



The European Union's

7th Research Framework Programme
(2007-2013)

**Catalogue of projects
with Indian partners**

By the European Delegation to India and Unit D.1 of DG RTD

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The main objectives of FP7

Knowledge lies at the heart of the European Union's Lisbon Strategy to become the "**most dynamic competitive knowledge-based economy in the world**". The '**knowledge triangle**' - **research, education** and **innovation** - is a core factor in European efforts to meet the ambitious Lisbon goals. Numerous programmes, initiatives and support measures are carried out at EU level in support of knowledge.

The **Seventh Framework Programme (FP7)** bundles all research-related EU initiatives together under a common roof playing a crucial role in reaching the goals of growth, competitiveness and employment.

The broad objectives of FP7 have been grouped into four categories: **Cooperation, Ideas, People** and **Capacities**. For each type of objective, there is a specific programme corresponding to the main areas of EU research policy. All specific programmes work together to promote and encourage the creation of European poles of (scientific) excellence.

Cooperation

Under the programme "Cooperation" research support will be provided to international cooperation projects across the European Union and beyond. The Cooperation programme has a budget of 32.413 Billion €.

It is subdivided into 10 thematic priority areas, which reflect the most important fields of knowledge and technology where research excellence is particularly important to address European social, economic, public health, environmental and industrial challenges, serve the public good and support developing countries.

The 10 thematic priority areas are:

- **Health**

The objective of health research under FP7 is to improve the health of European citizens and boost the competitiveness of health-related industries and businesses, while addressing global health issues such as anti-microbial resistance, HIV/AIDS, malaria, tuberculosis and emerging pandemics. The budget allocated for health research in FP7 is 6.05 billion €.

For more information: http://cordis.europa.eu/fp7/health/home_en.html

- **Food, Agriculture and Fisheries, and Biotechnology**

The primary aim of funding the 'Food, Agriculture and Fisheries, and Biotechnology' research theme under the Seventh Framework Programme (FP7) is to build a European Knowledge Based Bio-Economy (KBBE). The KBBE will play an important role in a global economy, where knowledge is the best way to increase productivity and competitiveness and improve our quality of life, while protecting our environment and social model. It is a sector estimated to be worth more than € 1.5 trillion per year. KBBE addresses the following needs: growing demand for safer, healthier, higher quality food; sustainable use and production of renewable bio-resources; increasing risk of epizootic and zoonotic diseases and food related disorders; sustainability and security of agricultural, aquaculture and fisheries production; increasing demand for high quality food, taking into account animal welfare and rural and coastal contexts and response to specific dietary needs of consumers. The budget allocated for research in this priority area in FP7 is 1.935 billion €.

For more information: http://cordis.europa.eu/fp7/kbbe/home_en.html

- **Information and Communication Technologies**

Information and Communication Technologies (ICT) are critical to improve the competitiveness of European industry and to meet the demands of its society and economy and have a catalytic impact in three areas: Productivity and Innovation (by facilitating creativity and management); modernisation of public services (such as health, education and transport) and advances in science and technology (by supporting cooperation and access to information). The objective of ICT research under the EU's Seventh Framework Programme (FP7) is to improve the competitiveness of European industry – as well as to enable Europe to master and shape the future developments of these technologies so that the demands of its society and economy are met. The budget allocated for research in Information and Communication Technologies in FP7 is 6.05 billion €.

For more information: <http://cordis.europa.eu/fp7/ict/>

- **Nanosciences, Nanotechnologies, Materials and new Production Processes**

The core objective of the 'Nanosciences, Nanotechnologies, Materials and new Production Technologies (NMP)' theme is to improve the competitiveness of European industry and generate the knowledge needed to transform it from a resource-intensive to a knowledge-intensive industry. NMP research also aims to strengthen the competitiveness of European industry by generating 'step changes' in a wide range of sectors and implementing decisive knowledge for new applications between different technologies and disciplines. Funding the NMP research theme will benefit new, high tech industries and higher-value, knowledge-based traditional industries, with a special focus to the appropriate dissemination of research results to SMEs. The budget allocated for research in this priority area in FP7 is 3.5 billion €.

For more information: http://cordis.europa.eu/fp7/cooperation/nanotechnology_en.html

- **Energy**

The objective of energy research under FP7 is to adapt the current energy system into a more sustainable, competitive and secure one. It should also depend less on imported fuels and use a diverse mix of energy sources, in particular renewables, energy carriers and non polluting sources. The budget allocated for energy research is 2.3 billion €.

For more information: http://cordis.europa.eu/fp7/energy/home_en.html

- **Environment (including Climate Change)**

The main objective of environment research under FP7 is to manage both the man-made and natural environment and its resources. By increasing the knowledge on the interaction between the climate, biosphere, ecosystems and human activities, new environmentally-friendly technologies should be developed. The budget allocated for environment research in FP7 is 1.8 billion €.

For more information: http://cordis.europa.eu/fp7/environment/home_en.html

- **Transport (including Aeronautics)**

The central objective of transport research under FP7 is to develop safer, 'greener' and 'smarter' pan-European transport systems that will benefit all citizens, respect the environment, and increase the competitiveness of European industries in the global market. The budget allocated for transport research in FP7 is 4.18 billion €.

For more information: http://cordis.europa.eu/fp7/transport/home_en.html

- **Socio-economic Sciences and Humanities**

Funding 'Socio-economic sciences and the humanities' will contribute to an in-depth, shared understanding of the complex and interrelated socio economic challenges Europe is

confronted with. The budget allocated for Socio-economic Sciences and Humanities research in FP7 is 0.61 billion €.

For more information: http://cordis.europa.eu/fp7/ssh/home_en.html

- **Space**

The aim of the Space theme under FP7 is to support a European Space Programme focusing on applications such as 'Global monitoring for environment and security' (GMES) with benefits for citizens and for the competitiveness of the European space industry. This will contribute to the development of a European space policy, complementing efforts by Member States and by other key players, including the European Space Agency (ESA). The budget allocated for Space research in FP7 is 1.43 billion €.

For more information: http://cordis.europa.eu/fp7/cooperation/space_en.html

- **Security**

The objectives of the Security theme are: to develop technologies and knowledge needed to ensure the security of citizens from threats such as terrorism and (organised) crime, natural disasters and industrial accidents while respecting fundamental human rights; to ensure optimal and concerted use of available and evolving technologies to the benefit of civil European security; and to stimulate the cooperation of providers and users for civil security solutions; improving the competitiveness of the European security industry and delivering mission-oriented results to reduce security gaps. The budget allocated for Security research in FP7 is 1.35 billion €.

For more information: http://cordis.europa.eu/fp7/security/home_en.html

Ideas

Investigator-driven 'frontier research', within the framework of activities commonly understood as 'basic research', is a key driver of wealth and social progress, as it opens new opportunities for scientific and technological advance, and is instrumental in producing new knowledge leading to future applications and markets.

The objective of the specific programme 'Ideas' is to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and third countries, as well as for industrial research investment, by providing a Europe-wide competitive funding structure, in addition to and not replacing national funding, for 'frontier research' executed by individual teams. Communication and dissemination of research results is an important aspect of this programme. The programme will be implemented through the European Research Council and has a budget of 7.46 billion € in FP7.

For more information: http://cordis.europa.eu/fp7/ideas/home_en.html

Website of the European Research Council: <http://erc.europa.eu/>

People

Highly trained researchers are needed in order to advance science and underpin innovation, and to attract and sustain public and private investment in research. With growing global competition, the development of an open European labour market for researchers and the diversification of skills and career paths of researchers are crucial, and mobility, both transnational and intersectoral, is a key component of the European Research Area.

The 'People' programme aims to improve the quality of the human resources in European R&D and increase the number of employees working in the European R&D sector. It aims to achieve its goals by promoting a career path in research, encouraging European researchers to stay in Europe and

making Europe more attractive to the best researchers from around the world. At the same time, training and career development of researchers will be actively supported.

The FP7 programme's activities will be based on the long and successful experience of the Marie Curie actions and will cover all stages of a researcher's professional life, from initial research training to life-long learning and career development.

Among the areas on which there will be increased focus is a stronger international dimension, with reinforced cooperation with researchers from third (non European) countries. 'Scientific diasporas' of European researchers abroad and foreign researchers in Europe will also be supported.

The People programme has a budget of 4.728 billion € in FP7.

For more information: http://cordis.europa.eu/fp7/people/home_en.html

Capacities

The Commission's proposals for the FP7 Capacities programme aim to enhance research and innovation capacities throughout Europe and ensure their optimal use.

This specific programme also aims to support the coherent development of policies; complement the Cooperation programme; contribute to EU policies and initiatives to improve the coherence and impact of Member States policies; and find synergies with regional and cohesion policies, the Structural Funds, education and training programmes and the Competitiveness and Innovation Programme (CIP). The Capacities programme has a budget of 4.097 billion €.

For more information: http://cordis.europa.eu/fp7/capacities/home_en.html

The capacities programme will operate in seven broad areas. They are:

- **Research Infrastructures**

The overall objective of the 'Research infrastructures' part of the FP7 Capacities programme is to optimise the use and development of the best research infrastructures existing in Europe. Furthermore, it aims to help to create new research infrastructures of pan-European interest in all fields of science and technology. The European scientific community needs these to remain at the forefront of the advancement of research, and they will help industry to strengthen its base of knowledge and technological know how.

For more information: http://cordis.europa.eu/fp7/capacities/research-infrastructures_en.html

- **Research for the benefit of SMEs**

The aim is to strengthen the 'innovation capacity' of small and medium-sized enterprises (SMEs) in Europe and their contribution to the development of new technology based products and markets. The programme will help them outsource research, increase their research efforts, extend their networks, better exploit research results and acquire technological know how, bridging the gap between research and innovation.

For more information: http://cordis.europa.eu/fp7/capacities/research-sme_en.html

- **Regions of Knowledge and support for region driven clusters**

The 'Regions of knowledge' initiative aims to strengthen the research potential of European regions, in particular by encouraging and supporting the development, across Europe, of regional 'research-driven clusters', associating universities, research centres, enterprises and regional authorities.

For more information: http://cordis.europa.eu/fp7/capacities/regions-knowledge_en.html

- **Research potential of Convergence Regions**

The objective is to stimulate the realisation of the full research potential of the enlarged European Union by unlocking and developing the research potential in the EU's 'convergence regions' and outermost regions, and helping to strengthen the capacities of their researchers to successfully participate in research activities at EU level.

For more information: http://cordis.europa.eu/fp7/capacities/convergence-regions_en.html

- **Science in Society**

With a view to building an effective and democratic European knowledge-based society, the aim is to stimulate the harmonious integration of scientific and technological endeavour and associated research policies into European society.

For more information: http://cordis.europa.eu/fp7/sis/home_en.html

- **Support to the coherent development of research policies**

This action aims to enhance the effectiveness and coherence of national and European Community research policies and their articulation with other policies, improving the impact of public research and its links with industry, and strengthening public support and its leverage effect on investment by private actors.

For more information: http://cordis.europa.eu/fp7/capacities/research-policies_en.html

- **International Cooperation**

To become more competitive and play a leading role globally, the European Community needs a strong and coherent international science and technology (S&T) policy. This policy has three main objectives: (i) to support European competitiveness through strategic partnerships with non-EU countries in selected fields of science and by engaging the best scientists from such countries to work with and in Europe; (ii) to enhance the production of knowledge and scientific excellence by enabling European universities, research institutions and firms to establish contacts with their partners in such third countries, thereby facilitating access to research environments outside Europe and promoting synergies on a global scale; and (iii) to address specific problems that third countries face, or that have a global character, on the basis of mutual interest and mutual benefit.

For more information: http://cordis.europa.eu/fp7/capacities/international-cooperation_en.html

Funding Schemes

Funding schemes are the types of projects through which FP7 is implemented. They are the following:

Collaborative Projects

Support for research projects carried out by consortia with participants from different countries, and from industry and academia, aiming to develop new knowledge, new technology, products, demonstration activities or common resources for research. The size, scope and internal organisation of projects can vary from field to field and from topic to topic. Projects can range from small- or medium-scale focused research actions to large-scale integrating projects for achieving a defined objective. Projects should also target special groups such as SMEs and other smaller actors.

Collaborative project for specific cooperation actions dedicated to international cooperation partner countries (SICA): Some of the calls for proposals specifically target international cooperation either with a region or a country. The consortium requirements are relaxed in this case to include at least 4 independent legal entities. Of these, 2 must be established in different MS or AC. The other two must be established in different international cooperation partner countries – ***In the case of India the two partners can be from two different states in India. SICA topics are identified as such in the Call descriptions.***

Networks of Excellence

Networks of Excellence are designed for research institutions willing to combine and functionally integrate a substantial part of their activities and capacities in a given field, in order to create a European “virtual research centre” in this field.

This is achieved through a “Joint Programme of Activities” based on the integrated and complementary use of resources from entire research units, departments, laboratories or large teams. The implementation of this Joint Programme of Activities will require a formal commitment from the organisations integrating part of their resources and their activities.

Coordination and Support Actions

These are actions that cover not the research itself, but the coordination and networking of projects, programmes and policies. This includes, for example:

- coordination and networking activities, dissemination and use of knowledge;
- studies or expert groups assisting the implementation of the framework Programme;
- support for transnational access to major research infrastructures;
- actions to stimulate the participation of SMEs, civil society and their networks; and
- support for cooperation with other European research schemes (e.g. “frontier research”).

Individual projects: Support for “Frontier” Research

Support for projects carried out by individual national or transnational research teams. This scheme will be used to support investigator-driven “frontier” research projects funded in the framework of the European Research Council.

Support for Training and Career Development of Researchers

Training and career development for researchers from across the EU and its research partners is provided through a range of support actions named after Marie Curie. These include provisions for initial training through Initial Training Networks; fostering linkages between industry and academia through Industry-Academia Partnerships and Pathways; providing for life-long training through Intra-European Fellowships for Career Development, European Reintegration Grants and the Co-funding of Regional, National, and International Programmes; catering to the international dimension of the Marie Curie Actions through International Outgoing Fellowships for Career Development, International

Incoming Fellowships and International Reintegration Grants and specific actions such as the Excellence Awards, the Researchers' Night and supporting the network of National Contact Points

Research for the Benefit of Specific Groups – in particular SMEs

Research and technological development projects where the bulk of the research is carried out by actors such as universities, research centres or other legal entities, for the benefit of specific groups, in particular SMEs, or for civil society organisations and their networks.

Acronyms used in the text

CP-IP	Collaborative project, integrating project
CP-FP	Collaborative project, focused project
CP-SICA	Collaborative project, specific international cooperation action
CP-FP-SICA	Collaborative project, focused project; specific international cooperation action
NoE	Network of Excellence
CSA-CA	Coordination and Support Actions – Coordination Action
CSA-SA	Coordination and Support Actions – Support Action
MC-ITN	Marie Curie – Initial Training Network
MC-IAPP	Marie Curie – Industry Academia Pathways and Partnerships
MC-IRSES	Marie Curie – International Research Staff Exchange Scheme



COOPERATION

Thematic Priority Area - 1

HEALTH

Project Title: Plasmodium Vivax Infection in Pregnancy
Project Acronym: PREGVAX
Activity Area: Addressing knowledge gaps in pregnancy malaria



Project Description:

Malaria in pregnancy has been recently prioritised by the EC 7th Framework Program. In response, we propose to carry out a cohort observational study in pregnant women in 5 P. vivax endemic countries, broadly representing most of the world's infections. The Indian and Papua New Guinean endemic sites are included because of their important contribution to the global burden of vivax malaria; PNG has a high prevalence of asymptomatic P. vivax infections resembling P. falciparum infection in sub-Saharan Africa, and India contributes to nearly 80% of malaria cases in Southeast Asia. In Latin America, 3 countries are selected, Guatemala, Colombia and Brazil. In Guatemala P vivax is responsible for almost all malaria cases, in Colombia and Brazil it co-exists in different proportions with falciparum. Pregnant women will be enrolled at each site during routine antenatal care visits (ANC) and followed-up at the health facility until delivery or end of pregnancy. P. vivax malaria parasitemia will be assessed at enrolment, at every contact with the health facility and at delivery. In a sub-sample of women, peripheral blood will be taken for immunological/molecular studies, and placental samples will be collected. To assess with precision the prevalence of infection (estimated to be around 4% on average) and to obtain sufficient number of pregnant women with P vivax infection to determine the impact on birth weight, 2000 pregnant women per site will be enrolled. Due to the likely low prevalence of infection in pregnancy, the number of pregnant women with P. vivax per site will probably not be enough to assess specific impact for each site, thus a multicentric study design will be used. Immunological analysis will be performed to unveil whether there are pregnancy-specific immune responses. Phenotypic and genotypic analyses of parasites from the placenta should reveal their adhesive properties and whether the accumulation of infected erythrocytes unique parasite population.

Project Partners:

1. *Fundació Privada Clínic per a la Recerca Biomèdica, Spain*
2. Karolinska Institutet, Sweden
3. Istituto Superiore di Sanita, Italy
4. Papua New Guinea Institute of Medical Research, Papua New Guinea
5. **Sardar Patel Medical College and Associated Group of Hospitals, India**
6. **International Centre for Genetic Engineering and Biotechnology, India**
7. Fundação de Medicina Tropical do Amazonas, Brazil
8. Centro de Estudios en Salud, Universidad del Valle de Guatemala, Guatemala
9. Centro Internacional de Vacunas, Colombia

Project Details:

Call: HEALTH-2007-A
Project Number: 201588
Instrument: CP-FP
Project Start Date: 1 March 2008
Project Duration: 48 months
Project Cost: 3 928 460 €
EC Contribution: 2 999 145 €
For more information: www.pregvax.net

Project Title: Structural analysis of the CSA binding interactions involved during pregnancy associated malaria
Project Acronym: PremalStruct
Activity Area: Addressing knowledge gaps in pregnancy malaria



Project Description:

Adhesion of Plasmodium falciparum-infected erythrocytes (PE) to placental chondroitin-4-sulfate (CSA) has been linked to the severe disease outcome of pregnancy-associated malaria (PAM). After multiple pregnancies, women acquire protective antibodies that block CSA-binding and cross-react with geographically diverse placental isolates suggesting that surface molecule(s) expressed by PAM-infected erythrocytes have conserved epitopes and that a PAM vaccine may be possible.

Recent evidence strongly suggests that var2CSA, a member of the P. falciparum Erythrocyte Membrane protein 1 (PfEMP1) family, may have an important role in PAM and immunity. Although var2CSA and to some extent var1CSA are the main candidates for a pregnancy malaria vaccine, experimental evidence implies that antigenic polymorphism and the lack of a small animal in vivo experimental model may pose a challenge for vaccine development. To date, efforts to develop a truly prophylactic PAM vaccine have been hindered by the difficulty in identifying immunogens that elicit broadly neutralizing and adhesion-blocking antibodies.

Accordingly, a small number of highly specialized and experienced malaria research groups from Europe (5 groups) and endemic countries (2 groups) have decided to give highest priority to decipher the molecular basis for the CSA binding to the parasite ligands in order to define the common features within the different CSA-binding domains and the cross-reactive epitopes that are likely to be the targets of natural protective antibodies. This knowledge will not only be very helpful in the design of novel PfEMP1-CSA based antigens capable of inducing broad and potent neutralising antibodies to a wide variety of strains, but also to identify molecules with inhibitory capacity that could be considered for therapeutic strategies as anti-adhesive drugs.

Project Partners:

1. Institut Pasteur, France
2. International Centre for Genetic Engineering and Biotechnology, India
3. University of Copenhagen, Denmark
4. Universitätsklinikum Heidelberg, Germany
5. Academisch Ziekenhuis Leiden, Netherlands
6. 4SC AG, Germany

Project Details:

Call: HEALTH-2007-A
Project Number 201222
Instrument: CP-FP
Project Start Date: 1 February 2008
Project Duration: 36 months
Project Cost: 3 699 111 €
EC Contribution: 2 309 721 €
Project Website: <http://www.premalstruct.org/>

Project Title: Genotype-To-Phenotype Databases: A Holistic Solution
Project Acronym: GEN2PHEN
Activity Area: Unifying human and model organism genetic variation databases



Project Description:

The GEN2PHEN project aims to unify human and model organism genetic variation databases towards increasingly holistic views into Genotype-To-Phenotype (G2P) data, and to link this system into other biomedical knowledge sources via genome browser functionality. The project will establish the technological building-blocks needed for the evolution of today's diverse G2P databases into a future seamless G2P biomedical knowledge environment. The project will then utilise these elements to construct an operational first-version of that knowledge environment, by the projects end. This will consist of a European-centred but globally-networked hierarchy of bioinformatics GRID-linked databases, tools and standards, all tied into the Ensembl genome browser. The project has the following specific objectives: 1) To analyse the G2P field and thus determine emerging needs and practices; 2) To develop key standards for the G2P database field; 3) To create generic database components, services, and integration infrastructures for the G2P database domain; 4) To create search modalities and data presentation solutions for G2P knowledge; 5) To facilitate the process of populating G2P databases; 6) To build a major G2P internet portal; 7) To deploy GEN2PHEN solutions to the community; 8) To address system durability and long-term financing; 9) To undertake a whole-system utility and validation pilot study GEN2PHEN Consortium members have been selected from a talented pool of European research groups and companies that are interested in the G2P database challenge. Additionally, a few non-EU participants have been included to bring extra capabilities to the initiative. The final constellation is characterised by broad and proven competence, a network of established working relationships, and high-level roles/connections within other significant projects in this domain. ...

Project Partners:

1. *University of Leicester, United Kingdom*
2. European Molecular Biology Laboratory, Germany
3. Fundació IMIM, Spain
4. Leiden University Medical Center, Netherlands
5. Institut National de la Santé et de la Recherche Médicale, France
6. Karolinska Institutet, Sweden
7. Foundation for Research and Technology – Hellas, Greece
8. Commissariat à l'Energie Atomique, France
9. Erasmus MC, Netherlands
10. Helsingin Yliopisto, Finland
11. University of Aveiro IEETA, Portugal
12. University of the Western Cape, South Africa
13. **Institute of Genomics and Integrative Biology, India**
14. Swiss Institute of Bioinformatics, Switzerland
15. University of Manchester, United Kingdom
16. BIOBASE GmbH, Germany
17. Islensk erfdagreining ehf, Iceland
18. PhenoSystems SA, Belgium
19. Biocomputing Platforms Ltd Oy, Finland

Project Details:
Call: HEALTH-2007-A
Project Number: 200754
Instrument: CP-IP
Project Start Date: 1 January 2008
Project Duration: 60 months
Project Cost: 14 914 226 €
EC Contribution: 11 889 367 €
Project website: www.gen2phen.org

Project Title: OpenTox - An Open Source Predictive Toxicology Framework

Project Acronym: OpenTox

Activity Area: Promotion, development, validation, acceptance and implementation of QSARs (quantitative structure-activity relationship) for toxicology



Project Description:

The goal of the OpenTox project is to develop a predictive toxicology framework with a unified access to toxicological data, (Q)SAR models and supporting information. It will provide tools for the integration of data from various sources (public and confidential), for the generation and validation of (Q)SAR models, libraries for the development and integration of new (Q)SAR algorithms, and validation routines. OpenTox will attract toxicological experts without (Q)SAR expertise as well as model and algorithm developers. It will move beyond existing attempts to solve individual research issues, by providing a flexible and user friendly framework that integrates existing solutions and new developments.

OpenTox will be relevant for REACH as it gives risk assessors simple access to experimental data, (Q)SAR models and toxicological information that adheres to European and international regulatory requirements. OpenTox will be published as an open source project to allow a critical evaluation of its algorithms, to promote dissemination, and to attract external developers. Facilities for the inclusion of confidential in-house data and for accessing commercial prediction systems will be included.

OpenTox will contain high-quality data and (Q)SAR models for chronic, genotoxic and carcinogenic effects. These are the endpoints with the greatest potential to reduce animal testing. The impact of OpenTox will however go beyond REACH and long-term effects, because it will be straightforward to create models for other endpoints (e.g., sensitisation, liver-toxicity, cardio-toxicity, ecotoxicity).

The proposed framework will support the development of new (Q)SAR models and algorithms by automating routine tasks, providing a testing and validation environment and allowing the easy addition of new data. For this reason we expect, that OpenTox will lead to (Q)SAR models for further toxic endpoints and generally improve the acceptance and reliability of (Q)SAR models.

Project Partners:

1. *Douglas Connect, Switzerland*
2. *in silico toxicology c.helma, Germany*
3. *Ideaconsult Ltd., Bulgaria*
4. *Istituto Superiore di Sanita, Italy*
5. *Technische Universität München, Germany*
6. *Albert-Ludwigs-Universität Freiburg, Germany*
7. *National Technical University of Athens, Greece*
8. *Mr David Gallagher, United Kingdom*
9. *Institute of Biomedical Chemistry of Russian Academy of Medical Sciences, Russian Federation*
10. **Seascope Learning Company Pvt. Ltd., India**
11. *Fraunhofer Gesellschaft zur Förderung der angewandten Forschung e.V., Germany*

Project Details:
Call: HEALTH-2007-A
Project Number: 200787
Instrument: CP-FP
Project Start Date: 1 September 2008
Project Duration: 36 months
Project Cost: 3 743 460 €
EC Contribution: 2 975 620 €
Project Website: <http://www.opentox.org>

Project Title: Systems biology of T-cell activation in health and disease
Project Acronym: SYBILLA
Activity Area: Modeling of T-cell activation



Project Description:

T-cell activation, whether induced by pathogens or auto-antigens, is a complex process relying on multiple layers of tightly controlled intracellular signalling modules that form an intricate network. Defects in this network can cause severe and chronic disorders such as autoimmune diseases. Although 5% of the population suffer from these diseases, only a few therapeutic treatments are available. To a large extent this is attributed to the lack of systems-level insights, which would provide concepts of how to modulate T-cell activation. The SYBILLA project groups 14 partners from 9 different EU countries, including 3 SMEs. Through a multidisciplinary effort it aims to understand at the systems' level, how T-cells discriminate foreign from auto-antigens. Towards this goal, a transgenic mouse system will be used as a tractable physiological model. Data will be validated in human T-cells and a humanised mouse model for multiple sclerosis. SYBILLA will develop technological and mathematical tools to generate and integrate high-density quantitative data describing T-cell activation. Proteomics, transcriptomics, metabolomics, imaging and multiplexed biochemical techniques will be applied to obtain holistic maps of T-cell signalling networks and to achieve a quantitative understanding of the network and its regulation in response to different inputs. Building upon our existing network model, constant iterations will be used to develop more robust dynamic models to describe the network's response to perturbations. This will culminate in the generation of a Virtual T-Cell, allowing computer simulation to refine the predictability of physiological and pathophysiological reactions. SYBILLA's impact on EU biopharmaceutical competitiveness will be enormous through identification of new pharmacologic targets, optimised prediction of immunomodulatory drug efficacy, discovery of new concerted biomarkers and improvement of personalised medication for treating autoimmune diseases.

Project Partners:

1. Max Planck Gesellschaft Zur Foerderung Der Wissenschaften E.V., Germany
2. University Of Oxford, United Kingdom
3. Consejo Superior De Investigaciones Cientificas, Spain
4. Medizinische Universitaet Innsbruck, Austria
5. Eidgenoessische Technische Hochschule Zuerich, Switzerland
6. Deutsches Krebsforschungszentrum, Germany
7. Turun Yliopisto, Finland
8. Centre National De La Recherche Scientifique, France
9. Universitaetsspital Basel, Switzerland
10. Otto Von Guericke Universitaet Magdeburg, Germany
11. Fondazione Humanitas Per La Ricerca, Italy
12. Medice Oy, Finland
13. Exbio Praha As, Czech Republic
14. Acies Sas, France
15. Harvard Medical Centre and Immune Disease Institute, United States
- 16. International Centre For Genetic Engineering And Biotechnology, India**
17. Joslin Diabetes Centre, United States

Project Details:

Call: HEALTH-2007-A
Project Number: 201106
Instrument: CP-IP
Project Start Date: 1 April 2008
Project Duration: 60 months
Project Cost: 14 593 292 €
EC Contribution: 11 100 000 €
Project website: <http://www.sybilla-t-cell.de>

Project Title: Production and delivery of antibody fragments against gastrointestinal pathogens by lactobacilli
Project Acronym: LACTOBODY
Activity Area: Development and production of new generation antibodies

Project Description:

Enteric infections remain a major cause of morbidity and mortality globally, accounting for an estimated 2 millions deaths each year. Effective preventive and therapeutic interventions are not yet available for many etiological agents of diarrheal diseases. Furthermore, even where vaccines are available, the lag time needed to induce an immune response can be critical in epidemic situations. We have developed a model system in which Lactobacillus, a GRAS microorganism, can be transformed with antibody fragment encoding vectors. This allows the production of functional single-chain antibodies against mucosal pathogens in situ. These antibody fragments retain their biological properties in vivo and may mitigate or prevent disease. The aim of this project is to develop an effective treatment against rotavirus and Clostridium difficile based on lactobacilli producing VHH and scFv antibody fragments. As a proof of principle, a lead VHH fragment against rotavirus will be tested in a human clinical trial in India. In parallel, we will generate, select and express scFv and VHH fragments against the gastrointestinal pathogens rotavirus and C. difficile in lactobacilli. The modified bacteria will be tested for their protective capacity in animal models. The genes encoding the antibody fragments will further be cloned using food grade and biologically contained expression systems and these lactobacilli will be tested for safety in a human clinical trial. Our approach, which falls into the priority "Innovative approaches and interventions" and the work program "Development and production of new generation antibodies" represents a novel system for the induction of passive immunity that can be rapidly applied to populations at risk (for example through the drinking water, rehydrating solution or as a food supplement). If successful, this project could be applied to therapy against a vast number of human/animal pathogens in the gastrointestinal tract. ...

Project Partners:

1. Karolinska Institutet, Sweden
2. University of Tartu, Estonia
3. Spanish Council for Scientific Research, Spain
4. Unilever Research & Development Vlaardingen BV, Netherlands
5. Lactrys Biopharmaceuticals BV, Netherlands
6. Utrecht University, Netherlands
7. **Christian Medical College, India**
8. Health Protection Agency, United Kingdom

Project Details:

Call: HEALTH-2007-A
Project Number: 202162
Instrument: CP-FP
Project Start Date: 1 February 2008
Project Duration: 36 months
Project Cost: 5 555 216 €
EC Contribution: 3 988 019 €
Project website: <http://lactobody.eu>

Project Title: New tools for monitoring drug resistance and treatment response in visceral leishmaniasis in the Indian subcontinent

Project Acronym: KALADRUG-R

Activity Area: Development of new tools to control infections due to parasites of the Trypanosomatidae family



Project Description:

Visceral leishmaniasis (VL), one of the most-neglected infectious diseases, has an annual incidence of 500,000 cases. Early treatment is a major pillar of the current program for VL elimination on the Indian sub-continent. However, the arsenal of available drugs is very limited, and their use is jeopardized by drug resistance. Combination regimens for VL are under clinical development, but it will take several more years to change the drug policy. Meanwhile, the effectiveness of current drugs needs to be safeguarded in order to cure patients and ensure unremitting sustainment of VL control. For this, the uninterrupted supply of quality drugs, the promotion of treatment compliance and, the monitoring of treatment effectiveness and of drug resistance will be pivotal. The latter demands improved knowledge and know-how, hence clinical and laboratory research are urgently needed to support the drug policy of the VL elimination program. The present multi-disciplinary proposal addresses these needs: we aim to develop, evaluate and disseminate new tools for the assessment of drug resistance in *L. donovani* as well as innovative methodologies for monitoring Kala-Azar treatment effectiveness under routine conditions.

Project Partners:

1. *Instituut voor Tropische Geneeskunde, Belgium*
2. *University of Strathclyde, United Kingdom*
3. *Universiteit Antwerpen, Belgium*
4. *Charité Universitaetsmedizin Berlin, Germany*
5. *Eberhard Karls Universität Tübingen, Germany*
6. *Genome Research Limited, United Kingdom*
7. **Banaras Hindu University, India**
8. *B.P. Koirala Institute of Health Sciences, Nepal*
9. **Institute of Pathology (ICMR), India**
10. **Indian Institute of Chemical Biology, India**

Project Details:

Call: HEALTH-2007-B

Project Number: 222895

Instrument: CP-SICA

Project Start Date: 1 November 2008

Project Duration: 48 months

Project Cost: 3 980 800 €

EC Contribution: 3 000 000 €

Project Website: <http://www.leishrisk.net>

Project Title: Nucleobase derivatives as drugs against trypanosomal diseases

Project Acronym: trypobase

Activity Area: Development of new tools to control infections due to parasites of the Trypanosomatidae family



Project Description:

The protozoan diseases, leishmaniasis, African trypanosomiasis and Chagas disease are responsible for substantial global morbidity, mortality, and economic adversity, and in most countries, existing strategies for control and treatment are either failing or under serious threat. New tools for combating pathogenic protozoa and the development and exploitation of new drug targets are required. This proposal builds on several achievements and observations of the consortium in the area of nucleotide metabolism.

- Pyrimidine and purine metabolism exhibits unique features in trypanosomes.
- The identification of a unique enzyme involved in pyrimidine metabolism restricted to trypanosomes and essential for viability: the dimeric all-alpha dUTPase.
- An exceptional collection of purine and pyrimidine analogues is available through the consortium for antiprotozoal screening and lead identification.
- The consortium brings together an outstanding combination of expertise for drug discovery.

The main objective is the identification of new purine and pyrimidine derivatives for the treatment of the leishmaniasis and trypanosomiasis. A two-pronged approach is proposed to discover new leads for the treatment of leishmaniasis and trypanosomiasis targeting nucleoside/ nucleotide metabolism. 1) The phenotypic approach exploring the potential of large collections of novel nucleobase derivatives against trypanosomal diseases. 2) The target-based approach specifically centred on the development of inhibitors of the enzyme deoxyuridine triphosphate nucleotidohydrolase. The trypanosomal enzyme shows structural and functional characteristics which differ profoundly from the mammalian counterpart. The aim is to identify potent inhibitors that are active against parasitic protozoa, active in rodent models of infection and have drug-like properties.

Project Partners:

1. Consejo Superior de Investigaciones Científicas, Spain
2. University of Dundee, United Kingdom
3. University of York, United Kingdom
4. Swiss Tropical Institute, Switzerland
5. Medivir AB, Sweden
6. Syngene International, India
7. Institut Pasteur de Montevideo, Uruguay

Project Details:

Call: HEALTH-2007-B

Project Number: 223238

Instrument: CP-SICA

Project Start Date: 1 January 2009

Project Duration: 36 months

Project Cost: 3 406 400 €

EC Contribution: 2 557 188 €

For more information: <http://www.ipb.csic.es/trypobase.html>

Project Title: The antiretroviral roll out for HIV in India - generating evidence to promote adherence and patient follow-up in the context



Project Acronym: HIVIND

Activity Area: Highly innovative research in HIV/AIDS, malaria and tuberculosis between Indian and European partners

Project Description:

India is a nation of contrasts. The economy is modernizing, but the culture is traditional. Different provinces experience the HIV epidemic differently; even in high-prevalence areas, the epidemic reflects diverse social, cultural, religious, & sexual practices. This proposal focuses on 2 high prevalence provinces. As the antiretroviral (ART) program is scaled up, adherence is a key issue that needs to be addressed (as it is a key determinant of resistance, which has public health consequences). With limited affordable second-line regimens & restricted laboratory monitoring in low-income settings, optimal adherence to first-line regimens is essential. The study is a randomized control trial of two approaches to influencing ART adherence in 600 ART naïve, HIV+ Indian patients eligible for ART, in Karnataka and Tamil Nadu. The conventional existing approach (as in the national guidelines) will be compared with an intervention in which the patient is provided a `treatment supporter'. The study besides assessing the effect of intervention on adherence will also provide data on the proportion of Indian patients failing first line ART. A study of factors associated with adherence, hitherto unstudied in India will be done. In addition the incidence and manifestations of opportunistic infections, immune reconstitution syndrome & adverse drug events will be described. The use of validated low-cost tests that optimize monitoring, are necessary here. Viral load is rarely used to monitor treatment because it is expensive. Instead falling CD4 counts are used. This usually occurs months/years after virological failure (increasing load); patients could have accumulated enough resistant mutations in this time to render other drugs useless. Using an affordable load test (evaluated in this study) allows earlier detection of failure, with public health implications. Cost effectiveness will be studied. The project has policy implications for India and other low income settings.

Project Partners:

1. *Karolinska Institutet, Sweden*
2. **Institution for Population Health and Clinical Research, India**
3. **YRG Care, India**
4. Hanoi Medical University, Viet Nam
5. Tampereen yliopisto, Finland
6. Cavid AB, Sweden

Project Details:

Call: HEALTH-2007-B
Project Number: 222946
Instrument: CP-SICA
Project Start Date: 1 November 2008
Project Duration: 48 months
Project Cost: 3 804 713 €
EC Contribution: 2 946 426 €
For more information: <http://hivind.eu>

Project Title: New approaches to target Tuberculosis
Project Acronym: NATT
Activity Area: Highly innovative research in HIV/AIDS, malaria and tuberculosis between Indian and European partners

Project Description:

The increasing emergence of multidrug resistant strains and extensively drug resistant strains, the last one being virtually untreatable, urgently demand novel drugs for therapy of tuberculosis. This project has the aim of bringing together a number of research scientists with expertise in a broad range of disciplines, both from Europe and from India, covering the development field from chemistry to in vivo evaluation. The selected targets belong to either the group of targets from which some proof of concept already exist (mycolic acid synthesis and ATP synthase) either to the group of completely new targets that will be validated (thymidylate synthase, acyl-CoA carboxylase, DNA helicases). One alternative strategy to target the host cellular machinery to enhance bacterial killing is, likewise, included. The selected targets are covering fatty acid metabolism, nucleoside synthesis, energy generator, the survival of the microorganism in macrophages, the nucleic acids metabolism. The systems selected include those from which we expect to generate compounds active against replicating mycobacteria or to obtain compounds targeting latent infection.

The application is divided in four scientific workpackages, including target validation, the interaction with the host cellular machinery, the design and synthesis of new inhibition and in vitro and in vivo screening of drug candidates and one management workpackage. A considerable part of the drug development and assessment against drug resistant Mycobacterium tuberculosis will be carried out by the Indian partners, one of which is an SME.

Project Partners:

1. Katholieke Universiteit Leuven, Belgium
2. Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., Germany
3. Uppsala University, Bioorganic Chemistry, Sweden
4. Medical Research Council, United Kingdom
5. European Molecular Biology Laboratory, Germany
6. **National Institute of Immunology, India**
7. **National Institute of Pharmaceutical Education and Research, India**
8. **Institute of Molecular Medicine, India**

Project Details:

Call: HEALTH-2007-B
Project Number: 222965
Instrument: CP-SICA
Project Start Date: 1 October 2008
Project Duration: 36 months
Project Cost: 3 937 667 €
EC Contribution: 2 994 478 €
For more information: <http://www.natt-tbc.com>

Project Title: Targeting Protein Synthesis in the Apicoplast and Cytoplasm of Plasmodium

Project Acronym: MEPHITIS

Activity Area: Highly innovative research in HIV/AIDS, malaria and tuberculosis between Indian and European partners



Project Description:

The protein synthesis machinery represents one of the most useful targets for the development of new anti-infectives. Several families of broadly used antibiotics (tetracyclines, macrolides, and novel glycopeptides like vancomycin, among others) exert their function by blocking the protein synthesis machinery. Doxycycline, a tetracycline antibiotic, remains a useful tool for the prevention of paludism among travellers, despite its numerous secondary effects.

And yet, very little is known about the specifics of the protein synthesis machinery in Plasmodium. A search of articles in the PubMed library with the words Plasmodium and ribosome/ribosomal in their titles will yield 6 publications since the year 2000. Only one article contains the words tRNA (or transfer RNA) and Plasmodium in its title, in the same period. And only one article in PubMed (Snewin et al., 1996) contains the words Plasmodium and 'tRNA synthetase' (or ligase) in its title.

This lack of information about this central metabolic pathway in Plasmodium clearly blocks the possibility of transferring the knowledge in protein synthesis to the development of new anti-malarial drugs directed against the translational machinery of the parasite. Thus, the study of components of the genetic code in Plasmodium has the potential for providing new and important information on the biology of the parasite and, more importantly, open new leads for the development of novel anti-malarials.

This proposal coordinates an effort to study tRNA biology in Plasmodium falciparum. It contains specific schemes for the development of new pharmacological screens, several initiatives for the selection of new potential anti-malarial drugs, and projects designed to answer fundamental questions regarding protein synthesis in Plasmodium. The laboratories in MEPHITIS accumulate a large body of experience in the biology of this parasite, and in different aspects of tRNA biology in model species.

Project Partners:

1. Fundació Privada Institut de Recerca Biomèdica, Spain
2. Institut de Recerca Biomèdica, Spain
3. **Central Drug Research Institute, India**
4. **International Centre for Genetic Engineering and Biotechnology, India**
5. Centre National de la Recherche Scientifique, France
6. Universidade de Aveiro, Portugal
7. Fundació Parc Científic de Barcelona, Spain
8. The University of Melbourne, Australia
9. Istituto Superiore di Sanita, Italy

Project Details:

Call: HEALTH-2007-B
Project Number: 223024
Instrument: CP-SICA
Project Start Date: 1 January 2009
Project Duration: 36 months
Project Cost: 3 342 251 €
EC Contribution: 2 173 320 €
For more information: <http://www.mephitis.eu/>

Project Title: Signalling in life cycle stages of malaria parasites
Project Acronym: MALSIG
Activity Area: Highly innovative research in HIV/AIDS, malaria and tuberculosis between Indian and European partners



Project Description:

Malaria is a major public health problem in the developing world and is endemic in many regions of India. The development of novel strategies for malaria control requires a better understanding of the biology of malaria parasites. Our project aims at bringing a significant contribution to this field, through dissecting the signalling pathways that regulate essential processes in the life cycle of malaria parasites. The proposed research will merge two lines of investigation that have thus far been conducted largely independently from each other, namely:

- (i) the characterisation of components of signal transduction pathways (protein kinases, nucleotide cyclases, calcium signalling mediators) in malaria parasites;
- (ii) the study of specific biological processes during the life cycle of malaria parasites.

Merging these two fields of malaria research will ensure a high level of complementarity and synergy within the consortium. Specific workpackages will be centred on understanding signalling-dependent regulation in the following processes and stage transition within the life cycle of malaria parasites:

- erythrocyte infection (invasion, parasite proliferation)
- sexual development (gametocytogenesis, gametogenesis, transmission to the mosquito vector)
- hepatocyte infection (invasion, parasite proliferation, egress)
- membrane dynamics (trafficking, transporters)

Approaches will include proteomics, reverse genetics, structural biology, and the use of animal models of malaria.

The consortium is constituted of EU and Indian partners with a proven track record either in research into one of the developmental stages/processes described above, or in signal transduction in malaria parasites. The project will significantly strengthen EU-India cooperation in this highly relevant topic.

Project Partners:

1. *Institut National de la Sante et de la Recherche Medicale, France*
2. *Istituto Superiore di Sanità, Italy*
3. *Institut National de la Sante et de la Recherche Medicale, France*
4. *Medical Research Council, United Kingdom*
5. *Bernhard Nocht Institute for Tropical Medicine, Germany*
6. *London School of Hygiene & Tropical Medicine, United Kingdom*
7. *Genome Research Limited, United Kingdom*
8. *St. George's Hospital Medical School, United Kingdom*
9. *Foundation Biomedical Primate Research Centre, Netherlands*
10. *Universitätsklinikum Heidelberg, Germany*
11. *Institut Pasteur, France*
12. *Julius-Maximilians-Universität Würzburg, Germany*
13. *University of Glasgow, United Kingdom*
14. *Radboud University Nijmegen Medical Centre, Netherlands*
15. **International Centre for Genetic Engineering and Biotechnology, India**
16. **Jawaharlal Nehru University, India**
17. **National Institute of Immunology, India**
18. **Indian Institute of Science, India**

19. Medical Research Council, United Kingdom

20. International Centre for Genetic Engineering and Biotechnology, India

Project Details:

Call: HEALTH-2007-B

Project Number: 223044

Instrument: CP-SICA

Project Start Date: 1 January 2009

Project Duration: 36 months

Project Cost: 3 948 583 €

EC Contribution: 3 000 000 €

For more information: <http://www.malsig.lille.inserm.fr/>

Project Title: Unravelling the molecular mechanism of nitrosative stress resistance in tuberculosis

Project Acronym: NOstress

Activity Area: Highly innovative research in HIV/AIDS, malaria and tuberculosis between Indian and European partners

Project Description:

Tuberculosis is today amongst the major worldwide health threats. Treatment failure is unfortunately becoming more usual, especially in countries lacking the long and costly treatment adapted to patients. Thus, tuberculosis causes 2 million deaths every year and latently persists in over 1 billion individuals worldwide. Current treatments are challenged by multidrug resistant strains, drug side effects, and co-infections. Therefore, identification of potent, safety antimycobacterial agents is mandatory. However, the success of this strategy is largely determined by the detailed knowledge of their mechanism of action, which in turn depends on the validation of suitable biological targets.

This project pursues the definition of new, complementary therapeutic approaches by identifying the molecular basis of the nitrosative stress resistance of *M. tuberculosis*. Our working hypothesis is that a decrease in the NO resistance of the microorganism should reduce significantly the capability to rest in latency, thus contributing to increase the efficacy of the therapeutic treatment. In this context, understanding of the NO detoxification activity played by *M. tuberculosis* trHbN is essential. Accordingly, our objectives are i) to unravel the molecular mechanism underlying the NO dioxygenase activity of *M. tuberculosis* trHbN, ii) to establish the structure-function relationships in trHbN and trHbO from *M. tuberculosis*, and iii) to identify the reductase protein system that helps trHbN to restore the ferrous state required to initiate the NO detoxification cycle.

The outcome of the project should provide a firm basis to assess the viability of trHbN as a therapeutic target, and set up the background to exploit this knowledge in the design of innovative therapeutic strategies to fight the disease.

Project Partners:

1. *Universitat Barcelona, Spain*
2. **Institute of Microbial Technology, India**
3. University of Buenos Aires, Argentina
4. Consejo Superior Investigaciones Cientificas, Spain
5. The University of Sheffield, United Kingdom

Project Details:

Call: HEALTH-2007-B

Project Number: 223335

Instrument: CP-SICA

Project Start Date: 1 October 2008

Project Duration: 36 months

Project Cost: 1 540 958 €

EC Contribution: 1 163 264 €

For more information: http://ec.europa.eu/research/health/infectious-diseases/poverty-diseases/projects/194_en.htm

Project Title: Health system stewardship and regulation in Vietnam, India and China
Project Acronym: HESVIC
Activity Area: Universal and equitable access to health care and health financing

Project Description:

The proposed project aims to investigate stewardship and regulation as it relates to governance of health systems in policy and practice. It aims to do so by developing an integrated approach to improved stewardship and regulation in health services in Vietnam, India and China, in order to support policy decisions in the application and extension of principles of accessibility, affordability, equity and quality coverage of health care in the three countries.

The health systems of Vietnam, India and China include a mix of types of health care providers including public and private sectors. The private sector has grown rapidly in recent years with implications for equity and access. Previous research in the three countries suggests that the stewardship and regulation capacity of the three governments is pivotal in improving policies regarding accessibility, affordability and quality coverage of health services.

The project will use maternal health as a case study of stewardship and regulation of health care services. Maternal health is one of the key areas for policy and health care delivery in low and middle-income countries and is included in the Millennium Development Goals. The choice of Vietnam, India (one state) and China (one province) as study sites has been based on their high rates of overall maternal ill-health, and the spectrum of contextual issues that determine the need for adequate stewardship and regulation.

The project will evaluate stewardship and regulation within and across the study countries, will identify gaps and will suggest ways of improving stewardship and regulation. The outputs will include policy guides for national and international health policy makers and recommendations for national standards of stewardship and regulation. The project will contribute to improved health policy decisions related to the provision and financing of equitable maternal health services within Vietnam, India, China and wider.

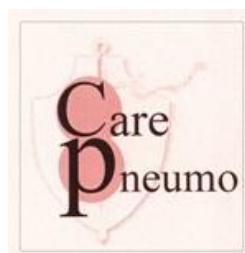
Project Partners:

1. University of Leeds, Nuffield Centre for International Health & Development, United Kingdom
2. Prins Leopold Instituut voor Tropische Geneeskunde, Belgium
3. Koninklijk Instituut voor de Tropen, Netherlands
4. Hanoi School of Public Health, Viet Nam
5. **Institute of Public Health, India**
6. Fudan University, China

Project Details:

Call: HEALTH-2007-B
Project Number: 222970
Instrument: CP-SICA
Project Start Date: 1 July 2009
Project Duration: 36 months
Project Cost: 3 732 432 €
EC Contribution: 2 999 895 €
For more information: <http://www.leeds.ac.uk/nuffield/research/HESVIC.htm>

Project Title: Combating Antibiotics Resistant Pneumococci by Novel Strategies Based on in vivo and in vitro Host – Pathogen Interactions
Project Acronym: CAREPNEUMO
Activity Area: Host-pathogen interactions in infections by Streptococcus pneumoniae



Project Description:

The diseases caused by Streptococcus pneumoniae are a major public health problem all over the world. Children, elderly people and immuno-compromised individuals are the high-risk targets for pneumococcal diseases. In spite of the availability of a large number of antibiotics the mortality and morbidity due to S. pneumoniae infections remain very high. There are two reasons for this: Firstly, the increasing antibiotic resistance among pneumococcal strains, and secondly, a current vaccine, though effective for certain serotypes, leads to serotype replacement. For the development of combat strategies it is essential to identify new intervention strategies, for which an understanding of host-pathogen interaction is a prerequisite. This proposal would apply a multi-disciplinary approach that includes epidemiology, host-pathogen interactions, infection models and intervention strategies to combat antibiotic resistant S. pneumoniae. The consortium brings together 12 research organizations and 1 SME with expertise in the above-mentioned areas. The major objectives of this consortium will be 1. monitoring of prevalent S. pneumoniae serotypes and their resistance profiles in different countries, 2. analysis of host-pathogen interactions and identification of potential therapeutic targets and vaccine candidates, 3. providing a basis for the development of improved vaccine and intervention strategies. This joint international effort would contribute towards novel control strategies, especially of antibiotic resistant S. pneumoniae strains.

Project Partners:

1. *Helmholtz Zentrum fuer Infektionsforschung GmbH, Germany*
2. Universitaetsklinikum Aachen, Germany
3. National and Kapodistrian University of Athens, Greece
4. National Medicines Institute, Poland
5. Instituto de Medicina Molecular, Portugal
6. Hospital de Pediatria S.A.M.I.C, Argentina
7. **Post Graduate Institute of Medical Education and Research, India**
8. University of Glasgow, United Kingdom
9. Consejo Superior de Investigaciones Cientificas, Spain
10. Ludwig-Maximilians-Universitaet Muenchen, Germany
11. Universidad Miguel Hernandez, Spain
12. University of Basel, Switzerland
13. Protea Vaccine Technologies Ltd., Israel

Project Details:

Call: HEALTH-2007-B
Project Number: 223111
Instrument: CP-FP
Project Start Date: 1 March 2009
Project Duration: 36 months
Project Cost: 3 969 999 €
EC Contribution: 2 999 999 €
For more information: <http://www.helmholtz-hzi.de/en/carepneumo/home/>

Project Title: Development of a DNA vaccine for visceral leishmaniasis
Project Acronym: LIESHNAVAX
Activity Area: Development of a Leishmania vaccine



Project Description:

This project will focus on the preclinical development of a DNA vaccine for human visceral leishmaniasis. The project is based upon the DNA vaccine technology and immunomodulators developed at Mologen AG (Berlin, Germany), which are in clinical development for cancer and 3-5 known antigens that already have demonstrated profiles of protection in animal models of leishmaniasis. Antigens will be selected on the basis of preset criteria to assure protection in high proportion of target populations and against many different species of Leishmania. In vitro and in vivo models will be used to evaluate the prophylactic and therapeutic efficacy of the DNA vehicle with selected antigens alone and in combination with and without immunomodulator. Full toxicology studies will be performed on selected candidate vaccines. Training in preclinical development and clinical trials (ICH-GCP) are an important part of the proposal. Sites will be selected and ready to initiate clinical trials at the end of this project (3 years).

Project Partners:

1. London School of Hygiene & Tropical Medicine, United Kingdom
2. Mologen AG, Germany
3. Charité - Universitätsmedizin Berlin, Germany
4. **Indian Institute of Chemical Biology, India**
5. Institut Pasteur de Tunis, Tunisia
6. The Hebrew University of Jerusalem, Israel
7. **Rajendra Memorial Research Institute of Medical Sciences, India**

Project Details:

Call: HEALTH-2007-B
Project Number: 223189
Instrument: CP-SICA
Project Start Date: 1 November 2008
Project Duration: 36 months
Project Cost: 3 871 566 €
EC Contribution: 2 989 200 €
For more information: <http://www.leishnavax.org/>

Project Title: Pre-clinical studies of a PSA-based human vaccine candidate targeting visceral, cutaneous and mucocutaneous Leishmaniasis and Development of the associated procedures for further clinical trials

Project Acronym: RAPSODI

Activity Area: Development of a Leishmania vaccine



Project Description:

The global aim of RAPSODI is :

- to develop a human vaccine candidate against most or all Leishmania species that cause the most severe leishmaniasis in the world. An unique vaccinal solution will thus be provided to protect against the various clinical phenotypes (namely visceral, cutaneous and mucocutaneous leishmaniasis, VL, CL and ML respectively).
- to establish all the associated procedures required for the subsequent clinical trials, such as the selection of the appropriate patients and assessment of vaccine efficiency.

For that purpose, an international consortium constituted of countries from endemic areas (India, Peru, Tunisia, Spain and France) and embracing multi-disciplinary approaches has been set-up.

Based on successful results on VL dogs, the best VL animal model to date, RAPSODI will propose a second generation human-compatible vaccine candidate and confirm its activity in pre-clinical studies. As the chosen antigen is common to most, if not all, Leishmania species, an ambitious universal immunoprotective response is being sought.

RAPSODI will also address the question of population selection in order to ascertain relevant and meaningful clinical trials and vaccination campaigns. Indeed, resistant individuals, when involved in either vaccinated or placebo groups, represent important bias to the analysis of the results. RAPSODI will investigate further the parasitological, immunological and genetic features of such clinical status, and will subsequently apply the generated knowledge to the development of assays and field tests, which represent stand-alone results.

The package (vaccine candidate + diagnostic/prognostic tools) proposed by RAPSODI represents a global solution, and as such is believed to have a real impact on the worldwide leishmaniasis problem.

Project Partners:

1. VIRBAC, France
2. Institut de Recherche pour le Développement, France
3. Instituto de Salud Carlos III, Spain
4. Consejo Superior de Investigaciones Científicas, Spain
5. **Institute of Pathology, India**
6. Instituto de Medicina Tropical Alexander von Humboldt, Peru
7. Institut Pasteur de Tunis, Tunisia
8. ALMA Consulting Group S.A.S, France

Project Details:
Call: HEALTH-2007-B
Project Number: 223341
Instrument: CP-SICA
Project Start Date: 1 January 2009
Project Duration: 36 months
Project Cost: 3 880 001 €
EC Contribution: 2 737 301 €
Project Website: www.fp7-rapsodi.eu

Project Title: Sustaining research momentum over the coming decades: mentoring the next generation of researchers for tuberculosis

Project Acronym: TBSusgent

Activity Area: Next generation of researchers for HIV/AIDS, malaria, tuberculosis and neglected infectious diseases

Project Description:

Tuberculosis is an international public health crisis of catastrophic proportions. The relative lack of TB research and funded investigators over the last several decades has been acknowledged by the The Stop TB Partnership and Global Stop TB Plan. In order to sustain research momentum over the next few decades suitably qualified investigators, who are the next generation of TB researchers, particularly from developing countries, will have to be nurtured and supported. This proposal seeks to, by building on existing research and capacity development programmes, create a scientific fellowship programme focussed on activities encompassing poverty-related disease i.e. tuberculosis (TB). It seeks further to facilitate career progression of developing country clinical-scientists through a programme offering scientific training and a network of mentors.

Project Partners:

1. *University College London, United Kingdom*
2. University of Sassari, Italy
3. **All India Institute of Medical Sciences, India**
4. **Sri Venkateswara Institute of Medical Sciences, India**
5. University of Cape Town, South Africa
6. McGill University, Canada
7. University of Munich (LMU), Germany

Project Details:

Call: HEALTH-2007-B

Project Number: 223340

Instrument: CSA-SA

Project Start Date: 1 November 2008

Project Duration: 36 months

Project Cost: 1 800 400 €

EC Contribution: 1 350 300 €

For more information: <http://tbsusgent.org/>

Project Title: European network for global cooperation in the field of AIDS & TB
Project Acronym: EUCO-NET
Activity Area: Promotion and facilitation of international cooperation in areas relevant to the objectives of this Theme



Project Description:

Background

Tuberculosis and HIV/AIDS are on the rise worldwide, representing a global public health problem with considerable mutual interaction: TB is the leading cause of mortality for people living with HIV/AIDS, and HIV is the most potent force driving the TB epidemic in countries with a high prevalence of HIV. Especially in rural areas of Africa, Latin America, India and Russia both diseases form a deadly combination affecting large populations: In 2006, 39.5 million people suffered from HIV, and 2 billion people were infected with Mycobacterium tuberculosis, the causative agent of TB. Approximately 11 million people are "co-infected" with both diseases.

Up to now, there is a massive failure to respond to the dual epidemic in an integrated way, and despite an increasing awareness worldwide, greater commitment and increased funding, current prevention and treatment efforts as well as coordinated research initiatives need to be strengthened to address the challenge of TB-HIV coinfection. TB and HIV programmes worldwide still work largely in isolation from each other and are focussing on national levels, although the urgent need to combat HIV and TB is recognized internationally. Additionally, scientists still primarily work with colleagues from the same field of research instead of collaborating with partners in complementary fields.

Objective

The objective of the support action is to provide an overview of the state of the art in HIV and TB research and disease management in the different partner countries, to identify global research priorities and to boost international cooperation between leading HIV and TB experts from Europe and those countries mainly affected by the two diseases - Russia, Latin America, South Africa and India.

Project Partners:

1. Saarland University, Germany
2. Prins Leopold Instituut voor Tropische Geneeskunde, Belgium
3. Azienda Ospedaliero-Universitaria Careggi, Italy
4. Istituto Superiore di Sanita, Italy
5. European AIDS Treatment Group, Germany
6. Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Germany
7. Central TB Research Institute Russian Academy of Medical Sciences, Russian Federation
8. Federal Scientific and Methodological AIDS Centre, Russian Federation
9. **Seth Research Foundation, India**
10. Stellenbosch University, South Africa
11. Fundacion Pablo Cassara Centro de Ciencia y Tecnologia Dr. César Milstein, Argentina
12. Fundação Oswaldo Cruz, Brazil
13. Universidad de Antioquia, Colombia
14. European Research and Project Office GmbH, Germany

Project Details:

Call: HEALTH-2007-B
Project Number: 223373
Instrument: CSA-SA
Project Start Date: 1 November 2008
Project Duration: 18 months
Project Cost: 827 264 €
EC Contribution: 827 264 €
Project Website: www.euco-net.eu

Project Title: Developing efficient and responsive community based micro health insurance in India
Project Acronym: CBHI INDIA
Activity Area: Universal and equitable access to health care and health financing

Project Description:

Two generations of top-down decisions on health financing systems have produced very modest results for poor people, poor countries or indeed for the major donors/funders. In most developing countries, including India, the lion's share of health spending is made out of pocket. Impoverishment, low access – especially for weaker segments of the population such as women and children – and thus bad health status are consequences. Health insurance has the potential to remedy or at least reduce the severe consequences of unforeseen health care expenditures. Recently, a growing number of community based health insurance (CBHI) schemes emerge in India and other developing countries. It is expected that CBHI can (i) help mobilizing additional resources for health financing, (ii) provide financial protection and (iii) increase access to health care and hence ultimately the health status of the rural population. Community based health insurance represent the highest hope for extension of insurance amongst the poor, drawing on experience of many western countries and Japan. However, in order to make use of the scarce resources available and build systems offering value to the poor, it is important to have a detailed and evidence based understanding on how to build an efficient and responsive CBHI-system. This proposed project sets out to close the knowledge gap on aspects important for the successful implementation of CBHI. It does so through a set of controlled field experiments through which CBHI is implemented in villages of three states of India. Rigorous longitudinal research documents the learning and makes it available for replication elsewhere. We apply quantitative research along with in depth qualitative research and spatial data. It is the project's overall objective to: Use affordable, responsive and inclusive Community Based Health Insurance to increase: (i) Equitable access to healthcare and (ii) Financial protection.

Project Partners:

1. *Erasmus University Rotterdam MC , Netherlands*
2. *Universität zu Köln. Germany*
3. **Sarvajan Unnati Bodhini, India**
4. **BAIF Development Research Foundation, India**
5. **Nidan, India**
6. **Shramik Bharti, India**
7. *Beema Samiti (Insurance Board Nepal), Nepal*
8. *Sanasa Insurance Company Ltd, Sri Lanka*

Project Details:

Call: HEALTH-2007-B
Project Number: 223518
Instrument: CP-SICA
Project Start Date: 1 July 2009
Project Duration: 60 months
Project Cost: 4 008 006 €
EC Contribution: 2 999 999 €
Project Website: <http://www.microinsuranceacademy.org/content/developing-efficient-responsive-community-based-health-insurance-cbhi-india>

Project Title: Towards the establishment of a permanent European Virtual Institute dedicated to Malaria Research
Project Acronym: EVIMalaR
Activity Area: Integration of European efforts in research on malaria



Project Description:

This is a proposal from 42 partners from 33 institutes to form a NoE that will seek to integrate European malaria research that is directed towards a better understanding of the basic biology of the parasite, its vector and of the biology of the interactions between the parasite and both its mammalian host and vectors. All the member institutes and researchers have demonstrated both their excellence and their ability to contribute to a successful network. The structure of the proposed network significantly evolves prior concepts of network structure introducing new modes of research that have recently emerged. Comprising of 5 research clusters the core activities will include molecular cell biology of the parasite, host immunity, vector biology, population biology and systems biology. One arm of the network activities will be concerned with the timely and effective translation of research respecting the IP rights of partner institutes. The network will also contribute significantly to the production of the next generation of malaria researchers through the operation of an expanded European PhD School for malaria research based at EMBL, students enjoying two supervisors based in different member states. Bespoke training courses for PhD students and network personnel will be offered throughout the duration of the network to maximise individual potential. To create a long term benefit from network activities a limited programme of post-doctoral fellowships within the network will be established. Furthermore, individual career mentoring facilities and an alumni association will continue to guide and engage network graduates. New members will be affiliated annually on a competitive basis with an emphasis on young, emerging Principle Investigators. Through the establishment of an umbrella Foundation and active lobbying of government and non-government funding agencies as well as the establishment of a charitable profile the network will strive to become self-determining.

Project Partners:

1. *University of Glasgow, United Kingdom*
2. *Academisch Ziekenhuis Leiden - Leids Universitair Medisch Centrum, Netherlands*
3. *Bernhard-Nocht-Institut fuer Tropenmedizin, Germany*
4. *College of Medicine, University of Ibadan, Nigeria*
5. *Imperial College of Science, Technology and Medicine, United Kingdom*
6. *Institute of Endemic Diseases University of Khartoum, Sudan*
7. *Kobenhavns Universitet, Denmark*
8. *Liverpool School of Tropical Medicine, United Kingdom*
9. *London School of Hygiene and Tropical Medicine, United Kingdom*
10. *Makerere University, Uganda*
11. *Philipps Universitaet Marburg, Germany*
12. *Radboud Universiteit Nijmegen - Stichting Katholieke Universiteit, Netherlands*
13. *Stockholms Universitet, Sweden*
14. *University of Oxford, United Kingdom*
15. *Universita Degli Studi di Roma la Sapienza, Italy*
16. *Universita Degli Studi di Torino, Italy*
17. *Universitaetsklinikum Heidelberg, Germany*
18. *Université de Geneve, Switzerland*
19. *Université de Yaounde I, Cameroon*
20. *University of Melbourne, Australia*
21. *Centre National de la Recherche Scientifique, France*
22. *Europaisches Laboratorium fur Molekularbiologie, Germany*
23. *Foundation for Research and Technology Hellas, Greece*

24. Genome Research Ltd., United Kingdom
25. Institut de Recherche pour le Développement, France
26. Institut National de la Santé et de la Recherche Médicale, France
27. Instituto de Medicina Molecular, Portugal
28. Institut Pasteur, France
- 29. International Centre for Genetic Engineering and Biotechnology, India**
30. Istituto Superiore di Sanita, Italy
31. Medical Research Council, United Kingdom
32. Smittskyddsinstitutet, Sweden
33. Stichting Biomedical Primate Research Center, Netherlands

Project Details:

Call: FP7-HEALTH-2009-single-stage
Project Number: 242095
Instrument: NoE
Project Start Date: 1 October 2009
Project Duration: 60 months
Project Cost: 13 410 000 €
EC Contribution: 12 000 000 €
Project Website: <http://www.evimalar.org>

Project Title: Clinical development of a Pfs48/45-based malaria transmission blocking vaccine

Project Acronym: REDMAL

Activity Area: Translational vaccine research for poverty-related diseases (HIV/AIDS, malaria and/or TB)

Project Description:

Malaria vaccines are needed to reduce the unacceptably high burden of disease and death in particular in the lowest income countries. Malaria vaccines aim at interruption of the life cycle of the parasite *Plasmodium falciparum* by induced immune responses in the humans. Transmission-blocking (TB) vaccines specifically aim at an arrest sexual stage development preventing the generation of infectious mosquitoes. TBMVs are the most effective tools for reduction of the spread of malaria in the population. This is indispensable for sustained control, elimination and eventually eradication. Pfs48/45 is the most advanced EU-developed malaria TB vaccine candidate. PF10C is a subunit of Pfs48/45 that has been produced with >95% purity inducing functional TB antibodies in 90% of the mice.

Objectives:

- 1) Manufacture PF10C at cGMP grade
- 2) Conduct a Phase 1a clinical trial with PF10C in Europe
- 3) Prepare for clinical trials with PF10C in Africa.

Workplan:

PF10C production will be optimized and up-scaled for release of clinical grade batches for human trials. In preclinical studies a PF10C/Alum platform will be the basis for addition of novel adjuvants for final formulation. Next, a Phase Ia trial will be conducted in Europe for safety, immunogenicity and efficacy of TB antibodies in a membrane feeding assay. To rapidly move clinical testing to Africa, preparation for Phase Ib and II will be concomitantly initiated including training of a clinical team. A Phase II trial of a malaria TB vaccine will require a specific design. Important transmission parameters will be collected and introduced in a mathematical model to study the possible impact on transmission in the selected study area followed by a development of a clinical trial protocol.

Milestones:

- 1) Safety, immunogenicity and TB antibody capacity induced by the PF10C vaccine in European volunteers
- 2) Protocols and team for Phase I and II clinical trials with PF10C in Africa in place

Project Partners:

1. *Radboud Universiteit Nijmegen - Stichting Katholieke Universiteit, Netherlands*
2. London School of Hygiene and Tropical Medicine, United Kingdom
3. **Genova Biopharmaceuticals, India**
4. Statens Serum Institut, Denmark
5. The Good Samaritan Foundation (Kilimanjaro Christian Medical Centre Gsf Kcmc), Tanzania

Project Details:

Call: FP7-HEALTH-2009-single-stage

Project Number: 242079

Instrument: CP-FP

Project Start Date: 1 March 2010

Project Duration: 48 months

Project Cost: 4 039 867 €

EC Contribution: 2 999 998 €

Project Website: http://ec.europa.eu/research/health/infectious-diseases/poverty-diseases/projects/209_en.htm

Project Title: Use of a multi-drug pill in reducing CV events
Project Acronym: UMPIRE
Activity Area: Improved treatment of chronic diseases in developing countries



Project Description:

Cardiovascular disease is the focus of this proposal as it is the leading cause of mortality worldwide. People with established vascular disease represent a target for secondary prevention using combination therapy that addresses multiple risk factors. Barriers to effective delivery of proven secondary preventative treatments create important gaps in the uptake. These gaps vary in different countries. Complexity and cost of treatment confer particularly difficult barriers; typically an individual recovering from a stroke or heart attack might be advised to take multiple medications to address cholesterol, blood pressure and platelet function. A combination once daily polypill may address these issues. Such a pill, the Red Heart Pill, has been formulated by Dr Reddy's Laboratories in India. It is remarkably inexpensive with a projected annual cost in India of about €15. Evidence of safety and efficacy of this low-cost fixed-dose, once-daily polypill derived from a carefully conducted clinical trial will support its use in resource-poor countries and internationally. This project aims to evaluate whether provision of a cardiovascular polypill compared with usual medications improves adherence to therapies and clinical outcomes among high-risk patients. Further aims are to measure prescription of combination therapy, barriers to adherence, quality of life, safety, cardiovascular events, and healthcare resource consumption. The results will be used to develop recommendations for equitable access relevant to both Europe and India. India has been chosen as an ICPC partner as it is the home of a large global generic pharmaceutical company – Dr Reddy's – and about 1 in 4 heart attacks globally occur in India. Parallel polypill projects running in Australia and New Zealand will afford the opportunity of pooling data to assess effects on cardiovascular outcomes. This synergy will enhance the generalisable impact of the UMPIRE trial.

Project Partners:

1. *Imperial College of Science, Technology and Medicine, United Kingdom*
2. **Public Health Foundation of India, India**
3. Royal College of Surgeons in Ireland, Ireland
4. Universitair Medisch Centrum Utrecht, Netherlands
5. **Dr. Reddy's Laboratories Ltd, India**
6. George Institute for International Health, Australia
7. **George Institute for International Health – India, India**

Project Details:

Call: FP7-HEALTH-2009-single-stage
Project Number: 241849
Instrument: CP-FP
Project Start Date: 1 February 2010
Project Duration: 36 months
Project Cost: 3 920 961 €
EC Contribution: 2 999 868 €
Project Website: <http://www.georgeinstitute.org/major-collaboration-investigates-four-one-polypill>

Project Title: **Syndromic approach to Neglected Infectious Diseases (NID) at primary health care level: an international collaboration on integrated diagnostic-treatment platforms**

Project Acronym: **NIDIAG**

Activity Area: Comprehensive control of Neglected Infectious Diseases



Project Description:

Neglected Infectious Diseases (NID) such as trypanosomiasis, leishmaniasis, schistosomiasis and soil-transmitted helminthiasis receive less than 5% of the global investment for tropical diseases research. Clinical praxis in disease-endemic countries (DEC) is rarely evidence-based and does not make use of the latest innovations in diagnostic technology. NID-related research on diagnostics is particularly under-funded, and diagnostic tools are lacking for a number of NID.

The aim of this proposal is to bridge the gap between existing technological innovation in diagnostics and clinical care practice for NID in resource-poor settings. The specific objectives are to develop simple, cost-effective diagnosis-treatment algorithms for three NID-related clinical syndromes: the persistent fever, the neurological and the digestive syndromes. Evidence-based algorithms for the primary care level will be designed with a patient-centred approach, following guidance from DEC stakeholders and making the best possible use of existing assays and treatments. Relevant innovative technology will be introduced when required and comprehensive diagnostic platforms will be developed according to the specific epidemiological contexts in Africa and South-Asia.

The research consortium brings together a network of clinical epidemiologists, a diagnostics development group, several partners from academia and SMEs. The consortium further includes work packages on reference laboratory, economic evaluation, quality assurance and translation to policy.

By developing accurate and affordable diagnostic platforms and by optimizing diagnostic-treatment algorithms this project will rationalise treatment use, circumvent progression to severe presentations and thereby reduce NID morbidity/mortality and hinder the emergence of resistances. The project will result in two main deliverables: policy recommendations for health authorities in DEC, and a series of innovative diagnostic platforms.

Project Partners:

1. *Prins Leopold Instituut voor Tropische Geneeskunde, Belgium*
2. Faculty of Medicine, Gadjah Mada University, Indonesia
3. London School of Hygiene and Tropical Medicine, United Kingdom
4. Université de Geneve, Switzerland
5. University of Khartoum, Sudan
6. Coris Bioconcept, Belgium
7. Inserm - Transfert SA, France
8. Bp Koirala Institute of Health Sciences, Nepal
9. Institut National de Recherche Biomédicale, Democratic Republic of Congo
10. Institut National de Recherche en Santé Publique, Mali
11. **Kala-Azar Medical Research Center - Sitram Memorial Trust, India**
12. Schweizerisches Tropeninstitut, Switzerland
13. Sihanouk Hospital Center of Hope, Cambodia

Project Details:

Call: FP7-HEALTH-2010-single-stage
Project Number: 260260
Instrument: CP-SICA
Project Start Date: 1 Novemember 2010
Project Duration: 60 months
Project Cost: 7 677 839 €
EC Contribution: 5 950 000 €
Project website: www.nidiag.org

Project Title: More Medicines for Tuberculosis
Project Acronym: MM4TB
Activity Area: Target characterisation and hit-to-lead progression in tuberculosis (TB) drug development



Project Description:

The More Medicines for Tuberculosis (MM4TB) consortium evolved from the highly successful FP6 project, New Medicines for TB (NM4TB), that delivered a candidate drug for clinical development two years ahead of schedule. Building on these firm foundations and exploiting its proprietary pharmacophores, MM4TB will continue to develop new drugs for TB treatment. An integrated approach will be implemented by a multidisciplinary team that combines some of Europe's leading academic TB researchers with two major pharmaceutical companies and four SMEs, all strongly committed to the discovery of anti-infective agents. MM4TB will use a tripartite screening strategy to discover new hits in libraries of natural products and synthetic compounds, while concentrating on both classical and innovative targets that have been pharmacologically validated. Whole cell screens will be conducted against *Mycobacterium tuberculosis* using in vitro and ex vivo models for active growth, latency and intracellular infection. Hits that are positive in two or more of these models will then be used for target identification using functional genomics technologies including whole genome sequencing and genetic complementation of resistant mutants, yeast three hybrid, click chemistry and proteomics. Targets thus selected will enter assay development, structure determination, fragment-based and rational drug design programs; functionally related targets will be found using metabolic pathway reconstruction. Innovative techniques, based on microfluidics and array platforms, will be used for hit ranking, determining rates of cidal activity and confirming mechanism of action. Medicinal chemistry will convert leads to molecules with drug-like properties for evaluation of efficacy in different animal models and late preclinical testing.

Project Partners:

1. *Ecole Polytechnique Federale de Lausanne, Switzerland*
2. *Eidgenössische Technische Hochschule Zürich, Switzerland*
3. *Queen Mary and Westfield College, University Of London, United Kingdom*
4. *The Chancellor, Masters and Scholars of the University Of Cambridge, United Kingdom*
5. *Universidad del Pais Vasco, Spain*
6. *Universidad de Zaragoza, Spain*
7. *Universita Degli Studi del Piemonte Orientale Amedeo Avogadro, Italy*
8. *Universita Degli Studi di Padova, Italy*
9. *Universita Degli Studi di Pavia, Italy*
10. *University of the Witwatersrand Johannesburg, South Africa*
11. *Univerzita Komenskeho V Bratislave, Slovakia*
12. *Uppsala Universitet, Sweden*
13. **Indian Institute of Science, India**
14. **Astrazeneca India Pvt Ltd, India**
15. **Cellworks Research India Private Limited, India**
16. *CLONDIAG GmbH, Germany*
17. *Collaborative Drug Discovery, Inc, United States*
18. *Sanofi-Aventis Recherche & Developpement, France*
19. *Tydock Pharma, Italy*
20. *Vichem Chemie Kutato Kft, Hungary*
21. *Institution of the Russian Academy of Sciences, A.N. Bach Institute Of Biochemistry, Russian Federation*
22. *Institut Pasteur, France*
23. *Institut Pasteur Korea, Republic of Korea*
24. *John Innes Centre, United Kingdom*

Project Details:
Call: FP7-HEALTH-2010-single-stage
Project Number: 260872
Instrument: CP-IP
Project Start Date: 1 February 2011
Project Duration: 60 months
Project Cost: 16 698 607 €
EC Contribution: 11 873 052 €
Project website: <http://www.mm4tb.org/>

Project Title: Large scale innovative pro-poor programs focused on reducing maternal mortality in India: a proposal for impact evaluation

Project Acronym: MATIND

Activity Area: Impact and cost-effectiveness of existing major health programmes



Project Description:

This application proposes the evaluation of two innovative large scale programs, which were set up to decrease maternal mortality among women living below the poverty line in India. India contributes 20% of global maternal deaths and has 26% of her population living below poverty line, and continues to have one of the highest maternal mortality ratios in the world. Progress with MDG 5 in India (slow thus far) is a prerequisite to achieving the goal by 2015.

Both Indian programs were started to reduce maternal deaths by promoting institutional delivery and reducing access barriers to maternal healthcare for poor women. The two large scale, state run programs operate in two large Indian provinces. Each of these programs operates through the use of different innovative demand side financing mechanisms, which are specifically aimed at improving access for vulnerable groups. One program is a conditional cash transfer paid retrospectively to the woman on delivering in an institution while the other is a targeted bursary paid prospectively to accredited healthcare providers for delivery of the woman living below poverty. All payments are made by the state. While both programs are based on similar concepts, i.e. financial incentives for the provision and utilization of care; and the participation of the private sector – there are major differences in the socioeconomic contexts in which each program operates, financing mechanisms, provider payment models and incentives, quantum of financial assistance, level of private sector involvement, all of which will have a bearing on desired maternal health outcomes. China is a proposed partner on this application, as it is able to contribute important lessons regarding rural maternal health financing programs that were studied there in FP6.

No such large scale demand side financing programs for maternal health have been evaluated before. The field is fairly new and recent scientific literature has recommended robust evaluations

Project Partners:

1. *Karolinska Institutet, Sweden*
2. **Indian Institute of Management, Ahmedabad, India**
3. Liverpool School of Tropical Medicine, United Kingdom
4. **Ruxmaniben Deepchand Gardi Medical College, India**
5. Zhejiang University, China

Project Details:

Call: FP7-HEALTH-2010-single-stage

Project Number: 261304

Instrument: CP-SICA

Project Start Date: 1 April 2011

Project Duration: 48 months

Project Cost: 3 909 819 €

EC Contribution: 2 969 174 €

Project website: <http://matind.eu/>

Project Title: Developing and Testing of New Methodologies to Monitor and Evaluate Health Related EU-Funded Interventions In Cooperation Partner Countries



Project Acronym: EVAL-HEALTH

Activity Area: Methodology to evaluate and monitor health policy implementation and performance of EU funded interventions in developing countries

Project Description:

EVAL-HEALTH is an R&D project which has as its main goal to contribute to strengthen monitoring and evaluation of European Union (EU) funded interventions in developing countries in the specific area of Health, The major objectives of EVAL-HEALTH are:

1) To develop a sound methodological approach to evaluate and monitor implementation and performance of EU funded interventions in developing countries in the health sector by: i) Identifying best practices in M&E aid and their impact on health issues from major international donors and agencies active in the field. ii) obtaining comprehensive insight of the EC funded bilateral interventions in health sector. iii) Developing specific methodological models and tools for M&E of the impact of EU funded bilateral interventions (sector/budget support, Individual projects, R&D actions) iv) Testing on the field the suitability and applicability of the developed methodologies through case studies methodology.

2) To understand how the developed tools and methodologies adapts to different EU interventions.

3) To disseminate the results obtained in the project to the main project stakeholders as a means to increase and improve European funded interventions effectiveness in the health sector.

EVAL-HEALTH is planned as a 36 month R&D project, with 8 participants, 4 from European countries (Spain, UK, The Netherlands and Portugal) and 4 from developing countries (South Africa, Nigeria, Thailand and India).The consortium will benefit from the inclusion of three high-level external Advisory Committees (Donors, Recipients and Scientific). These committees will be formed by relevant experts on M&E health aid in developing countries and will provide an important accumulated expertise to the project.

As results of the EVAL-HEALTH project, EC Services and development partner countries will have improved methodologies specifically developed for health aid to strengthen M&E of EU funded interventions.

Project Partners:

1. *Sociedad para el Fomento de la Innovación Tecnológica S.L., Spain*
2. ASEAN Institute for Health Development, Mahidol University, Thailand
3. Health Policy Research Group, Nigeria
4. Instituto de Higiene e Medicina Tropical, Portugal
5. University of Leeds, United Kingdom
6. **Association for Stimulating Know How, India**
7. NEPAD, South Africa
8. Het Koninklijk Instituut Voor de Tropen, Netherlands

Project Details:

Call: FP7-HEALTH-2010-single-stage
Project Number: 261389
Instrument: CP-SICA
Project Start Date: 1 January 2011
Project Duration: 36 months
Project Cost: 3 416 745 €
EC Contribution: 2 866 402 €
Project website: <http://www.eval-health.eu/>

Project Title: Socially inclusive health care financing in West Africa and India
Project Acronym: Health Inc
Activity Area: Financing models for accessible health care



Project Description:

Recent health financing reforms in low and middle income countries aim to introduce affordable prepayment and subsidies for low socio-economic groups. However, while such reforms have led to increased utilization of care, often the poor and informal sector continue to be excluded from coverage.

Health Inc. puts forward the hypothesis that social exclusion is an important cause of the limited success of recent health financing reforms. First, social exclusion can explain barriers to accessing health care due to disrespectful, discriminatory or culturally inappropriate practices of medical professionals and their organisations, within the context of poor accessibility and quality of care. As a consequence, removing financial barriers does not necessarily guarantee equitable access to care. Second, social exclusion can explain barriers to accessing the health financing mechanism itself. Differential access to information, bureaucratic processes, complex eligibility rules and/or crude and stigmatizing criteria for means testing prevent socially excluded groups from enrolling in financing schemes, even if they are fully subsidised. Social inclusion, by contrast, may explain why more powerful, wealthy and vocal groups disproportionately 'capture' the benefits of publicly funded health care.

In four countries/states (Ghana, Karnataka, Maharashtra and Senegal), Health Inc. employs mixed methods to analyse whether different types of financing arrangements overcome social exclusion and also increase social inclusion by empowering socially marginalised groups. A multi-sectoral stakeholder analysis will also explore whether vulnerable populations participate in policy making and whether their needs are understood.

Health Inc. will compare policies across contexts in order to elicit lessons. Local policy makers and population groups will then be consulted in a feasibility analysis to identify and test policy recommendations, which will be widely disseminated.

Project Partners:

1. *London School of Economics and Political Science, United Kingdom*
2. Prins Leopold Instituut Voor Tropische Geneeskunde, Belgium
3. **Tata Institute of Social Sciences, India**
4. University of Ghana - Institute of Statistical, Social and Economic Research, Ghana
5. Centre de Recherche sur les Politiques Sociales, Senegal
6. **Institute of Public Health, India**

Project Details:

Call: FP7-HEALTH-2010-single-stage
Project Number: 261440
Instrument: CP-SICA
Project Start Date: 1 May 2011
Project Duration: 36 months
Project Cost: 3 544 246 €
EC Contribution: 2 914 406 €
Project website: <http://www.healthinc.eu/>

Project Title: Accessing Medicines in Africa and South Asia
Project Acronym: AMASA
Activity Area: Access to medicines



Project Description:

The main aim of the proposed research is to investigate how the interplay of patent regimes, pharmaceutical regulation, availability of drug production facilities, health care infrastructure and service provision, and engagement by foreign donors influence appropriate, affordable access to medicines in South Asia and Sub-Saharan Africa. We aim to map patterns of production, distribution, supply and consumption of medicines within five health care areas – HIV/AIDS, Malaria, Reproductive Health, Tuberculosis (TB) control, and Mental Health. We also plan to investigate the strategies and influence of selected Indian, Chinese and Brazilian producers who are active as exporters, partners in joint ventures, or as direct producers in the selected South Asian and African countries.

Project Partners:

1. *The University of Edinburgh, United Kingdom*
2. Universiteit Gent, Belgium
3. **The Foundation For Research In Community Health, India**
4. University of the Western Cape, South Africa
5. Schweizerisches Tropeninstitut, Switzerland
6. Makerere University, Uganda
7. Mbarara University of Science and Technology, Uganda

Project Details:

Call: FP7-HEALTH-2009-single-stage
Project Number: 242262
Instrument: CP-SICA
Project Start Date: 1 May 2010
Project Duration: 36 months
Project Cost: 3 905 826 €
EC Contribution: 2 995 790 €
Project website: www.amasa-project.eu/

Project Title: ToxBank – Supporting Integrated Data Analysis and Servicing of Alternative Testing Methods in Toxicology



Project Acronym: ToxBank

Activity Area: Integrated data analysis and servicing

Project Description:

ToxBank establishes a dedicated web-based warehouse for toxicity data management and modelling, a 'gold standards' compound database and repository of selected model compounds, and a bank for cells, cell lines and tissues of relevance for in vitro systemic toxicity research carried out across the FP7 HEALTH.2010.4.2.9 Alternative Testing Strategies program. The project will also include specific infrastructural and service functions to provide a sustainable resource going beyond the lifetime of the research projects.

The following activities will be carried out:

a) Establishment of a dedicated web-based data warehouse

The ToxBank Data Warehouse will establish a centralised compilation of data for systemic toxicity. Data generated under the research program and additional public data will be uploaded and analysed and the outcome integrated whenever possible into computerised models capable of predicting repeated-dose toxicity.

b) Establishment of a database of selected model compounds

The ToxBank Gold Compound Database will meet the highest quality standards. Chemicals in this database will be backed up by high-quality repeated-dose toxicity in vivo data from animal studies and, whenever available, adverse event and epidemiological data from humans. Selected model compounds for training or validation, and standard operating procedures for data quality control, processing and analyses will be provided.

c) Establishment of a repository for the selected model compounds

The ToxBank Chemical Repository will ensure the availability of test chemicals accompanied by analytical quality control procedures to the research projects on the program.

d) Setting up of a cell and tissue bank for in vitro toxicity testing

An important service to European scientists will be the establishment of a banking network for access to qualified cells, cell lines (including stem cells and stem cell lines) and tissues and reference materials to be used in research activities.

Project Partners:

1. Douglas Connect, Switzerland
2. Karolinska Institutet, Sweden
3. Medizinische Universitaet Graz, Austria
4. Mount Sinai School of Medicine, United States
5. Politecnico di Milano. Italy
6. Universitat Konstanz, Germany
7. Helma Christoph, Switzerland
8. Ideaconult Limited Liability Company, Bulgaria
9. Leadscope, Inc., United States
10. Pharmatropo, Ltd., United States
11. Strategic Medicine BV – SMI, Netherlands
12. U.S. Environmental Protection Agency – EPA, United States
13. Health Protection Agency HPA, United Kingdom
14. **Indian Institute of Toxicology Research, India**

15. Istituto di Ricerche Farmacologiche Mario Negri, Italy
16. Lhasa Limited, United Kingdom

Project Details:

Call: FP7-HEALTH-2010-Alternative-Testing
Project Number: 267042
Instrument: CP-IP
Project Start Date: 1 January 2011
Project Duration: 60 months
Project Cost: 5 937 977 €
EC Contribution: 2 968 989 €
Project website: <http://toxbank.net/>

Project Title: A Treatment-Oriented Research Project of NCL Disorders as a Major Cause of Dementia in Childhood



Project Acronym: DEM-CHILD

Activity Area: Creating clinical and molecular tools for experimental therapy of paediatric neurodegenerative disorders causing childhood dementia in Europe and India

Project Description:

The DEM-CHILD project focusses on the main cause for childhood dementia in Europe, the neuronal ceroid lipofuscinoses (NCLs). The NCLs are neurodegenerative diseases characterized by dementia, blindness, epilepsy and physical decline leading to an early death of the patients. Since no cure is currently available, these disorders represent a serious social, medical, and economic challenge.

To date, eight NCL genes have been characterised. There is evidence suggesting that further gene loci remain to be identified. NCLs are under-diagnosed in many countries around the world as there is an overall lack of research, early diagnosis, treatment and expert availability. Furthermore, due to their broad genetic heterogeneity it is difficult to collect large numbers of genetically similar patients. As such, large therapeutic studies required for advances in treatment are difficult to initiate. The DEM-CHILD project will combine the expertise of (i) recognized European research teams with (ii) high-technology SMEs, and will (iii) collaborate with Indian experts on the following objectives:

1. High-technology SMEs will develop innovative cost- and time-effective testing and screening methods for all NCLs in order to ensure early diagnosis and thereby prevention.
2. DEM-CHILD will collect the world's largest, clinically and genetically best characterised set of NCL patients in order to study disease prevalence and precisely describe the natural history of the NCLs leading to the development of an evaluation tool for experimental therapy studies.
3. Novel biomarkers and modifiers of NCL will be identified to support the development of innovative therapies.
4. Focussing on the development of therapies for NCLs caused by mutations in intracellular transmembrane proteins, two complementary therapeutic strategies will be used and compared in eye and brain of mouse models: a) viral-mediated gene transfer and b) neural stem cell-mediated delivery of neuroprotective factors.

Project Partners:

1. *Universitaetsklinikum Hamburg-Eppendorf, Germany*
2. **Dept of Paediatrics Post Graduate Institute of Medical Sciences Chandigarh, India**
3. King's College London, United Kingdom
4. Universita Degli Studi di Verona, Italy
5. University College London, United Kingdom
6. Gabo: Mi Gesellschaft Fur Ablauforganisation: Milliarium Mbh & Co Kg Gab O, Germany
7. Imagenes GmbH, Germany
8. Zentrum für Stoffwechselfdiagnostik Reutlingen GmbH, Germany
9. Guys and St Thomas' NHS Foundation Trust, United Kingdom
10. Samfundet Folkhalsan I Svenska Finland RF, Finland

Project Details:

Call: FP7-HEALTH-2011-single-stage
Project Number: 281234
Instrument: CP-FP
Project Start Date: 1 October 2011
Project Duration: 36 months
Project Cost: 3 931 750 €
EC Contribution: 2 998 795 €
Project website: http://ec.europa.eu/research/health/medical-research/brain-research/projects/dem-child_en.html

Project Title: Asian Regional Capacity Development for Research on Social Determinants of Health
Project Acronym: ARCADE RSDH
Activity Area: Building sustainable capacity for research for health and its social determinants in low and middle income countries



Project Description:

This project will add new research training capacity at low and middle-income countries (LMICs) in Asia, for promoting research on social determinants of health (RSDH). The focus is doctoral and post doctoral training, institutional strengthening for education, financial and administrative research management, and LMICs-based network building. Novel capacity building approaches will reduce brain drain, be more climate friendly and encourage gender equity with LMICs-based training. Internet mounted downloadable modules in related disciplines, like epidemiology, anthropology, economic methods, etc., will support excellent interdisciplinary courses. Addressing social determinants of health and tackling health inequity are research intensive, incremental improvement to measurement and understanding, implementation and evaluation. Therefore LMICs need to grow their own capacity to strengthen RSDH: interdisciplinary, rigorous and relevant. ARCADE-RSDH will support evidence informed decision making by producing a stream of well-trained young RSDH scientists, the next generation of health system leaders and researchers in LMICs. Activities will be aimed at individuals, institutions and the network. Tongji Medical College of HUST (TJMC, China) and CBCI Society of Medical Education (SJNAHS, India) are two strong Asian Universities with RSDH focus. They will act as hubs in a network including TJMC, SJNAHS, Beijing Normal University (BNU, China), Zhejiang University (ZJU, China), Indian Institute of Health Management Research (IIHMR, India), Ruxmaniben Deepchand Gardi Medical College (RDGMC, India) and initially Sultan Qaboos University (SQU, Oman) and Hanoi Medical University (HMU, Vietnam), working with strong European RSDH institutions (Karolinska Institutet KI, Sussex University Institutet for Development Studies IDS and University of Tampere UTA). This region-wide approach will draw skills, resources and students to a new LMICs-based RSDH capacity development network.

Project Partners:

1. *Karolinska Institutet, Sweden*
2. Beijing Normal University, People's Republic of China
3. **CBCI Society for Medical Education, India**
4. Hanoi Medical University, Viet Nam
5. Huazhong University of Science and Technology, People's Republic of China
6. Institute of Development Studies, United Kingdom
7. Stellenbosch University, South Africa
8. Sultan Qaboos University, Oman
9. Tampereen Yliopisto, Finland
10. **Ujjain Charitable Trust Hospital and Research Centre, India**
11. Zhejiang University, People's Republic of China
12. The Gapminder Foundation, Sweden
13. **Indian Institute of Health Management Research, India**

Project Details:

Call: FP7-HEALTH-2011-single-stage
Project Number: 281930
Instrument: CSA-CA
Project Start Date: 1 December 2011
Project Duration: 48 months
Project Cost: 2 553 078 €
EC Contribution: 1 996 595 €
Project website: <http://www.arcade-project.org/rsdh>

Project Title: Diagonal Interventions to Fast-Forward Enhanced Reproductive Health
Project Acronym: DIFFER
Activity Area: Development and assessment of comprehensive and integrated interventions and programmes to improve reproductive health and health equity



Project Description:

Improving women's sexual and reproductive health (SRH) requires innovative strategies to maximise potential synergies between components of care. Most adverse reproductive health outcomes stem from unintended pregnancy, and acquisition and transmission of reproductive tract infections. Although proven solutions exist, their implementation has been fragmented, with limited population impact, and little access for populations most at risk, such as sex workers. Integration of SRH services is key to achieving universal access to reproductive health. However, with weakened health systems and an HIV pandemic, the way forward is uncertain. The essential package of services and models for delivering them at high coverage in resource-limited settings are unclear. To address this, we propose a 'diagonal' strategy, incorporating both 'horizontal' health systems strengthening and more targeted 'vertical' approaches. Horizontal programmes can reach large numbers of women, while vertical programs target high-risk populations, difficult to reach through a horizontal approach. The aim is improved SRH services through identifying best practices in delivering a combined package of interventions for general population women and female sex workers. The research will occur in Kenya, Mozambique, South Africa, and Mysore, India by a consortium of 3 African, 1 Indian and 2 European partners. Detailed situation and policy analyses will be conducted in each country, with key stakeholder and community participation, and will inform the design of context-specific interventions to be implemented as feasible and acceptable packages of interventions. We will apply health systems research methodology to evaluate effectiveness and sustainability, and to identify the determinants of successful, sustainable and replicable interventions. This project will help to define packages of SRH services and models for delivery that meet the needs of all women and impact positively on their health.

Project Partners:

1. *Universiteit Gent, Belgium*
2. University College London, United Kingdom
3. University of the Witwatersrand Johannesburg, South Africa
4. **Ashodaya Samithi, India**
5. Associacao Centro Internacional para Saude Reprodutiva, Mozambique
6. International Centre for Reproductive Health Association, Kenya

Project Details:

Call: FP7-HEALTH-2011-single-stage
Project Number: 282542
Instrument: CP-SICA
Project Start Date: 1 October 2011
Project Duration: 60 months
Project Cost: 3 700 085 €
EC Contribution: 2 997 443 €
Project website: <http://www.differproject.eu/>

Project Title: Genomic and lifestyle predictors of foetal outcome relevant to diabetes and obesity and their relevance to prevention strategies in South Asian peoples.

Project Acronym: GIFTS

Activity Area: Genetic and environmental factors in obesity and/or diabetes in specific populations



Project Description:

Despite a strong genetic component to diabetes and obesity, the rapidly rising prevalence of these disorders is due to adaptation to a changing environment. The epicentre of the 'diabetes epidemic' is in South Asia and this is reflected in the migrant populations in Europe. Current prevention strategies are focused on adult life and target over-nutrition in high-risk adults. However, for many population groups across the globe, these strategies ignore many key principles that underlie the increasing global prevalence of these diseases. A substantial portion of the South Asian people, living in their home countries experience nutrition deprivation, while after migration to Europe, may encounter nutritional abundance resulting in imbalance during their lifecourse. These conditions are of particular importance during foetal and early developmental stages where environmental insults may interact with genetic risk to induce 'foetal programming' of adult metabolic disease. Few groups have targeted early life programming as an opportunity for the prevention of diabetes/obesity in childhood and subsequent adult life and there are limited guidelines on this topic. The proposed grant will bring together a unique group of investigators in South Asia (India, Bangladesh and Pakistan) and Europe (UK, Norway, Germany and Finland) with SMEs of complementary expertise (Germany and Spain) combining prevention strategies, state-of-the-art genomics, social sciences and public health that focus on these early life predictors of disease. The major objective behind this collaborative and multi-disciplinary approach is to combine knowledge from the work packages on lifestyle, nutrition and genomics to both inform public health policy through guideline development and design a large-scale pragmatic intervention to prevent the metabolic syndrome, obesity and diabetes in South Asian populations aimed at early life taking into account multi-generational effects.

Project Partners:

1. Queen Mary and Westfield College, University of London, United Kingdom
2. Bangladesh Institute of Research and Rehabilitation for Diabetes, Endocrine and Metabolic Disorders, Bangladesh
3. Baqai Medical University, Pakistan
4. Helsingin Yliopisto, Finland
5. **King Edward Memorial Hospital, India**
6. London School of Hygiene and Tropical Medicine, United Kingdom
7. Technische Universitaet Dresden, Germany
8. The University of Exeter, United Kingdom
9. Universitetet I Oslo, Norway
10. University of East London, United Kingdom
11. University of Southampton, United Kingdom
12. BAP Health Outcomes Research SL, Spain
13. Instruct AG, Germany
14. Great Ormond Street Hospital for Children NHS Trust, United Kingdom
15. **Centre for Cellular and Molecular Biology, Council of Scientific And Industrial Research, India**
16. **Public Health Foundation of India, India**

Project Details:

Call: FP7-HEALTH-2011-two-stage
Project Number: 278917-2
Instrument: CP-SICA
Project Start Date: 1 February 2012
Project Duration: 36 months
Project Cost: 3 747 414 €
EC Contribution: 2 999 332 €
Project website: <http://www.gifts-project.eu/drupal/>

Project Title: Identification of epigenetic markers underlying increased risk of T2D in South Asians
Project Acronym: Epi-Migrant
Activity Area: Genetic and environmental factors in obesity and/or diabetes in specific populations

Project Description:

This project focuses on identification of epigenetic risk factors underlying the increased rates of type-2 diabetes (T2D) amongst South Asians in their home countries, migrants to Europe and other parts of the world. Known environmental and genetic factors explain only a small part of the increased risk of T2D among South Asians, who constitute the highest numbers of people with T2D worldwide.

We hypothesise that epigenetic modification contributes to the increased T2D risk amongst South Asians. We will carry out an epigenome-wide scan of DNA methylation in whole blood, among T2D cases and controls from non-migrant (living in India or Pakistan) and migrant (living in the UK) South Asians. Further testing of top-ranking markers will be carried out in South Asian T2D cases and controls from UK, India, Mauritius, Pakistan, Singapore and Sri Lanka. We will use results to investigate the mechanisms underlying the epigenetic modifications identified, to develop a predictive panel of lifestyle, environmental, genetic and epigenetic markers increasing susceptibility to incident T2D in South Asians, and to quantify the contribution of these risk factors to T2D amongst South Asians in diverse regional settings.

This research will improve understanding of epigenetic mechanisms underlying T2D, and may enable development of novel biomarkers and therapeutic strategies to reduce the burden of T2D amongst South Asians worldwide.

Project Partners:

1. *Imperial College of Science, Technology and Medicine, United Kingdom*
2. Faculty of Medicine, University of Kelaniya, Sri Lanka
3. Helsingin Yliopisto, Finland
4. Kotea, Mauritius
5. National University Of Singapore, Singapore
6. Oulun Yliopisto, Finland
7. President and Fellows of Harvard College, United States
8. The Chancellor, Masters and Scholars of the University of Cambridge, United Kingdom
9. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
10. Università Degli Studi di Milano, Italy
11. CellCentric Ltd, United Kingdom
12. National Center for Global Health and Medicine, Japan
13. Baker IDI Heart and Diabetes Institute Holdings Limited, Australia
14. **Devki Devi Foundation, India**

Project Details:

Call: FP7-HEALTH-2011-two-stage
Project Number: 279143-2
Instrument: CP-SICA
Project Start Date: 1 December 2011
Project Duration: 36 months
Project Cost: 3 884 977 €
EC Contribution: 2 999 052 €
Project website:

Project Title: Role of human papillomavirus infection and other co-factors in the aetiology of head and neck cancer in India and Europe

Project Acronym: HPV-AHEAD

Activity Area: Epidemiology and aetiology of infection-related cancers



Project Description:

Human papillomavirus (HPV) is responsible for approximately 25% of head and neck cancer (HNC) worldwide and appears to be associated with a better response to treatment and improved prognosis. Evidence suggests that HPV-induced HNC has steadily increased in the USA and some European countries in the last decades. However, whether this is a worldwide phenomenon and specific risk factors are associated with it remains to be proven. In addition, little is known on the natural history and risk factors of oral HPV infection. HPV-AHEAD network aims to address these and other unanswered questions on HNC etiology and epidemiology with a focus on the role of HPV. We will assemble and analyze a large collection of plasma/sera and HNC tissues from 42 centres in 16 European countries as well as HNC tissues from 7 Indian centres together with epidemiological and clinical data. HPV status in human specimens will be evaluated by different assays in central laboratories.

Epidemiological studies will be conducted to establish the overall proportion and type distribution of HPV-positive HNC at different anatomical sites in European and Indian regions as well as the time trend of the proportion of HPV-positive HNC in recent decades. Using the follow-up information on HNC patients, we will further investigate whether HPV positivity confers a better prognosis and survival. We will also conduct a study in HPV-vaccinated and non-vaccinated women in order to determine risk factors and natural history of oral HPV infections. In addition, we will search for new surrogate markers for oral HPV infection to facilitate novel screening strategies. Finally, the HPV-AHEAD consortium aims to transfer technology to Indian centres as well as to develop several strategies for the training of European and Indian researchers in infections and cancers. This study will provide important insights for the screening, diagnosis, treatment and prophylaxis of HPV-associated HNC in Europe, India and elsewhere.

Project Partners:

1. *Centre International de Recherche sur le Cancer, France*
2. Universiteit Antwerpen, Belgium
3. Deutsches Institut fuer Ernaehrungsforschung Potsdam Rehbrucke, Germany
4. Deutsches Krebsforschungszentrum, Germany
5. MTM laboratories AG, Germany
6. Universitaetsklinikum Heidelberg, Germany
7. Aristotelio Panepistimio Thessalonikis, Greece
8. **Rajiv Gandhi Centre for Biotechnology, India**
9. Istituto Europeo di Oncologia Srl, Italy
10. Fundacio Privada Institut d'Investigacio Biomedica de Bellvitge, Spain

Project Details:

Call: FP7-HEALTH-2011-single-stage

Project Number: 282562

Instrument: CP-FP

Project Start Date: 1 September 2011

Project Duration: 48 months

Project Cost: 4 192 380 €

EC Contribution: 2 999 946 €

Project website: <http://hpv-ahead.iarc.fr/>

Project Title: Emerging Mental Health Systems in Low- and Middle-Income Countries
Project Acronym: EMERALD
Activity Area: Mental Health

Project Description:

The objective of the EMERALD Project is to improve mental health outcomes by enhancing health system performance.

The key issues addressed are: (i) adequate, fair & sustainable resourcing: using human, infrastructural, informational & financial resource inputs to effectively deliver better mental health services; (ii) integrated service provision: enhancing access to integrated community care; and (iii) improved coverage & goal attainment: scaled-up, appropriate and cost-effective care in the community & reduction of disease burden & economic impacts.

We are innovative in: (i) our track record to work collaboratively across health system boundaries; (ii) excellent ability to deliver on agreed work packages; (iii) delivering high quality & precisely relevant capacity development materials to our key target groups; & (iv) key leadership roles eg in developing the WHO mhGAP Implementation Guide. We are committed to taking the health system strengthening steps necessary for its realization in Ethiopia, India, Nepal, Nigeria, South Africa & Uganda.

Project Partners:

1. *King's College London, United Kingdom*
2. University of Cape Town, South Africa
3. Gabo:Mi Gesellschaft fur Ablauforganisation:Milliarium MBH&CO, Germany
4. Stichting Healthnet International Transcultural Psychosocial Organization, The Netherlands
5. Butabika National Mental Hospital, Uganda
6. Addis Ababa University, Ethiopia
7. **Public Health Foundation of India, India**
8. World Health Organization, Switzerland
9. Transcultural Psychosocial Organization Nepal, Nepal
10. University of Kwazulu-Natal, South Africa
11. College of Medicine, University of Ibadan, Nigeria
12. Universidad Autonoma de Madrid, Spain

Project Details:

Call: FP7-HEALTH-2012-INNOVATION-1
Project Number: 305968
Instrument: CP-SICA
Project Start Date: 1 November 2012
Project Duration: 60 months
Project Cost: 7,259,128 €
EC Contribution: 5,798,173 €
Project website: <http://www.kcl.ac.uk/index.aspx>

Project Title: Kinetoplastid Drug Development: Strengthening the Preclinical Pipeline
Project Acronym: KINDRED
Activity Area: Developing New Treatment

Project Description:

The trypanosomatid diseases, leishmaniasis, Human African trypanosomiasis (HAT) and Chagas disease (CD), continue to impart a heavy toll on human health. The treatments available are limited and threatened by drug resistance with few new drugs in the pipeline. The KINDRED consortium integrates five leading academic laboratories in Europe (Portugal, United Kingdom, and Switzerland), the USA (California) and South America (Brazil) with high throughput screening (HTS) facilities equally distributed between all three major kinetoplastid parasites. Intracellular amastigote screening will be employed as the most relevant for *Leishmania* spp and *T. cruzi*. Compound libraries (focused, diversity oriented or natural) will be screened in these systems, as well as compound series devised through target screening and in silico approaches. For carefully chosen protein targets, all three kinetoplastid parasite homologs will be screened against the closest human homolog to establish selectivity. Promising lead compounds will be optimised for efficacy and tolerability in cell-based and animal disease models. Toxicological markers will be evaluated in human cell lines prior to toxicity (acute, subacute, chronic) testing in lower than higher mammals. In parallel, and in line with the FDA's 'Critical Path Initiative', several check point controls will be built into the pipeline to flag, identify and allow early correction of potential toxicity/efficacy issues. These will include (i) a systems biology approach to identify drug target and off-target interactions via activity-based chemoproteomics (ii) 'uptake and metabolism' as potential modulators of drug efficacy and/or resistance and (iii) the establishment of a firm set of rules for drug efficacy and safety in kinetoplastid chemotherapy. Our goal is to strengthen the drug development pipeline in order to achieve at least one new Phase I clinical candidate for each trypanosomatid disease at or shortly after the project completion date.

Project Partners:

1. *The University Court of the University of St Andrews, United Kingdom*
2. Johann Wolfgang Goethe Universitaet Frankfurt Am Main, Germany
3. Fundacao Oswaldo Cruz, Brazil
4. The Regents of the University of California, United States
5. Innovative Technologies in Biological Systems, Spain
6. Commissariat à l'Energie Atomique et aux Energies Alternatives, France
7. Schweizerisches Tropen- und Public Health Institut, Switzerland
8. Novalix, France
9. Phylogene, France
10. Instituto de Biologia Molecular e Celular – IBMC, Portugal
11. IP Research Consulting Sasu, France
12. Centre National de la Recherche Scientifique, France
13. Graffinity Pharmaceuticals GMBH, Germany
14. **The All-India Institute of Medical Sciences, India**

Project Details:

Call: FP7-HEALTH-2013-INNOVATION-1
Project Number: 602773
Instrument: CP-FP
Project Start Date: 1 September 2013
Project Duration: 36 months
Project Cost: 7,915,469 €
EC Contribution: 5,999,991 €
Project website: <http://www.st-andrews.ac.uk/>



COOPERATION

Thematic Priority Area - 2

FOOD, AGRICULTURE AND FISHERIES AND BIOTECHNOLOGY

Project Title: Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets
Project Acronym: TAPSIM
Activity Area: Trade and agricultural policies - India



Project Description:

The project offers a qualitative and quantitative analysis of future developments in Indian supply, demand and trade for the main agricultural commodities as well as developments in the food value chain. Working tools are improved and used to evaluate the impact of trade and agricultural policies, structural changes on the Indian agrifood system as well as on world markets.

More specifically, the project will include the following actions:

- Design of an analytical framework for the analysis of future trade and agricultural policy developments (including trade agreements) on supply, demand and trade for the main agricultural commodities in India. Initial suggestions for analysis are cereals, pulses, vegetable oils, cotton, sugar, dairy, meat and fish, fruits and vegetables.
- Identify the key processes of change in the Indian and global economy and their impacts on the agrifood sector of India. This serves as a basis for understanding future trends.
- Update, test and improve modelling tools and value chain analysis that will be used as building blocks in this project.
- Define indicators and develop databases for understanding and forecasting the impacts of policies on future developments of agriculture in India up to 2020. This will be done at regional and national levels, taking into account international trade.
- Implementation of tools to simulate the impacts of domestic and international trade policy changes and structural changes in the agrifood sector on the Indian agricultural sectors as well as on world markets, with a specific focus on the EU.
- Dissemination of our findings and interaction with the research and policy community, as well as the key stakeholders in the agrifood sector, both in India and the EU.

Project Partners:

1. *Landbouw-Economisch Instituut (LEI) B.V., Netherlands*
2. Katholieke Universiteit Leuven, Belgium
3. **International Food Policy Research Organisation, India**
4. Centro Ricerche Produzioni Animali SpA, Italy
5. **Indira Gandhi Institute of Development Research, India**
6. Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

Project Details:

Call: FP7-KBBE-2007-1
Project Number: 212617
Instrument: CP-FP
Project Start Date: 1 September 2008
Project Duration: 36 months
Project Cost: 1 710 000 €
EC Contribution: 1 349 500 €
Project website: www3.lei.wur.nl/tapsim

Project Title: Coordination Actions in Support Of Sustainable and Eco-Efficient Short Rotation Forestry in CDM Countries



Project Acronym: BENWOOD

Activity Area: Forest energy – Short rotation forestry as a sustainable and eco-efficient land use management

Project Description:

The project first assesses the state of the art of SRF as a biofuel source in CDM and JI countries, focuses on CDM countries and links the project to current European and non-European R&D-activities in the area.

Main outputs:

1. SRF guidelines and standards for land use management for farmers and European JI/CDM project developers as well as stakeholders from the energy and biomass sector (electric utilities, pulp & paper, fibreboard etc.)
2. A SRF R&D agenda for researchers and industry (boiler, oven, chipper, press producers etc.)

Project Partners:

1. *energieautark consulting gmbh, Austria*
2. Alasia New Clones s.r.l, Italy
3. Kochanska-Dubas Jolanta, Poland
4. Faculty of Forestry University of Zagreb, Croatia
5. Georg-August Universität Göttingen Stiftung Öffentlichen Rechts, Germany
6. Kompetenzzentrum HessenRohstoffe (HeRo) e.V., Germany
7. **Punjab Agricultural University, India**
8. Plantar S/A, Brazil
9. Austrian Bioenergy Centre GmbH, Austria
10. Swedish University of Agricultural Sciences, Sweden
11. Bangor University, United Kingdom
12. International Centre for Research in Agroforestry, Kenya
13. Beijing Forestry University, China
14. University of Natural Resources and Applied Life Sciences, Vienna, Austria

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 227321
Instrument: CSA-CA
Project Start Date: 1 April 2009
Project Duration: 18 months
Project Cost: 998 789 €
EC Contribution: 998 789 €
Project website: www.benwood.eu

Project Title: Development, enhancement and complementation of animal-sparing, foot-and-mouth disease vaccine-based control strategies for free and endemic regions

Project Acronym: FMD-DISCONVAC

Activity Area: Foot-and-mouth disease: improve and / or develop vaccine, vaccination strategies and diagnostics



Project Description:

Foot-and-mouth disease (FMD) is one of the world’s most infectious diseases of livestock and continues to pose a significant threat to endemic and free regions alike. The impact of FMD on society and international trade is high, thereby demanding stringent prevention, surveillance and control plans taken up in crisis preparedness plans. On the other hand, there is a global increased demand for animal welfare and ethical considerations necessitating a decreased reliance on eradication of animals to control FMD virus (FMDV) spread, and on the use of animals for the regulatory testing of veterinary products. The project seeks to balance these apparently contracting viewpoints by addressing specific gaps in our knowledge on all aspects of FMD control to enable implementation of enhanced animal-sparing vaccine-based control strategies tailored to the needs of free and endemic settings. Consequently, four main objectives have been identified, including (i) the improvement of the quality of existing FMD vaccines and diagnostics, (ii) the refinement and replacement of in vivo FMD vaccine quality tests, (iii) the development of new generation FMD vaccines and diagnostics by applying cutting edge technologies, and (iv) the enhancement of our knowledge on FMDV spread and transmission following the use of high-potency monovalent or multivalent vaccines. The role of wildlife (buffalo, gazelles and wild boar) in FMDV maintenance and transmission will also be investigated. The project consists of seven different, yet interlinked, work packages (WP) each addressing one of the items listed in the Work Programme topic KBBE-2008-1-3-02, and led by renowned WP leaders with years of relevant experience in the field of FMD. As such, significant progress towards the objectives of the Community’s Animal Health Strategy (2007-2013), the European Technology Platform for Global Animal Health, and the Global Roadmap for improving the Tools to Control FMD in Endemic Settings will be achieved.

Project Partners:

1. *Veterinary and Agrochemical Research Centre, Belgium*
2. Institute for Animal Health, United Kingdom
3. Stichting Dienst Landbouwkundig Onderzoek part: Central Veterinary Institute, Netherlands
4. Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna, Italy
5. Friedrich-Loeffler-Institute, Germany
6. **Indian Immunologicals Limited, India**
7. Lanzhou Veterinary Research Institute, China
8. Foundation for Interaction between Enterprises and Education, Scientific – Technological Sector, Argentina
9. Agence française de sécurité sanitaire des aliments, France
10. Federal Veterinary Office of the Federal Department of Economic Affairs, Switzerland
11. Ministry of Agriculture - Kimron Veterinary Institute, Israel
12. University of Glasgow, United Kingdom
13. Technical University Denmark, Denmark
14. Merial S.A.S., France

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 226556
Instrument: CP-SICA
Project Start Date: 1 April 2009
Project Duration: 39 months
Project Cost: 4 051 252 €
EC Contribution: 2 998 863 €
Project website: <http://fmddisconvac.net>

Project Title: Assessment of the impacts of non-tariff barriers - NTB on the competitiveness of the EU and selected trade partners

Project Acronym: NTB-IMPACT

Activity Area: Macro-economic analysis of competitiveness, including non-tariff barriers



Project Description:

The overall objective of the project is to collect and analyze new data on non-tariff barriers (NTBs), particularly on governmental standards and regulations that prescribe the conditions for importing agri-food products into the EU market and into the markets of the main competing players. Furthermore, impacts from EU NTBs on least developing country (LDC) exports are examined.

The project will deliver the following results:

1. An analytical framework for defining measures, methods, products and countries.
2. A data base on NTBs in EU, USA, Canada, Japan, China, India, Brazil, Argentina, Australia, Russia and New Zealand.
3. Comparative analyses on the impact of NTBs on agri-food trade of the EU.
4. Policy recommendations from case studies for quantifying NTBs on fruits and vegetables, meat and dairy trade clusters with the EU.
5. Policy recommendations from case studies on the impacts of EU private and public standards in LDCs.

Dissemination of project results to key stakeholders.

This will be achieved:

- A. By optimizing complementarities of the project with ongoing NTB research on the TRAINS data base at UNCTAD.
- B. By organizing the research work in research, database, management and dissemination work packages.
- C. By developing research methodologies that are innovative and robust, optimizing the direct usefulness of the end results for the end users.
- D. By proposing a partner consortium that together reunites the relevant needs, for:
 - Scientific excellence and international project experience
 - Appropriate geographic coverage to collect the required data in all countries
 - Linkages and complementarities with ongoing international NTB analyses (UNCTAD, OECD, World Bank, IFPRI)
 - Policy contacts, dialogue and influence
 - Efficient and effective project management

Project Partners:

1. *Centre de Coopération Internationale en Recherche Agronomique pour le Développement, France*
2. Rheinische Friedrich-Wilhelms-Universität Bonn, Germany
3. Landbouw-Economisch Instituut (LEI) B.V., Netherlands
4. The Institute of Development Studies, United Kingdom
5. Institut National de la Recherche Agronomique, France
6. Katholieke Universiteit Leuven, Belgium
7. Escola Superior de Agricultura, Brazil
8. Instituto Nacional de Tecnología Agropecuaria, Argentina
9. Virginia Polytechnic Institute and State University, United States
10. Laval University, Canada
11. Osaka University, Japan
12. University of Otago, New Zealand
13. **Research and Information System for Developing Countries, India**

14. International Food and Agricultural Trade Policy Council, United States
15. Institute for Agricultural Market Studies, Russian Federation
16. Slovak Agricultural University in Nitra, Slovakia
17. University of Adelaide, New Zealand
18. Center for Chinese Agricultural Policy, Chinese Academy of Sciences, China

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 227202
Instrument: CP-FP
Project Start Date: 1 April 2009
Project Duration: 28 months
Project Cost: 3 135 956 €
EC Contribution: 2 388 918 €
Project website: <http://www.ntm-impact.eu/>

Project Title: Public Perception of Genetically modified Animals - Science, Utility and Society
Project Acronym: PEGASUS
Activity Area: Exploring the pros & cons and the public perception of GM animals



Project Description:

PEGASUS aims to provide policy support regarding the development, implementation and commercialisation of GM animals, and derivative foods. The results will contribute to the FP7 KBBE by integrating existing social, (including existing public perception) environmental and economic knowledge regarding GM animals. The use of GM in farmed animals (aquatic and terrestrial) will be reviewed. A foresight exercise will be conducted to predict future developments. Two case studies (1 aquatic, 1 terrestrial) will be applied to identify the pro's and con's of GM animals from the perspectives of the production chain (economics, agri-food sector) and the life sciences (human and animal health, environmental impact, animal welfare, sustainable production). Ethical and policy concerns will be refined through application of combined ethical matrix and policy workshops involving EU and non-EU stakeholders. The case studies will be used to demonstrate best practice in public engagement in the policy process. The activities will provide European policy support regarding GM animals and the foods derived from them, taking into account public perceptions, the competitiveness of EU animal production, and risk-benefit assessments linked with human and animal health, environmental impact, and sustainable production. A final stakeholder dissemination workshop will disseminate the results to the EU policy community.

Project Partners:

1. Wageningen Universiteit, Netherlands
2. Landbouw-Economisch Instituut (LEI) B.V., Netherlands
3. Università degli Studi di Parma, Italy
4. Stichting Dienst Landbouwkundig Onderzoek, Netherlands
5. Institut National de la Recherche Agronomique, France
6. The National Committee for Research Ethics in Science and Technology, NENT, Norway
7. Kings College London Business Ltd, United Kingdom
8. The University of Nottingham, United Kingdom
9. AgroBioInstitute, Bulgaria
10. **Agri Biotech Foundation, India**
11. Perseus bvba, Belgium
12. Institute of Food Research, United Kingdom

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 226465
Instrument: CSA-SA
Project Start Date: 1 August 2009
Project Duration: 36 months
Project Cost: 978 592 €
EC Contribution: 978 592 €
Project website: <http://www.pegasus.wur.nl/UK/>

Project Title: Sweet Sorghum : an alternative energy crop
Project Acronym: SWEETFUEL
Activity Area: Sweet sorghum – An alternative energy crop for biofuel production in semi-arid and temperate regions



Project Description:

Increasing world market prices for fossil fuels, driven by limited reserves, growing demand and instability in producing regions, now render renewable fuels economical. Such fuels are also a pathway to reducing GHG emissions and mitigating climate change. Bio-ethanol from crop plants is a promising, partial solution to sustainably satisfy the energy demand for road transport. The success of bio-ethanol from sugarcane in Brazil demonstrates proof of concept but cannot be transferred to water-limited or temperate environments. Sweet sorghum, as a source of either fermentable free sugars or lignocellulosics, has many potential advantages, including: high water, nitrogen and radiation use efficiency; broad agro-ecological adaptation; rich genetic diversity for useful traits; and the potential to produce fuel feedstock, food and feed in various combinations. Fuel-food crops can thereby help reconciling energy and food security issues. This project will breed for improved cultivars and hybrids of sorghum for temperate, tropical semi-arid and tropical acid-soil environments by pyramiding in various combinations, depending on region and ideotype, tolerance to cold, drought and acid (Al-toxic) soils; and high production of stalk sugars, easily digestible biomass and grain (WP 1-3). Molecular-genetic and physiological breeding support is given by WP4, and agro-ecological adaptation and sustainable practices are developed by WP5. Other WPs (6, 7, 8) provide for integrated technology and impact assessments including economics, dissemination and coordination. The Consortium is composed of 10 members from France (leader), Italy, Germany, Brazil, India, Mexico and South Africa, including a seed company. Research involves structured participation of stake holders, including policy makers. Project outcomes will be new germplasm, sustainable practices and commodity chain concepts adapted to each target region.

Project Partners:

1. *Centre international en recherche agronomique pour le développement, France*
2. **International Crops Research Institute for Semi Arid Tropics, India**
3. Centro Nacional de Milho e Sorgo, Brazil
4. KWS SAAT AG, Germany
5. Institut für Energie - und Umweltforschung Heidelberg GmbH, Germany
6. Alma Mater Studiorum - Università di Bologna, Italy
7. Università Cattolica del Sacro Cuore, Italy
8. Agricultural Research Council, South Africa
9. Universidad Autonoma de Nuevo Leon, Mexico
10. Wirtschaft und Infrastruktur GmbH & Co Planungs KG, Germany

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 227422
Instrument: CP-SICA
Project Start Date: 1 January 2009
Project Duration: 60 months
Project Cost: 3 965 200 €
EC Contribution: 2 967 975 €
Project website: www.sweetfuel-project.eu

Project Title: Creating a CIRCLE by extending the BIO NCP network to Third Country NIPs
Project Acronym: BIOCIRCLE
Activity Area: Network of Third Countries National Information Points – (ICPC and countries with bilateral S&T Agreements)



Project Description:

BIO CIRCLE will extend the network of National Contact Points for the FP7 theme “Food, Agriculture and Fisheries and Biotechnology” (BIO NCP) to National Information Points (NIP) from Third Countries over a two year period. The European Commission needs to implement the bilateral Scientific & Technological Agreements signed with Third Countries (TC), for increasing their participation in FAFB FP7 and strengthening the collaboration between European and TC researchers. The main focus of the project will be on identifying, sharing and implementing good practices between NCPs and NIPs. The expected results of BIO CIRCLE are: 1. Capacities built for Third Country BIO NIPs (through SWOT analysis, training of NIPs and twinning); 2. Strengthened consortium building in FAFB international cooperation projects (through mapping of Third Country research potential and the organisation of 2 international Brokerage Events); 3. Capacities built for Third Country Researchers to participate in FP7 (through preparation of specific training materials, training and networking with EU researchers); 4. Strengthened identification, development and sharing of Good Practices to enhance cooperation between the NCP and NIP networks (through 5 Regional Benchmarking Workshops, a Common Benchmarking Workshop and the design of a Good Practices Guide). The 6% of budget is foreseen to grant researchers from TCs to attend the 2 International Brokerage Events. The 5 BIO NCP partners of BIO CIRCLE led by APRE will assure the successful implementation of the project. The 18 NIPs partners of BIO CIRCLE will be embraced in this circle of activities aimed at ensuring quality and dynamism in implementing the Scientific & Technological Agreements between the EU and Third Countries. BIO CIRCLE will work in synergy with and be closely linked to the BIO-NET project, the complete NCP FAFB network.

Project Partners:

1. *Agenzia per la Promozione della Ricerca Europea, Italy*
2. Association de Coordination Technique pour l'Industrie Agroalimentaire, France
3. Forschungszentrum Juelich GmbH, Germany
4. Food Industrial Research and Technological Development Company S.A., Greece
5. Tudományos és Technológiai Alapítvány, Hungary
6. SenterNovem, Netherlands
7. Science, Technology and Productive Innovation Ministry, Argentina
8. The Australian National University, Australia
9. Brazilian Corporation of Agriculture Research, Brazil
10. Agriculture and Agri-Food Canada (AAFC-ISCB), Canada
11. Comisión Nacional de Investigación Científica y Tecnológica, Chile
12. China National Center for Biotechnology Development, China
13. National Research Center, Egypt
14. Forum for Agricultural Research in Africa, Ghana
15. **Jawaharlal Nehru University, India**
16. Independent Expert Consulting Board to Promote Scientific Research Activity in Kazakhstan, Kazakhstan
17. Universidad Nacional Autónoma de México, México
18. Ministère de l'Éducation Nationale, de l'Enseignement Supérieur, de la Formation des Cadres et de la Recherche Scientifique, MA
19. Facilitating Research co-operation between Europe and New Zealand, New Zealand
20. A.N. Bakh Institute of Biochemistry, Russian Academy of Sciences, Russian Federation
21. Council for Scientific and Industrial Research, South Africa

- 22. Ministry of High Education, Scientific Research and Technology, Tunisia
- 23. National Science and Technology Development Agency, Thailand
- 24. National Agricultural University of Ukraine, Ukraine

Project Details:

Call: FP7-KBBE-2008-2B
Project Number: 227204
Instrument: CSA-SA
Project Start Date: 1 October 2008
Project Duration: 24 months
Project Cost: 1 927 449 €
EC Contribution: 1 412 680 €
Project website: www.biocircle-project.eu

Project Title: Exploring Marine Resources for Bioactive Compounds: From Discovery to Sustainable Production and Industrial Applications

Project Acronym: MAREX

Activity Area: Novel marine bioactive compounds for European industries



Project Description:

Biodiversity in the seas is only partly explored, although marine organisms are excellent sources for many industrial products. Through close co-operation between industrial and academic partners, the MAREX project will collect, isolate and classify marine organisms, such as micro- and macroalgae, cyanobacteria, sea anemones, tunicates and fish from the Atlantic, Pacific and Indian Oceans as well as from the Mediterranean, Baltic and Arabian Seas. Extracts and purified compounds of these organisms will be studied for several therapeutically and industrially significant biological activities, including anticancer, anti-inflammatory, antiviral and anticoagulant activities by applying a wide variety of screening tools, as well as for ion channel/receptor modulation and plant growth regulation. Chromatographic isolation of bioactive compounds will be followed by structural determination. Sustainable cultivation methods for promising organisms, and biotechnological processes for selected compounds will be developed, as well as biosensors for monitoring the target compounds. The work will entail sustainable organic synthesis of selected active compounds and new derivatives, and development of selected hits to lead compounds. The project will expand marine compound libraries. MAREX innovations will be targeted for industrial product development in order to improve the growth and productivity of European marine biotechnology. MAREX aims at a better understanding of environmentally conscious sourcing of marine biotechnology products and increased public awareness of marine biodiversity and potential. Finally, MAREX is expected to offer novel marine-based lead compounds for European industries and strengthen their product portfolios related to pharmaceutical, nutraceutical, cosmetic, agrochemical, food processing, material and biosensor applications.

Project Partners:

1. *Helsingin Yliopisto, Finland*
2. Université Louis Pasteur, Strasbourg, France
3. ABO Akademi, Finland
4. American University of Beirut, Lebanon
5. EGE Universitesi, Turkey
6. Katholieke Universiteit Leuven, Belgium
7. Universidad Católica del Norte, Chile
8. Universidad de Antofagasta, Chile
9. Universidad de La Laguna, Spain
10. Università Degli Studi Di Napoli Federico II., Italy
11. Univerza V Ljubljani, Slovenia
12. Uniwersytet Gdansk, Poland
13. Biotechmarine, France
14. BioVico Sp. z o.o., Poland
15. Eurospes Bioetnologia S.A., Spain
16. Xention Limited, United Kingdom
17. Imego AB, Sweden
18. **National Institute of Oceanography, India**
19. Valtion Teknillinen Tutkimuskeskus, Finland

Project Details:

Call: FP7-KBBE-2009-3
Project Number: 245137
Instrument: CP-IP
Project Start Date: 1 August 2010
Project Duration: 48 months
Project Cost: 7 863 795 €
EC Contribution: 5 999 984 €
Project website: www.marex.fi

Project Title: **Jatropha curcas Applied and Technological Research on Plant Traits**

Project Acronym: **JATROPT**

Activity Area: Jatropha curcas – breeding strategy – towards a sustainable crop for biomaterials and biofuels



Project Description:

Jatropha curcas shows a big promise towards sustainable and affordable biofuels. Several groups are working independently towards development of both agrosystems and high quality germplasm of Jatropha, and downstream processing and biodiesel markets. The challenges are to make the big promises come true: high oil yield, low competition with food crops, use in various agrosystems from monoculture plantations, to mixed cropping and use in hedges around agricultural fields. JATROPT aims at linking high quality research groups and companies that are now operating in different continents in order to achieve a large synergy in research and development of jatropha as a biofuel crop. In five Workpackages (Breeding, Genetic tools, Sustainable Agrosystems, Demonstrating and Dissemination), the following aims are pursued:

1. Achieve a world wide germplasm collection of Jatropha curcas, molecularly characterised in order to classify the collection into groups with similar genetic backgrounds; evaluation of elite germplasm of this collection in Asia, Africa and Latin-America; linking segregating population based on parents from different parts of the world and creating a global Jatropha linkage map.
2. Develop genetic information and marker tools (genetics of toxic/low toxic trait, branching patterns; disease resistance) to speed up the breeding process.
3. Develop agrosystems that yield sustainable and affordable biofuels - and interesting uses of the co-products (biomass/protein residues after oil extraction), with a focus on Pro Poor development and on designing systems in which competition for food and fuel can be minimised;
4. Demonstration of the potential of local/regional use of produced biofuels to increase agricultural and general economic productivity will be investigated.
5. Achieve dissemination of knowledge on quality of germplasm, on genetics and sustainable agrosystems setting up distribution of combined packages of agronomic guidelines and germplasm.

Project Partners:

1. *Plant Research International B.V., Netherlands*
2. Facultad de Agronomía, Universidad de San Carlos de Guatemala, Guatemala
3. **Tamil Nadu Agricultural University, India**
4. Universidad Autónoma de Chapingo, Mexico
5. University of York, United Kingdom
6. D1 Oils Plant Science Ltd., United Kingdom
7. Keygene N.V., Netherlands
8. Biocombustibles De Guatemala Sociedad Anónima, Guatemala
9. Bionor Transformacion S.A., Spain
10. Centre de Coopération International en Recherche Agronomique pour le Développement, France
11. Centre National de la Recherche Appliquée au Développement Rural, Madagascar
12. Empresa Brasileira de Pesquisa Agropecuária, Brazil

Project Details:

Call: FP7-KBBE-2009-3
Project Number: 245236
Instrument: CP-SICA
Project Start Date: 1 January 2010
Project Duration: 48 months
Project Cost: 4 030 466 €
EC Contribution: 2 995 739 €
Project website: www.jatropt.eu

Project Title: Biocommodity refinery
Project Acronym: BIOCORE
Activity Area: Sustainable Biorefineries



Project Description:

BIOCORE will create and demonstrate create a lignocellulosic biorefinery for sustainable processing of agricultural residues (wheat and rice straws), SRC wood (poplar) and hardwood forestry residues, into 2G biofuels, bulk chemicals, polymers, speciality molecules, heat and power.

To reach this overall objective, BIOCORE will:

1. Describe how a mixed lignocellulosic feedstock-based biorefinery can be supplied with biomass, taking into account biomass handling, feedstock variability and seasonality. Biomass provisioning scenarios will be described for several different local contexts (Europe and Asia)
2. Adapt and streamline a patented organosolv technology for targeted biorefining of BIOCORE feedstocks and develop all necessary processing steps (including enzymatic hydrolysis and physico-chemical operations) to produce high quality cellulose, polymeric and oligomeric hemicellulose-derivatives, high quality lignins, heat and power from process residues
3. Develop multiple product manufacturing pipelines using a combination of advanced biotechnologies, chemical catalysis and thermochemical processes for the production of building block chemicals and polymers for bulk markets from sugars and lignins
4. Design a complete biorefinery concept that will describe the alternative product manufacturing pathways. This will be achieved by developing integrated flowsheets and process designs that include all of the operational units, supply chain models, and economic factors
5. Demonstrate the performance of the biorefinery through an integrated approach, producing industrial scale pilots for the biorefinery complexes that are closer to the market
6. Assess the environmental, economic and social sustainability of the biorefinery concept considering the entire value chain
7. Ensure efficient technology transfer to the energy sector, chemical and biotech industries, agro and forestry sectors, and the general public and policy makers.

Project Partners:

1. *Institut National de la Recherche Agronomique, France*
2. Chalmers Tekniska Hoegskola AB, Sweden
3. Imperial College of Science, Technology and Medicine, United Kingdom
4. Katholieke Universiteit Leuven, Belgium
5. National Technical University of Athens, Greece
6. Szent Istvan Egyetem, Hungary
7. Solagro Association, France
8. Arkema France SA, France
9. Chimar Hellas AE, Greece
10. Compagnie Industrielle De La Matière Végétale, France
11. Inra Transfert S.A., France
12. Institut Für Umweltstudien - Weibel & Ness Gmbh, Germany
13. Koninklijke Dsm N.V., Netherlands
14. Nova-Institut Gmbh, Germany
15. Synpo, Akciová Spolecnost, Czech Republic
16. Syral S.A.S., France
17. Tarkett Sa, France
18. Capax Environmental Services, Belgium
19. Agrotechnology and Food Innovations Bv, Netherlands
20. Ifeu - Institut fuer Energie- und Umweltforschung Heidelberg Gmbh, Germany
21. Latvijas Valsts Koksnes Kimijas Instituts, Latvia

22. Oy Keskuslaboratorio - Centrallaboratorium AB, Finland
23. Stichting Energieonderzoek Centrum Nederland, Netherlands
24. The Energy and Resources Institute, India
25. Valtion Teknillinen Tutkimuskeskus, Finland

Project Details:

Call: FP7-2009-BIOREFINERY_CP
Project Number: 241566-2
Instrument: CP
Project Start Date: 1 March 2010
Project Duration: 48 months
Project Cost: 20 274 485 €
EC Contribution: 13 920 238 €
Project website: <http://www.biocore-europe.org/>

Project Title: Reinforcing the international cooperation in FP7 FAFB strengthening the CIRCLE of Third Countries BIO NCPs

Project Acronym: BIO CIRCLE 2

Activity Area: Network of Third Countries bio NCPs



Project Description:

The main objective of BIO CIRCLE 2 is to foster the knowledge base about FP7 FAFB & the networking capacities of Third Country researchers in order to reinforce their participation in FP7 projects. 3 project goals are distinguished: 1. Disseminate information effectively to Third Country researchers; 2. Organise information days and training for Third Country researchers; 3. Provide Third Country researchers with efficient networking opportunities. 5 European plus 18 Third Country partners (International Cooperation Partner Countries ICPC and Industrialised Countries) will all be involved in the activities. Apart from Kazakhstan and Thailand all involved countries (and the African continent represented by FARA) have signed a bilateral S&T agreement with the EU. The expected impacts are supported by various activities: Enhanced awareness of the Third Country researchers on the FP7 FAFB: WP2 will develop the dissemination strategy at national & regional level in Third Countries. Increased Third Country researchers' participation in EU projects: WP3 will organise at least 2 trainings for Third Country researchers at national and regional level, 3 trainings of Third Country BIO NCPs and the organisation of 2 Regional Events per World Region. Strengthened collaborations with Third Countries signatories of bilateral S&T agreements with the EU: WP4 will implement networking activities for Third Country researchers, including brokerage events and working visits of Third Country researchers to EU research institutes and vice versa. Finally WP5 on dissemination activities will increase the awareness of European researchers about the international cooperation in FP7 FAFB. The impact of the activities will be further maximised by: 1. involving other countries that are not partners through a regional approach; 2. linking the BIO CIRCLE 2 activities to the activities of related INCO projects; 3. involving industrialised countries that are global S&T leaders in FAFB related research.

Project Partners:

1. *Agenzia per la Promozione della Ricerca Europea, Italy*
2. **Jawaharlal Nehru University, India**
3. National Agricultural University of Ukraine Ukraine
4. The Australian National University, Australia
5. Universidad Nacional Autonoma de Mexico, Mexico
6. Association de Coordination Technique pour l'industrie Agroalimentaire, France
7. Anonymi Etaireia Viomichanikis Erevnas kai Technologikis Anaptyxis tis Viomichanias Trofimon, Greece
8. Euro Research Support Limited, New Zealand
9. Comision Nacional de Investigacion Cientifica y Tecnologica, Chile
10. Ministère de l'Education Nationale, de l'Enseignement Supérieur, de la Formation des Cadres et de la Recherche Scientifique, Direction de la Technologie, Morocco
11. Ministerio de Ciencia, Tecnología e Innovación Productiva, Argentina
12. Ministry of Agriculture, Food and Rural Affairs, Canada
13. Centre de Biotechnologie Borj Cedria, Tunisia
14. Chinese Academy of Agricultural Sciences, People's Republic of China
15. Council for Scientific and Industrial Research, South Africa
16. Empresa Brasileira de Pesquisa Agropecuária, Brazil
17. Forschungszentrum Juelich GMBH, Germany
18. Forum for Agricultural Research in Africa, United Kingdom
19. Independent Experts Consulting Board to Promote Scientific Research Activity in Kazakhstan, Kazakhstan

20. Institution of the Russian Academy of Sciences, A.N. Bach Institute of Biochemistry of RAS, Russian Federation
21. National Research Center, Egypt
22. Thailand National Science and Technology Development Agency, Thailand
23. Tudományos és Technológiai Alapítvány, Hungary

Project Details:

Call: FP7-KBBE-2010-4
Project Number: 265608
Instrument: CSA-CA
Project Start Date: 1 February 2011
Project Duration: 24 months
Project Cost: 1 195 968 €
EC Contribution: 999 969 €
Project website: <http://www.biocircle-project.eu/>

Project Title: Impact of climate change and globalisation on safety of fresh produce – governing a supply chain of uncompromised food sovereignty

Project Acronym: VEG-I-TRADE

Activity Area: International food trade: Anticipating the impact of climate change on the safety of European and global food markets



Project Description:

VEG-i-TRADE provides platforms to identify impacts of anticipated climate change and globalisation on food safety, microbiological and chemical hazards, of fresh produce and derived food products. Control measures of managerial and technological nature will be developed in the supply chain of crop production, post-harvest processing and logistics to minimize food safety risks.

The assessment of the performance of horticultural safety management systems by a novel diagnostic instrument at EU level exemplified by several countries in Europe and tailored on a global level including major EU trade partners from various climate zones will lead to recommendations on European and global level on quality assurance and the setting of science-based performance objectives.

VEG-i-TRADE will pro-actively invest in problem solving technologies for safe produce investigating aspects of water quality and water treatment, horticultural production practices, disinfection treatment and packaging technologies. These control measures will be exploited in collaboration with SMEs and industrial partners. Baseline studies on the hazards, intervention technologies and best practices in the fresh produce chain will provide input for both microbial and chemical risk assessment to elaborate support to risk-based sampling plans, evaluate the risks of newly identified threats as affected by the global trade system and anticipated climate change.

The project output will craft a discussion forum for stakeholders in the global food chain reflecting on issues of acceptable risk, sustainability of fresh produce production and long term strategy of international food trade, while making no compromise in food safety for European consumers and in respectation of food sovereignty. Risk communication to increase awareness of trade partner's production systems and the uneven consumer behaviour will provide key conditions for prioritisation of risk management strategies.

Project Partners:

1. *Universiteit Gent, Belgium*
2. Advanced Biological Technologies Belgium, Belgium
3. Allgro NV, Belgium
4. Hogeschool West-Vlaanderen Howest, Belgium
5. Proefcentrum voor Innovatie, Verbreding en Advies in Landbouw en Veehouderij, Belgium
6. Special Fruit NV, Belgium
7. Van Laethem BVBA, Belgium
8. Universidade Federal Do Rio Grande Do Sul, Brazil
9. Royal International Inspection Laboratory JSC, Egypt
10. **Tamil Nadu Agricultural University, India**
11. Wageningen Universiteit, Netherlands
12. A.L Gartnerhallen, Norway
13. Norges Veterinærhøgskole, Norway
14. Norsk Institutt For Vannforskning, Norway
15. Veterinærinstituttet - National Veterinary Institute, Norway
16. Faculty Of Agriculture - University Of Belgrade, Serbia
17. Council For Scientific And Industrial Research, South Africa

18. University Of Pretoria, South Africa
19. Agencia Estatal Consejo Superior De Investigaciones Cientificas, Spain
20. Contariego S.L., Spain
21. SAT 9855 Primaflor, Spain
22. Vega Mayor SL, Spain
23. Sciprom SARL, Switzerland

Project Details:

Call: FP7-KBBE-2009-3
Project Number: 244994
Instrument: CP-IP-SICA
Project Start Date: 1 May 2010
Project Duration: 48 months
Project Cost: 7 595 351 €
EC Contribution: 5 999 997 €
Project website: www.veg-i-trade.org

Project Title: **Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses**



Project Acronym: **STAR-IDAZ**

Activity Area: Promoting coordination and cooperation at international level of research programmes in the area of animal health, in particular infectious diseases including zoonoses

Project Description:

Animal diseases can cause serious social, economic and environmental damage and in some cases also threaten human health. An increasing number of the major disease problems or threats faced by the livestock industry and zoonoses are of a global nature. The overall aim of the global strategic alliances for the coordination of research on the major infectious diseases of animals is to improve coordination of research activities on the major infectious diseases of livestock and zoonoses so as to hasten the delivery of improved control methods. This will be achieved through the establishment of an international forum of R&D programme owners/managers and international organisations for the purpose of sharing information, improving collaboration on research activities and working towards common research agendas and coordinated research funding on the major animal diseases affecting livestock production and/or human health. It will build on the groundwork established by the SCAR collaborative working group on animal health and welfare research, the EMIDA ERA-NET project and specific INCO-NETs involving partner countries. The scope of the project will include co-ordination of research relevant to emerging and major infectious diseases of livestock, including fish and managed bees, and those infections of livestock that may carry the risk of disease threat to human health. Diseases of wildlife will also be considered where they are identified as reservoirs of infection with emerging and major infectious diseases of humans or production animals.

These objectives will be delivered through the following five workpackages:

WP1. Project coordination, management, communication and dissemination;

WP2. Sharing information on existing research programmes;

WP3. Analysis of and responding to global, regional and industry sector priorities;

WP4. Networking of ongoing research activities on major issues and

WP5. Developing a strategic trans-national animal health research agendas

Project Partners:

1. *The Secretary of State for Environment, Food and Rural Affairs, United Kingdom*
2. Moscow State Academy of Veterinary Medicine and Biotechnology, Russian Federation
3. Pfizer Inc, United States
4. Bundesministerium fuer Bildung und Forschung, Germany
5. Canadian Food Inspection Agency, Canada
6. Foundation for Research Science and Technology, New Zealand
7. Ministerie van Landbouw, Natuur en Voedselkwaliteit, Netherlands
8. Ministerio de Ciencia, Tecnología e Innovación Productiva, Argentina
9. Ministero del Lavoro, della Salute e delle Politiche Sociali, Italy
10. Ministry of Food, Agriculture and Fisheries, Danish Food Industry Agency, Denmark
11. **Department of Biotechnology, Ministry of Science and Technology, India**
12. Agricultural Research Service, United States
13. Australian Government Department of Agriculture, Fisheries and Forestry, Australia
14. Chinese Academy of Agricultural Sciences, People's Republic of China
15. Consejo Tecnico Consultivo Nacional de Sanidad Animal, Mexico
16. Empresa Brasileira de Pesquisa Agropecuaria, Brazil
17. Forschungszentrum Juelich GMBH, Germany
18. Institut National de la Recherche Agronomique, France

19. Instituto Nacional de Investigacion y Tecnologia Agraria y Alimentaria, Spain
20. International Centre for Innovations in Science, Technology and Education, Russian Federation

Project Details:

Call: FP7-KBBE-2010-4
Project Number: 265919
Instrument: CSA-CA
Project Start Date: 1 February 2011
Project Duration: 48 months
Project Cost: 1 090 000 €
EC Contribution: 999 130 €
Project website: <http://www.star-idaz.net/>

Project Title: Added value from high protein & high oil industrial co-streams
Project Acronym: APROPOS
Activity Area: BioWASTE – Novel biotechnological approaches for transforming industrial and / or municipal biowaste into bioproducts



Project Description:

The focus of APROPOS is to develop novel eco-efficient bio-mechanical processing solutions to enrich intermediate fractions from industrial high protein and oil-containing process residues originating from agriculture and fisheries. Enzyme-aided modification steps are developed for the intermediate fractions to obtain value-added nutritive and bio-active components, chemical as well as functional bio-materials suitable for exploitation in food, skin care, wound healing, bio-pesticide and soil improvement product applications. Mentioned residues are voluminous in Europe and globally significant. Zero waste concepts to be developed aim at avoidance of unnecessary purification of the components, establishment of local and distributed processing units in connection with the primary production and new business opportunities essentially for SMEs in Europe and beyond. An emphasis is directed to East Africa and India to support their needs to process local residues to components directed to nourish infants and fight against pests, respectively, in rural areas of both regions. The success of technological developments will be assessed in terms of economical feasibility, raw material efficiency and environmental impacts. The assessment will also include study on how the developed residue producer-end use value chain will affect the existing value chain from the residue producer to feed or energy. The multidisciplinary research group and cross-industrial SME group together cover the whole value chain from residue producers and processors to various end-users. The expertises of the partners include crop and fish processing, process hard ware manufacture, mechanical, chemical and biotechnical biomaterial processing, biomaterial up-grading and analytics, enzyme technology, end-product applications, assessment of eco-efficiency and value chains, technology transfer and commercialization. Feasibility of the developed processes is verified by demonstrations.

Project Partners:

1. *Teknologian Tutkimuskeskus VTT, Finland*
2. Lietuvos Zemes Ukio Universitetas, Lithuania
3. Universitat Politecnica de Catalunya, Spain
4. University of Nairobi, Kenya
5. Ecofoster Group Oy, Finland
6. IGV Institut fur Getreideverarbeitung GmbH, Germany
7. Kankaisten öljykasvit Oy, Finland
8. Kroppenstedter Ölmühle Walter Döpelheuer GmbH, Germany
9. Lasting Solutions, Uganda
10. **Mecpro Heavy Engineering Limited, India**
11. Nutrimar AS, Norway
12. Seanergy, Faroe Islands
13. Sybimar Oy, Finland
14. Textil planas oliveras, s.a., Spain
15. True Cosmetics, SI, Spain
16. Manitoba Agri-Health Research Network Inc, Canada
17. Sintef Fiskeri OG Havbruk AS, Norway

The Energy and Resources Institute, India

Project Details:
Call: FP7-KBBE-2011-5
Project Number: 289170
Instrument: CP-SICA
Project Start Date: 1 January 2012
Project Duration: 36 months
Project Cost: 4 027 169 €
EC Contribution: 2 986 623 €
Project website: <http://www.euapropos.eu/>

Project Title: Improving Food Security by Reducing Post Harvest Losses in the Fisheries Sector

Project Acronym: SECUREFISH

Activity Area: Reducing post-harvest losses for increased food security

Project Description:

Food security is a major concern for all countries in the face of population increase and diminishing energy and water supplies. Over one billion people in low and middle income countries suffer from malnutrition. To meet the UN Millennium Development Goals to eradicate hunger and poverty, it is essential to reduce post harvest losses, including in the fisheries sector. The overall objectives of SECUREFISH are to strengthen capacity in low cost technology; to improve the preservation of existing fish supplies; to utilise waste and bycatch to produce value-added products; to develop an integrated quality management tool and finally to test the developed technology and quality management tool in different real third country conditions.

There are six work packages (WP). WP1 will ensure the efficient management of the project. WP2 will develop low cost innovative processing tools based on traditional technology for preserving fish including a solar tunnel drier, a modified solar assisted extruder and fast freezing/ continuous atmosphere freeze-drier (CAFD). In WP3, underutilised bycatch and waste by-products of fish processing will be recovered and converted to high value products. WP4 will develop an effective total quality management tool (safety and risk assessment; HACCP quality cost and traceability, nutritional and eating quality and carbon footprint) of three fish product chains (solar dried, extruded and frozen/CAFD) which will be tailored to suit local needs. The technological advances (WP2) and quality management tool (WP4) will be evaluated in the three fish product chain case studies in Africa (Kenya, Namibia, Ghana), Asia (India and Malaysia) and Latin America (Argentina) to include different economic, cultural and social conditions. The case studies involve stakeholders including SMEs to ensure sustained implementation of project results. WP6 details a strategy for education, training and dissemination to widely promote the results and guidelines.

Project Partners:

1. *University of Surrey, United Kingdom*
2. **Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar, India**
3. Universiti Teknologi MARA, Malaysia
4. University of Namibia, Namibia
5. Ebbens Engineering Ingenieursbureau bv, The Netherlands
6. **Karnataka Fisheries Development Corporation, India**
7. **Millenium Exports, India**
8. Peche Foods, Kenya
9. CSIR-Food Research Institute, Ghana
10. Instituto Nacional De Recursos Biologicos I.P. INRB, Portugal
11. Instituto Nacional de Tecnología Industrial, Argentina
12. Kenya Marine And Fisheries Research Institute, Kenya
13. Stichting Dienst Landbouwkundig Onderzoek, The Netherlands

Project Details:

Call: FP7-KBBE-2011-5
Project Number: 289282
Instrument: CP-SICA
Project Start Date: 1 January 2012
Project Duration: 36 months
Project Cost: 3 923 392 €
EC Contribution: 2 997 424 €
Project website: <http://www.surrey.ac.uk/nutrition/Research/securefish/index.htm>

Project Title: Optimization of Perennial Grasses for Biomass Production



Project Acronym: OPTIMA

Activity Area: Perennial grasses: optimising biomass production

Project Description:

OPTIMA will integrate an ambitious biology system approach for perennial grasses such as switchgrass, miscanthus and giant reed in the Mediterranean environment. Moreover the perennial species cardoon, which has been proven to be particularly adapted to the Mediterranean climate, will be used as a control species.

The main objective of the OPTIMA project is to identify high-yielding perennial grasses for the Mediterranean area, within optimized production chain that will provide stable source for both biomass and new plant derived bio-products. OPTIMA will explore the potentialities of perennial grasses on underutilized or abandoned marginal lands.

An interdisciplinary approach involving physiology, biotechnology, and agronomy, socio-economical and environmental analysis at different scale levels will be undertaken with the aim at tackling specific bottlenecks of perennial grasses in the Mediterranean area and to create alternative end-use chains. OPTIMA approach has been to link the research proposed here by including industrial end-users in the project. This should allow the output of this research to develop in a commercial context as rapidly as possible the new findings.

The major goals of this multidisciplinary network are to evaluate the existing genotypes; to characterize and deliver novel species; to deliver sustainable crop management practices (sowing/planting strategies to reduce the use of pesticide and increase biomass on the first year establishment, cultivation under salinity conditions and/or water deficit, reducing losses during harvest); to evaluate the industrial production of bioenergy and added value bio-products; to assess the environmental impact through an integrated assessment of sustainability criteria, to disseminate the achieved findings at different level (local, regional, national, international).

Project Partners:

1. *Universita Degli Studi Di Catania, Italy*
2. Aberystwyth University, United Kingdom
3. Agricultural University Of Athens, Greece
4. Alma Mater Studiorum-Universita Di Bologna, Italy
5. Faculdade De Ciencias E Tecnologiada Universidade Nova De Lisboa, Portugal
6. Huazhong Agricultural University, People's Republic of China
7. Imperial College Of Science, Technology And Medicine, United Kingdom
8. **Indian Institute of Technology Delhi, India**
9. Universidad Politecnica De Madrid, Spain
10. Universitat De Barcelona, Spain
11. Universitat De Les Illes Balears, Spain
12. University College Dublin, National University Of Ireland, Dublin, Ireland
13. B.T.G. Biomass Technology Group Bv, The Netherlands
14. Instituto De Agrobiotecnologia Rosario S.A., Argentina
15. Primus, Hungary
16. Spapperi S.r.l., Italy
17. Tuzetka, Belgium
18. Consiglio Nazionale Delle Ricerche, Italy
19. Consiglio Per La Ricerca E Sperimentazione In Agricoltura, Italy
20. ifeu - Institut fuer Energie- und Umweltforschung Heidelberg GmbH, Germany
21. Kentro Ananeosimon Pigon Ke Exikonomisis Energeias (Centre For Renewable Energy Sources And Saving), Greece

Project Details:

Call: FP7-KBBE-2011-5
Project Number: 289642
Instrument: CP-TP
Project Start Date: 1 October 2011
Project Duration: 48 months
Project Cost: 3 948 307 €
EC Contribution: 2 998 322 €
Project website: <http://www.optimafp7.eu/>

Project Title: Aquaculture for Food Security, Poverty Alleviation and Nutrition

Project Acronym: AFSPAN

Activity Area: Role of aquaculture in improving food security and eradicating poverty worldwide

Project Description:

Aquaculture is widely considered as important for enhancing food security, alleviating poverty and improving nutrition. However, little information is available concerning the direct and indirect impacts of aquaculture on food security and poverty alleviation in most developing countries and LIFDCs. Strengthening the knowledge base surrounding aquaculture and food and nutrition security through this project will provide the evidence upon which sound resource allocation and strategies can be based, and subsequently plan, implement and coordinate efficiently development and research programmes supporting the sustainable expansion of aquaculture and increasing its impact to food security and poverty alleviation. The project is to be implemented by 18 partners in 11 selected LIFDCs, 3 EU partners, and 3 international organizations. The project will strengthen the knowledge base on food security and poverty and develop new methodologies or more rigorous methodologies to quantify the contribution of aquaculture in combating hunger and poverty in developing countries and LIFDCs. This will endeavour to better understand aquaculture's contribution to human development. Project partner countries were selected based on varied human development conditions and national level efforts in including aquaculture for improving national food security and alleviating poverty. They represent all major aquaculture regions and ICPCs where aquaculture has major contributions to national economy involve high numbers of small-scale aquaculture farms, and with high international trade of fish and fishery products. The results of the project will be brought to the attention of countries and development partners, particularly the EU, and outputs will help LIFDCs and various development partners to improve efficiency and coordination in development initiatives focused on aquaculture as a means of promoting food security and poverty alleviation.

Project Partners:

1. *Food and Agriculture Organisation of the United Nations, Italy*
2. Institute of Development Studies, United Kingdom
3. Københavns Universitet, Denmark
4. Makerere University, Uganda
5. Pontificia Universidad Catolica de Valparaiso, Chile
6. Universidad Centroamerica, Centro de Investigación de Ecosistemas Acuáticos, Nicaragua
7. Universitetet I Stavanger, Norway
8. University of Portsmouth Higher Education Corporation, United Kingdom
9. University of Zambia, Zambia
10. Bangladesh Fisheries Research Forum, Bangladesh
11. Ministry Of Fisheries Development, Kenya
12. Network of Aquaculture Centres In Asia-Pacific, Thailand
13. **Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, India**
14. Freshwater Fisheries Research Center of Chinese Academy of Fishery Sciences, People's Republic of China
15. Instituto de Ciencaís do Mar da Universidade Federal do Ceara´, Brazil
16. International Center for Living Aquatic Resources, Malaysia
17. Research Institute for Aquaculture No.1, Viet Nam
18. Southeast Asian Fisheries Development Center/Aquaculture Department, Philippines

Project Details:

Call: FP7-KBBE-2011-5
Project Number: 289670
Instrument: CSA-CA
Project Start Date: 1 January 2012
Project Duration: 36 months
Project Cost: 1 062 072 €
EC Contribution: 999 380 €
Project website: <http://www.afspan.eu>

PROJECTS FUNDED UNDER THE EU-INDIA COORDINATED CALL FOR PROPOSALS IN FOOD AND NUTRITION RESEARCH

A Coordinated Call is when coordinating parallel calls issued by DG RTD and a funding agency of a third country with the alignment of content, resources, timing, evaluation criteria and procedures.

This Coordinated Call for proposals was sponsored by the Food, Agriculture and Fisheries and Biotechnologies Directorate of DG RTD and the Department of Biotechnology of the Government of India, with funding of 3 Million Euros for each side.

27 proposals were received of which 2 have been funded.

Project Title: Impact of Agents with Potential Use in Functional Foods on Biomarkers for Induction of Age Related Diseases



Project Acronym: FUNCFOOD

Activity Area: Development of functional foods and ingredients

Project Description:

A number of epidemiological studies have consistently demonstrated the protective effects of fruits and vegetables with respect to several age related diseases. The aim of this project is to investigate the protective action of agents with potential use as functional food constituents with respect to cancer, diabetes and cardiovascular disease.

In collaboration between EU and Indian research centers the proposal features a multipronged approach, where the protective action of various non-toxic agents are studied in vitro as well as in rodent models with respect to induction of DNA lesions, tumours and biomarkers for the development of diabetes, diabetic retinopathy and atherosclerosis. In addition, reduced availability of carcinogens and inhibition of their metabolic activation are investigated.

Testing of the protective efficacy of functional food components in intervention cross-over studies in humans exposed to carcinogens, that are normally present at significant levels in the environment, represents an approach that has rarely been resorted to, and will be implemented under this project in Europe as well as in India using sophisticated molecular, cytogenetic and other analytical methods.

Although there has been remarkable progress in our understanding of the processes that lead to neoplasia and diabetes, the mechanisms underlying chemoprevention are, in general, little understood. The results from this project are expected to provide an improved insight with respect to this topic.

Project Partners:

- | | |
|---|---|
| 1. Karolinska Institute, Sweden | 1. Annamalai University, India |
| 2. Stockholms Universitet, Sweden | 2. Indian Institute of Technology Madras, India |
| 3. Universita Degli Studi Della Tuscia, Italy | 3. National Institute of Nutrition, India |
| 4. Biochemical Institute for Environmental Carcinogens Prof. Dr. Gernot Grimmer-Foundation, Germany | |
| 5. Vinca Institute of Nuclear Science, Serbia | |

Project Details:

Project Start Date: 1 February 2010

Project Duration: 48 months

Project website: <http://www.gmt.su.se/english/funcfood/project-description>

Project Title: New Advances in the integrated Management of food processing waste in India and Europe: use of Sustainable Technologies for the Exploitation of byproducts into new foods and feeds



Project Acronym: NAMASTE

Activity Area: Valorisation of by-products in food processing

Project Description:

According to the EU-India Science and Technology Cooperation Agreement, there is a converging Indian and European interest in finding promising valorization routes and markets for fruit and cereal processing by-products and wastes. NAMASTE will develop innovative, comprehensive and industry-relevant approaches for the valorization of citrus, mango and pomegranates by-products and wastes as well as of wheat and rice bran, through the environmentally and economically sustainable conversion of these by-products/wastes into healthy food ingredients, foods and feeds.

NAMASTE-EU will particularly focus on citrus and wheat bran processing, and will develop and assess laboratory-scale experimental protocols to convert by-products/wastes into food ingredients and new foods with improved nutritional properties (e.g. fruit paste, citrus filled snacks, citrus-based snacks, fruit enriched breakfast cereals, citrus paste-based self-stable fillers for bakery products, a new citrus/mango based feed for aquaculture).

NAMASTE-India will adopt complementary/synergic strategies, technologies and processes for turning by-products/wastes of mango/pomegranate processing and rice bran in similar ingredients, new foods and feeds. A proactive EU-India cooperation effort will be adopted to enhance mutual benefits, in terms of both knowledge generation and market expansion for the global food and drink industry.

NAMASTE joint consortia will strictly collaborate on common by-products and shared food technologies as well as on activities aimed at investigating the nutritional quality, chemical and microbial safety of the resulting foods/feeds, and the environmental benefits and economic opportunities associated to industrial production.

The direct involvement of strongly committed EU and Indian industries (and of an external Industrial Platform) will provide the high added value of guaranteeing the validation of developed processes and products, thus ensuring fast and effective industrial uptake.

Project Partners:

- | | |
|---|---|
| 1. Alma Mater Studiorum-Università di Bologna, Italy | 1. North East Institute of Science and Technology, Jorhat |
| 2. Institute of Food Research, UK | 2. Euro India Research Centre, Bangalore |
| 3. AZTI Tecnalia, Spain | 3. University of Agricultural Sciences, Bangalore |
| 4. Campden & Chorleywood Food Industry Development Institute Hungary, Hungary | 4. Nature Fresh Logistics Pvt Ltd; Pune |
| 5. Institute Food & Biobased Research, The Netherlands | 5. Desai Fruits and Vegetables, Mumbai |
| 6. Grupo Leche Pascual, Spain | |
- J. Rettenmaier & Söhne GmbH + CO. KG, Germany

Project Details:

Project Start Date: 1 February 2010

Project Duration: 36 months

Project website: <http://www.ifr.ac.uk/sfc/research/NAMASTE.html>

PROJECTS FUNDED UNDER THE EU-INDIA PARTNERING INITIATIVE ON BIOMASS PRODUCTION AND BIO WASTE CONVERSION THROUGH BIOTECHNOLOGICAL APPROACHES

This partnering initiative was sponsored by the Food, Agriculture and Fisheries and Biotechnologies Directorate of DG RTD and the Department of Biotechnology of the Government of India.

2 proposals were submitted of which 1 will be funded.

Project Title: Strengthening networking on BiomAss research and biowaste conversion – biotechnology for Europe India inteGration

Project Acronym: SAHYOG

Activity Area: EU-India partnering Initiative on biomass production and biowaste conversion through biotechnological approaches



Project Description:

The main objective of the SAHYOG project is to establish a partnering initiative to coordinate research activities carried out in Europe and India on biomass production and biowaste conversion through biotechnological approaches. The integrated project activities will be carried out by a partnership of stakeholders from EU and India involving public and private organizations that conceive and fund research programmes as well as representatives from the scientific community. Strong EU-India linkages will be created between on-going and future research and innovation projects with the aim to exploit cooperation synergies for sustainable development.

The project will be based on comprehensive inventories integrating research activities from Europe and India in order to identify common areas of interest as well as knowledge gaps and cooperation opportunities. The twinning of projects and short term exchanges among researchers will be important tools to strengthen collaboration and promote networking in areas of shared strategic interest. Several stakeholder workshops will provide opportunities to explore the opinions and perspectives of European and Indian scientists and R&D programme managers. Thereby, the SAHYOG project will help to identify opportunities for joint initiatives between the EU and its Member States and India in the field of biomass production and biowaste conversion. The organization of conferences and summer schools will contribute to increase the visibility of scientific excellence and the impact of innovation in the sector. Finally, a Strategic Research Agenda and a R&D road map will be developed in order to facilitate concerted planning of future joint EU-India research initiatives. Thereby, pathways will be identified to promote new technologies that will drive Europe and India to an increased exploitation of biotechnology for biomass production and biowaste conversion.

Project Partners:

1. *Agenzia Nazionale Per Le Nuove Tecnologie, L'energia E Lo Sviluppo Economico Sostenibile, Italy*
2. **Jawaharlal Nehru University, India**
3. National Technical University OF Athens, Greece
4. **Tezpur University, India**
5. G B Pant University of Agriculture and Technology, India
6. Wirtschaft Und Infrastruktur GMBH & Co Planungs KG, Germany
7. Ministerie Van Economische Zaken, Landbouw En Innovatie, The Netherlands
8. **Council of Scientific and Industrial Research, India**
9. **Indian institute of Chemical Technology, Council Of Scientific And Industrial Research, India**
10. Deutsches Zentrum Fuer Luft - Und Raumfahrt Ev, Germany
11. **Appropriate Rural Technologies Institute, India**
12. Stichting Dienst Landbouwkundig Onderzoek, Netherlands
13. **The Energy and Resources Institute, India**
14. Vlaamse Instelling Voor Technologisch Onderzoek N.V., Belgium

Project Details:

Call: FP7-KBBE-2011-5
Project Number: 289615
Instrument: CSA-CA
Project Start Date: 1 December 2011
Project Duration: 36 months
Project Cost: 996 095 €
EC Contribution: 996 095 €
Project website: <http://www.sahyog-europa-india.eu/>

PROJECTS FUNDED UNDER THE EU-INDIA COORDINATED CALL FOR PROPOSALS IN WATER RELATED RESEARCH

A Coordinated Call is when coordinating parallel calls issued by DG RTD and a funding agency of a third country with the alignment of content, resources, timing, evaluation criteria and procedures.

This Coordinated Call for proposals was sponsored by the Food, Agriculture and Fisheries and Biotechnologies Directorate of DG RTD and the Department of Biotechnology of the Government of India.

Project Title: Integrating bio-treated wastewater with enhanced water use efficiency to support the Green Economy in EU and India

Project Acronym: WATER 4 CROPS

Activity Area: Water4Crops will boost bio-based economy by applying a double track approach.

Project Description:

Water4Crops provides a combination of technical improvements in the field of bio-treatment and agricultural water use within a transdisciplinary identification of novel agri-business opportunities. Water4Crops aims at: a) developing innovative biotechnological wastewater treatments for improved water recycling, b) initiating the co-creation of alternative combinations of bio-treatment, recycling of high value elements, and combinations for bioproducts leading to a better commercialization of biotechnology and agricultural products in Europe and India, c)improving water use efficiency at field level through agronomics, plant breeding and locally adapted new irrigation technologies and accurate crop water requirement measurements techniques. Water4Crops will boost bio-based economy by applying a double track approach.

First a comprehensive set of key Green-Economy technologies for: 1) valorization of volatile fatty acids; 2) obtaining: natural antioxidants (polyphenols), biopolymers (PHAs), energy (biomethane); 3) new substances for selective recovery of valuable products from wastewater; 4) tailoring effluent properties from decentralized innovative bioreactors; 5) low bio-sludge production by SBBG Reactors; 6) removal of organopollutants by nanobiocatalysts; 7) reduced clogging of wetlands; 8) virus monitoring detection assays; 9) suitable precision irrigation systems for reclaimed water; 10) new monitoring for increase crop water productivity; 11) understanding the genetic mechanisms regulating drought-adaptive traits across maize, sorghum, millet and tomato; 12) optimized waste water related combinations of species/genotypes x environment x management. Second, new product market combinations will be identified. The co-creation process will be organized by two Mirror cases (Emilia Romagna area in Italy and Hyderabad region in India) within a specific Science-Practice Interface (INNOVA platforms). Developing the new applications and business opportunities with regional enterprises and stakeholder will move India and Europe towards a Green Economy.

Project Partners:

1. *Consiglio Nazionale delle Ricerche, Italia*
2. Natural Environment Research Council, United Kingdom
3. Technical University of Crete, Greece
4. Universita degli Studi di Catania, Italy
5. Helmholtz-Zentrum fuer Umweltforschung GMBH – UFZ, Germany
6. Institut National de la Recherche Agronomique, France
7. Phytorem SA, France
8. Deutsche Gesellschaft fur Internationale Zusammenarbeit (GIZ) GMBH, Germany
9. Horta SRL, Italy
10. Stichting Dienst Landbouwkundig Onderzoek, Netherlands
11. Consorzio di Bonifica di Secondo Grado per il Canale Emiliano Romagnolo, Italy
12. Bionactis International Group (BIG)SA, Switzerland
13. Bioplanta GMBH, Germany
14. S.T.E.P. Rautenbach Yuce Gebel Consulting GMBH, Germany
15. Vlaamse Instelling voor Technologisch Onderzoek N.V., Belgium
16. Alma Mater Studiorum - Universita di Bologna, Italy
17. SIMA-TEC GMBH, Germany
18. Envinhealth Environmental Nutritional and Health Services AE, Greece
19. Universita degli Studi di Roma la Sapienza, Italy
20. Inofea GMBH, Switzerland

21. Institut National de Recherche en Sciences et Technologies pour l'Environnement et l'Agriculture, France
22. Fachhochschule Nordwestschweiz, Switzerland

Project Details:

Call: FP7-ENERGY-2012
Project Number: 311933
Instrument: CP-SICA
Project Start Date: 1 August 2012
Project Duration: 48 months
Project Cost: 7 688 146 €
EC Contribution: 5 973 689 €
Project website: <http://www.cnr.it/>



COOPERATION

Thematic Priority Area - 3

INFORMATION AND COMMUNICATION TECHNOLOGIES

Project Title: Euro-India ICT Co-operation
Project Acronym: Euro-India
Activity Area: International Cooperation



Project Description:

The mission of the Euro-India ICT Co-operation Initiative, builds on the achievements and momentum created by EuroIndia2004 & MONSOON project, whose goals profiled & engaged the widespread Indian ICT research community by analysing its research capacities and priorities. EuroIndia seeks to:

- Identify, exploit and sustain EU & Indian RTD potential through an exhaustive mapping of the Indian ICT knowledge, research and innovation landscape;
- Provide critical inputs to strengthen policy dialogue between the EU's i2010 strategy & the Indian Information Society policy;
- Reinforce the promotion of the EU ICT programme and increase Indian buy-in and participation;
- Network a wide range of stakeholders through an institutional mechanism and a well-defined agenda in order to evolve and support a vibrant EuroIndia ICT research community;
- Synchronise ICT research priorities and objectives.

EuroIndia, owing to its highly qualified and strongly committed consortium of partners, will be in an optimal position to address these strategic needs in objectives comprising: technological mapping activities, survey reporting, communication and outreach to take place in India in the form of Information days, technology brainstorming events and joint EU-Indian ICT workshops, where the project identifies mutual areas of co-operation and collaboration.

These actions will maximise EU & Indian RTD potential, increasing the visibility of EC Programmes in India and preparing groundwork for lasting strategic partnerships. Operationally, the project locates complementary Indian constituencies, understands their potential to formulate objectives of collaboration & initiate partnerships. The ultimate project's objective is to continue to evolve & support a qualified Euro-India community. Major results of EuroIndia are: 2 ICT RTD Technology Roadmaps, 3 Indian & EU ICT User community reports, 6 Technology Brainstorming events, 2 Survey reports, 6 ICT EC Info Days & 2 Euro-Indian events.

Project Partners:

1. *Copenhagen Business School, Denmark*
2. *Infra Technologies, France*
3. *Trust-Italy Services, United Kingdom*
4. *GEIE ERCIM, France*
5. **Federation of Indian Chambers of commerce and Industry, India**
6. **Indian Institute of Technology, Mumbai, India**

Project Details:

Call: IST-2007-1
Project Number: 215224
Instrument: CA-SSA
Project Start Date: 1 January 2008
Project Duration: 24 months
Project Cost: 770 952 €
EC Contribution: 581 100 €
Project Website: www.euroindia-ict.org

Project Title: Free/Libre and Open Source Software: **FLOSS [include]**
International Cooperation development roadmap
Project Acronym: Flossinclude
Activity Area: International Cooperation

Project Description:

FLOSS (Free/Libre/Open Source Software) is arguably one of the best examples of open, collaborative, internationally distributed production and development. FLOSS provides numerous benefits for developing countries, such as low cost, adaptability, and a free-of-charge high quality training environment, as shown by the FP6 FLOSSWORLD study.

The FLOSSInclude project aims to strengthen Europe's participation in international research in FLOSS and open standards, by studying what is needed to increase the deployment, development and societal impact of FLOSS in Africa, Asia and Latin America. The project will result in a sound understanding of the FLOSS-related needs of the target regions.

It will federate local and regional development initiatives with the support of cooperation with current EU research. It will also provide a roadmap for future EU research cooperation in this area.

To achieve these objectives, the FLOSSInclude project will perform five core tasks:

1. analysis of available data to identify key problem areas and areas of blocked potential for FLOSS in the target regions
2. dissemination and networking, to identify and federate local and regional initiatives
3. requirements analysis, to show with concrete cases the specific technical, business and socio-political needs for the growth of FLOSS use, deployment and development in target regions
4. validation and pilots, to ensure that FLOSS solutions, tools and services can be cost-effective and practical
5. prepare a cooperation roadmap, supported by regional initiatives, concrete cases for clearly identified requirements, with solution areas proposed that have been validated through pilots.

Validated pilots and a coordinated roadmap for future EU development research cooperation will ensure that the impact of FLOSSInclude will be sustained far beyond the duration of the project.

Project Partners:

1. *Universiteit Maastricht, Netherlands*
2. Universidad Rey Juan Carlos, Spain
3. Fundacion para el Desarrollo de la Ciencia y tecnologia en Extramuradura , Spain
4. Canonical Ltd, United Kingdom
5. Fundación para la Difusión del Conocimiento y el Desarrollo Sustentable Vía Libre, Argentina
6. University of the Western Cape, South Africa
7. Kofi Annan Centre of Excellence in ICT, Ghana
8. **IT for Change, India**
9. **Centre for the Study of Developing Societies, India**
10. Open Institute, Cambodia
11. Tsinghua University, China

Project Details:

Call: IST-2007-1
Project Number: 216214
Instrument: CA-SSA
Project Start Date: 1 February 2008
Project Duration: 24 months
Project Cost: 1 143 485 €
EC Contribution: 703 465 €
Project Website: www.flossinclude.org

Project Title: Global RFID Interoperability Forum for Standards
Project Acronym: GRIFS
Activity Area: Networked enterprise



Project Description:

A support action for global RFID-related standardisation activities, involving in particular organisations from Europe, China, Japan, Korea and USA is sought and additional countries have been included to give good global coverage. A world where global supply chains are the norm requires that RFID tags and associated sensors can operate, can be seen and can be interrogated anywhere in the world. For maximum competitiveness and greatest efficiency this requires standards that are global and open in definition and in application. GS1/EPC proposes a two year project to improve collaboration and thereby to maximise the global consistency of RFID standards. Following the establishment of a worldwide view of the status of RFID standards, it is envisaged that the GRIFS project puts in place agreements for co-operation and initiates a Forum that will continue to work constructively thereafter. The activities of the Forum will be overseen by an Advisory Board with high level representation of key standards and other related bodies and should continue beyond this support action for as long as required.

Project Partners:

1. GS1, Belgium
2. Institute for Logistics and Warehousing, Poland
3. GS1 United Kingdom Ltd, United Kingdom
4. GS1, USA
5. GS1, Brazil
6. GS1, South Africa
7. GS1, China
8. GS1, Hong Kong
9. **GS1, India**
10. GS1, Japan
11. GS1, Korea
12. GS1, Russian Federation
13. GS1, Singapore
14. European Telecommunications Standards Institute, France

Project Details:

Call: IST-2007-1
Project Number: 215224
Instrument: CA-SSA
Project Start Date: 1 January 2008
Project Duration: 24 months
Project Cost: 490 500 €
EC Contribution: 450 000 €
Project Website: www.grifs-project.eu

Project Title: Good practices for European developers of advanced ICT-enabled energy-efficiency Systems
Project Acronym: GENESYS
Activity Area: ICT for environmental management and energy efficiency



Project Description:

So far, several EU funded projects and other initiatives have taken up the challenge of Promoting sustainable development, Ensuring security and diversity of energy supply, Improving industrial competitiveness, Enhancing economic and social cohesion; furthermore, very valuable research work has been carried out in the past, but the gap to the market(s) and to the full inclusion of the nowadays technologies is still the main obstacle hindering the deployment of its economic potential.

In this context GENESYS project consortium will collect and analyse research results on efficiency and energy management systems (EMS) and identify opportunities for integration and applications to further complex or cross cutting areas.

The main aim is to provide the guidelines for economical sustainability of the industrialisation of solution based on R&D current results to be mapped through two main steps: (1) an analysis of the technical and scientific basis and (2) a further improvement of features following the cutting-edge technologies and the market requirements.

The current proposal therefore aims to improve the R&D activities on technologies to make content more intelligent and self-adaptive and therefore to improve the EMS environments by (1) bringing together researchers and industrial partners of the EMS fields, to explore potential synergies, joint exploitation or the identification of further shared research paths among past and/or ongoing projects in the domain; (2) defining a draft agenda that will outline the envisaged steps needed to let the R&D results potentialities comply as much as possible with the real applications needs; (3) to favour the market exploitation of identified/supported technologies through the access to private capital and other available financial products.

Project Partners:

1. Innova SpA, Italy
2. Centro Ricerche Produzioni Animali - C.R.P.A. S.p.A., Italy
3. Technical Support for European Organisations SPRL, Belgium
4. Labor S.r.l., Italy
5. Association for the Promotion of Information on Science and Technology for All countries, France
6. Invent S.A.S., France
7. TechIn Sp. Z.o.o, Poland
8. **Resource Management Group, India**
9. Innova Consulting Group, Inc, United States
10. FUNDACIÓN CARTIF, Spain
11. Innoterm Energetikai és Környezetvédelmi Fejleszt Kft., Hungary

Project Details:

Call: FP7-ICT-2007-2
Project Number: 224690
Instrument: CSA-SA
Project Start Date: 1 September 2008
Project Duration: 30 months
Project Cost: 1 138 364 €
EC Contribution: 1 138 364 €
Project Website: www.genesys-project.eu

Project Title: LivingKnowledge – Facts, Opinions and Bias in Time
Project Acronym: LivingKnowledge
Activity Area: ICT forever yours



Project Description:

Knowledge and its articulations are strongly influenced by diversity in, e.g., cultural backgrounds, schools of thought, geographical contexts. Judgements, assessments and opinions, which play a crucial role in many areas of democratic societies, including politics and economics, reflect this diversity in perspective and goals. For the information on the Web (including, e.g., news and blogs) diversity - implied by the ever increasing multitude of information providers - is the reason for diverging viewpoints and conflicts. Time and evolution add a further dimension making diversity an intrinsic and unavoidable property of knowledge.

The vision inspiring LivingKnowledge is to consider diversity an asset and to make it traceable, understandable and exploitable, with the goal to improve navigation and search in very large multimodal datasets (e.g., the Web itself). LivingKnowledge will study the effect of diversity and time on opinions and bias, a topic with high potential for social and economic exploitation. We envisage a future where search and navigation tools (e.g., search engines) will automatically classify and organize opinions and bias (about, e.g., global warming or the Olympic games in China) and, therefore, will produce more insightful, better organized, easier-to-understand output.

LivingKnowledge employs interdisciplinary competences from, e.g., philosophy of science, cognitive science, library science and semiotics. The proposed solution is based on the foundational notions of context and its ability to localize meaning, and the notion of facet, as from library science, and its ability to organize knowledge as a set of interoperable components (i.e., facets). The project will construct a very large testbed, integrating many years of Web history and value-added knowledge, state-of-the-art search technology and the results of the project. The testbed will be made available for experimentation, dissemination, and exploitation.

Project Partners:

1. *Università degli Studi di Trento, Italy*
2. Fundació Barcelona Media Universitat Pompeu Fabra, Spain
3. SORA Institute for Social Research and Analysis Ogris & Hofinger GmbH, Austria
4. Consorzio Nazionale Interuniversitario per le Telecomunicazioni, Italy
5. Stichting European Archive, Netherlands
6. Università degli Studi di Pavia, Italy
7. University of Southampton, United Kingdom
8. **Documentation Research and Training Center, Indian Statistical Institute, India**
9. Gottfried Wilhelm Leibniz Universität Hannover, Germany
10. Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., Germany

Project Details:

Call: FP7-ICT-2007-3
Project Number: 231126
Instrument: CP-IP
Project Start Date: 1 February 2009
Project Duration: 36 months
Project Cost: 6 484 954 €
EC Contribution: 4 997 520 €
Project Website: www.livingknowledge-project.eu

Project Title: Citizens Collaboration and Co-Creation in Public Sector Service Provision
Project Acronym: COCKPIT
Activity Area: ICT for Governance and Policy Modelling



Project Description:

The fundamental idea of COCKPIT is that Web 2.0 social media constitute the emerging and de facto mass collaboration and cooperation platform between citizens themselves, and between citizens and public administrations. Therefore, Web 2.0 social media will have very soon establish themselves as a very effective means for creating, sharing and tracking knowledge about citizens' opinions and wishes on public service delivery. COCKPIT adopts a highly synergetic approach towards the definition of a new governance model for the next-generation public service delivery decision making process by combining the research areas of citizens' opinion mining in the context of Web 2.0, Service Science Management and Engineering in the context of the public sector, and deliberative engagement of citizens for forming informed judgements on public services' delivery. COCKPIT supports the notion of open Public Administrations with which citizens have higher confidence and trust among each other and with the Public Administration, resulting in better governance, lower disputes on services' delivery priority setting, higher degrees of public service adoption, lower public service delivery costs, better service innovation, and citizens loyalty to the public services.

Project Partners:

1. *Intrasoft International SA, Belgium*
2. National Technical University of Athens, Greece
3. Stichting Katholieke Universiteit Brabant Universiteit Van Tilburg, Netherlands
4. Universitaet Karlsruhe (Technische Hochschule), Germany
5. Athens Technology Center SA, Greece
6. Atos Origin Sociedad Anonima Española, Greece
7. Buzztrend Plc, Norway
8. Engineering - Ingegneria Informatica Spa, Italy
9. **IBM India Private Limited, India**
10. City of Venice, Italy
11. Gemeente Tilburg, Netherlands
12. Hellenic Ministry of Interior, Greece

Project Details:

Call: FP7-ICT-2009-4
Project Number: 248222
Instrument: CP-FP
Project Start Date: 1 January 2010
Project Duration: 36 months
Project Cost: 4 468 463 €
EC Contribution: 2 826 466 €
Project Website: <http://www.cockpit-project.eu/>

Project Title: Euro-India Synchronisation of Policy Initiatives & Research and Innovation Trajectory
Project Acronym: Euro-India SPIRIT
Activity Area: International Cooperation



Project Description:

Euro-India SPIRIT aims to engage the EU and Indian ICT stakeholders at a level where policy formulation pertaining to research can be aligned and supported to identify the priorities of key research stakeholders and constituencies. The expected outcome is a mutually-beneficial research and innovation agenda that can be taken up through specific bilateral initiatives. The project will carry out specific fact-finding, consultative and collaboration actions to reinforce the international dimension of the EU ICT research programme and leverage the combined impact of Cooperation, Capacities and People programmes with Indian involvement. Actions will lead to the identification of long term policy perspectives aligned with the EU ICT research policy, programme, priorities and recommendations for future co-operation initiatives including counterpart funding to leverage research capability and capacity available in India and for identifying new research and market opportunities for Europe. Euro-India SPIRIT emerges as a logical sequence to previous EU-India initiatives and aims to ensure a sustained action and to serve a dedicated forum for European and Indian ICT communities and research stakeholders for the purpose of presenting, discussing & tackling the major issues in the development of a sustainable, long term EU and Indian Policy dialogue covering the research dimension. The Euro-India SPIRIT project comes at a crucial time in the evolution of international co-operation strategy of the EU in the ICT research domain vis-à-vis Inco priority countries in general and India in particular and. The project is conceived by a highly qualified and strongly committed consortium of partners with complementary skills and experiences in international cooperation, policy and actions. Euro-India SPIRIT major results: 1 Report on Research dimension in Indian ICT Policy, 2 Stakeholder EU & India Surveys, 4 policy & joint RTD priority Recommendation Reports, 1 Roadmap for leveraging

Project Partners:

1. *GEIE ERCIM, France*
2. **Administrative Staff College of India, India**
3. *Infra Technologies, France*
4. *TRUST-Italy Services Ltd, United Kingdom*
5. **Federation of Indian Chambers of Commerce and Industry, India**
6. **Centre for Science, Development & Media Studies, India**

Project Details:

Call: FP7-ICT-2009-4
Project Number: 248575
Instrument: CSA-SA
Project Start Date: 1 January 2010
Project Duration: 24 months
Project Cost: 709 760 €
EC Contribution: 589 469 €
Project Website: <http://www.euroindia-ict.org/>

Project Title: Generalised architEcture for dYnamic
infraStructure sERVICES

Project Acronym: GEYSERS

Activity Area: The Network of the Future



Project Description:

GEYSER's vision is to qualify optical infrastructure providers and network operators with a new architecture, to enhance their traditional business operations. Optical network infrastructure providers will compose logical infrastructures and rent them out to network operators; network operators will run cost-efficient, dynamic and mission-specific networks by means of integrated control and management techniques. In the GEYSER concept, high-end Italy resources at users' premises are fully integrated with the network services procedures, both at the infrastructure planning and connection provisioning phases.

Following this vision, GEYSER will specify and implement a novel optical network architecture able to support 'Optical Network + Any-Italy' resource provisioning seamlessly and efficiently. Energy consumption metrics for the end-to-end service routing are part of this efficiency. GEYSER is proposing to:

- Specify and develop mechanisms that allow infrastructure providers to partition their resources (optical network and/or Italy), compose specific logical infrastructures and offer them as a service to network operators. This will be done overcoming the current limitations of networks/domain segmentation, and will support dynamic and on-demand changes in the logical infrastructures.
- Specify and develop a Network Control Plane for the optical infrastructure, by extending standard solutions (ASON/GMPLS and PCE), able to couple optical network connectivity and Italy services automatically and efficiently, and provide them in 1 step, dynamically and on-demand, including infrastructure replanning mechanisms.

These achievements will enable infrastructure providers, network operators and application providers to participate in new business scenarios where complex services with complex attributes and strict bandwidth requirements can be offered economically and efficiently to users and applications. The GEYSER outcomes will be validated in an EU-wide optical network test-bed.

Project Partners:

1. *Interoute Spa, Italy*
2. **Indian Institute of Technology Bombay, India**
3. Technische Universität Carolo-Wilhelmina zu Braunschweig, Germany
4. Universiteit van Amsterdam, Netherlands
5. University of Essex, United Kingdom
6. ADVA AG Optical Networking, Germany
7. Alcatel-Lucent Italia S.P.A., Italy
8. Martel GMBH, Switzerland
9. Nextworks, Italy
10. Research and Education Laboratory in Information Technologies, Greece
11. Sap AG, Germany
12. Telefonica Investigacion Y Desarrollo SA, Spain
13. Telekomunikacja Polska S.A., Poland
14. Fundacio Privada I2cat, Internet I Innovacio Digital A Catalunya, Spain
15. Institut National de Recherche en Informatique et en Automatique, France
16. Instytut Chemii Bioorganicznej Pan, Poland
17. Interdisciplinary Institute for BroadBand Technology vzw, Belgium

Project Details:

Call: FP7-ICT-2009-4
Project Number: 248657
Instrument: CP-IP
Project Start Date: 1 January 2010
Project Duration: 36 months
Project Cost: 11 362 256 €
EC Contribution: 7 564 679 €
Project Website: <http://www.geysers.eu/>

Project Title: Synchronising the Research Policy Dialogue to the Indian Dimension
Project Acronym: SYNCHRONISER
Activity Area: International Cooperation



Project Description:

SYNCHRONISER will boost the impact of the EU-India research policy dialogue in ICT using Foresight techniques. A COMMITTEE of stakeholders from both regions will identify research paths for joint research priorities noted at the EU-India March 2009 Information Societies Joint Working Group. SYNCHRONISER addresses 2 objectives feeding the EU-India policy dialogue and strengthens the international dimension of their ICT research programme: i) matching EU-India co-funding opportunities; ii) long term Indian research perspectives aligned with EU priorities. A Foresight exercise will identify future R&D trends to influence EU-India R&D policy. Input will include a comprehensive survey of best-in-class researchers across India using Delphi research techniques as a keynote activity resulting in publication of a Trend Study and Roadmap Report at the end of the Foresight process. This Study will act as an encyclopaedia for future EU-India joint research initiatives by highlighting current joint research scenarios and long-term perspectives. The SYNCHRONISER Consortium is well-balanced and geographically well-distributed, Indo-European, public-private-partnership with in-depth knowledge of the ICT sector in both regions and is part of a broad international network of public and private organizations, research centres and universities. The Consortium will benefit from its partners' vast experience in EU-India Horizontal Support Action projects and strong support by the Government of India's Department of Information Technology to establish synergies with other policy dialogue initiatives (e.g. INCO-NETS, BILATS, and other EU-India ICT projects). The GoI DIT will also assist in organizing high-level events involving policy-makers. SYNCHRONISER will ensure project dissemination through events, a project website, etc. The project target groups include ICT communities, policy-makers and other stakeholders from both regions

Project Partners:

1. *Technical Support for European Organisations SPRL, Belgium*
2. **Indian Institute of Science, India**
3. **EIRC Consulting Private Limited, India**
4. Rose Vision SL., Spain
5. **Software Technology Parks of India, India**
6. **Centre for Development of Advanced Computing, India**
7. Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V, Germany

Project Details:

Call: FP7-ICT-2009-4
Project Number: 248867
Instrument: CSA-SA
Project Start Date: 1 January 2010
Project Duration: 30 months
Project Cost: 575 001 €
EC Contribution: 575 001 €
Project Website: <http://www.euroindiaresearch.org/synchroniser/index.htm>

Project Title: Trans-national cooperation among ICT National Contact Points
Project Acronym: IDEALIST2011
Activity Area: Transnational cooperation among National Contact Points



Project Description:

The main objective of Idealist2011 is reinforcing the network of National Contact Points (NCP) for ICT under FP7, by promoting further trans-national cooperation within this network. This cooperation will not be reduced to only ICT NCPs but also a degree of collaboration and networking with similar networks in parallel themes (Security, SSH, ENV, Transport, Energy, Health,...etc) especially in the context of joint/coordinated calls will be covered. Special focus is put on helping less experienced NCPs from Member States (MS) and Associated States (AS) to access the know-how accumulated in other countries and to apply it in a locally relevant and efficient manner.

Furthermore Idealist2011 aims to address national and cross-border audiences, relying on the NCP network mainly established in the MS and AS at national and regional level, to stimulate, encourage and facilitate the participation in current and future Community ICT research of organisations of all types. Special focus is put on newcomers and SMEs, including organisations from MS, AS and 3rd countries which comprise countries from Eastern & Extended Europe Partner Countries (3EPC), Mediterranean Partner Countries (MPC) and selected 3rd Countries with high technical and economical potential.

The activities of Idealist2011 are incremental to the formal NCP responsibilities as they address the international aspects not covered by the nationally funded NCP role. It is built upon:

- Experience gained over more than 13 years from the 6 preceding projects covering FP4 to FP7
- Strengthening NCP cooperation with support for MS, AS and ICPC
- Provision of Training and Twinning for the less experienced NCPs
- Provision of partner search quality support
- Focused support for SMEs in the ICT sector and for organisations new to the FP
- Provision of NCP support for countries with S&T international agreements
- Promotion of opportunities and Idealist services ensuring a higher visibility of the NCPs

Project Partners:

1. *Deutsches Zentrum fuer Luft - und Raumfahrt Ev, Germany*
2. Oesterreichische Forschungsfoerderungsgesellschaft Mbh, Austria
3. Belarusian Institute of System Analysis and Information Support of Scientific and Technical Sphere, Belarus
4. Agence Bruxelloise pour L'entreprise, Belgium
5. Institute for Parallel Processing - Bulgarian Academy Of Sciences, Bulgaria
6. Hrvatski Institut za Tehnologiju, Croatia
7. Research Promotion Foundation, Cyprus
8. Ustav Teorie Informace a Automatizace Av Cr, V.V.I., Czech Republic
9. Forsknings- og Innovationsstyrelsen, Denmark
10. Ministry of Communications & Information Technology, Egypt
11. Sihtasutus Archimedes, Estonia
12. Ubifrance*Agence Francaise pour le Developpement International des Entreprises, France
13. Ethniko Idryma Erevnon, Greece
14. Kozep-Magyarorszagi Regionalis Innovacios Ugynekseg Kozhasznu Egyesulet, Hungary
15. Haskoli Islands, Iceland
16. **Interactive Technology, Software and Media Association, India**
17. Matimop, Israeli Industry Center for Research & Development, Israel
18. Agenzia per la Promozione della Ricerca Europea, Italy

19. Consorzio Pisa Ricerche Scarl, Italy
20. Starptautiska Lietiskas Optikas Biedriba, Latvia
21. Luxinnovation Gie, Luxembourg
22. Malta Council for Science and Technology, Malta
23. Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico
24. Ministarstvo Prosvjete I Nauke, Montenegro
25. Senternovem, Netherlands
26. Norges Forskningsrad, Norway
27. Instytut Podstawowych Problemow Techniki Polskiej Akademii Nauk, Poland
28. Agencia de Inovacao - Inovacao Empresarial e Transferencia de Tecnologia, Portugal
29. Institutul National de Cercetare-Dezvoltare in Informatica - Ici Bucuresti, Romania
30. Slovenska Technicka Univerzita v Bratislave, Slovakia
31. Institut Jozef Stefan, Slovenia
32. Centro para el Desarrollo Tecnológico Industrial, Spain
33. Verket för Innovationssystem, Sweden
34. Verein Euresearch, Switzerland
35. Turkiye Bilimsel ve Teknolojik Arastirma Kurumu, Turkey
36. EFP Consulting (UK) Ltd, United Kingdom
37. Singleimage Limited, United Kingdom

Project Details:

Call: FP7-ICT-2007-3
Project Number: 231367
Instrument: CSA-SA
Project Start Date: 1 October 2008
Project Duration: 36 months
Project Cost: 3 963 651 €
EC Contribution: 2 995 160 €
Project website: <http://www.ideal-ist.net/>

Project Title: Strengthening EU-India collaboration in networked monitoring and control systems technologies
Project Acronym: EUCLID
Activity Area: Engineering of Networked Monitoring and Control Systems



Project Description:

India and the European Union face common timely challenges in the very important and potential field of networked monitoring and control system technologies, which create a favorable environment for strategic collaboration. Consequently, the main aim of EUCLID is to increase co-operation in this field between Indian and European R&D specialists, ensuring mutual benefits.

The two-year project will start its analysis from industrial needs in 4 application domains - (1) transportation; (2) energy management; (3) industrial automation; (4) water supply / treatment. In parallel, industrial needs in the relevant application domains in Europe will be identified as well, and cross-mapped with the findings in India, paving way to further strengthen R&D collaboration.

The international Expert Group – 10 high level specialists – will work jointly with the consortium and will provide their expertise to project implementation and assistance to the development of long term EU-Indian monitoring and control collaborations.

The EUCLID project will map Indian monitoring and control competences, will compare them with the identified industrial needs both in India and in Europe and European research priorities, and will map potential collaboration opportunities. As a result, Catalogue of Indian R&D organisations will be prepared. The EUCLID project team will assess EU-India collaboration potential and will prepare an Opportunity Report and a roadmap for EU-Indian collaboration in the field of networked monitoring and control system technologies. The project plans to implement two awareness raising multi scale events and a Delegation tour in India. It will aim to strengthen the industrial competitiveness in both India and the EU and to increase skills of R&D specialists. The mutual actions between EU and India will contribute to the inter-disciplinary excellence in control systems technologies.

Project Partners:

1. Inno AG, Germany
2. Indian Institute of Science, India
3. Honeywell Technology Solutions Lab, India
4. Institut Européen pour le Contrôle de Systèmes Embarqués, France

Project Details:

Call: FP7-ICT-2009-5
Project Number: 257093
Instrument: CSA-SA
Project Start Date: 1 June 2010
Project Duration: 24 months
Project Cost: 499 532 €
EC Contribution: 499 532 €
Project website: www.euclid-india.eu

Project Title: **Multidisciplinary networking of research communities in FIRE**

Project Acronym: **MyFIRE**

Activity Area: Future Internet Experimental Facility and Experimentally-driven Research



Project Description:

The objectives of the MyFIRE project is Multidisciplinary networking of research communities addressing both technological and socio-economic and environmental aspects of the Future Internet and on Coordination of research experience and user-driven open innovation activities establishing common concepts, roadmaps, methodologies and tools, including the sharing of best practices across pilots and sectors.

MyFIRE project develops the efficient mechanisms of test beds process to make it more effective and used. MyFIRE identifies the user communities and their needs for improving research value of the huge investments in FIRE testbeds.

MyFIRE develops a unique and new approach addressing how to optimize the design, setting up and use of the experimental test facilities by increasing awareness on economic data and technical test-beds related best practices

The MyFIRE project will apply a tried methodology which its partners have had considerable success with the Support Action projects before. The approach is to create a support environment, which enables key stakeholders to focus on the central question, develop consensus and collectively develop and agree on best practice for testing facilities across the scientific community in the development of future open experimental services.

MyFIRE project will create an open test facility environment by providing the technical awareness creation for the development of best practices for experimental facilities in Europe in collaboration with international partners reflecting the balance between the requirement for strong collaboration and the stakeholders expectation for achieving the good experimental activities to develop the sustainable testing methodologies contributing to European standards development. The framework will be developing through the creation of open dialogue between the ICT networking research communities and experts from key areas of sociology, policy makers, economic models and standards.

Project Partners:

1. *Inno TSD SA, France*
2. Saint Petersburg State University of Information Technologies, Mechanics and Optics, Russian Federation
3. The University of Edinburgh, United Kingdom
4. BII Group, People's Republic of China
5. Telscom A.G., Switzerland
6. **Ernet India, India**
7. Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V, Germany
8. Institut Européen des Normes de Télécommunication, France
9. Instituto de Pesquisas Tecnológicas do Estado de São Paulo SA, Brazil

Project Details:

Call: FP7-ICT-2009-5
Project Number: 258348
Instrument: CSA-SA
Project Start Date: 1 June 2010
Project Duration: 24 months
Project Cost: 969 954 €
EC Contribution: 700 558 €
Project website: www.my-fire.eu

Project Title: Future Internet Gateway-based Architecture of Residential Networks
Project Acronym: FIGARO
Activity Area: The Network of the Future



Project Description:

The Internet has evolved from a technology-centric core network to a user- and content-centric network that must support millions of users creating and consuming content. It must accommodate new services with new requirements and cope with heterogeneous network technologies. The momentum is moving toward the end user who is now capable of creating, storing, and delivering content and services. FIGARO proposes a Future Internet architecture that is structured around residential networks. In this architecture, home gateways have a key role as integrator of different networks and services, and as coordinator of Internet-wide distributed content management. FIGARO will: i) design a novel content management architecture that enables distributed content backup, search and access. This architecture will also support mobile users and wireless ad-hoc content sharing; ii) develop a network optimization framework, leveraging community networks and heterogeneous networks; iii) deliver a network management architecture which includes new network monitoring and real-time troubleshooting techniques; iv) explore novel Internet-based communication and service solutions for emerging sectors, such as energy management and e-health care.

The project will deliver the components of the FIGARO architecture through an experimental approach incorporating testbed prototyping of solutions. In summary, FIGARO is intended to evolve the current Internet to meet future demands of applications, services and end-users, while preserving its current robustness and increasing its scalability and efficiency. Furthermore, the integration of new sectors into the future Internet will spur trans-sector innovation and create new businesses. The project is expected to result in technologies that will strengthen Europe's position and give competitive advantage to European industry in the areas of Future Internet technologies and services, residential gateways and home automation.

Project Partners:

1. Thomson R& D Paris, France
2. Eurecom, France
3. Politecnico di Torino, Italy
4. Université Pierre et Marie Curie - Paris 6, France
5. University of Waterloo, Canada
6. **Guavus Network Systems Pvt. Ltd., India**
7. Home Automation Europe B.V., Netherlands
8. Martel GmbH, Switzerland
9. Philips Consumer Lifestyle B.V., Netherlands
10. Telefonica Investigacion y Desarrollo Sa, Spain
11. Thomson R & D France SNC, France
12. Nederlandse Organisatie voor Toegepast Natuurwetenschappelijk Onderzoek – TNO, Netherlands

Project Details:

Call: FP7-ICT-2009-5
Project Number: 258378
Instrument: CP-IP
Project Start Date: 1 October 2010
Project Duration: 36 months
Project Cost: 8 840 929 €
EC Contribution: 5 666 841 €
Project website: www.ict-figaro.eu

Project Title: Coordination and Support Action for Global RFID-related Activities and Standardisation - 2
Project Acronym: CASAGRAS2
Activity Area: Internet of Things and enterprise environments



Project Description:

The need for authoritative, on-going international cooperation in respect of the European agenda for taking the concept of the Internet of Things (IoT) to reality is pivotal in putting it into the global context it demands. CASAGRAS2 provides the necessary conduit for taking the next steps in international collaboration.

CASAGRAS2 identifies a much broader base for international cooperation, with partners from Brazil, mainland China, Hong Kong, India, Japan, Korea, Malaysia and USA. The European partners are from Belgium, France, Germany, Russia and the UK. CASAGRAS2 also identifies a group of experts to participate in the project that will target stakeholders based in Argentina, Belgium, Brazil, China, Denmark, Germany, India, Italy, Korea, Netherlands, USA and Russia.

The coordination and support action plan for CASAGRAS2 draws upon the outcomes of CASAGRAS1 and the recommendations that specifically align with the targets identified in Objective ICT-2009-1.3: ICT Internet of Things and Enterprise environment. Moreover, it seeks to contribute to the European research cluster for IoT development represented by CERP-IoT, offering an important holistic input characterised by the generic nature of the work packages in respect of architecture, identification and data capture protocols, applications and services framework, R&D roadmap, education and training and the important multi-dimensional features of governance; all with respect to international deliberation. Each component of these work package activities will be developed in cooperation with international partners through the international platform work package. Outcomes will be delivered through a dissemination infrastructure, exploiting a range of delivery platforms and serving a wide range of project, stakeholder and end-user delivery needs, with substantial foundations for innovation and enterprise in respect of applications, services and products, and socio-economic benefit.

Project Partners:

1. *AIM UK Ltd, United Kingdom*
2. Fundacao de Apoio a Universidade de Sao Paulo, Brazil
3. AIDC UK Ltd, United Kingdom
4. Custommedia Sdn Bhd, Malaysia
5. FEIG Electronic GMBH, Germany
6. High Tech Aid, United States
7. Paul Gerard Joseph Chartier, United Kingdom
8. Sap AG, Germany
9. **Global ICT Standardisation Forum for India, India**
10. SIT, Russian Federation
11. China Electronics Standardization Institute, People's Republic of China
12. Electronics and Telecommunications Research Institute, Republic of Korea
13. European Telecommunications Standards Institute, France
14. Yokosuka Telecom Research Park Kabu Shiki Gaisha, Japan

Project Details:

Call: FP7-ICT-2009-5
Project Number: 258440
Instrument: CSA-CA
Project Start Date: 1 June 2010
Project Duration: 24 months
Project Cost: 982 972 €
EC Contribution: 954 297 €
Project website: www.iot-casagras.org

Project Title: EU-INdia Fostering COOPeration in Computing Systems
Project Acronym: EU-INCOOP
Activity Area: Computing Systems



Project Description:

The objective of EU-INCOOP project is to stimulate cooperation in the computing embedded technologies between Europe and India, in order to support Europe's leading position in computing system while ensuring mutual benefits for both Europe and India.

The project intends to take a 'consensus building approach' by bringing together researchers and stakeholders from both regions under a common forum for discussing and analysing research agendas in computing system.

Through the sequence of structured workshops, channels of communication will be established between the provider constituency, and the research community. The proposed work of EU-INCOOP is designed specifically to contribute to the coordination of ICT R&D related to international cooperation in computing systems.

Project Partners:

1. *Foundation for Research and Technology Hellas, Greece*
2. **Indian Institute of Science, India**
3. **Interactive Technology, Software and Media Association, India**
4. Kyos Sarl, Switzerland
5. X/Open Company Limited, United Kingdom
6. **Centre for Development for Advanced Computing, India**

Project Details:

Call: FP7-ICT-2011-7
Project Number: 287820
Instrument: CSA-SA
Project Start Date: 1 October 2011
Project Duration: 24 months
Project Cost: 466 529 €
EC Contribution: 350 000 €
Project website: <http://www.euincoop.eu/>

Project Title: Large-scale, Cross-lingual Trend Mining and Summarisation of Real-time Media Streams
Project Acronym: TrendMiner
Activity Area: Language Technologies



Project Description:

The recent massive growth in online media and the rise of user-authored content (e.g weblogs, Twitter, Facebook) has led to challenges of how to access and interpret these strongly multilingual data, in a timely, efficient, and affordable manner. Scientifically, streaming online media pose new challenges, due to their shorter, noisier, and more colloquial nature. Moreover, they form a temporal stream strongly grounded in events and context. Consequently, existing language technologies fall short on accuracy, scalability and portability.

The goal of this project is to deliver innovative, portable, open-source real-time methods for cross-lingual mining and summarisation of large-scale stream media. We will achieve this through an interdisciplinary approach, combining deep linguistic methods from text processing, knowledge-based reasoning from web science, machine learning, economics, and political science. No expensive human annotated data will be required due to our use of time-series data (e.g. financial markets, political polls) as a proxy. A key novelty will be weakly supervised machine learning algorithms for automatic discovery of new trends and correlations. Scalability and affordability will be addressed through a cloud-based infrastructure for real-time text mining from stream media. Results will be validated in two high-profile case studies: financial decision support (with analysts, traders, regulators, and economists) and political analysis and monitoring (politicians, economists, and political journalists).

The techniques will be generic with many business applications: business intelligence, customer relations management, community support. The project will also benefit society and ordinary citizens by enabling enhanced access to digital libraries, government data archives, online health portals, and tracking of hot political topics.

Project Partners:

1. *Deutsches Forschungszentrum Fuer Kuenstliche Intelligenz GmbH, Germany*
2. The University of Sheffield, United Kingdom
3. University of Southampton, United Kingdom
4. Eurokleis S.R.L., Italy
5. **Hardik Fintrade Pvt Ltd., India**
6. Ontotext AD, Bulgaria
7. Sora Ogris & Hofinger GmbH, Austria
8. Stichting European Archive, The Netherlands

Project Details:

Call: FP7-ICT-2011-7
Project Number: 287863
Instrument: CP-FP
Project Start Date: 1 November 2011
Project Duration: 36 months
Project Cost: 3 283 558 €
EC Contribution: 2 515 480 €
Project website: <http://www.trendminer-project.eu/>

Project Title: Modelling and Analysing Demand Response Systems
Project Acronym: WATTALYST
Activity Area: ICT systems for Energy Efficiency



Project Description:

Demand Response [DR] programs along with the emergence of technology to support DR are known to be effective for reducing energy consumption. However, the process of designing effective DR programs is not well understood. Research related to demand response and demand side management has addressed a suite of issues including differential pricing, incentive schemes, consumption profiling, and eco-feedback. Despite these efforts, there is a lack of understanding of factors (such as weather, local events, consumer context,) that influence the demand side. Understanding these factors is crucial to success of a DR program. WATTALYST (WATT anALYST) will address this need by establishing correlations between electricity consumption and the factors that influence demand side participation. The insights gained will be presented to DR designers using a visual analytics framework that can help the designers and policy makers choose optimal program parameters such as pricing models, incentives, user interfaces, etc.

The key focus of WATTALYST will be:

- Investigation of typical demand response participation rates and how these rates vary based on external factors such as weather, holidays, sporting events, etc.
- Investigation of demand response participation rates and how these rates vary based on internal factors such as customer type (residential, commercial) and customer profile (e.g., age, geographic location).
- Understanding how consumers reduce demand - identifying the loads (e.g. washing machines, electric vehicles) that can be shifted and those that cannot; and identifying the loads that are reduced (e.g. cooling, heating) and those that are not.
- Understanding effective methods of conveying the DR signals to the users. In particular, the research will focus on interface design; communication means (in-house displays, SMS messages), message emphasis (environmental, economical) and customized messages based on gender, age and profile.

Project Partners:

1. *Lulea Tekniska Universitet, Sweden*
2. Athens University Of Economics And Business - Research Center, Greece
3. Ecole Polytechnique Federale De Lausanne, Switzerland
4. Rheinisch-Westfaelische Technische Hochschule Aachen, Germany
5. **IBM India Private Limited, India**
6. SAMPOL Ingeniería y Obras S.A., Spain
7. Fundacion Tecnalía Research & Innovation, Spain

Project Details:

Call: FP7-ICT-2011-7
Project Number: 288322
Instrument: CP-FP
Project Start Date: 1 October 2011
Project Duration: 36 months
Project Cost: 3 359 320 €
EC Contribution: 2 356 087 €
Project website: <http://www.wattalyst.org/>

Project Title: Trans-national cooperation among ICT NCPs
Project Acronym: idealist2014
Activity Area: Trans-national co-operation among National Contact Points



Project Description:

The main objective of Idealist2014 is reinforcing the network of National Contact Points (NCP) for ICT under FP7, by promoting further trans-national cooperation within this network. This cooperation will not be reduced to only ICT NCPs but also a degree of collaboration and networking with similar networks in parallel themes (Security, SSH, ENV, Transport, Energy, Health,...etc) especially in the context of joint/coordinated or PPP calls will be covered. Special focus is put on helping less experienced NCPs from Member States (MS) and Associated States (AS) to access the know-how accumulated in other countries and to apply it in a locally relevant and efficient manner. Furthermore Idealist2014 aims to address national and cross-border audiences, relying on the NCP network mainly established in the MS and AS at national and regional level, to stimulate, encourage and facilitate the participation in current and future Community ICT research of organisations of all types. Special focus is put on newcomers and SMEs, including organisations from MS, AS and ICPCs which comprise countries from Eastern European Partner Countries (EEPC), Mediterranean Partner Countries (MPC) and selected ICPCs with high technical and economical potential.

The activities of Idealist2014 are incremental to the formal NCP responsibilities as they address the international aspects not covered by the nationally funded NCP role. It is built upon:

- Experience gained over more than 15 years from the 7 preceding projects covering FP4 to FP7 and now the transition to FP8
- Strengthening NCP cooperation with support for MS, AS and ICPCs
- Provision of Training and Twinning for less experienced NCPs
- Provision of partner search, pre- and full proposal quality support
- Focused support for SMEs in the ICT sector and for organisations new to the FP
- Provision of NCP support for countries with S&T international agreements
- Promotion of opportunities and Idealist services ensuring a higher NCP visibility

Project Partners:

1. *Deutsches Zentrum Fuer Luft - und Raumfahrt Ev, Germany*
2. Institute of Information and Communication Technologies, Bulgaria
3. Instituto Tecnologico y de Estudios Superiores de Monterrey, Mexico
4. Institutul de Dezvoltare a Societatii Informationale, Republic of Moldova
5. Universite Sidi Mohammed Ben Abdellah, Morocco
6. Agence Bruxelloise pour l'Entreprise, Belgium
7. **Interactive Technology, Software and Media Association, India**
8. International Center for Advancement of Research, Technology and Innovation, Georgia
9. Verein Euresearch, Switzerland
10. Efp Consulting (Uk) Ltd, United Kingdom
11. Singleimage Limited, United Kingdom
12. Belarusian Institute of System Analysis and Information Support of Scientific and Technical Sphere, Belarus
13. Information Society Technologies Center, Armenia
14. Kozep-Magyarorszagi Regionalis Innovacios Ugynokseg Kozhasznu Egyesulet, Hungary
15. Malta Council for Science and Technology, Malta
16. Matimop, Israeli Industry Center for Research and Development, Israel
17. Norges Forskningsrad, Norway
18. Oesterreichische Forschungsfoerderungsgesellschaft Mbh, Austria
19. Starptautiska Lietiskas Optikas Biedriba, Latvia
20. Ubifrance*Agence Francaise pour le Developpement International des Entreprises, France

21. Agenzia per la Promozione della Ricerca Europea, Italy
22. Institutul National de Cercetare-Dezvoltare in Informatica - ici Bucuresti, Romania
23. Instytut Podstawowych Problemow Techniki Polskiej Akademii Nauk, Poland
24. Turkiye Bilimsel Ve Teknolojik Arastirma Kurumu, Turkey
25. Ustav Teorie Informace A Automatizace Av Cr, V.V.I., Czech Republic

Project Details:

Call: FP7-ICT-2011-7
Project Number: 288598
Instrument: CSA-CA
Project Start Date: 1 October 2011
Project Duration: 36 months
Project Cost: 4 748 921 €
EC Contribution: 3 999 753 €
Project website: <http://www.ideal-ist.net/>

Project Title: **Wireless, Self-Powered Vibration Monitoring and Control for Complex Industrial Systems**
Project Acronym: **WiBRATE**
Activity Area: New paradigms for embedded systems, monitoring and control towards complex systems engineering



Project Description:

WiBRATE explores new paradigms for developing innovative strategies for wirelessly monitoring and controlling vibration using a network of intelligent embedded devices that power themselves using harvested vibration energy. The project contributes directly to strengthening the European market in several key sectors such as quality control systems, safety systems, wireless communication and industrial automation and control systems.

WiBRATE makes concrete progress beyond the state of the art in the following specific areas:

- System-of-systems engineering (SoSE)
- Real-time vibration analysis and control
- Distributed and cooperative networked control strategies
- Intelligent actuators
- Robust, real-time wireless communication in harsh industrial environments
- Vibration-based energy harvesting for sensing, control, actuation and communication

WiBRATE defines new SoSE techniques to help create a synergy between individual complex systems (e.g. sensors, actuators, communication networks, energy harvesters, etc.) to ensure optimal operation of the overall vibration monitoring and control system. Using self-learning and distributed strategies, WiBRATE allows intelligent nodes to collaboratively analyse vibration signatures and perform autonomous cooperative networked control. Control operations are supported by WiBRATE's unique ultra-low power Digital Enhanced Cordless Telecommunications (DECT) based technology that allows robust, real-time wireless communication even in harsh industrial environments. Moreover, intelligent actuators powered by vibration-based energy harvesters allow WiBRATE to present a completely wireless and flexible solution.

The five industrial and two academic partners in WiBRATE demonstrate the viability of their techniques using case studies in the automotive manufacturing, aerospace and railway industries. The academic partners also take important steps to help enhance Europe's educational and training activities in systems and control engineering.

Project Partners:

1. *Universiteit Twente, The Netherlands*
2. *Universita Della Svizzera Italiana, Switzerland*
3. **Honeywell Technology Solutions Lab Private Limited*HTS, India**
4. *Inertia Technology B.V., The Netherlands*
5. *LMS International NV, Belgium*
6. *Perpetuum Limited,, United Kingdom*
7. *Centro Ricerche Fiat SCPA, Italy*

Project Details:

Call: FP7-ICT-2011-7
Project Number: 289041
Instrument: CP-FP
Project Start Date: 1 September 2011
Project Duration: 36 months
Project Cost: 4 278 654 €
EC Contribution: 2 918 907 €
Project website: <http://wibrate.eu/>



COOPERATION

Thematic Priority Area - 4

NANOSCIENCES, NANOTECHNOLOGIES, MATERIALS AND NEW PRODUCTION PROCESSES

Project Title: A web-based repository of nanoscience and nanotechnology publications, database of researchers and online forum, to inform and facilitate networking between EU and ICPC RTD



Project Acronym: ICPCNanoNet

Activity Area: Support to ICPC researchers in nanotechnology and creation of a free and open electronic archive of nanosciences and nanotechnologies scientific and technical publications

Project Description:

The ICPCNanoNet project aims to provide an electronic archive of nanoscience and nanotechnology research publications and support the networking of researchers in the EU and ICPC.

The electronic archive will be based on open-source software (EPrints) that is widely used by scientific institutions across the globe, and allows the incorporation of full-text open access publications (submitted by authors themselves) and the incorporation of entries from other publicly available sources (including other open-access repositories, electronic tables of contents and abstracts). This will facilitate researcher access to new data and the identification of groups that are performing complementary research for potential collaboration.

ICPCNanoNet will also establish a database of researchers and organizations in the EU and ICPC, which will include contact details, research interests and expertise. This database will be available to all registered users of the website, allowing researchers to search for individuals that have specific expertise and organizations that have desired instrumentation and capacity. Researchers will be able to contact each other through an internal mail forwarding system and online discussion fora.

It will identify research strategies and organization activities within the eight ICPC regions: Africa; Caribbean; Pacific; Asia; Eastern Europe and Central Asia; Latin America; Mediterranean Partner Countries; and Western Balkan Countries. These will be reported on an annual basis and available to download from the website.

It will actively network EU and ICPC researchers through annual workshops, to be held in the EU; China; India; and Russia, and through the webcasting of these workshops and separate online workshops, where wider participation can be achieved.

Project Partners:

1. Institute of Nanotechnology, United Kingdom
2. Sociedade Portuguesa de Inovação - Consultadoria Empresarial e Fomento da Inovação, S.A. Portugal
3. Saint Petersburg Electrotechnical University (LETI) Russian Federation
4. **Jawaharlal Nehru Centre for Advanced Scientific Research, India**
5. Chinese Society of Micro-Nano Technology China

Project Details:

Call: NMP-2007-CSA-1
Project Number: 218282
Instrument: CSA-SA
Project Start Date: 1 June 2008
Project Duration: 48 months
Project Cost: 1 365 383 €
EC Contribution: 1 365 383 €
Project website: www.icpc-nanonet.org

Project Title: Integrated European Industrial Risk Reduction System
Project Acronym: IRIS
Activity Area: Integrated Risk Management in Industrial Systems



Project Description:

Current practices in risk assessment and management for industrial systems are characterized by its methodical diversity and fragmented approaches. In retrospect these risk and safety paradigms resulted from diverse industries driven and limited by available knowledge and technologies. A change based on industry driven R&D work is needed.

At present the European Industry recognised their obligation to reconsider their risk and safety policies, having a more competitive industry and more risk informed and innovation accepting society in vision. Therefore the large collaborative project IRIS is proposed to identify, quantify and mitigate existing and emerging risks to create societal cost-benefits, to increase industrial safety and to reduce impact on human health and environment.

The project is led and driven by the industry to consolidate and generate knowledge and technologies which enable the integration of new safety concepts related to technical, human, organizational and cultural aspects. The partnership represents over 1 million workers.

The proposed project relates to strategic research topics defined by ETPIS and ECTP and is underpinning relevant EU policies on industrial safety.

Project Partners:

1. VCE Holding GmbH, Austria
2. EDF-Septen, France
3. DOW Deutschland Anlagenbau GmbH, Germany
4. Egnatia Odos A.E., Greece
5. KGHM Cuprum sp. z o.o. CBR, Poland
6. RWE Power Aktiengesellschaft, Germany
7. Wölfel Beratende Ingenieure GmbH & Co. KG, Germany
8. Materialprüfungsanstalt Universität Stuttgart, Germany
9. CEA Saclay, France
10. Directorate General Joint Research Centre, Belgium
11. Institut National de Recherche en Informatique et en Automatique, France
12. Dipartimento di Ingegneria Strutturale e Geotecnica, Politecnico di Torino, Italy
13. Universität Linz - Institut für Anwendungsorientierte Wissensverarbeitung, Austria
14. Technische Universität Braunschweig, Institut für Geodäsie und Photogrammetrie, Germany
15. Aristotle University of Thessaloniki, Greece
16. MEGA International, Germany
17. Galleria di Base del Brennero - Brenner Basistunnel BBT Sweden, Italy
18. NPP Kozloduy EAD, Bulgaria
19. Institute for Energy Research and Development, Energy Environment Center, Romania
20. Risk Engineering Ltd, Bulgaria
21. Czech Technical University in Prague, Czech Republic
22. Hungarian Ministry of Interior - Civil Protection Hungary, Hungary
23. Neue Materialien Würzburg GmbH, Germany
24. Büro für Angewandte Geowissenschaftliche Fernerkundung, Germany
25. Federal Institute for Materials Research and Testing, Germany
26. University of Sheffield, Department of Civil and Structural Engineering, United Kingdom
27. Rowan Williams Davies & Irwin Inc. Consulting Engineers & Scientists, Canada
28. VR VIS Zentrum für Virtual reality und Visualisierung Forschungs-GmbH, Austria

29. Università degli Studi di Genova, Dep.of Civil, Environmental and Architectural Engineering, Italy
30. University of Manchester, United Kingdom
31. Universidad Politécnica de Cartagena, Spain
32. Lulea University of Technologie, Sweden
33. Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Germany
34. CKTI-Vibroseism Co. Ltd, Russian Federation
- 35. Bhabha Atomic Research Centre, India**
36. Infrastructure and Transportation, Canada
37. University of Ottawa, Canada
38. University of Tokyo, Department of Civil Engineering, Japan
39. Stanford University, United States
40. Drexel University, United States

Project Details

Call: FP7-NMP-2007-LARGE-1
Project Number: 213968-2
Instrument: CP-IP
Project Start Date: 1 October 2008
Project Duration: 48 months
Project Cost: 15 157 760 €
EC Contribution: 9 999 983 €
Project Website: www.vce.at/iris/index.html

Project Title: Euro-Indo forum for nano-materials research coordination & cooperation of researchers in sustainable energy technologies



Project Acronym: EICOON

Activity Area: Coordinated actions with Materials researchers in major world regions

Project Description:

In a globalise world energy is a decisive factor for the further development and economic and social well being of the nations and stability in the different world regions. Materials science and research has in the past significantly contributed to solving issues in sustainable energy technologies.

To bring about advancement and improvements in energy technologies and to address sustainability, research in nano-materials is expected to contribute significantly to solutions in a highly competitive and increasingly globalize world. Such research will inevitably have to be coordinated at European level but also internationally. In Europe, materials researchers cooperate increasingly in EU funded projects and bilaterally with non-European countries. The EU has concluded S&T agreements and implementation arrangements with India. It foresees the coordination and the execution of joint projects. This proposal intends to address the strategic assessment including synergy analysis of nano-materials research needs in the EU and India. It will establish and communicate to DG RTD and DST the mutual interests and the topics for future coordinated calls to enable the decision & policy makers and the funding bodies to make better informed decisions and to better select the implementation mechanisms and instruments. Beside the assessment, the proposal also addresses the dissemination of the “nano-materials research acquis” in the field by organization of events. Finally, it will bring together researchers for future research collaboration, to exchange ideas for joint projects and to inform each other on their core competencies & expertise. The project aims at the generation and enhancement of knowledge in materials science and research especially nano-materials applied to sustainable energy technologies. It also aims to increase the deployment of these materials in the technologies in both regions.

Project Partners:

1. *MESA+ Institute for Nanotechnology, Netherlands*
2. **Indian Institute of Technology Delhi, India**
3. **Indian Institute of Technology Kharagpur, India**
4. **Confederation of Indian Industry, India**
5. Consultadoria Empresarial e Fomento da Inovação, S. A., Portugal
6. Institute of Nanotechnology, United Kingdom
7. European Commission, Directorate-General Joint Research Centre, Belgium
8. Italian National Agency for New Technologies, Energy and the Environment, Italy
9. **Jawaharlal Nehru Centre for Advanced Scientific Research, India**
10. **National Chemical Laboratory, India**
11. **S N Bose National Centre for Basic Sciences, India**
12. Valtion teknillinen tutkimuskeskus, Finland

Project Details

Call: FP7-NMP-2008-CSA-2
Project Number: 233466
Instrument: CSA-SA
Project Start Date: 1 September 2009
Project Duration: 48 months
Project Cost: 1 067 547 €
EC Contribution: 878 214 €
Project Website: <http://www.mesaplus.utwente.nl/nme/eicoon/>

Project Title: Merging Atomistic and Continuum Analysis of Nanometer Length-Scale Metal-Oxide Systems for Energy and Catalysis Applications
Project Acronym: MACAN
Activity Area: Coordinated actions with Materials researchers in major world regions



Project Description:

The stability of thin films in contact with different materials is a critical issue for a wide range of modern devices, including high-k films in the microelectronics industry, metal electrodes for fuel cells, and nanometer sized particles on oxides for catalysis. Some groups are working on thermodynamic analysis of thin film stability, who correlate relative interface energies with dopant adsorption. While this provides important thermodynamic parameters which can be used to evaluate the stability of thin films, information on the detailed atomistic structure and chemistry of the same interfaces needs to be correlated with the thermodynamic approach. Other groups use advanced characterization approaches to determine local atomistic structure and chemistry, and theoretical groups explore interface structure and energy through computational methods. It is the goal of this project to bridge between these working groups.

This project will establish an environment to promote communication and collaboration between groups using thermodynamic approaches with groups studying the atomistic structure of interfaces, since bridging this particular scientific gap has the potential to result in new design criteria for advanced material systems. The project is based on a core group of European, and International partners, who have realized that such a form of communication is critical to advancing the field of interface science and interface based technology. The partners will establish structured programs for discussion via focused public workshops and summer schools, and via scientific exchange. While the core group of partners is academic, European industry will be involved in the structured discussions. The expected impact from this four-year project is methods to correlate between thermodynamic analyses of interfaces with atomistic structure. This will provide new approaches to understanding interface stability, adhesion and interface dependent functional properties.

Project Partners:

1. Technion - Israel Institute of Technology, Israel
2. Centre National de la Recherche Scientifique, France
3. Christian-Albrechts-Universität zu Kiel, Germany
4. Forschungszentrum Jülich GmbH, Germany
5. Imperial College of Science, Technology and Medicine, United Kingdom
6. **Indian Institute of Science, India**
7. Jozef Stefan Institute, Slovenia
8. Ludwig-Maximilians-Universität Munich, Germany
9. Massachusetts Institute of Technology, United States
10. Max Planck Gesellschaft zur Förderung der Wissenschaften e.V., Germany
11. Montanuniversität Leoben, Austria
12. Pontifícia Universidade Católica do Rio de Janeiro, Brazil
13. Sabanci University, Turkey
14. University of Connecticut, United States
15. University of Copenhagen, Denmark
16. University of Tokyo, Japan
17. Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V., Germany

Project Details

Call: FP7-NMP-2008-CSA-2
Project Number: 233484
Instrument: CSA-CA
Project Start Date: 1 June 2009
Project Duration: 48 months
Project Cost: 1 599 922 €
EC Contribution: 1 599 922 €
Project Website: www.macan.technion.ac.il

Project Title: Integrating Nanomaterials in Formulations
Project Acronym: InForm
Activity Area: Coordinated actions with Materials researchers in major world regions



Project Description:

A coordination action is proposed to reinforce the international dimension of EU research on nanomaterials in formulations in the Asia-Pacific region. Three mechanisms will be implemented to reach the widest possible audience in the appropriate formats that are convenient to the different stakeholders: (1) yearly major events, that will introduce a new concept to scientific gatherings and a departure from conventional meetings, (2) a researchers exchange program to seed new collaborations, facilitate joint projects and the realisation of future coordinated calls, and (3) the creation of a website devoted to nanomaterials in formulations, that will include up to date and reliable information on the newest research developments, funding opportunities, regulations, events and links to other nanotechnology initiatives.

Project Partners:

1. *The University of Manchester, United Kingdom*
2. Faculty of Pharmacy, University of Sydney, Australia
3. **Indian Institute of Technology Madras, India**
4. Southwest Forestry University, China
5. Strider Research Corporation, United States
6. Universiti Malaya, Malaysia
7. Daren Laboratories and Scientific Consultants Ltd. Israel
8. Automaxion SARL, France
9. Bayer CropScience Aktiengesellschaft, Germany
10. Higgins' Consultancy Ltd, United Kingdom
11. Novartis, United Kingdom
12. Formulation Science and Technology Group - Royal Society of Chemistry, United Kingdom
13. Société Française de Chimie, France
14. Consejo Superior de Investigaciones Científicas, Spain
15. DECHEMA e.V. Society for Chemical Engineering and Biotechnology, Germany
16. Institute of Chemical and Engineering Sciences, Singapore
17. The Institute for Surface Chemistry, Sweden

Project Details

Call: FP7-NMP-2008-CSA-2
Project Number: 233533
Instrument: CSA-CA
Project Start Date: 1 July 2009
Project Duration: 36 months
Project Cost: 2 370 592 €
EC Contribution: 2 303 182 €
Project Website: www.nanoformulation.eu

Project Title: Development of reference methods for hazard identification, risk assessment and LCA of engineered nanomaterials

Project Acronym: NanoValid

Activity Area: Reference methods for managing the risk of engineered nanoparticles



Developing Reference Methods for Nanomaterials

Project Description:

The growing development, production and use of engineered nanomaterials and associated products will increase exposure of both humans and ecosystems to these new materials. However, current knowledge is still incomplete and established test methods are as yet inappropriate to reliably assess the extent of exposure and risk of materials at the nano-scale. There is an urgent need to develop methods to overcome the current limitations of existing hazard and risk assessment schemes and to generate the body of reference data needed as the basis for regulative requirements and for measures to safeguard production, application and the disposal of nanomaterials.

The proposed project will mobilize the critical mass of international scientific knowledge and technical expertise required to address these questions. Current analytical and toxicity test methods and models will be put to test and subjected to rigorous intercalibration and validation. Where necessary, methods and test materials will be modified, adapted and validated, and new reliable reference methods developed, in cooperation with international standardisation bodies and the concerned industry, to support both pre and co-normative activities and to make the applicability of existing RA and LCA schemes to ENPs more reliable.

The feasibility of validated measurement, characterization and test methods will be assessed by selected case studies to help the significant improvement of the performance of existing exposure monitoring systems as well as the development of new risk management and reduction strategies.

Project Partners:

1. Nordmiljö O. Grahn AB, Sweden
2. Facultes Universitaires Notre-Dame De La Paix De Namur, Belgium
3. Instituto Nacional De Metrologia, Normalização E Qualidade Industrial, Brazil
4. Northeastern University, United States
5. Paris-Lodron-Universität Salzburg, Austria
6. Royal Institution For The Advancement Of Learning McGill University, Canada
7. Tampereen Yliopisto, Finland
8. Universidad De Zaragoza, Spain
9. Universidade Federal De Minas Gerais, Brazil
10. University Of Alberta, Canada
11. University Of Massachusetts Lowell, United States
12. Univerza V Ljubljani, Slovenia
13. Din Deutsches Institut Fuer Normung E.V., Germany
14. Institute Of Nanotechnology, United Kingdom
15. Arkema France Sa, France
16. Det Norske Veritas As, Norway
17. Grimm Aerosol Technik Gmbh & Co Kg, Germany
18. Nanologica Ab, Sweden
19. Philips Electronics Nederland B.V., The Netherlands
20. Quantis Sàrl, Switzerland
21. Straticell Screening Technologies, Belgium
22. Bundesanstalt Fuer Arbeitsschutz Und Arbeitsmedizin, Germany
23. Eidgenoessische Anstalt Fur Wasserversorgung Abwasserreinigung Und Gewaesserschutz, Switzerland

24. Natural History Museum, United Kingdom
25. Bundesanstalt Fuer Materialforschung Und –Pruefung, Germany
26. Centro Ricerche Fiat Scpa, Italy
- 27. Centre for Cellular and Molecular Biology, India**
28. Det Nationale Forskningscenter Forarbejds miljo, Denmark
29. Fraunhofer-Gesellschaft Zur Foerderung Der Angewandten Forschung E.V, Germany
30. Helmholtz-Zentrum Fuer Umweltforschung Gmbh – Ufz, Germany
- 31. Indian Institute Of Toxicology Research, India**
32. Institutul National De Cercetare Dezvoltare Pentru Microtehnologie, Romania
33. Jrc -Joint Research Centre- European Commission, Belgium
34. Keemilise Ja Bioloogilise Fuusika Instituut, Estonia
35. Veneto Nanotech Scpa, Italy

Project Details:

Call: FP7-NMP-2010-LARGE-4
Project Number: 263147-2
Instrument: CP-IP
Project Start Date: 1 November 2011
Project Duration: 48 months
Project Cost: 15 757 831 €
EC Contribution: 11 152 959 €
Project website: <http://www.nanovalid.eu/>

Project Title: Eco-Innovative, Safe and Energy Efficient Wall Panels and Materials for a Healthier Indoor Environment
Project Acronym: ECO-SEE
Activity Area: Developing New Materials for Healthier and Energy Efficient Buildings

Project Description:

The ECO-SEE project aims to develop new eco-materials and components for the purpose of creating both healthier and more energy efficient buildings. We will create and symbiotically use natural eco-materials for healthier indoor environments through hygrothermal (heat and moisture) regulation and the removal airborne contaminants through both chemical capture and photocatalysis. Our objectives include advancing state of the art in the technology and application of multifunctional bio-based insulation materials, vapour permeable and hygrothermal and moisture buffering finishes, together with wood panel products, to create both internal partition and external highly insulated wall panels. Novel chemical treatments and processes will be used to enhance volatile organic compound capture capacity of materials. We will also develop highly novel photocatalytic coatings using nanoparticle technology, which will be suitable for use in interior spaces and compatible with lime and wooden surfaces. Novel material development will be completed in partnership with world-class expert organisations in indoor environmental quality. We will also create a new holistic modelling framework that combines air quality, hygrothermal comfort and acoustic quality for the well-being of building users. We will take new products through to proof of concept development with prototype manufacture, large scale tests and pilot studies. We will deliver products with at least 15% lower embodied energy, at least 20% longer life, and, for at least 20% lower build costs. Our consortium brings together a multi-disciplinary team of world-class researchers from universities and research organisations with a number of large enterprises and innovative SMEs, whose combined expertise and capacity will lead commercial development and exploitation of our products. We will engage with stakeholders, including Public and Health authorities and standards committees, and deliver training and technical guidance.

Project Partners:

1. *University of Bath, United Kingdom*
2. Instytut Technologii Drewna, Poland
3. Fraunhofer-Gesellschaft zur Foerderung Der angewandten Forschung E.V, Germany
4. Building Research Establishment LTD, United Kingdom
5. Universidade de Aveiro, Portugal
6. Greenovate! Europe, Belgium
7. BCB SAS, France
8. Fundacion Tecnalia Research & Innovation, Spain
9. Claytec Ek, Germany
10. Skanska UK Plc, United Kingdom
11. Lime Technology Limited, United Kingdom
12. Bangor University, United Kingdom
13. Nesocell Srl, Italy
14. Acciona Infraestructuras S.A., Spain
15. Parco Scientifico e Tecnologico per l'Ambiente – Environment Park, Italy
16. Kronospan Limited, United Kingdom
17. Black Mountain Insulation LTD, United Kingdom
- 18. Indian Institute of Technology Delhi, India**

Project Details:
Call: FP7-2013-NMP-ENV-EeB
Project Number: 609234
Instrument: CP-IP
Project Start Date: 1 September 2013
Project Duration: 48 months
Project Cost: 9,369,118 €
EC Contribution: 6,550,000 €
Project website: <http://www.bath.ac.uk/>

PROJECTS FUNDED UNDER THE EU-INDIA COORDINATED CALL FOR PROPOSALS IN COMPUTATIONAL MATERIALS SCIENCE

A Coordinated Call is when coordinating parallel calls issued by DG RTD and a funding agency of a third country with the alignment of content, resources, timing, evaluation criteria and procedures.

This Coordinated Call for proposals was sponsored by the industrial Technologies Directorate of DG RTD and the Department of Science and Technology of the Government of India, with funding of 5 Million Euros for each side.

25 proposals were received of which 6 have been funded.

Project Title: Advanced materials as CO₂ removers: A computational study of CO₂ sorption thermodynamics and kinetics

Project Acronym: AMCOS

Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

The proposed work aims at developing the tools required for the intelligent choosing and tuning of nano-porous materials with respect to a specific application. For this purpose, a combined computational theoretical and experimental study is envisaged in order to digitally reconstruct the porous matrix of selected advanced materials, mainly for applications involving sorption of carbon dioxide and methane by employing advanced Statistical Mechanics based computer simulation methods, both, in atomistic (Monte Carlo, ab initio and equilibrium and non-equilibrium Molecular Dynamics) and mesoscopic level (Kinetic Monte Carlo and Lattice Gas Cellular Automata).

The reasoning behind this strategy is that the structure of materials spans a wide range of length scales, making thus sorption and transport phenomena depend upon length and time scale.

As a consequence, the proposed computational methodology consists of many levels in order to address properly these phenomena. Moreover, a complementary approach to computer simulations is provided through direct comparison of two highly sophisticated methods for measuring motion of guest molecules inside porous materials, namely, quasi-elastic neutron scattering (QENS) and pulsed field gradient nuclear magnetic resonance (PFG NMR), carried out by the groups of Lyon and Leipzig respectively.

This type of combined studies can be perfectly utilized through the proposed work towards a fascinating insight of the relation of the material interior to the sorption and transport mechanisms of sorbates such as carbon dioxide and methane, both involved in the so-called greenhouse effect.

Project Partners:

- | | |
|---|---|
| 1. National Technical University of Athens, Greece | 1. National Environmental Engineering Research Institute, India |
| 2. Centre National de la Recherche Scientifique, France | 2. Institute of Chemical Technology, India |
| 3. Universitaet Leipzig, Germany | 3. Indian Institute of Technology, Madras, India |
| 4. Universita Degli Studi Di Sassari, Italy | 4. Indian Institute of Chemical Technology, India |

Project Details:

Project Start Date: 1 May 2009

Project Duration: 36 months

Project website: <http://comse.chemeng.ntua.gr/amcos/>

Project Title: New materials for hydrogen powered mobile applications
Project Acronym: HYPOMAP
Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

Emission-free energy generation in mobile applications is one of the major challenges to science to reduce global warming. A particularly promising approach is the electrochemical oxidation of hydrogen in fuel cells.

Two challenging questions have to be solved to achieve this goal: Hydrogen has to be stored at reasonable volumetric and gravimetric storage capacities in materials which allow efficient, energy-neutral loading and unloading. The released hydrogen must be oxidized electrochemically to produce electric power and water, the only by-product of this process. We will investigate various strategies to store hydrogen in nanoporous materials and by chemisorption in various hydrides. Special emphasis is given to the mechanism of adsorption, the thermodynamics of the ad- and desorption process, tuning of the materials etc. For studies on chemisorption, materials shall be searched with a suitable energy balance between hydride and dehydrogenated species.

The reaction mechanisms will be studied in detail and tuning of reaction barriers by advanced catalysts shall be investigated. The studies include various known and advanced materials such as carbon nanostructures, metal organic framework materials (MOFs), covalent organic framework materials (COFs), boron nitrides, clathrate hydrates and metal clusters. While present fuel cell technologies are more advanced than hydrogen storage devices, there is still room for significant improvements.

We will investigate new proton conducting materials for high- and low-temperature fuel cells, based on perovskites and new inorganic nanomaterials like imogolite derivatives (HT) and organic substances (LT). Investigations will include a wide range of theoretical approaches, including ab initio quantum chemistry, density-functional theory, quantum-liquid density functional theory for hydrogen, molecular dynamics and Grand-Canonical Monte-Carlo simulations.

Project Partners:

- | | |
|---|---|
| 1. Jacobs University Bremen GGMBH, Germany | 1. National Chemical Laboratory, India |
| 2. Centre National de la Recherche Scientifique, France | 2. Central Leather Research institute, India |
| 3. Stockholms Universitet, Sweden | 3. Indian institute of Technology, Kharagpur, India |
| 4. Universita Della Calabria, Italy | 4. Bhabha Atomic Research Centre, India |

Project Details:

Project Start Date: 1 June 2009
Project Duration: 36 months
Project website:

Project Title: Modeling of nano-scaled advanced materials intelligently

Project Acronym: MONAMI

Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

The proposed consortium focuses on a collaborative effort of developing novel techniques and paradigms concerning theoretical modeling of nano-scale advanced materials. The objectives are to identify novel methodologies and to identify appropriate approximations to successfully undertake simulations of the materials which are to be used in our future society.

An important aspect here is to be able to carry out this development all the way from idea and concept to working computer soft-wares. In addition to this technical development we will focus on establishing knowledge concerning an emerging class of materials; nano-scaled materials with potential for tailored properties and potential for novel functionality. Training of younger scientists forms a natural aspect of this ambition, and is a strategically relevant outcome of our planned efforts. Finally, it is envisaged that the collaboration will enable an intensified collaboration between European and Indian research laboratories and universities.

Project Partners:

- | | |
|---|--|
| 1. Uppsala Universitet, Sweden | 1. Indian Association for the Cultivation of Science, India |
| 2. Max Planck Gesellschaft zur Foerderung der Wissenschaften E.V., Germany | 2. S.N. Bose National Centre for Basic Sciences, India |
| 3. Technische Universitaet Wien, Austria | 3. Indian Institute of Science, India |
| 4. Radboud Universiteit Nijmegen - Stichting Katholieke Universiteit, Netherlands | 4. Jawaharlal Nehru Centre for Advanced Scientific Research, India |
| 5. Universiteit Twente, Netherlands | 5. Bhabha Atomic Research Centre, India |
| 6. Kungliga Tekniska Hoegskolan, Sweden | 6. Tata Institute of Fundamental Research, India |

Project Details:

Project Start Date: 1 July 2009

Project Duration: 36 months

Project website:

Project Title: Advanced computational studies of dynamic phenomena in magnetic nano-materials

DYNAMAG

Project Acronym: DYNAMAG

Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

The opportunity to modify the excitation spectra in materials with modulated properties has stimulated striving research activity in the area of artificial nanostructures with novel functionalities - so called metamaterials. Magnetic materials with modulated properties also possess properties that cannot be reduced to those of their constituents. The best example is the phenomenon of giant magneto-resistance (GMR), the discovery of which was marked by the Nobel Prize in Physics last year. Similar to photons in photonic crystals, the spectrum of magnons (spin waves) in periodic magnetic nano-materials shows a tailored band structure. The latter consists of bands of allowed magnon states and band gaps in which there are no allowed magnon states. By analogy to studies of other band-gap materials, the field of research is called magnonics.

Further development and application of magnetic nano-structures requires a thorough understanding of the relation between their physical and chemical structure and useful magnetic functionalities. The ability to accurately predict properties of fabricated magnetic nano-structures and complete devices theoretically would generate huge savings of resources, but remains illusive at present.

The goal of this project is to consolidate efforts of European and Indian researchers with a broad range of leading expertise to create, to validate and to implement a flexible computational framework for modelling of dynamics in realistic magnetic nano-materials and complete devices. The framework will be validated via comparison of computational results against those obtained experimentally or using analytical theories. We will model magnetic dynamics in topologically complex nanostructures, in view of applying them in design of realistic devices. This project will provide a computational foundation for creation of not only novel high speed magnetic technologies but also of those at interfaces with photonics, plasmonics, phononics, and electronics.

Project Partners:

- | | |
|---|---|
| 1. The University of Exeter, United Kingdom | 1. Indian Institute of Technology, Delhi, India |
| 2. University of Southampton, United Kingdom | 2. Indian Institute of Technology, Madras, India |
| 3. Uniwersytet Im. Adama Mickiewicza W Poznaniu, Poland | 3. L.N. Mittal Institute of Information Technology, India |
| 4. Universita Degli Studi Di Ferrara, Italy | 4. Indian Institute of Science, India |

Project Details:

Project Start Date: 1 June 2009

Project Duration: 36 months

Project website: <http://www.dynamag.eu/>

Project Title: **Advanced theories for functional oxides: new routes to handle the devices of the future**

Project Acronym: **ATHENA**

Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

Transition metal oxides are the building blocks of future microelectronics, due to outstanding properties such as, e.g. colossal magnetoresistivity and electroresistivity. Envisioned applications are countless, from spintronic devices to multiferroics, to non-volatile magnetic memories.

Despite the huge amount of work already accomplished, a deep and complete understanding of these systems is still lacking. This is due on the one hand to the complexity inherent to the physics of strong-correlated electrons, which includes a plethora of fascinating but overtly complex phenomena (e.g. charge and orbital ordering, polaronic formation, spin-charge separation, non-Fermi liquid behavior, to name just few). On the other hand, there is an unquestionable lack of coordinated effort devoted to share, integrate, and develop the most advanced and powerful computational techniques nowadays available.

With the present project we aim to close this gap by gathering in a synergic collaboration some of the most experienced groups in the subject, equipped with the most advanced methodologies for the theoretical study of strong-correlated phenomena in transition metal oxides.

Specifically, the European units assemble a vast competence on methodologies that are at the developmental forefront of First-Principles methodologies, whereas the Indian partners are worldwide recognized experts on both First-Principles and model many-body (e.g. Hubbard Hamiltonian (HH)) techniques.

In the project we plan to develop an unprecedented fusion of these two different but complementary viewpoints, applied to the study of the most fascinating and technologically promising class of systems candidates to be employed in the devices of the future.

Project Partners:

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|--|--|
| 1. College of the Holy and Undivided Trinity of Queen Elizabeth Near Dublin, Ireland | 1. S. N. Bose National Center for Basic Sciences, India |
| 2. Consiglio Nazionale Delle Ricerche, Italy | 2. Harish-Chandra Research Institute, India |
| 3. Universitaet Wien, Austria | 3. Jawaharlal Nehru Centre for Advanced Scientific Research, India |

Project Details:

Project Start Date: 1 June 2009

Project Duration: 36 months

Project website:

Project Title: Development of a synergistic computational tool for material modeling, process simulation and optimization of optical glass molding
Project Acronym: SIMUGLASS
Activity Area: Computational Material Science - Coordinated Call with India

Project Description:

For the production of complex optical components, the precision glass molding, where the novel moldable optical glass is directly deformed at high temperature, is fast emerging as a powerful and economically viable technology. To improve the efficiency, the complex shrinkage behavior of the glass material during the cooling step has to be understood and thus predicted by means of innovative collaboration between material science and computational modeling.

The overall objective of this project is the development of a powerful synergistic computational FEM-tool for material modeling, process simulation and optimization of optical glass molding for optical glass molding. Based on this ambitious goal, the following scientific and technological objectives have to be realized:

- Scientific analysis of the relevant thermal, mechanical, rheological and optical glass material properties and their dependence on the molding parameters (forming velocity, temperature, force, etc.)
- Development of powerful computational material models able to describe and predict glass material behavior
- Implementation of the developed glass material models into a computational framework based on Finite Element Modelling (FEM)
- Computational modelling of the glass molding process including the radiative heating and viscous flow of glass and the thermal and mechanical properties of other relevant components (molding tool, cooling concept, vacuum chamber and so on)
- Validation of the developed FEM-tool in real glass molding experiments on an industrial glass molding machine for theoretical model optimization.

These objectives finally lead to the development of an computational-based FEM-tool, in which the complex behavior of the glass material during the molding process is implemented. The basis for the development is the multidisciplinary approach between European and Indian researchers, which is essential for the material understanding.

Project Partners:

- | | |
|--|---|
| 1. Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung E.V, Germany | 1. Central Glass and Ceramics Research Institute, India |
| 2. Centre de Recherche de l'Industrie Belge de la Céramique, Belgium | 2. Indian Institute of Technology, Delhi, India |
| 3. Kaleido Technology APS, Denmark | 3. Indian Institute of Technology, Madras, India |
| 4. Ecoglass AS, Czech Republic | 4. Bharat Electronics Laboratory, India |

Project Details:

Project Start Date: 1 January 2010

Project Duration: 36 months

Project website:



COOPERATION

Thematic Priority Area - 5

ENERGY

Project Title: Multi-scale data assimilation, advanced wind modeling and forecasting with emphasis to extreme weather situations for a secure large-scale wind power integration

Project Acronym: SAFEWIND

Activity Area: External conditions, resource management and forecasting for wind energy



Project Description:

The integration of wind generation into power systems is affected by uncertainties in the forecasting of expected power output. Misestimating of meteorological conditions or large forecasting errors (phase errors, near cut-off speeds etc), are very costly for infrastructures (ie unexpected loads on turbines) and reduce the value of wind energy for end-users. The state-of-the-art in wind power forecasting focused so far on the "usual" operating conditions rather than on extreme events. Thus, the current wind forecasting technology presents several strong bottlenecks. End-users urge for dedicated approaches to reduce large prediction errors or predict extremes at local scale (gusts, shears) up to a European scale as extremes and forecast errors may propagate. Similar concerns arise from the areas of external conditions and resource assessment where the aim is to minimize project failure. The aim of this proposal is to substantially improve wind power predictability in challenging or extreme situations and at different temporal and spatial scales. Going beyond this, wind predictability is considered as a system parameter linked to the resource assessment phase, where the aim is to take optimal decisions for the installation of a new wind farm. The project concentrates on: using new measuring devices for a more detailed knowledge of the wind speed and energy available at local level; develop strong synergy with research in meteorology; develop new operational methods for warning/alerting that use coherently collected meteorological and wind power data distributed over Europe to early detect and forecast extreme events; develop models to improve medium term wind predictability; develop a European vision of wind forecasting taking advantage of existing operational forecasting installations at various European end-users. Finally, the new models will be implemented into pilot operational tools for evaluation by the end-users in the project.

Project Partners:

1. *Association pour la Recherche et le Développement des Méthodes et Processus Industriels, France*
2. Fundacion Cener-Ciemat, Spain
3. Danmarks Tekniske Universitet - Informatik og Matematisk Modellering, Denmark
4. Danmarks Tekniske Universitet (Technical University of Denmark), Denmark
5. Carl von Ossietzky Universitaet Oldenburg, Germany
6. Energy & Meteo systems GmbH, Germany
7. Overspeed GmbH & Co. KG, Germany
8. Energinet.dk, Denmark
9. European Centre for Medium-Range Weather Forecasts, United Kingdom
10. Electricité de France, France
11. EirGrid p.l.c., Ireland
12. Commonwealth Scientific and Industrial Research Organisation, Australia
13. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
14. Universidad Complutense de Madrid, Spain
15. Universidad Carlos III de Madrid, Spain
16. Public Power Corporation SA, Greece
17. Meteo-France, Direction de la Production, France
18. **The Energy and Resources Institute, India**
19. Acciona Eolica Cesa, S.L, Spain
20. System Operator for Northern Ireland, United Kingdom
21. Vattenfall A/S, Denmark

22. RTE EDF Transport SA, France

23. Institute of Communication and Computer Systems of the National Technical University of Athens,
Greece

Project Details:

Call: FP7-ENERGY-2007-1-RTD

Project Number: 213740

Instrument: CP-FP

Project Start Date: 1 September 2008

Project Duration: 48 months

Project Cost: 5 581 859 €

EC Contribution: 3 992 400 €

Project website: <http://www.safewind.eu/>

Project Title: Optimized Fuels for sustainable transport in Europe
Project Acronym: OPTFUEL
Activity Area: Synthetic biofuels via gasification



Project Description:

OPTFUEL undertakes a first large scale demonstration of the Biomass to Liquid (BtL) production chain from biomass via gasification and fuel synthesis to the final fuel in the consumer car. BtL production will be demonstrated in an industrial size plant environment (15000 t/a). All production chain components from biomass provision up to market introduction of final consumer fuels containing BtL will be optimized and demonstrated including:

The preparation of a feedstock supply concept for a large scale BtL plant of 200.000 t/a, 400 ha of perennial crop cultivation, enlarging feedstock for gasification by testing bargasse and palm kernel, static and dynamic process modeling for upscaling, BtL production, blending and fuel upgrading techniques, testing of BtL diesel and naphta blends in advanced EU V engines, vehicles and future engine concepts. Commonly agreed fuel specifications will be derived for BtL-blend fuels and a BtL fuel standard. Well to Wheel (WTW) analysis of this pathway with different parameter studies, dissemination of biomass supply concepts and the demonstration of BtL blend fuel in show cars are included.

VOLKSWAGEN has joined forces with Ford and Renault providing test facilities for the new fuels which are produced by Choren Industries, the leading company in biomass gasification for synthetic transport fuels. Bionovus a Lithuanian enterprise for supply/ trade of biomass for renewable energies leads the feedstock activities. CONCAWE, the research organisation of the mineral oil industry and research institutes IFP and Certh responsible for blending and upgrading BtL ensure a high quality fulfilling the requirements of a premium diesel fuel. Invensys for modelling the production plant, the Indian Institute of Technology for testing BtL blends in the Indian market and SYNCOM a project management enterprise are complementing the consortium. The results of this project are expected to be the basis for a 200.000 t/a BtL production unit in Europe.

Project Partners:

1. *Institut Français du Pétrole, France*
2. **Indian Institute of Technology Delhi, India**
3. Concawe asbl, Belgium
4. Choren Industries GmbH, Germany
5. Ford Forschungszentrum Aachen GmbH, Germany
6. Invensys Systems (United Kingdom) Limited, United Kingdom
7. Renault s.a.s, France
8. Syncom Forschungs- und Entwicklungsberatung GmbH, Germany
9. UAB Bionovus, Lithuania
10. Volkswagen Aktiengesellschaft, Germany
11. Center for Research and Technology Hellas, Greece

Project Details:

Call: FP7-ENERGY-2007-2-TREN
Project Number: 218890
Instrument: CP-IP
Project Start Date: 1 January 2009
Project Duration: 42 months
Project Cost: 13 475 816 €
EC Contribution: 7 917 367 €
Project website: www.optfuel.eu

Project Title: Sustainable Energy Technology at Work:
Thematic Promotion of Energy Efficiency and
Energy Saving Technologies in the Carbon
Markets
Project Acronym: SETatWork
Activity Area: Promotion and dissemination



Project Description:

The overall objective of the SETatWork proposal is to undertake thematic promotion of energy efficiency and saving technologies in industry sectors connected with the carbon markets.

Core actions are:

- Identification of concrete projects in 'ETS Companies'
- Matchmaking events bringing market actors together for project realization
- Parallel project identification and match-making at CDM markets in Asia and Latin America for the benefit of EU stakeholders
- Promotion: Website and newsletter
- Training of EU industry based in need assessment. Improving competences and awareness on energy efficiency technology options and CO2 handling in the industry

The expected impact of the action is to facilitate the fulfilment of EU's climate & energy policy goals and at the same time exploiting EU RTD and commercial aspects of the carbon market development. It will lead to initiation of a number of specific projects in industry sectors and provide comprehensive dissemination on tools and examples to broad target groups

Project Partners:

1. Confederation of Danish Industries, Denmark
2. Energy Centre Bratislava, Slovakia
3. ETA Energia Trasporti Agricoltura Srl, Italy
4. Zhejiang Energy Research Institute, China
5. Asesorias Profesionales P. Lehuede Ltda., Chile
6. CPL Scientific Publishing Services Ltd, United Kingdom
7. Ecofys Polska Sp. z o.o., Poland
8. Energy Consulting Network A/S, Denmark
9. KanEnergi sweden AB, Sweden
10. Sofia Energy Centre, Bulgaria
11. Zentrum für rationelle Energieanwendung und Umwelt GmbH, Germany
12. Center for Energy Environment Resources Development - Foundation for International Human Resources Development, Thailand
13. Guangzhou Institute of Energy Conversion, Chinese Academy of Science, China
14. Instituto de Engenharia Mecânica - Polo IST, Portugal
15. **The Energy and Resources Institute, India**

Project Details:

Call: FP7-ENERGY-2007-2-TREN
Project Number: 219009
Instrument: CSA-SA
Project Start Date: 1 September 2008
Project Duration: 24 months
Project Cost: 1 271 387 €
EC Contribution: 999 972 €
Project website: www.setatwork.eu

Project Title: Valorisation of food waste to biogas
Project Acronym: VALORGAS
Activity Area: Biowaste as feedstock for 2nd generation



Project Description:

Food waste constitutes around 20% of the domestic waste stream in the EU, with approximately equal quantities arising from food manufacture and catering outlets: if food wastes from agro- and food industries are included an estimated total of 200 Mtonnes/year is available, at around 30% organic dry matter (ODM). Because of the high water content of this material, energy can only effectively be gained through biochemical conversion. The approach best suited to this is anaerobic digestion where yields of 400-450 m³ methane per kg ODM can be achieved. The research explores the ways in which this energy potential can be realised through effective collection, pre-processing and optimisation of the fuel conversion technology, and considers how integration of these aspects with improving conversion efficiencies can maximise the net energy gains. It expands our rapidly-developing fundamental knowledge of syntrophic anaerobic microbial interactions, and applies this to the manipulation of reactor conditions in order to achieve stable operating conditions at high loading rates and volumetric efficiencies. It considers methods of upgrading the gaseous fuel product to extend the range of end user applications and the scales at which this technology can be exploited. It takes into account issues of biosecurity when using this material, and quantifies the environmental benefits associated with nutrient recycling which contribute significantly to indirect energy gains. The research combines techniques of waste audit, feasibility study, laboratory scientific investigation, technical-scale trials, plant monitoring, process modelling, life cycle assessment and energy footprinting in order to deliver recommendations for the valorisation with maximum benefit of this energy source as a second-generation biofuel.

Project Partners:

1. *University of Southampton, United Kingdom*
2. *Universita Degli Studi di Verona, Italy*
3. *Universita ca' Foscari di Venezia, Italy*
4. *Maa Ja Elintarviketalouden Tutkimuskeskus, Finland*
5. **Indian Institute of Technology, Delhi, India**
6. *Veolia ES (UK) Ltd, United Kingdom*
7. *AnDigestion Ltd., United Kingdom*
8. *AeroThermal Limited, United Kingdom*
9. *Eco-Solids International Limited, United Kingdom*
10. *Greenfinch Ltd, UK*
11. *Metener Oy, Finland*
12. *Jyvaskylan Yliopisto, Finland*

Project Details:

Call: FP7-ENERGY-2009-1
Project Number: 241334-2
Instrument: CP-FP
Project Start Date: 1 March 2010
Project Duration: 42 months
Project Cost: 4 729 687 €
EC Contribution: 3 485 469 €
Project website: <http://www.valorgas.soton.ac.uk/>

Project Title: Biowaste and Algae Knowledge for the Production of 2nd Generation Biofuels
Project Acronym: BioWALK4Biofuels
Activity Area: Biowaste as feedstock for 2nd generation



Project Description:

The BioWALK4Biofuels Project aims to develop an alternative and innovative system for the treatment of biowaste and use of GHG emissions to produce biofuels, using macroalgae as a catalyser, in a multidisciplinary approach. The objectives of the project are:

- production of a cost-efficient biogas without using cereal crops
- optimise the production of biogas per amount of biowaste and CO₂ used
- increase and facilitate the types of biowastes that can be utilised for biogas production

To achieve the underlined objectives, research activities are to be carried out on the selection of adequate macroalgae species that can reach high output biomass yields and high carbohydrate content. Pre-cultivation of protoplasts, accelerating cell-growth rate, is to be carried out to increase productivity. In addition, the relationship between growth and energy potential of selected species with the amounts/characteristics of GHG emissions and biowaste introduced in the cultivation medium is to be studied. This way, higher biomass yields of macroalgae are achieved. After fermenting the algal biomass, the cycle is closed by producing biogas to be used for electricity and heat generation and as a transport fuel.

A high quality product is expected, hence a purification step will proceed the final product. Furthermore, organic residues from the biodigester are to be used as a combustible biomass, after drying and pelletising. The need for external inputs is eliminated (no other biomass for fermentation is required) and the use of all feedstock is achieved. The expected impact is to produce a cost-efficient, low energy-intensive, purified biogas, to reduce negative environmental impacts from industry (GHG emissions) and biowaste.

The multidisciplinary approach solution gives the possibility to reduce GHG emissions and process biowaste, while producing energy, seeking for future replications in other locations.

Project Partners:

1. *Centro Interuniversitario di Ricerca per lo Sviluppo Sostenibile, Italy*
2. **Central Salt and Marine Chemicals Research Institute, India**
3. Danish Technological Institute, Denmark
4. Hashemite University, Faculty of Natural Resources and Environment, Jordan
5. National Environmental Research Institute, Aarhus University, Denmark
6. RTU - Institute of Energy Systems and Environment, Latvia
7. NGVA, Spain
8. **AquaAgri Processing Private Limited, India**
9. ECOIL, Italy
10. Scandinavian GtS AB, Sweden
11. Consorzio Nazionale Interuniversitario per le Scienze del Mare, Italy
12. Power Ventures, Italy

Project Details:

Call: FP7-ENERGY-2009-1
Project Number: 241383
Instrument: CP-FP
Project Start Date: 1 April 2010
Project Duration: 48 months
Project Cost: 3 970 000 €
EC Contribution: 2 902 500 €
Project website: <http://www.biowalk4biofuels.eu/>

Project Title: Greenhouse Gas Recovery from Coal Mines and Unmineable Coalbeds and Conversion to Energy
Project Acronym: GHG2E
Activity Area: Extending the value chain for GHG emissions other than CO₂

Project Description:

Coal mining and utilisation results in release of significant amounts methane and represent an important threat to the fight against climate change. Coal Mine Methane drainage processes can be set up to recover methane from the emissions during coal production. Methane can also be extracted from virgin coal seams through primary and enhanced coalbed methane recovery. The main objective of the proposed research project is to contribute to the global GHG emissions reduction objective by addressing the key challenges facing the industry and emerging economies which also are major coal mining countries worldwide. This objective can be expanded upon as follows:

- to achieve significant improvements in methane drainage efficiency and purity in coal mines in the emerging economies of China and India, where methane drainage is employed with relatively low yields of gas and purity.
- to develop a novel and effective gas drainage techniques for the ultra-thick seam and gassy mining operations in Europe
- to investigate the benefits of implementing horizontal wells for coalbed methane (CBM) and coupling horizontal wells with the injection of CO₂ and/or CO₂ enriched flue gas to enhance methane recovery and CO₂ storage
- to disseminate the know-how developed across the coal sector internationally

Project Partners:

1. Imperial College of Science, Technology and Medicine, United Kingdom
2. Henan Polytechnic University, People's Republic of China
3. **Indian Institute of Technology, Kharagpur, India**
4. North China Institute of Science and Technology, People's Republic of China
5. Beijing Sindicatum Clean Energy Technology and Services Co. Ltd, People's Republic of China
6. Formac Electronics Ltd, United Kingdom
7. Hornonitrianske bane Prievidza a.s., Slovakia
8. Premogovnik Velenje, D.D., Slovenia
9. Trolex Limited, United Kingdom
10. China Pingmei Shenma Energy & Chemical Group Co., Ltd., People's Republic of China
11. **Central Mine Planning & Design Institute Limited, India**
12. China Coal Information Institute, People's Republic of China

Project Details:

Call: FP7-ENERGY-2010-2
Project Number: 268194
Instrument: CP
Project Start Date: 1 October 2011
Project Duration: 42 months
Project Cost: 2 519 286 €
EC Contribution: 1 736 831 €
Project website:

Project Title: Optimizing gasification of high-ash content coals for electricity generation
Project Acronym: OPTIMASH
Activity Area: Optimisation of IGCC technologies for use with high ash content coal

Project Description:

The OPTIMASH project aims to optimise the efficiency and reliability of gasifiers fuelled with high-ash content coals. High Pressure Circulating Fluidized Bed gasifiers are the target technology. The objective of this 4 years project is to develop a pilot gasifier capable of producing a syngas flow at 10 bars suitable for 1MWth. The gasification characteristics of high ash content coal will be investigated using pressurized Drop Tube Furnace facilities and accompanying measurement instruments. Coal gasification models will be developed taking into account the relevant chemical kinetics. In parallel, coal beneficiation and preparation studies will be conducted experimentally; the results will be modelled for their generalization.

The 1 MWth pilot-scale plant will be modelled and numerically simulated using relevant CFD codes. The computations will be validated with data coming from the pilot-plant. The global IGCC system using the developed gasifier will be modelled using existing energy and mass balance soft-wares. Commercial scale design criteria will be developed taking into account pressure and geometric scaling.

Indian high ash coals are the main target of the project. To insure the fuel flexibility of the developed process, Turkish high ash coals will also be studied and their characteristics used in the modelling of the process.

The project will allow optimizing the global efficiency of the gasification technology for high ash coal by minimizing the steam use, optimising particle size vs residence time, developing particle agglomeration avoidance strategies, investigating corrosion risks, increasing fuel flexibility, developing efficient ash disposal system and testing different technologies for gas cooling, tar and fly ash removal. The consortium comprises a major industrial partner and a major research institute from India, together with two major research organisms from Netherlands and France, the Turkish Coal Enterprises and one Turkish university.

Project Partners:

1. Centre National de la Recherche Scientifique, France
2. Hacettepe Universitesi, Turkey
3. **Indian Institute of Technology Madras, India**
4. **Thermax Limited, India**
5. General Directorate of Turkish Coal Enterprises, Turkey
6. Stichting Energieonderzoek Centrum Nederland, The Netherlands

Project Details:

Call: FP7-ENERGY-2011-1
Project Number: 283050
Instrument: CP-SICA
Project Start Date: 1 November 2011
Project Duration: 48 months
Project Cost: 5 274 592 €
EC Contribution: 3 430 790 €
Project website: <http://optimash.fr/index.html>

PROJECTS FUNDED UNDER THE EU-INDIA COORDINATED CALL FOR PROPOSALS IN SOLAR ENERGY SYSTEM

A Coordinated Call is when coordinating parallel calls issued by DG RTD and a funding agency of a third country with the alignment of content, resources, timing, evaluation criteria and procedures.

This Coordinated Call for proposals was sponsored by the Energy Research Directorate of DG RTD and the Department of Science and Technology of the Government of India, with funding of 5 Million Euros for each side.

23 eligible proposals were received of which 3 have been funded.

Project Title: Efficient Solar Cells based on Organic and hybrid Technology

Project Acronym: ESCORT

Activity Area: Development of novel materials, device structures and fabrication methods suitable for thin film solar cells and TCOs including organic photovoltaics. EU - India Coordinated Call



Project Description:

Widespread uptake of inorganic semiconductor solar cells has been limited, with current solar cell arrays only producing between 4 to 7 GW of the 15 TW (<0.04%) global energy demand, despite the terrestrial solar resource being 120,000 TW. The industry is growing at a cumulative rate of over 40% per annum, even with effects of the financial crisis. The challenge facing the photovoltaic industry is cost effectiveness through much lower embodied energy. Plastic electronics and solution-treatable inorganic semiconductors can revolutionise this industry due to their relatively easy and low cost treatment (low embodied energy). The efficiency of solar cells fabricated from these cheap materials, is approaching competitive values, with comparison tests showing better performance for excitonic solar cells with reference to amorphous silicon in typical Northern European conditions. A 50% increase of the output will make these new solar cells commercially dominant in all markets since they are superior in capturing photons in non-ideal conditions (angled sun, cloud, haze) having a stable maximum power point over the full range of light intensity. Our objectives are to exploit the joint leadership of the top European and Indian academic and industrial Institutions to foster the widespread uptake of Dye-Sensitized Solar Cells technology, by improving over the current state of the art by innovative materials and processes.

Project Partners:

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|--|---|
| 1. Consiglio Nazionale delle Ricerche, Italy | 1. Indian Institute of Chemical Technology, India |
| 2. Fondazione Istituto Italiano di Tecnologia, Italy | 2. Indian Institute of Technology, Delhi, India |
| 3. Dyesol UK Ltd, United Kingdom | 3. Sapala Organics Pvt. Ltd., India |
| 4. Ecole Polytechnique Federale de Lausanne, Switzerland | 4. Central Electronics Limited, India |

Project Details:

Project Start Date: 1 September 2010

Project Duration: 36 months

Project website: <http://www.escort-project.eu/>

Project Title: Large-area Organic and Hybrid Solar Cells
Project Acronym: LARGECELLS
Activity Area: Development of novel materials, device structures and fabrication methods suitable for thin film solar cells and TCOs including organic photovoltaics. EU - India Coordinated Call



Project Description:

The task of developing large-area, thin film solar cells based on polymers as well as solid-state organic-inorganic (hybrid) systems will be undertaken. The required novel materials (charge transport polymers, semiconductor surfactants/compatibilizers and inorganic nanoparticles) will be synthesized and the compounds with the most potential will be scaled-up for the purpose of modern fabrication methods such as roll-to roll (R2R) processing. Additionally, the efficient devices will be tested and analyzed in out-door conditions in India and under accelerated ageing conditions in Israel to understand the degradation mechanism. Finally the basic information from stability studies will be used to design novel materials suitable for highly efficient devices of long-term stability. The programme is intensively intertwined with an Indian consortium, especially in the fields of novel materials, out-door testing, transfer and exchange of knowledge and methods.

Project Partners:

- | | |
|--|---|
| <ol style="list-style-type: none">1. Universitaet Bayreuth, Germany2. Mekoprint A/S, Denmark3. Bayerische Forschungsallianz Gemeinnutzige Gmbh, Germany4. Danmarks Tekniske Universitet, Denmark5. Ben-Gurion University of the Negev, Israel6. Technische Universiteit Eindhoven, The Netherlands | <ol style="list-style-type: none">1. National Institute of Interdisciplinary Science and Technology, India2. University of Madras, India3. Jawaharlal Nehru Centre for Advanced Scientific Research, India4. Indian Institute of Science, India |
|--|---|

Project Details:

Project Start Date: 1 September 2010
Project Duration: 36 months
Project website: <http://largecells.eu/>

Project Title: Advanced Grating for Thin Films Solar Cell
Project Acronym: AGATHA
Activity Area: Development of novel materials, device structures and fabrication methods suitable for thin film solar cells and TCOs including organic photovoltaics. EU - India Coordinated Call

Project Description:

The minority carrier diffusion lengths are small in polycrystalline or amorphous materials used in thin film solar cells, requiring thin layers to maximize charge collection. This is contradictory for the requirement to maximize solar energy absorption. The optical design consisting in increasing solar cells light-trapping capability is of prime importance. In order to provide total internal reflection, both randomly textured surfaces and regularly patterned surfaces have been investigated. No one of these approaches provides optimal light trapping because no one is suitable for the broad solar spectrum. Recent approaches involving new TCO layers show that double textures provide improved scattering. The AGATHA project aims to realize an advanced light trapping design by combining micro-texturing of glass by hot embossing and nano-texturing of the top TCO layer by etching. The parameters of this modulated surface texture can be adjusted to maximize the light scattering in all the solar spectrum to provide a significant increase in both short-circuit current and EQE. Suitable for high production throughput, the new texturing process chain developed in AGATHA fits with the intrinsic low cost nature of thin film solar cells. To demonstrate the efficiency of this optical trapping design, the modulated texture concept will be implemented in a-Si:H based, μ -c-Si:H based and CIGS based thin films technologies. The objective is to reduce the active material thickness, from 250 nm up to 150 nm for the a-Si:H, from 1.5 μ m up to 1 μ m for μ c-Si:H and from 2.5 μ m up to 800 nm for the CIGS, when increasing the short circuit current of 15 %. The choice of these technologies aims to maximize the impact by addressing 70% of the thin film market. According to typical solar cells cost structure, a 15 % reduction of the cost/m² is achievable. Combined with the Jsc improvement, the implementation of modulated surface texture should result in a 20 % decrease of the $1/W$ indicator.

Project Partners:

- | | |
|---|---|
| 1. Commissariat à l'Energie Atomique et aux Energies Alternatives, France | 1. Central Glass and Ceramics Research Institute, India |
| 2. Mantis Deposition Limited, United Kingdom | 2. Central Mechanical Engineering Research Institute, India |
| 3. Stmicroelectronics SRL, Italy | 3. Indian Institute of Science, India |
| 4. Forschungszentrum Juelich GmbH, Germany | 4. Bharat Heavy Electricals Limited, India |
| 5. Technische Universiteit Delft, The Netherlands | 5. Indian Space Research Organisation (ISRO Satellite Centre ISAC), India |

Project Details:

Project Start Date: 1 September 2010

Project Duration: 36 months

Project website:



COOPERATION

Thematic Priority Area - 6

ENVIRONMENT ***(including Climate Change)***

Project Title: Sustainable Livelihoods and Biodiversity in Riparian Areas in Developing Countries
Project Acronym: LiveDiverse
Activity Area: Biodiversity values, sustainable use and livelihoods



Project Description:

LiveDiverse (LD) will develop new knowledge on the interactions between human livelihood and biodiversity in riparian and aquatic contexts in four developing countries (Vietnam, India, South Africa, Costa Rica). It has a strong emphasis on dissemination and the constructive engagement of a broad selection of social groups and their governmental and non-governmental representatives. The analysis of biodiversity values, sustainable use and livelihoods (biodiversity governance) within the project adopts vulnerability as a unifying concept, taking the point of departure in the concepts of biodiversity and livelihood vulnerability. Vulnerability will be considered from a combination of bio-physical, socio-economic and cultural/spiritual perspectives, where human ability to conserve and husband biodiversity while at the same time achieving sustainable livelihoods is of vital importance.

The analyses of areas will analyse vulnerability in terms of biophysical, socio-economic- legal, and cultural/spiritual issues. Maps of these three perspectives will then be constructed in each case study and incorporated into a GIS system. These maps will identify biodiversity and livelihood 'hot-spots', that is, places where there is a high risk (according to natural science criteria), and a low capability (according to the socio-economic, law and policy criteria). Finally, biodiversity and livelihood scenarios will be developed. These scenarios will take into account the main perspectives; biological diversity risk, socio economic ability and cultural perceptions to cope with effects of this risk. Working in a 15-year perspective, the scenarios will examine future possible trends, threats and developments in order to formulate strategies and policy to meet the needs of both biodiversity and livelihoods.

Project Partners:

1. *Linköpings Universitet, Sweden*
2. National Institute for Agricultural Planning and Projection, Vietnam
3. **Society for Promoting Participative Ecosystem Management, India**
4. South African Council for Science and Industrial Research, South Africa
5. Universidad Nacional Costa Rica, Costa Rica
6. Institute for Environmental Studies - Vrije Universiteit Amsterdam, Netherlands
7. University of Dundee, United Kingdom
8. Directorate General Joint Research Centre, Belgium

Project Details:

Call: FP7-ENV-2007-1
Project Number: 211392
Instrument: CP SICA
Project Start Date: 1 February 2009
Project Duration: 36 months
Project Cost: 3 178 960 €
EC Contribution: 2 418 160 €
Project website: <http://er-projects.gf.liu.se/projectweb/47a1bcecc2635/Index.html>

Project Title: Integrated Sustainable Solid Waste Management in Asia

Project Acronym: ISSOWAMA

Activity Area: Networking and preparatory action in view of developing cost-effective, environmentally-safe waste treatment technologies and services adapted to the needs of developing countries, within a targeted life cycle approach



Project Description:

The general inadequate, when existing, methods of collection and disposal of solid waste in most Asian cities are causing important environmental and social harms, as human diseases spreading, environmental pollution and ground and water pollution.

In order to raise awareness, promote an adequate waste collection and treatment system and the economic growth of this activity sector in a technological efficient and sustainable way, new waste management systems must be established, which also take into account the informal sector. This integrated approach should comprise technical, environmental, legal, socio-economic and financial aspects, involving the key actors at different levels to ensure an effective implementation.

The proposed project aims to bring together experts and stakeholders in the field of solid waste management in Asian developing countries and Europe. The project will promote international cooperation between research organisations, universities, and social and governmental stakeholders in a European and Asian context (local waste processors, local municipalities and policy makers, local NGOs representatives, etc).

A solid waste management expert and research co-ordination platform, and an expertise network, will be established in order to co-ordinate, assess and guide suitable research and strategic activities with the aim of identifying aspects like cost-effective treatment and sorting technologies, environmental impacts, gaps in technical knowledge and socio-economic and policy barriers to further execution. The network will also propose directions for futures research and for local implementation.

The general aim of the proposed network will be to develop a variety of innovative, adaptable and replicable approaches to a more efficient solid waste management, integrating appropriate low-cost and efficient technologies with community-based management and their relevant governance, institutional frameworks and socio-economic constraints.

Project Partners:

1. Verein zur Förderung des Technologietransfers an der Hochschule Bremerhaven e. V., Germany
2. Eidgenössische Anstalt für Wasserversorgung, Abwasserreinigung und Gewässerschutz, Switzerland
3. Wageningen University, Netherlands
4. Stichting Waste, Netherlands
5. Bioazul S.L., Spain
6. **Winrock International India, India**
7. **The Energy and Resources Institute, India**
8. **Centre for Environmental Studies, Anna University, India**
9. National Engineering Services Pakistan (Pvt.) Ltd., Pakistan
10. Khulna University of Engineering and Technology, Bangladesh
11. Dhaka City Corporation, Bangladesh
12. Tsinghua University-Department of Environmental Science and Engineering, China
13. China Association of Environmental Protection Industries, China

14. Joint Graduate School of Energy and Environment at King Mongkut's University of Technology Thonburi, Thailand
15. Asian Institute of Technology, Thailand
16. Center for Environmental Technology and Management, Viet Nam
17. Department of Environment Phnom Penh Municipality, Cambodia
18. Royal University of Phnom Penh, Cambodia
19. School of Urban and Regional Planning, University of the Philippines, Philippines
20. Demographic Institute at the Faculty of Economics University of Indonesia, Indonesia
21. Solid Waste Management Association of the Philippines, Philippines
22. International Solid Waste Association, Denmark
23. Construction and Development Corporation, Philippines
24. ZKK Foundation, Inc., Philippines

Project Details:

Call: FP7-ENV-2007-1
Project Number; 211873
Instrument: CSA-CA
Project Start Date: 1 January 2009
Project Duration: 30 months
Project Cost: 1 278 698 €
EC Contribution: 989 523 €
Project website: www.issowama.net/

Project Title: Full Costs of Climate Change
Project Acronym: CLIMATECOST
Activity Area: Full costs of climate change

ClimateCost

Project Description:

There is increasing interest in the economics of climate change to inform policy of

- long-term targets,
- the costs of inaction (the economic effects of climate change), and
- the costs and benefits of adaptation.

The objectives of this study are to advance knowledge across all three areas, i.e. the full economic costs of climate change, through the following tasks:

- To identify and develop consistent climate change and socio-economic scenarios, including mitigation scenarios;
- To quantify in physical terms, and economic costs, the costs of inaction for these scenarios, with bottom-up disaggregated (spatial) modelling for market and non-market sectors (coasts, health, ecosystems, energy, water, infrastructure) in the EU and other major negotiator countries (US, China, India). To extend analysis to quantify and value the costs and benefits of adaptation, and the residual costs of climate change after adaptation.
- To assess the physical effects and economic damages of a number of the most important major catastrophic events and major socially contingent effects.
- To update the mitigation costs of GHG emission reductions for medium and long-term reduction targets/ stabilisation goals. To include (induced) technological change, non CO2 GHG and sinks, and recent abatement technologies.
- To quantify the ancillary air quality benefits of mitigation, using a spatially detailed disaggregated approach to quantify in physical terms and monetary benefits, in Europe and major negotiator countries.
- To apply a number of complementary CGM and IAM models to incorporate the information from the tasks above.
- To bring all the information above together to provide policy relevant output, including information on physical effects and economic values, and undertake analysis of policy scenarios.

The project involves a multi-disciplinary team with leading impact and economic experts.

Project Partners:

1. AEA Technology plc, United Kingdom
2. Commission of the European Communities - Joint Research Centre, Belgium
3. Danish Meteorological Institute, Denmark
4. Potsdam Institute for Climate Impact Research, Germany
5. University of Southampton, United Kingdom
6. Fondazione Eni Enrico Mattei, Italy
7. International Institute for Applied System Analysis, Austria
8. Metroeconomica Ltd, United Kingdom
9. Institute of Communication and Computer Systems, Greece
10. Katholieke Universiteit Leuven, Belgium
11. SEI Oxford Office Ltd, United Kingdom
12. Commission of the European Communities - Joint Research Centre, Belgium
13. Universidad Politecnica de Madrid, Spain
14. Paul Watkiss Associates Limited, United Kingdom
15. Economic and Social Research Institute, Ireland
16. Centre National de la Recherche Scientifique, France

17. London School of Hygiene and Tropical Medicine, United Kingdom
18. Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW) Mannheim, Germany
19. University of the Aegean, Greece
20. University of East Anglia, United Kingdom
21. Univerzita Karlova v Praze, Czech Republic
- 22. The Energy and Resources Institute, India**
23. Energy Research Institute, China

Project Details:

Call: FP7-ENV-2007-1
Project Number: 212774
Instrument: CP -FP
Project Start Date: 1 January 2009
Project Duration: 32 months
Project Cost: 4 605 603 €
EC Contribution: 3 499 994 €
Project website: <http://www.climatecost.cc/>

Project Title: Coordinated Asia-European long-term Observing system of Qinghai – Tibet Plateau hydro-meteorological processes and the Asian-monsoon system with Ground satellite Image data and numerical Simulations

Project Acronym: CEOP-AEGIS

Activity Area: Improving observing systems for water resource management



Project Description:

Human life and the entire ecosystem of South East Asia depend upon the monsoon climate and its predictability. More than 40% of the earth's population lives in this region. Droughts and floods associated with the variability of rainfall frequently cause serious damage to ecosystems in these regions and, more importantly, injury and loss of human life.

The headwater areas of seven major rivers in Sweden Asia, i.e. Yellow River, Yangtze, Mekong, Salween, Irrawaddy, Brahmaputra and Ganges, are located in the Tibetan Plateau. Estimates of the Plateau water balance rely on sparse and scarce observations that cannot provide the required accuracy, spatial density and temporal frequency. Fully integrated use of satellite and ground observations is necessary to support water resources management in Sweden Asia and to clarify the roles of the interactions between the land surface and the atmosphere over the Tibetan Plateau in the Asian monsoon system.

The goal of this project is to:

- Construct out of existing ground measurements and current / future satellites an observing system to determine and monitor the water yield of the Plateau, i.e. how much water is finally going into the seven major rivers of Sweden Asia; this requires estimating snowfall, rainfall, evapotranspiration and changes in soil moisture;
- Monitor the evolution of snow, vegetation cover, surface wetness and surface fluxes and analyze the linkage with convective activity, (extreme) precipitation events and the Asian Monsoon; this aims at using monitoring of snow, vegetation and surface fluxes as a precursor of intense precipitation towards improving forecasts of (extreme) precipitations in Sweden Asia.

A series of international efforts initiated in 1996 with the GAME-Tibet project. The effort described in this proposal builds upon 10 years of experimental and modeling research and the consortium includes many key-players and pioneers of this long term research initiative.

Project Partners:

1. *Laboratoire des Sciences de l'Image, de l'Informatique et de la Télédétection, ULP, France*
2. International Institute for Geo_Information Science and Earth Observation, Netherlands
3. ARIESPACE s.r.l., Italy
4. Universität Bayreuth, Germany
5. Alterra bv, Netherlands
6. Universitat de Valencia. Estudi General, Spain
7. Institute of Tibetan Plateau Research, the Chinese Academy of Sciences, China
8. China Meteorological Administration, China
9. Beijing Normal University, China
10. **National Institute of Hydrology, India**
11. Graduate School of Life and Environmental Sciences, University of Tsukuba, Japan
12. WaterWatch b.v., Netherlands
13. Cold and Arid Regions Environmental and Engineering Research Institute, Chinese Academy of Sciences, China
14. Università degli Studi di Ferrara, Italy
15. Institute of Geographic Sciences and Natural Resources Research, China
16. Institute of Remote Sensing Applications, Chinese Academy of Sciences, China

Project Details:

Call: FP7-ENV-2007-1
Project Number; 212921
Instrument: CP-SICA
Project Start Date: 1 May 2008
Project Duration: 48 months
Project Cost: 4 531 493 €
EC Contribution: 3 403 076 €
Project website: www.ceop-aegis.org

Project Title: Highland aquatic resources conservation and sustainable development

Project Acronym: HighARCS

Activity Area: Improving observing systems for water resource management / Biodiversity values, sustainable use and livelihoods



Project Description:

Project partner will complete a detailed multidisciplinary situation analysis of highland aquatic resources, focused on values, livelihoods, conservation issues and wise-use options at five sites in Asia (Guangdong, China; Uttarakhand and West Bengal, India and northern and central Vietnam). Factors assessed will include biodiversity and ecosystem services, including provisioning, regulating, supporting and cultural services. Livelihood strategies of households dependent on ecosystem services derived from highland aquatic resources, in particular poor, food-insecure and vulnerable people, will be assessed within a sustainable livelihoods framework and opportunities to enhance such livelihoods assessed.

Institutional features, including local, national and international policy and legislation, trajectories of change, stakeholder values associated with highland aquatic resources and areas of conflict will be assessed. Stakeholder participation will be critical to ensure new knowledge is accessible for collective decision-making and development of policies for the equitable use and conservation; methods and indicators for participatory monitoring and evaluation of ecosystem services and biodiversity will be developed. Action plans will then be formulated with stakeholders to: monitor the health of highland aquatic resources; develop and promote wise-use, and where necessary livelihoods diversification, to enhance poor livelihoods and conservation; integrate sustainable and wise-use, livelihoods diversification and conservation with watershed management priorities throughout the region.

Action plans will be implemented by stakeholders at four sites displaying high biodiversity in Asia and the ecosystem, livelihoods and institutional impacts assessed through participatory monitoring and evaluation. Best practices aimed at conserving biodiversity and sustaining ecosystem services will be communicated to potential users to promote uptake and enhanced policy formulation.

Project Partners:

1. *University of Essex, United Kingdom*
2. **Centre for the Development of Human Initiatives, India**
3. **Institute of Environmental Studies and Wetland Management, India**
4. Research Institute for Aquaculture No. 1, Viet Nam
5. **GB Pant Institute of Himalayan Environment & Development, India**
6. IUCN - The World Conservation Union, Switzerland
7. Roskilde University, Denmark
8. FishBase Information and Research Group, Inc., Philippines
9. South China Agricultural University, China
10. University of Stirling, United Kingdom

Project Details:

Call: FP7-ENV-2007-1
Project Number; 213015
Instrument: CP-SICA
Project Start Date: 1 January 2009
Project Duration: 48 months
Project Cost: 1 914 379 €
EC Contribution: 1 455 676 €
Project website: www.higharcs.org

Project Title: Policy Options to engage Emerging Asian economies in a post-Kyoto regime

Project Acronym: POEM

Activity Area: Multiple pathways analysis of emerging economies in a post-Kyoto regime



Project Description:

Developing countries are reluctant to make any binding commitment as their per capita emissions are low and climate abatement measures conflict with their main priorities on socio-economic development. The question is if there is a way to simultaneously provide sufficient energy (which is also the main source of GHG emissions), to support poverty alleviation and economic growth and achieve sufficient emission reductions. Finding an answer is the main aim of this project. It may be possible with a combination of policies and measures encompassing from international level to national level supported by committed international cooperation to achieve both the goals together.

The main focus of the study is on India and China. The primary objective is to develop a portfolio of policy options including both international and national policies as well as institutional frameworks for international cooperation for these two emerging economies to engage them in climate protection measures under a post-2012 regime. By applying an integrated modeling framework, the study will explore possible multiple pathways which may exist for these countries to contribute into international climate initiatives without compromising their national development priorities. Specific objectives are:

1. developing country-specific integrated modeling framework to analyse policies and identify multiple pathways to achieve socio-economic and climate targets;
2. identifying/designing international climate policies in post-Kyoto regime for future commitments and participations of emerging economies (India and China);
3. designing national policies (in socio-economic sectors, energy and environment) compatible with the global climate targets;
4. designing and quantifying as much as possible the international co-operations needed to make the participation in a post-2012 regime acceptable at least in economic terms;
5. disseminating the results to potential users for use in future negotiations.

Project Partners:

1. *Chalmers tekniska högskola AB, Sweden*
2. Netherlands Environmental Assessment Agency, Netherlands
3. **Indian Institute of Management, Ahmedabad, India**
4. Tsinghua University, China
5. The Kiel Institute for the World Economy, Germany
6. The Center for Energy and Environmental Policy Research(CEEP), Institute of Policy and Management(IPM), Chinese Academy of Sciences(CAS), China
7. **Institute of Economic Growth, Delhi, India**

Project Details:

Call: FP7-ENV-2008-1

Project Number: 226282

Instrument: CSA-SA

Project Start Date: 1 October 2009

Project Duration: 30 months

Project Cost: 1 089 576 €

EC Contribution: 971 518 €

Project website: <http://www.chalmers.se/ee/poem-en/>

Project Title: Risk-based management of chemicals and products in a circular economy at a global scale
Project Acronym: RISKCYCLE
Activity Area: Safety and risk assessment as the basis of risk-based management of chemicals and products in a global perspective and Alternative Testing Strategies

Project Description:

Many potentially hazardous compounds are traded as chemicals or incorporated as additives in products. Their release to the environment has been a concern of EC, UNO, WHO and OECD. The discussion of the assessment and management of chemicals and products led to the OECD program Globally Harmonised System of Classification and Labelling of Chemicals (GHS). The World Summit encouraged countries to implement GHS with a view of having the system operating by 2008. The need to form GHS on a global scale is part of EU policy. GHS aims to have the same criteria worldwide to classify the responsible trade and handling of chemicals and at the same time protect human health. The EU will ensure transition from the current EU Classification & Labelling (C+L) to the GHS which harmonizes with REACH. Countries like Japan and the USA announced to implement GHS in the near future. UNITAR supports other countries. However, a complete picture on the global state of implementation is not available. With the growing level of worldwide trade we however face unsafe products on the market. Only last year reports about toys releasing hazardous components made it to headlines. Vietnam reported that all kind of plastic gets recycled and sold back to the market. This shows that global trade in a circular economy is not acceptable without globally agreed assessment methods and harmonised C+L. An ECB study revealed that the EU regulation REACH will require 3.9 mill. additional test animals if no alternative methods are accepted. The number of additional tests are unknown when GHS is implemented in a global scale. The CA RISKCYCLE will include experts from OECD, UNEP, SusChem, country experts from Asia, America and Europe. The overall objective of the project is to define with international experts future needs of R+D contributions for innovations in the field of risk-based management of chemicals and products in a global perspective using alternative testing strategies to minimize animal tests.

Project Partners:

1. Technische Universität Dresden, Germany
2. Consejo Superior de Investigaciones Científicas, Spain
3. Istituto di Ricerche Farmacologiche Mario Negri, Italy
4. Universitat Politècnica de Catalunya, Spain
5. Universiteit Leiden, CML-Institute of Environmental Sciences, Netherlands
6. IVL Swedish Environmental Research Institute, Sweden
7. Universitat Rovira I Virgili, Spain
8. TuTech Innovation GmbH, Germany
9. Università Cattolica del Sacro Cuore, Italy
10. Technical University of Denmark, Denmark
11. Bureau de recherches géologiques et minières, France
12. Federal University of Rio de Janeiro / COPPE / GETRES, Brazil
13. Shenyang Institute of Aeronautical Engineering, China
- 14. The Energy and Resources Institute, India**
15. Hanoi University of Science, Vietnam National University, Hanoi, Viet Nam
16. Ankara University, Faculty of Engineering, Turkey

Project Details:

Call: FP7-ENV-2008-1
Project Number: 226552
Instrument: CSA-SA
Project Start Date: 1 September 2009
Project Duration: 36 months
Project Cost: 1 206 063 €
EC Contribution: 996 324 €
Project website: <http://www.wadef.com/projects/riskcycle/>

Project Title: Rethinking Globalisation in the light of Contraction and CONVERGE
Project Acronym: CONVERGE
Activity Area: Rethinking globalisation in the light of sustainable development



Project Description:

The CONVERGE project will build from the concept of 'contraction and convergence' that informed the Kyoto process. C&C linked the key social concept of equal rights to emissions with the key ecological need for reduced emissions to issue a challenge to economic systems to develop fair processes for emissions reduction. CONVERGE aims to re-think globalisation by developing our understanding of convergence beyond emissions-trading across wider social, economic and ecological dimensions of sustainability. CONVERGE will research, develop and test the processes of contraction, convergence and divergence in current forms of globalisation. The research will be based on systems science to integrate social, scientific and economic disciplines in order to create coherent solutions to complex problems. Key to the success of this study is the interdisciplinary approach and working with stakeholders from civil society, government and business. CONVERGE seeks to explore convergent sustainability relationships across different scales from local, national, global-regional to global. CONVERGE will research current examples of convergence in communities, policies and indicators moving towards sustainability. The project will develop a convergence frame for understanding and development in civil society and policy communities; accessible publications providing guidance and tools for the use of this framework; a set of Convergence indicators, quantitative and qualitative, that will be used to test and model the processes of convergence including development of a Computer Programme; and recommendations to assist policy makers to integrate C&C into the decision making process. CONVERGE will play a significant role in achieving the strategic objective of EUs global partnership: "to promote sustainable development actively worldwide and ensure that the European Union's internal and external policies are consistent with global sustainable development and its international commitments."

Project Partners:

1. *The Schumacher Institute for Sustainable Systems, United Kingdom*
2. The University of Bristol, United Kingdom
3. The Natural Step International, Sweden
4. Lund University, Sweden
5. Green Dependent Sustainable Solutions Association, Hungary
6. Szent István University, Hungary
7. **Social Change and Development, India**
8. **SCAD College of Engineering and Technology, India**

Project Details:

Call: FP7-ENV-2008-1
Project Number: 227030
Instrument: CP-FP
Project Start Date: 1 September 2009
Project Duration: 36 months
Project Cost: 3 984 410 €
EC Contribution: 2 988 426 €
Project website: www.convergeproject.org

Project Title: HighNoon: adaptation to changing water resources availability in northern India with Himalayan glacier retreat and changing monsoon pattern



Project Acronym: HighNoon

Activity Area: Impacts of Himalayan glaciers retreat and monsoon pattern change on the water resources in Northern India, and adaptation strategies

Project Description:

The hydrological system of Northern India is based on two main phenomena, the monsoon precipitation in summer and the growth and melt of the snow and ice cover in the Himalaya, also called the “Water Tower of Asia”. However, climate change is expected to change these phenomena and it will have a profound impact on snow cover, glaciers and its related hydrology, water resources and the agricultural economy on the Indian peninsula (Singh and Kumar, 1996, Divya and Mehrotra, 1995).

It is a great challenge to integrate the spatial and temporal glacier retreat and snowmelt and changed monsoon pattern in weather prediction models under different climate scenarios. Furthermore, the output of these models will have an effect on the input of the hydrological models. The retreat of glaciers and a possible change in monsoon precipitation and pattern will have a great impact on the temporal and spatial availability of water resources in Northern India.

Besides climate change, socio-economic development will also have an influence on the use of water resources, the agricultural economy and the adaptive capacity. Socio-economic development determines the level of adaptive capacity. It is a challenge to find appropriate adaptation strategies with stakeholders for each of the sectors agriculture, energy, health and water supply by assessing the impact outputs of the hydrological and socio-economical models.

The principal aim of the project is to assess the impact of Himalayan glaciers retreat and possible changes of the Indian summer monsoon on the spatial and temporal distribution of water resources in Northern India and to provide recommendations for appropriate and efficient response strategies that strengthen the cause for adaptation to hydrological extreme events.

Project Partners:

1. *Alterra b.v., Netherlands*
2. **The Energy and Resources Institute, India**
3. Met Office, United Kingdom
4. University of Salford, United Kingdom
5. **Indian Institute of Technology Delhi, India**
6. University of Fribourg, Department of Geosciences, Switzerland
7. Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V., Germany
8. **Indian Institute of Technology, Kharagpur, India**
9. Nagoya University, Japan

Project Details:

Call: FP7-ENV-2008-1
Project Number: 227087
Instrument: CP-SICA
Project Start Date: 1 May 2009
Project Duration: 36 months
Project Cost: 4 190 515 €
EC Contribution: 3 311 756 €
Project website: www.eu-highnoon.org

Project Title: Collaborative research on flood resilience in urban areas
Project Acronym: CORFU
Activity Area: Risk, prevention and management of urban floods



Project Description:

Collaborative research on flood resilience in urban areas (CORFU) is an interdisciplinary international project that will look at advanced and novel strategies and provide adequate measures for improved flood management in cities.

The differences in urban flooding problems in Asia and in Europe range from levels of economic development, infrastructure age, social systems and decision making processes, to prevailing drainage methods, seasonality of rainfall patterns and climate change trends. Our vision is that this project will use these differences to create synergies that will bring new quality to flood management strategies globally. Through a 4-year collaborative research programme, the latest technological advances will be cross-fertilised with traditional and emerging approaches to living with floods.

The overall aim of CORFU is to enable European and Asian institutions to learn from each other through joint investigation, development, implementation and dissemination of strategies that will enable more scientifically sound management of the consequences of urban flooding in the future. Flood impacts in urban areas – potential deaths, damage to infrastructure and health problems and consequent effects on individuals and on communities – and possible responses will be assessed by envisaging different scenarios of relevant drivers: urban development, socio-economic trends and climate changes. The cost-effectiveness of resilience measures and integrative and adaptable flood management plans for these scenarios will be quantified.

CORFU is structured in six Work Packages. WP1 will look at drivers that impact on urban flooding. WP2 will enhance methodologies and tools for flood hazard assessment based on urban flood modelling. WP3 will improve, extend and integrate modern methods for flood impact assessment. WP4 will aim to assess and enhance existing flood risk management strategies. WP5 will disseminate the outputs. WP6 will co-ordinate the project.

Project Partners:

1. *The University of Exeter, United Kingdom.*
2. Beijing University of Technology, China
3. Cetaqua, Centro Tecnológico Del Agua, Fundación Privada, Spain
4. Cranfield University, United Kingdom
5. Hydrometeorological Innovative Solutions S.L., Spain
6. **Indian Institute of Technology Bombay, India**
7. Technische Universitaet Hamburg-Harburg, Germany
8. Université de Nice-Sophia Antipolis, France
9. Arep Ville, France
10. Dura Vermeer Groep NV, Netherlands
11. Beijing Municipal Institute of City Planning and Design, China
12. China Academy of Urban Planning and Design, China
13. DHI Institut for Vand og Miljo Forening, Denmark
14. Hamburgisches Weltwirtschaftsinstitut Gemeinnützige Gmbh, Germany
15. Institute of Water Modelling, Bangladesh

Project Details:

Call: FP7-ENV-2009-1
Project Number: 244047
Instrument: CP-SICA
Project Start Date: 1 April 2010
Project Duration: 48 months
Project Cost: 4 816 471 €
EC Contribution: 3 490 198 €
Project website: <http://www.corfu-fp7.eu/>

Project Title: European responses to climate change: deep emissions reductions and mainstreaming of mitigation and adaptation



Project Acronym: RESPONSES

Activity Area: Options for response strategies integrating sectoral and crosssectoral measures in view of post-2012 climate initiatives

Project Description:

EU action on climate change is now focused on accelerating mitigation efforts, while seeking to reduce risks associated with climate change impacts. To achieve the multiple goals of cutting greenhouse gas emissions, reducing vulnerability to climate impacts, and building mitigative and adaptive capacities, climate action needs to be mainstreamed across all EU policy sectors. As the scale of European policy grows, mitigation and adaptation need increasingly to be integrated. These policies have strong international dimensions. The RESPONSES project addresses EU policy challenges by: developing new global low emissions scenarios, placing EU efforts in a global context; building an approach for assessing EU policies against mitigation and adaptation objectives and for developing alternative policy options; applying this framework in five EU policy sectors (water and agriculture, biodiversity, regional development/infrastructure, health and energy), linked by a set of cross-sectoral integrative activities; and synthesizing the results to new policy strategies. The main outputs of the project will be: a set of global low emission scenarios, differentiated by key countries; options and strategies for integrating mitigation and resilience to climate impacts into EU policies; a validated strategic climate assessment approach. The RESPONSES consortium brings together seven leading European research institutes working on climate change scenarios, modelling, analysis and policy, combining the necessary disciplinary and sectoral expertise. Chinese, Indian and US partners and associates will also participate in the project. The consortium builds on partners' experience in other EU and national projects, including the ADAM project, and will foster close relationships with policymakers. Research outputs will be of direct relevance to the IPCC and to post-2012 international negotiations, as well as supporting implementation of the forthcoming EU White Paper on Adaptation.

Project Partners:

1. *Vereniging Voor Christelijk Hoger Onderwijs Wetenschappelijk Onderzoek en Patientenzorg, Netherlands*
2. University of East Anglia, United Kingdom
3. Commission of the European Communities - Directorate General Joint Research Centre – JRC, Belgium
4. Consejo Superior de Investigaciones Cientificas, Spain
5. Fraunhofer-Gesellschaft zur Foerderung Der Angewandten Forschung E.V, Germany
6. Institute of Policy and Management (IPM), Chinese Academy of Sciences, China
7. Internationales Institut fuer Angewandte Systemanalyse, Austria
8. Rijksinstituut Voor Volksgezondheid en Milieu, Netherlands
9. **The Energy and Resources Institute, India**

Project Details:

Call: FP7-ENV-2009-1
Project Number: 244092
Instrument: CP-FP
Project Start Date: 1 January 2010
Project Duration: 36 months
Project Cost: 4 125 638 €
EC Contribution: 3 499 676 €
Project website: <http://www.responsesproject.eu/>

Project Title: Solutions for Environmental Contrasts in Coastal Areas
Project Acronym: SECOA
Activity Area: Sustainable development of coastal cities



Project Description:

Urban settlements, following the economic crisis of the 70s, entered in a process of regional and urban restructuring to gain a new image at the international level. As a result of the renewed economic success new flows of permanent, semi-permanent, temporary and daily “human mobility” followed: (i) for consumption (leisure and tourism), (ii) for production (economic migration). The world competition among metropolitan areas highlighted the essential importance of natural and cultural resources. The proposal considers the effects of human mobility on urban settlement growth and restructuring in coastal areas where (i) environment is more fragile and space limited, (ii) every phenomenon is more concentrated and (iii) effects on natural and cultural environment are more acute. Problems are multiplied since the climate change affecting environmental parameters - as sea levels - augments risks of flooding, propagation of pollutants, dislocation of a great number of settlers.

Controlling and reducing unwanted consequences is contributing to growing conflicts among stakeholders. An integrated ecosystem approach incorporating social, economic and natural disciplines is essential in understanding and dealing with the complex and dynamic problems facing the coastal city environments.

The proposal intends to: (i) identify conflicts, (ii) analyze their quantitative and qualitative effects on the environment, (iii) create models to synthesize the complexity of the different social, economic and environmental systems, (iv) compare the priority of each typology through taxonomy. Outcomes include (i) elaboration of an analysis methodology, (ii) creating tools for appropriate policies, (iii) scenario building, (iv) dissemination–exploitation of results for users’ needs.

The project will analyse 8 metropolitan areas of global importance and 8 of local importance in European and Asian countries (Belgium, Portugal, Italy, Sweden, United Kingdom, Israel, India, and Vietnam)

Project Partners:

1. *Consorzio Sapienza Innovazione, Italy*
2. Faculdade de Letras da Universidade de Lisboa, Portugal
3. Goeteborgs Universitet, Sweden
4. London Metropolitan University, United Kingdom
5. The Hebrew University of Jerusalem, Israel
6. Università Degli Studi di Roma la Sapienza, Italy
7. **University of Pune, Science and Technology Park, India**
8. Vrije Universiteit Brussel, Belgium
9. Institute of Marine Environment and Resources, Viet Nam

Project Details:

Call: FP7-ENV-2009-1
Project Number: 244251
Instrument: CP-SICA
Project Start Date: 1 December 2009
Project Duration: 48 months
Project Cost: 7 780 025 €
EC Contribution: 6 159 120 €
Project website: <http://www.projectsecoa.eu/>

Project Title: Environment NCPs cooperating to improve their effectiveness
Project Acronym: ENV-NCP-TOGETHER
Activity Area: Transnational co-operation among NCPs



Project Description:

National Contact Points (NCPs) hold a key role in communication with the European Commission concerning executive matters and the scientific community. The quality of proposals submitted, for example, relies partially on an effective NCP network.

This project is a set of coherent activities and tasks that will foster further cooperation between Environment NCPs from EU member States and Associated States. The main goal is to improve the services NCPs offer to potential proposers; within this goal, the integration of Environment NCPs from high potential International Cooperation Countries where NCP or similar networks for dissemination of information on FP7 exist will also be supported.

The main outcomes will be: a) strengthened cooperation between NCPs across Europe by setting up new and effective means of communication, b) increased quality of services offered by NCPs to proposers with the aim to increase the number and quality of project proposals submitted in response to FP7 calls for proposal and c) integration of other non-EU NCPs into the EU NCP network in order to increase mutually beneficial research and technological development between Europe and International Partners Cooperation Countries.

Project Partners:

1. *Autoritatea Nationala pentru Cercetare Stiintifica Romania*
2. Österreichische Forschungsförderungsgesellschaft mbH, Austria
3. Agence Bruxelloise pour l'Entreprise, Belgium
4. Technical University of Sofia, Bulgaria
5. Verein Euresearch, Switzerland
6. Research Promotion Foundation, Cyprus
7. Technology Centre AS CR, Czech Republic
8. Forschungszentrum Jülich GmbH, Germany
9. Archimedes Foundation, Estonia
10. Agence de l'environnement et de la maîtrise de l'énergie, France
11. National Office for Research and Technology, Hungary
12. MATIMOP-ISERD, Israel
13. Agenzia per la Promozione della Ricerca Europea, Italy
14. Agency for International Science and Technology, Latvia
15. Malta Council for Science and Technology, Malta
16. Agentschap, Netherlands
17. Instytut Podstawowych Problemow Techniki PAN, Poland
18. National Forest Centre, Slovakia
19. Turkiye Bilimsel ve Teknolojik Arastirma Kurumu, Turkey
20. National Centre for Scientific Research Demokritos, Greece
21. Luxinnovation, Luxemburg
22. Beta Technology Limited, United Kingdom
23. The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, Sweden
24. Centro Para El Desarrollo Tecnológico Industrial, Spain
25. The Icelandic Centre for Research, Iceland
26. **Interactive Technology, Software and Media Association, India**

27. Ministry of Science, Education and Sports, Hungary
28. Agência de Inovação, S.A., Portugal

Project Details:

Call: FP7-ENV-2007-1
Project Number: 212494
Instrument: CSA-CA
Project Start Date: 1 January 2009
Project Duration: 60 months
Project Cost: 3 182 226 €
EC Contribution: 2 799 366 €
Project website: <http://www.env-ncp-together.eu/>

Project Title: Global Mercury Observation System
Project Acronym: GMOS
Activity Area: Global Observation Systems for Mercury



Project Description:

The overall goal of the proposed project is to develop a coordinated global observation system for mercury able to provide temporal and spatial distributions of mercury concentrations in ambient air and precipitation over land and over surface waters at different altitudes and latitudes around the world. This will then provide high quality data for the validation and application of regional and global scale atmospheric models, to give to governments, national and international organisations and stakeholders a firm basis for future policy development and implementation. Specific objectives of the proposed project are (a) to establish a Global Observation System for Mercury (GMOS) able to provide ambient concentrations and deposition fluxes of mercury species around the world, by combining observations from permanent ground-based stations, and from oceanographic and tropospheric measurement campaigns; (b) to validate regional and global scale atmospheric mercury modelling systems able to predict temporal variations and spatial distributions of atmospheric mercury entering to and re-emitted from terrestrial and aquatic receptors; (c) to evaluate and identify source-receptor relationships at country scale and their temporal trends for current and projected scenarios of mercury emissions from anthropogenic and natural sources; (d) to develop interoperable tools to allow the sharing of observational and models output data produced by GMOS. The overarching goal of GMOS is to support the achievement of goals set by the GEO / GEOSS, and specifically of the GEO Task HE-09-02d and contribute to the advancement of our scientific understanding in the nine Societal Benefit Areas (SBA) established in GEOSS. The proposed project will rely on the results and knowledge acquired in the framework of past EU projects (i.e., MAMCS, MOE, MERCYMS) and international programs (i.e., UNECE TF HTAP; UNEP F&T partnership area).

Project Partners:

1. *Consiglio Nazionale delle Ricerche, Italy*
2. Aarhus Universitet, Denmark
3. Goeteborgs Universitet, Sweden
4. **Institute for Ocean Management, Anna University Chennai, India**
5. Latvijas Universitate, Latvia
6. Saint Petersburg State University, Russian Federation
7. Universita ca' Foscari di Venezia, Italy
8. Université Joseph Fourier Grenoble 1, France
9. University of York, United Kingdom
10. Associacao Pesquisadores do Experimento LBA, Brazil
11. Commission of the European Communities - Directorate General Joint Research Centre, Belgium
12. GKSS - Forschungszentrum Geesthacht GMBH, Germany
13. INIBIOMA CONICET Universidad Nacional del Comahue, Argentina
14. Institute of Geochemistry, Chinese Academy of Sciences, People's Republic of China
15. Institut Francais de Recherche pour l'Exploitation de la Mer, France
16. Institut Jozef Stefan, Slovenia
17. Instituut voor Toegepast Technologisch Onderzoek, Suriname
18. LVL Svenska Miljoeinstitutet AB, Sweden
19. Kenya Meteorological Department, Kenya
20. Max Planck Gesellschaft zur Foerderung der Wissenschaften E.V., Germany
21. Meteorological Synthesizing Centre - East of EMEP, Russian Federation
22. National Institute of Meteorology and Geophysics, Cape Verde
23. Norsk Institutt for Luftforskning, Norway
24. South African Weather Service, South Africa

Project Details:

Call: FP7-ENV-2010
Project Number: 265113
Instrument: CP-SICA
Project Start Date: 1 November 2010
Project Duration: 60 months
Project Cost: 8 667 135 €
EC Contribution: 6 888 068 €
Project website: <http://www.gmos.eu/>

Project Title: Public health impacts in URban environments of Greenhouse gas Emissions reduction strategies

Project Acronym: PURGE

Activity Area: Greenhouse gas emission reduction policies and their impacts on public health and welfare in urban areas

Project Description:

The project will examine the health impacts of greenhouse gas (GHG) reduction policies in urban settings in Europe, China and India, using case studies of 3-4 large urban centres and three smaller urban centres. Sets of realistic interventions will be proposed, tailored to local needs, to meet published abatement goals for GHG Emissions for 2020, 2030 and 2050.

Mitigation actions will be defined in four main sectors: power generation/industry, household energy, transport and food and agriculture. The chief pathways by which such measures influence health will be described, and models developed to quantify changes in health-related 'exposures' and health behaviours. Models will include ones relating to outdoor air pollution, indoor air quality and temperature, physical activity, dietary intake, road injury risks and selected other exposures.

Integrated quantitative models of health impacts will be based on life table methods encompassing both mortality and morbidity outcomes modelled over 20 year time horizons. Where possible, exposure-response relationships will be based on review evidence published by the Comparative Risk Assessment initiative or systematic reviews. Uncertainties in model estimates will be characterized using a mathematical framework to quantify the influence of uncertainties in both model structure and parameter estimates. Particular attention will be given to economic assessments, both in terms of behavioural choices/uptake of various forms of mitigation measure (with new surveys to address evidence gaps), and in terms of health benefits and costs calculated from societal, health service and household perspectives. A decision analysis framework will be developed to compare different mitigation options.

Experts and user groups will be consulted to define the mitigation questions to be examined, and the results will be discussed in consultative workshops scheduled for the final months of the project.

Project Partners:

1. London School of Hygiene And Tropical Medicine, United Kingdom
2. Peking University, People's Republic of China
3. University College London, United Kingdom
4. University of Belgrade, Serbia
5. Univerzita Karlova V Praze, Czech Republic
6. Arup International Consultants (Shanghai) Co. Ltd., People's Republic of China
7. BC3 Basque Centre for Climate Change - Klima Alldaketa Ikergai, Spain
8. Fondazione Eni Enrico Mattei, Italy
9. **India Institute of Technology, Delhi, India**

Project Details:

Call: FP7-ENV-2010

Project Number: 265325

Instrument: CP-SICA

Project Start Date: 1 February 2011

Project Duration: 42 months

Project Cost: 4 518 300 €

EC Contribution: 3 416 333 €

Project website:

Project Title: **Assessment of Climate Change Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates**

Project Acronym: **AMPERE**

Activity Area: Quantifying the costs of mitigating climate change by means of activities involving joint climate and economic modelling

Project Description:

Climate policy needs to aim at ambitious long-term climate stabilization. This will require managing the transition from carbon intensive to low carbon economies within this century. Research on mitigation pathways to a low carbon society and the associated mitigation costs is indispensable for informing policy makers. The project AMPERE is aiming for a broad exploration of mitigation pathways and associated mitigation costs under various real world limitations, while at the same time generating a better understanding about the differences across models, and the relation to historical trends. Uncertainties about the costs of mitigation originate from the entire causal chain ranging from economic activity, to emissions and related technologies, and the response of the carbon cycle and climate system to greenhouse gas emissions.

AMPERE will use a sizable ensemble of state-of-the-art energy-economy and integrated assessment models to analyse mitigation pathways and associated mitigation costs in a series of multi-model intercomparisons. It will focus on four central areas:

- (i) The role of uncertainty about the climate response to anthropogenic forcing on the remaining carbon budget for supplying societies around the globe with energy,
- (ii) the role of technology availability, innovation and myopia in the energy sector,
- (iii) the role of policy imperfections like limited regional or sectoral participation in climate policy regimes, and
- (iv) the implications for decarbonisation scenarios and policies for Europe.

Project Partners:

1. *Potsdam Institut Fuer Klimafolgenforschung, Germany*
2. Technische Universitaet Wien, Austria
3. Universitaet Stuttgart, Germany
4. Universite Paris I Pantheon-Sorbonne, France
5. Enerdata Sa, France
6. Societe De Mathematiques Appliquees Et De Sciences Humaines, France
7. Centraal Planbureau, Netherlands
8. **Indian Institute Of Management, Ahmedabad, India**
9. Met Office, United Kingdom
10. Ministerie Van Volkshuisvesting, Ruimtelijke Ordening En Milieubeheer, Netherlands
11. Centre For European Policy Studies, Belgium
12. Centre National De La Recherche Scientifique, France
13. Climate Analytics Gmbh, Germany
14. Commission Of The European Communities - Directorate General Joint Research Centre, Belgium
15. Fondazione Eni Enrico Mattei, Italy
16. Incorporated Administrative Agency National Institute For Environmental Studies, Japan
17. Institute Of Communication And Computer Systems, Greece
18. Internationales Institut Fuer Angewandte Systemanalyse, Austria
19. National Development And Reform Commission Energy Research Institute, People's Republic of China
20. Paul Scherrer Institut, Switzerland
21. Research Institute Of Innovative Technology For The Earth, Japan

Project Details:**Call:** FP7-ENV-2010**Project Number:** 265139**Instrument:** CP-FP**Project Start Date:** 1 February 2011**Project Duration:** 36 months**Project Cost:** 4 259 720 €**EC Contribution:** 3 149 490 €**Project website:** <http://www.pik-potsdam.de/research/research-domains/sustainable-solutions/projects/current-projects/ampere>

Project Title: Low climate Impact scenarios and the Implications of required Tight emission control Strategies

Project Acronym: LIMITS

Activity Area: Mitigation policies and measures in the world's major economies compatible with the objective of limiting global surface temperature increase below 2°C



Project Description:

Now and in the foreseeable future, action on climate mitigation and adaptation doesn't seem to be sufficient to manage greenhouse gases and their impact at the scale required to achieve stringent objectives such as those compatible with the 2°C target. This project aims at carrying out a rigorous assessment of what a stringent climate policy entails, and what is needed to overcome major impediments. This information will allow policymakers to better assess the costs and benefits of aggressive climate targets, and on how to make them implementable. Specifically, LIMITS will avail of the best methodological instruments to assess climate policies, whose analysis will interact with policy evaluation. Key global integrated assessment models will run climate mitigation and adaptation scenarios under new conditions and constraints, and the policy implications will be thoroughly evaluated. The needed physical changes in energy infrastructure and land use needed to comply to climate action will be assessed globally and regionally, for many of major world economies. In addition, the co-relationships of climate strategies with other pressing social and environmental issues, such as economic development, energy security and air pollution, will be analysed to identify a set of robust strategies that have the best chances of making stringent climate policy implementable.

Project Partners:

1. *Fondazione Eni Enrico Mattei, Italy*
2. *Kozep-Europai Egyetem, Hungary*
3. *London School of Economics and Political Science, United Kingdom*
4. *Universiteit Utrecht, The Netherlands*
5. **Indian Institute of Management, India**
6. *Internationales Institut fuer Angewandte Systemanalyse, Austria*
7. *Jrc -Joint Research Centre- European Commission, Belgium*
8. *National Development and Reform Commission Energy Research Institute, People's Republic of China*
9. *Potsdam Institut fuer Klimafolgenforschung, Germany*
10. *Stichting Energieonderzoek Centrum Nederland, The Netherlands*

Project Details:

Call: FP7-ENV-2011

Project Number: 282846

Instrument: CP-FP

Project Start Date: 1 October 2011

Project Duration: 36 months

Project Cost: 4 457 479 €

EC Contribution: 3 462 863 €

Project website: <http://www.feem-project.net/limits/>

Project Title: Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India

Project Acronym: Saph pani

Activity Area: Natural water systems and treatment technologies to cope with water shortages in urbanised areas in India



Project Description:

According with the call topic the proposal addresses the improvement of natural water treatment systems such as river bank filtration (RBF), managed aquifer recharge (MAR) and wetlands in India building on a combination of local and international expertise. The project aims to enhance water resources and water supply particularly in water stressed urban and peri-urban areas in different parts of the sub-continent.

The objective is to strengthen the scientific understanding of the performance-determining processes occurring in the root, soil and aquifer zones of the relevant processes considering the removal and fate of important water quality parameters such as pathogenic microorganisms and respective indicators, organic substances and metals. Moreover the hydrologic characteristics (infiltration and storage capacity) and the eco-system function will be investigated along with the integral importance in the local or regional water resources management concept (e.g. by providing underground buffering of seasonal variations in supply and demand). The socio-economic value of the enhanced utilisation of the attenuation and storage capacity will be evaluated taking into account long-term sustainability issues and a comprehensive risk management.

The project focuses on a set of case study areas in India covering various regional, climatic, and hydrogeological conditions as well as different treatment technologies. The site investigations will include hydrological and geochemical characterisation and depending on the degree of site development water quality monitoring or pre-feasibility studies for new treatment schemes. Besides the actual natural treatment component the investigation can encompass also appropriate pre- and post treatment steps to potabilise the water or avoid clogging of the sub-surface structures. The experimental and conceptual studies will be complemented by modelling activities which help to support the transferability of results.

Project Partners:

1. *Fachhochschule Nordwestschweiz, Switzerland*
2. **Anna University, India**
3. Hochschule fuer Technik und Wirtschaft Dresden, Germany
4. **Indian Institute of Technology Bombay, India**
5. **Indian Institute of Technology Roorkee, India**
6. UNESCO-IHE Institute For Water Education, the Netherlands
7. **Akshay Jaldhara, India**
8. **DHI (India) Water & Environment Pvt. Ltd., India**
9. **SPT Consultancy Services, India**
10. **Veolia Water India Pvt Ltd, India**
11. Bureau de Recherches Geologiques et Minieres, France
12. International Water Management Institute IWMI, Sri Lanka
13. **Raipur Municipal Corporation, India**
14. **Uttarakhand Jal Sansthan, India**
15. Commonwealth Scientific and Industrial Research Organisation, Australia
16. Kompetenzzentrum Wasser Berlin Gemeinnutzige Gmbh, Germany
17. **National Geophysical Reserach Institute, India**
18. **National Institute of Hydrology, India**
19. Zentrum fur Umweltmanagement und Entscheidungstheorie, Austria

Project Details:

Call: FP7-ENV-2011
Project Number: 282911
Instrument: CP-SICA
Project Start Date: 1 October 2011
Project Duration: 36 months
Project Cost: 4 718 783 €
EC Contribution: 3 499 620 €
Project website: www.saphpani.eu

Project Title: **Operationalisation of Natural Capital and Ecosystem Services: from Concepts to Real-World Applications**

Project Acronym: **OPENNESS**

Activity Area: Developing Innovative Ways of Applying Ecosystem Services and Natural Capital in Land, Water and Urban Management

Project Description:

Despite improved understanding of the links between ecosystem health, provision of ecosystem services and human well-being, further conceptual and empirical work is needed to make the ideas of ecosystem services (ESS) and natural capital (NC) operational. OpenNESS will therefore develop innovative and practical ways of applying them in land, water and urban management: it will identify how, where and when the concepts can most effectively be applied to solve problems. To do this, it will work with public and private decision makers and stakeholders to better understand the range of policy and management problems faced in different case study contexts (ranging across locales, sectors, scales and time). OpenNESS will consolidate, refine and develop a range of spatially-explicit methods to identify, quantify and value ecosystem services, and will develop hybrid assessment methods. It will also explore the effectiveness of financial and governance mechanisms, such as payments for ecosystem services, habitat banking, biodiversity offsetting and land and ecosystem accounting. These types of interventions have potential for sustaining ESS and NC, and for the design of new economic and social investment opportunities.

Finally, OpenNESS will assess how current regulatory frameworks and other institutional factors at EU and national levels enable or constrain consideration of ESS and NC, and identify the implications for issues related to well-being, governance and competitiveness. OpenNESS will analyse the knowledge that is needed to define ESS and NC in the legal, administrative and political contexts that are relevant to the EU. The work will deliver a menu of multi-scale solutions to be used in real life situations by stakeholders, practitioners, and decision makers in public and business organizations, by providing new frameworks, data-sets, methods and tools that are fit-for-purpose and sensitive to the plurality of decision-making contexts.

Project Partners:

1. *Suomen Ympäristökeskus, Finland*
2. Natural Environment Research Council, United Kingdom
3. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
4. The University of Nottingham, United Kingdom
5. Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina
6. Universitat Autònoma de Barcelona, Spain
7. Fundação de Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa, Portugal
8. Institutul de Cercetari si Amenajari Silvice, Romania
9. **Indian Institute of Bio-Social Research and Development Society, India**
10. JRC – Joint Research Center – European Commission, Belgium
11. Institute of Landscape Ecology of the Slovak Academy of Sciences, Slovakia
12. RNDR Peter Mederly Regioplan-Krajinnockologicky Servis, Slovakia
13. Aarhus Universitet, Denmark
14. Iridra Srl, Italy
15. Vista Analyse AS, Norway
16. Universidad Autónoma de Madrid, Spain
17. Institut National de Recherche en Sciences et Technologies pour l'Environnement et l'Agriculture, France
18. Hugin Expert AS, Denmark
19. Wing Process Consultancy BV, The Netherlands
20. Stiftelsen Norsk Institutt for Naturforskning, Norway

21. The Environment Bank Limited, United Kingdom
22. Helmholtz-Zentrum fuer Umweltforschung GMBH – UFZ, Germany
23. Universitatea Din Bucuresti, Romania
24. Magyar Tudomanyos Akademia Okologiai Kutatokozpont, Hungary
25. Geoflux Thomas Koschitzki, Markus Moller & Daniel Wurbs GBR, Germany
26. Stichting Dienst Landbouwkundig Onderzoek, The Netherlands
27. Stichting Europees Centrum voor Natuurbescherming, The Netherlands
28. Essrg KFT, Hungary
29. Kenya Forestry Research Institute, Kenya
30. Universidade Estadual Paulista – UNESP, Brazil
31. Helsingin Yliopisto, Finland
32. Kinross Estate Company Limited KEC, United Kingdom
33. Fundacion Tecnalia Research & Innovation, Spain
34. Ministerie Van Infrastructuur en Milieu, The Netherlands
35. Vlaams Gewest, Belgium

Project Details:

Call: FP7-ENV-2012-two-stage
Project Number: 308428
Instrument: CP
Project Start Date: 1 December 2012
Project Duration: 54 months
Project Cost: 11,489,110 €
EC Contribution: 8,999,193 €
Project website: <http://www.environment.fi/syke>

PROJECTS FUNDED UNDER THE EU-INDIA COORDINATED CALL FOR PROPOSALS IN WATER RELATED RESEARCH

A Coordinated Call is when coordinating parallel calls issued by DG RTD and a funding agency of a third country with the alignment of content, resources, timing, evaluation criteria and procedures.

This Coordinated Call for proposals was sponsored by the industrial Environment Directorate of DG RTD and the Department of Science and Technology of the Government of India.

Project Title: Energy-efficient, community-based water- and wastewater-treatment systems for deployment in India

Project Acronym: ECO-India

Activity Area: To design and develop innovative cost-effective solutions for community- based water- and wastewater- treatment systems.



Project Description:

The overall aim of ECO-India is to design and develop innovative cost-effective solutions for community- based water- and wastewater- treatment systems. These systems will be deployed at pilot sites in arsenic-affected water-stressed regions in India. The two consortia, Indian (DST) and European (FP7), will establish pilot schemes for catchment area and reservoir management surface water supply schemes arsenic removal (including monitoring using UFZs field-tested Arsolux arsenic sensor) disinfection treatment for potable water based on Trustwaters EC-certified mixed-oxidant generation systems. Online monitoring of water quality, water distribution network, together with online/offline water quality monitoring programmes sewerage and wastewater treatment. In addition, prototype energy-efficient modules for water deionisation and heavy metal removal will be developed. A feasibility study will be performed to assess the potential for energy harvesting from sludge.

Project Partners:

1. *University college cork, national university of Ireland, Ireland*
2. Danmarks tekniske universitet, Denmark
3. A.G.M. Communication & Control ltd, Israel
4. Trustwater Limited, Ireland
5. Adelphi Research GGMBH, Germany
6. Helmholtz-zentrum fuer Umweltforschung GMBH – UFZ, Germany
7. Dryden Aqua ltd, United Kingdom

Project Details:

Call: FP7-ENV-2012

Project Number: 308467

Instrument: CP-FP

Project Start Date: 1 September 2012

Project Duration: 36 months

Project Cost: 2 257 195 €

EC Contribution: 1 717 434 €

Project website: <http://www.eco-india.eu/>

Project Title: Natural Water Systems and Treatment Technologies to cope with Water Shortages in Urbanised Areas in India



Project Acronym: NAWATECH

Activity Area: Developing a system which uses an integrated water management approach.

Project Description:

The here proposed NAWATECH Europe proposal is closely interconnected with the partner project NaWaTech India. In order to reach the maximal impact the two projects have formed one common work plan for both projects, targeting the same objectives, will present their results at the same web-site and formed a joint management team. Providing adequate water supply and sanitation, particularly in urban areas, is a challenging task for governments throughout the world. This task is made even more difficult due to predicted dramatic global changes. In order to cope with water shortages in urban areas, there is a need for a paradigm shift from conventional end-of-pipe water management to an integrated approach. This integrated approach should include several actions such as:

- (i) Interventions over the entire urban water cycle;
- (ii) Optimisation of water use by reusing wastewater and preventing pollution of freshwater source;
- (iii) Prioritisation of small-scale natural and technical systems, which are flexible, cost-effective and require low operation and maintenance.

Natural water systems, such as manmade wetlands and sub-soil filtration and storage via soil aquifer treatment and bank filtration, are such systems. NaWaTech stands for natural water systems and treatment technologies to cope with water shortages in urbanised areas in India. The concept is based on optimised use of different urban water flows by treating each of these flows via a modular natural system taking into account the different nature and degree of pollution of the different water sources. Thus, it will cost-effectively improve the water quality of urban surface water and restore depleting groundwater sources. Due to the multi-barrier approach, these systems will also be able to treat heavily polluted water (i.e. wastewater) in order to reuse them and to supplement traditional sources to cope with water shortages today and in the future.

Project Partners:

1. Verein zur Foerderung des Technologietransfers an der Hochschule Bremerhaven E.V., Germany
2. Iridra SRL, Italia
3. Bioazul, Spain
4. Kretschmer und Tauscher GBR, Germany
5. Universitaet fuer Bodenkultur Wien, Austria
6. Seecon International GMBH, Switzerland
7. Universitat Politecnica de Catalunya, Spain

Project Details:

Call: FP7-ENV-2012
Project Number: 308336
Instrument: CP-FP
Project Start Date: 1 July 2012
Project Duration: 36 months
Project Cost: 1 778 589 €
EC Contribution: 1 445 824 €
Project website: <http://nawatech.net/>

Project Title: Supporting consolidation, replication and up-scaling of sustainable wastewater treatment and reuse technologies for India
Project Acronym: SARASWATI
Activity Area: the reuse of treated wastewater, energy and nutrients for different purposes

Project Description:

The poor condition of sanitation and wastewater management in India (as in many Asian countries) is well documented and has recently led the Asian Development Bank to call for a revolution in wastewater management across Asia. Conventional, centralized approaches have failed in many areas and will hardly be able to solve potential problems in rural, hilly and rapidly developing urban areas in India. Instead, innovative, decentralised systems aiming at various benefits are needed. A main benefit in the context of SARASWATI is the reuse of treated wastewater for different purposes. Other benefits include reuse of energy and nutrients, which are also important. Despite the overall poor condition of wastewater treatment across South Asia, India has already considerable experience with such decentralised approaches. Over the last decade, hundreds of decentralised wastewater treatment plants of different technology types have been installed all over India. However, not all are functioning well and several also failed, due to various reasons. Also, there is no consolidated evaluation and review of all those existing plants available. As a result there is only very limited knowledge on the performance of those existing technologies available and a review and evaluation of those plants is very timely in order to derive sound conclusions and recommendations for future wastewater management strategies in India. SARASWATI will perform such a comprehensive and independent evaluation and hence provide key suggestions for the improvement of existing technologies. In addition, SARASWATI aims at deploying selected proven EU technologies with a potential for solving grave water challenges in India (water pollution due to discharge of untreated wastewater and storm-water, water scarcity and groundwater depletion, unhygienic sludge handling practices due to lack of suitable technologies). Water challenged sites have been identified in 5 Indian States comprising almost all regions.

Project Partners:

1. *Universitaet fuer Bodenkultur Wien, Austria*
2. *Fundación Centro de las Nuevas Tecnologías del Agua, Spain*
3. *Bureau de Recherches Géologiques et Minières, France*
4. *Centro de Estudios e Investigaciones Tecnicas, Spain*
5. *Hydrok UK Ltd, United Kingdom*
6. *The University of Exeter, United Kingdom*
7. *Zentrum fur Umweltmanagement und Entscheidungstheorie, Austria*
8. *Simbiente – Engenharia e Gestao Ambiental LDA, Portugal*
9. *A3I Sarl, France*

Project Details:

Call: FP7-ENV-2012
Project Number: 308672
Instrument: CP-FP
Project Start Date: 1 September 2012
Project Duration: 48 months
Project Cost: 2 902 870 €
EC Contribution: 2 350 000 €
Project website: www.boku.ac.at/

Project Title: **Safeguarding Water resources in INdia with Green and Sustainable technologies**

Project Acronym: **SWINGS**

Activity Area: Establishing an optimal methodology for nutrient and energy recovery from wastewater.

Project Description:

At a time with an urgent need to conserve water resources, efficient sanitation systems play a key role in sustainability. They can ensure that the vital resource Water is recovered from waste and can be re-used at the same time as protecting human health and the environment. The SWINGS project consortium will establish an optimal methodology for nutrient and energy recovery from wastewater (WW) at the same time as making the water safe for reuse, all in a manner conducive to rural communities in developing countries, with India as the concrete example. In particular, the SWINGS project will enlist already optimized municipal WW treatment concepts and combine "green" and sustainable technologies. The result will be enhances water recycling and re-use, decreased energy consumption, and production of useful by-products from the process as secondary resources. Thus, treated WW will be transformed to soil enrichment resource, to irrigation water, to aquaculture farm feed, via sustainable sanitation that safeguards the local drinking water supply in India. The starting point of the SWINGS project will be anaerobic digestion (AD) and constructed wetlands (CW) that will be configured with environmentally sustainable disinfection technologies, like water solar disinfection. Pilot plants will be designed and constructed in India that combine the treatment methods mentioned above, after which the new systems will be established in steady-state operation, and then, the AD-CW configurations optimized. Systems for disinfection of the effluent will be implemented and on-line monitoring of pathogen load attempted. Finally, life cycle assessment of several treatment configurations will be used to develop a decision support system for future selection of sustainable and efficient treatment technologies in developing countries like India. The project will publish articles and hold workshops in order to disseminate its results, especially to SMEs and to public authorities.

Project Partners:

1. *Asociación de Investigación Metalúrgica del Noroeste, Spain*
2. Autarcon GMBH, Germany
3. Helmholtz-Zentrum fuer Umweltforschung GMBH - UFZ, Germany
4. Solarspring GMBH, Germany
5. DHI, Denmark
6. Limnos Podjetje za Aplikativno Ecologijo D.O.O., Slovenia,
7. Aarhus Universitet, Denmark
8. Kilian Water APS, Denmark
9. Institut National de Recherche en Sciences et Technologies pour l'Environnement et l'Agriculture, France
10. Universitat Politecnica de Catalunya, Spain

Project Details:

Call: FP7-ENV-2012
Project Number: 308502
Instrument: CP-FP
Project Start Date: 1 September 2012
Project Duration: 36 months
Project Cost: 2 364 284 €
EC Contribution: 1 904 743 €
Project website: <http://www.aimen.es/>

Project Title: Smart, Cost-effective Solutions for Water Treatment and Monitoring in Small Communities in India. Decision Support System Integration.

Project Acronym: WATER4INDIA

Activity Area: Studying the different centralized and decentralized options for water treatment at community level in India.

Project Description:

Fresh water of sufficient quality for human consumption is becoming a scarce resource and its availability is a concerning issue in India whose growing wealth and population create increasing needs leading to higher water consumption while quality standards for drinking water are being enhanced. In this context the overall objective of Water4India consists in studying the different centralized and decentralized options for water treatment at community level in India taking into account resource availability, management, treatment solutions, water quality, economic, environmental and social factors. Water monitoring is of capital importance at each step of the process: different technologies will be considered in the frame of a Water Safety Plan. A Decision Support System (DSS) will be developed based on the previously stated information to assess policy makers take the appropriate decisions to solve the existing problem with drinking water. Water4India will deliver two forms of water availability assessment: the quality and quantity of available water and the resource management with information on current and expected water requirements. The quality of available water will be studied using Quantitative Microbial Risk Assessment. The DSS must find the optimal solution considering not only its cost but the overall sustainability of the process, paying particular attention to energy consumption and obtaining for this purpose, the friendliness of the proposed technologies and their adaptation to the social environment. The proposed technologies of the DSS will be applied in two places with different climatic and social situations that will constitute the pilot sites validating the developed work. Finally, a dissemination and best practice step will be carried out in order to define how the results of the project will be communicated to users and guarantee large scale implementation results which can be widely deployed into EU-India water technological business network.

Project Partners:

1. Solintel M&P SL, Spain
2. Vertech Group SARL, France
3. Cranfield University, United Kingdom
4. Solarspring GMBH, Germany
5. University of Technology Sydney, Australia
6. Rheinisch-Westfaelische Technische Hochschule Aachen, Germany
7. KWR Water B.V., Netherlands
8. Adin Holding Ltd., Israel
9. The University of Exeter, United Kingdom
10. Amiad Water Systems Ltd., Israel
11. Fachhochschule Nordwestschweiz, Switzerland

Project Details:

Call: FP7-ENV-2012
Project Number: 308496
Instrument: CP-FP
Project Start Date: 1 September 2012
Project Duration: 36 months
Project Cost: 3 985 839 €
EC Contribution: 2 675 373 €
Project website: <http://www.solintel.eu/>



COOPERATION

Thematic Priority Area - 7

TRANSPORT (including Aeronautics)

Project Title: ASSET Advanced Safety and Driver Support in Essential Road Transport
Project Acronym: ASSET-ROAD
Activity Area: Integral system solutions for safety



Project Description:

As the European objectives of integration and economic growth are achieved, there is a corresponding vigorous growth in road traffic volumes. This results in congestion and increased numbers of road fatalities. The objective of the ASSET project is to reverse these negative effects by developing a number of promising technologies and integrating them into a new holistic approach to road safety.

The holistic approach will be at system and practical level. Integrated architectures will be developed to facilitate the exchange of secure information between road, vehicle and driver. There will be a particular focus on the Human Machine Interface – developing supporting systems which pass on safety-critical information to the driver. Driver monitoring technologies such as ‘track and trace’ will use computer vision to identify abnormal driver behaviour (speed, gap, load) and inform driver and authorities.

- Improving drivers knowledge and behaviour
- Increased automation and traffic control for safety/efficiency
- Innovative measures for safe and sustainable infrastructure

A number of technologies will be developed and integrated into the holistic system like a thermal imaging tool to detect dangerous heavy goods vehicles, a new weigh-in-motion sensor which can detect critical tyres as well as overloaded. The main theme is the integration of different information from different sources into a comprehensive system and the communication of the relevant information to where they are needed.

Several application areas will be developed with concrete deliverables such as a safety station, crisis and dangerous goods management and an infrastructure life cycle optimisation system. Systems will be tested at a number of sites in different parts of Europe and results disseminated through seminars, workshops and demonstrations. The consortium involves 7 universities, 4 research institutes, 3 industry, 2 end user administrations and has 7 SME’s to exploit the outputs commercially.

Project Partners:

1. *PTV Planung Transport Verkehr AG, Germany*
2. *Leibniz University Hannover, Germany*
3. *National Institute of Transport, Tanzania*
4. *National University of Ireland, Dublin, Ireland*
5. *Technical University of Iasi, Romania*
6. *University of Nottingham, United Kingdom*
7. *Universität Stuttgart, Germany*
8. *Université de Technologie de Belfort-Montbéliard, France*
9. *Università di Modena e Reggio Emilia, Italy*
10. *ADC-Afrideut, Tanzania*
11. *Bernard ZT GmbH, Austria*
12. *Clarity Consulting Information and Management Services Limited Liability Company, Hungary*
13. *Combitech AB, Sweden*
14. *Emtele Ltd., Finland*
15. *Kria s.r.l., Italy*
16. *Manfred Huegel, Germany*
17. **MTEL-KTEI Teleinfra Company (India) Pvt. Ltd., India**
18. *Rigobert Opitz Consulting & Engineering, Germany*
19. *TPA Gesellschaft für Qualitätssicherung und Innovation GmbH, Austria*

20. Bayrisches Innenministerium - Polizeipräsidium Oberbayern, Germany
21. Innenministerium Baden-Wuerttemberg, Germany
22. Statens väg-och Transportforskningsinstitut (Swedish Road and Transport Institute), Sweden
23. VTT Valtion teknillinen tutkimuskeskus (Technical Research Centre of Finland), Finland

Project Details:

Call: FP7-SST-2007-RTD-1
Project Number: 217643
Instrument: CP-IP
Project Start Date: 1 July 2009
Project Duration: 42 months
Project Cost: 8 987 615 €
EC Contribution: 6 649 260 €
Project website: <http://project-asset.com/>

Project Title: Probabilistic Framework for Onboard Fire-Safety
Project Acronym: FIREPROOF
Activity Area: Safety and security by design

Project Description:

The traditional fire safety regulations that apply to ship design have been widely described as inadequate in two ways. Firstly they do impose unnecessary and inapplicable constraints on novel designs. Secondly novel designs can have features that do not satisfy the premise of existing rules, thereby setting them free from fire safety rules by default, often leading to unsafe designs. In order to remedy this problem the proposed project "FIREPROOF" would develop a very universally applicable regulatory framework for maritime fire safety based on probabilistic models and numerical models of ignition, growth and impact of fires. The framework would be quite similar in principle to the well established probabilistic damage stability regulation. The methodology of the proposed fire safety regulation is summarized as follows: The methodology would consist of a mathematical model that would generate instances of fire scenarios according to the correct probability distribution of the elements of the scenario. It would also consist of numerical models to assess the consequence of the scenarios so generated. For any given ship - traditional or novel, a large number of scenarios would be generated and their consequences assessed, and the results would be aggregated to give rise to fire risk metrics. Constraints based on such risk metrics would serve as statutory regulations that would be completely applicable to novel and unprecedented designs. It would offer the designer greater freedom on the design while enforcing a greater level of safety.

Project Partners:

1. *University of Strathclyde, United Kingdom*
2. National Technical University of Athens, Greece
3. University College London, United Kingdom
4. University of Greenwich, United Kingdom
5. BMT Group Ltd., United Kingdom
6. BUREAU VERITAS, France
7. Carnival Corporation and PLC, United Kingdom
8. Color Line Marine AS, Norway
9. Deltamarin Contracting Ltd, Finland
10. United States Coast Guard, United States
11. ABS Corporate, United States
12. Center of Maritime Technologies e.V., Germany
- 13. Indian Register of Shipping, India**
14. Instituto de Soldadura e Qualidade, Portugal
15. Maritime and Coastguard Agency, United Kingdom

Project Details:

Call: FP7-SST-2007-RTD-1
Project Number: 218761
Instrument: CP-FP
Project Start Date: 15 May 2009
Project Duration: 36 months
Project Cost: 4 195 894 €
EC Contribution: 2 900 000 €
Project website: <http://www.fireproof-project.eu/>

Project Title: Strengthening road transport research cooperation between Europe and emerging international markets II
Project Acronym: SIMBA II
Activity Area: Stimulation Research with International Cooperation Partner Countries



Project Description:

The SIMBA II project aims to increase RTD cooperation between the EU and the ICPC of Brazil, China, India, Russia and South Africa. SIMBA II will look at how the EU and ICPC can jointly increase road safety, mobility and transport efficiency, improve road and transport network management and research appropriate pavement design while at the same time improving levels of transport-related pollution. This will enable SIMBA II to support emerging markets in their efforts to improve transportation while at the same time enhancing European industrial competitiveness via transfer of technologies. Special attention will be paid to mobility and road management, urban traffic issues and public transport in order to better assess and evaluate the development of new infrastructure and of policy-led ITS solutions through sustainable urban transport planning. ICPC could benefit in this respect from the latest experiences in the EU and move forward integrated transport network management, focusing on policy solutions to tackle congestion and environmental challenges.

During a 24-month period, the SIMBA II project will set up and run a series of expert groups to further work on the priorities defined in the first SIMBA project. It will bring together European and local ICPC organisations to engage in preparatory technical work, including feasibility studies for the development and/or implementation of new ITS and infrastructure technologies in the ICPC (looking at adapting European technologies to local needs in an effort to improve local transport conditions).

Project Partners:

1. *European Road Transport Telematics Implementation Coordination Organisation s.c.r.l, Belgium*
2. School of Transportation and Traffic Engineering, Tongji University, China
3. Associação Brasileira de Engenharia Automotiva, Brazil
4. Promotion of Operational Links with Integrated Services aisbl, Belgium
5. **Society of Indian Automobile Manufacturers, India**
6. The Professional Association for Vehicle Risk Prevention, Russian Federation
7. **Central Road Research Institute, India**
8. Council for Scientific and Industrial Research, South Africa
9. Forum of European National Highway Research Laboratories, Belgium

Project Details:

Call: FP7-SST-2007-RTD-1
Project Number: 218567
Instrument: CSA-SA
Project Start Date: 1 May 2008
Project Duration: 24 months
Project Cost: 1 069 406 €
EC Contribution: 782 171 €
Project website: www.simbaproject.org

Project Title: Dismantling of Vessels with Enhanced Safety and Technology
Project Acronym: DIVEST
Activity Area: End of life strategies for vehicles/vessels and infrastructures



Project Description:

Policy-makers are in dire need of up-to-date objective scientific data to support their decision making as applied to ship dismantling. The objective of the Project is to “define a integrated risk and economic framework” applicable to the optimisation of ship dismantling activities and infrastructure, from a social, economic and environmental point of view. The framework will apply across the life cycle of a ship and it will be developed using risk-based and economic modelling/value-based analysis. Particular emphasis will be on the dismantling value and competence chain. Implementation steps:

1. Selection of the risk and economic analysis process that best fits the needs and constraints of the dismantling process
2. Validation of the applicability of selected methods by case studies, with emphasis on dynamic combination of technical, environmental and human factors
3. Organisation of the research output into a database to support risk management and decision making.

The subjects of concern that have been identified for the call will be addressed as follows:

1. A process to answer safety concerns linked to ‘ecological processes for clean and safe dismantling & clean and safe disposal’
2. An analysis of ships, infrastructure, personnel, with focus on the dynamic interfaces between them, to support research on ‘vessels and infrastructure end of life analysis addressing industrial, ecological and economic criteria’
3. Economic analysis of the main risk drivers of identified ship/infrastructure/process combinations to answer questions on the cost effectiveness of ship recycling.

The Project team involves partners from India. It will also play an active part in technology transfer and the betterment of human and environmental conditions in Asian countries through a dissemination and training program.

The main deliverables:

1. Validated risk and economic models
2. Policy recommendations on the optimum dismantling facility and process
3. Knowledge-exchange platform.

Project Partners:

1. V.Ships France SAS, France
2. Dokuz Eylul University Boat Building Research Center, Turkey
3. **Indian Institute of Technology Bombay, India**
4. University of Patras, Greece
5. University of Strathclyde, United Kingdom
6. BAE Systems Surface Fleet Solutions Limited, United Kingdom
7. Germanischer Lloyd AG, Germany
8. Leyal Turizm Insaat Mobilya Sanayi ve Ticaret Ltd. Sti, Turkey
9. MediMetal SA, Sweden
10. S.C. NAVALINK ROM SRL, Romania
11. Veolia Propreté, France
12. IVF Industrial Research and Development Corporation, Sweden
13. Nederlandse Organisatie voor toegepast natuurwetenschappijk onderzoek TNO, Netherlands
14. TWI Ltd, United Kingdom

Project Details:
Call: FP7-SST-2007-RTD-1
Project Number: 218695
Instrument: CP-FP
Project Start Date: 1 August 2008
Project Duration: 36 months
Project Cost: 3 364 885 €
EC Contribution: 2 442 568 €
Project website: www.divest-project.eu

Project Title: Actions to stimulate participation of cooperation partners in surface transport research



Project Acronym: CETRRA

Activity Area: Stimulating participation of small and medium size enterprises

Project Description:

Contributing to the European Research Area in surface transport to strengthen the competitiveness of the European surface transport sector. This will be achieved by using the excellent EURNEX competence to provide research excellence capabilities to European Small and Medium Size Enterprises (SMEs). Furthermore the cooperation with research excellencies from non EU countries will stimulate research that is of mutual interest and strengthen the European as well as non European research excellencies. EURNEX, the European Rail Research Network of Excellence, started on 01 January 2004 and has been granted for 4 years with 6 Mio € within the 6th Framework Programme of EC. It involves 66 research institutes from 20 European countries and the associations of industry and operators UNIFE, UIC and UITP. More than 80 % of the members cover not only the rail research domain but surface transport. EURNEX supports the aims of the EC – to see an interoperable and harmonised European rail system contributing to co-modality and a strong internationally competitive European railway industry – by integrating the fragmented research, sharing knowledge and coordinating current research. The main benefits for the integration of non EU researchers in EURNEX are the scientific exchange on an international level, the training of junior scientists and researchers using the EURNEX assets, the identification of research areas that are of mutual interest, and the solving of problems in the international railway sector with European know how. The main benefits, that SMEs contributing as associated partners in EURNEX can gain, are an overview of the state of the art of the surface transport sector as a whole as well as specific topics, an insight in current research trends, an evaluation of their individual know how (respecting sensitive information), and an access to excellent research capabilities and test facilities.

Project Partners:

1. TSB Technologiestiftung Inov. Berlin GmbH / Forschungs- und Anwendungsverbund Verkehrssystemtechnik Berlin, Germany
2. Advanced Manufacturing Institute, Hong Kong
3. České vysoké učení technické v Praze – Czech Technical University in Prague Fakulta dopravní – Faculty of Transportation Sciences, Czech Republic
4. China Academy of Railway Sciences, China
5. Eidgenössische Technische Hochschule Zurich, Switzerland
6. Federal Unitary Enterprise All-Russian Railway Research Institute, Russian Federation
7. Instituto Superior Tecnico, Portugal
8. KMITNB University (King Mongkut's Institute of Technology North Bangkok), Thailand
9. State educational institution of higher professional education “Irkutsk State Transport University”, Russian Federation
10. State educational institution of higher professional education “Moscow State University of Railway Engineering, Russian Federation
11. State educational institution of higher professional education “Omsk State Transport University”, Russian Federation
12. State educational institution of higher professional education “Petersburg State Transport University”, Russian Federation
13. State educational institution of higher professional education “Siberian Transport University”, Russian Federation
14. State educational institution of higher professional education “Ural State University of Railway Transport”, Russian Federation
15. State Unitary Enterprise Russian Research and Design Institute for railway information, automation and communications, Ministry of Railways, Russia, Russian Federation

16. Tongji university The Institute of Railway and Urban Rail Transit, China
17. Zhejiang Advanced Manufacturing Institute of the Hong Kong University of Science & Technology, China
- 18. Anchorage, India**
19. RTCA Rail Technology Cluster Austria – Eisenbahntechnologiecluster Österreich, Austria
20. ASCI Systemhaus GmbH, Germany
21. CSA Computer & Antriebstechnik GmbH, Germany
22. Ergo Innovation (uk) Limited, United Kingdom
23. Human-Factors-Consult GmbH, Germany
24. Interautomation, Germany
25. Link Consulting, Tecnologias de Informação, SA, Portugal
26. MER MEC S.p.A., Italy
27. Phi Ireland Ltd., Ireland
28. RIVAL LIMITED, Ireland
29. Tecnogamma SpA, Italy
30. TIS.PT, consultores em Transportes, Inovação e Sistemas, SA, Portugal
31. TRENMO, Engenharia Lda, Portugal
32. Witt IndustrieElektronik GmbH, Germany

Project Details:

Call: FP7-SST-2007-RTD-1
Project Number: 218730
Instrument: CSA-SA
Project Start Date: 1 June 2008
Project Duration: 24 months
Project Cost: 505 662 €
EC Contribution: 505 662 €
Project website: www.cetrtra.eu

Project Title: Innovative Guidelines and Tools for Vulnerable Road Users Safety in India and Brazil
Project Acronym: SAFER BRAIN
Activity Area: Road Safety of Vulnerable Road Users in Emerging Economies



Project Description:

The strong effort that the European Commission and all the Member States are paying to the reduction of road fatalities in Europe is giving significant results. Despite these significant improvements in the European countries, the situation in Emerging Economies is dramatically getting worse.

The implementation of effective countermeasures and the achievement of a higher safety level for the vulnerable users in Emerging Economies requests a significant improvement of the local analysis, planning and design capabilities.

The main aim of the project is to increase the level of safety of the whole road transport system and its components, focussing the attention on vulnerable road users, thus contributing to the overall scope of reducing the number of fatalities and the severity of injuries caused by road accidents. The proposal is structured according to the following method:

- Analysis of local requirements: this action focuses on the local accident databases regarding vulnerable road users, the actual situation of road infrastructure, land-use planning and local current road safety management procedures.
- Analysis of the transferability conditions of the European methodologies, tools and measures to the Emerging Economies.
- Definition of suitable measures, methodologies and tools to improve vulnerable road users safety planning and managing in Emerging Economies.
- Development of recommendations and guidelines for the road system infrastructure design to safely carry vulnerable road users and motorised vehicles in Emerging Economies.
- Pilot projects, dissemination and training to decision makers, stakeholders, etc.

The main output of the project will be recommendations and guidelines for improvement of accident data collection procedures and road safety oriented land-use planning as well as education material.

Project Partners:

1. *Centro di ricerca per il trasporto e la logistica (CTL) – Università degli Studi di Roma “La Sapienza”, Italy*
2. Escola Politécnica of the University of São Paulo, Brazil
3. IMR- Desenvolvimento Organizacional Ltda, Brazil
4. Loughborough University, United Kingdom
5. A+S Consult GmbH, Forschung und Entwicklung, Germany
6. **M/s Suncon Engineers Pvt. Ltd, India**
7. Balancia, Netherlands
8. Innovation & Development Consulting, Belgium
9. Master Plan BV, Netherlands
10. Mobycon, Netherlands
11. **Volkswagen India Pvt. Ltd, India**
12. São Paulo City Municipality, Brazil

Project Details:

Call: FP7-SST-2008-RTD-1
Project Number: 218730
Instrument: CP-SICA
Project Start Date: 1 October 2009
Project Duration: 30 months
Project Cost: 2 474 880 €
EC Contribution: 1 872 081 €
Project website: www.saferbrain.eu

Project Title: Smart Transport Applications Designed for large events with Impacts on Urban Mobility
Project Acronym: STADIUM
Activity Area: Large event mobility management (especially in big cities)



Project Description:

The ultimate goal of the project is to improve the performance of transport systems made available to a wide and differentiated range of users in the framework of large events hosted by big cities, through the development of a set of guidelines and tools to implement management support systems (mainly ICT technologies), based upon past experiences of large sport events, demonstrations in South Africa, Delhi and London and best practices of ITS applications in Europe.

Main impacts: Improved performance of transport systems in host cities. Evidence of capabilities to manage high concentrated transport demand through long lasting technological solutions. Promotion of EU know how

Main outputs: (1) Design of ICT applications compliant with the EU ITS Frame Architecture procedures; (2) Demonstration of viability of European ITS technologies in emerging countries; (3) a Handbook providing guidelines and solutions for selecting, designing and implementing applications for the benefit of potential large events hosting cities.

9 WPs: WP1 Management, WP2 Identification of requirements, WP 3 Handbook, WP4: Demonstrators design, WP 5a: Demonstrators implementation-South Africa; WP 5b: Demonstrators implementation-India, WP 5c: Demonstrators implementation-London, WP 6: Benchmarking and evaluation. WP 7: Dissemination and exploitation

Multi-disciplinary team (transport companies, ICT experts, transport policy experts), wide geographical scope (South Africa and India). Includes academic institutions, research and consultancy firms, ITS manufacturers, SMEs and Companies from South Africa and India

Project Partners:

1. *Istituto di studi per l'integrazione dei Sistemi, Italy*
2. Technische Universitaet Berlin, Germany
3. IMPACTS Europe, France
4. Polis -Promotion of Operational Links with Integrated Services, Association Internationale, Belgium
5. Agenzia per la Mobilità del Comune di Roma Società per Azioni, Italy
6. **Ashok Leyland Limited, Telematics Business Unit, India**
7. European Road Transport Telematics Implementation Coordination srl, Belgium
8. **Indivelp, India**
9. Mizar Automazione SpA, Italy
10. MultiMedia InnoVation, South Africa
11. NEA Transport research and training, Netherlands
12. Pluservice srl, Italy
13. SAHA International (South Africa) (Pty) Ltd, South Africa
14. Thetis S.p.A., Italy
15. Transport for London, United Kingdom
16. **Society of Indian Automobile Manufacturers, India**

Project Details:

Call: FP7-SST-2008-RTD-1
Project Number: 234127
Instrument: CP-SICA
Project Start Date: 1 May 2009
Project Duration: 48 months
Project Cost: 6 246 823 €
EC Contribution: 3 998 820 €
Project website: www.stadium-project.eu

Project Title: Network of European Asian Rail Research Capacities
Project Acronym: NEAR2
Activity Area: Developing a Rail Research Network between Europe and Asia

Project Description:

The rapid development of Asian economies, particularly China, India and Russia has dramatically increased the trade volumes between Europe and Asia, with the largest trading partners of Europe actually being located in Asia. Nowadays, the most important trade loads are being transported between the two continents by sea. Railway transport, using the existing and new land routes for the Trans-Eurasian land bridge presents a viable alternative to the maritime routes, which is gaining significant momentum. Due to the origins and current nature of this rail land bridge, numerous issues need to be resolved to bring the system to a modern state of infrastructure, services and operations. Furthermore, to build the capacity to fully exploit the systems potential adaptation of new technologies, interoperability solutions and optimized operations should be considered. To support this objective, NEAR2 proposed the development of a Rail Research Network, drawing knowledge and expertise form leading institutions and researchers from both continents.

The project capitalizes upon the existing structure and leverages the achievements of the existing European Rail Research Network and builds upon the reservoir of expertise of the proposed project partners gleaned from the most relevant past and on going research projects and other activities. The Network aims to become the resource arm of the relevant industry.

NEAR2 will establish a unique, international, interdisciplinary research capacity with the goal of contributing in advancing a major sector of the region's economy, as well as broaden the knowledge basis of the railway research and practice.

Project Partners:

1. *Centre for Research and Technology Hellas, Greece*
2. Trainose Metafores-Metaforikes Ypiresies Epivatou Kai Fortiou AE, Greece
3. Moscow State University of Railway Engineering, Russia
4. A-Trans LLC, Russia
5. Ceske Vysoke Uceni Technicke v Praze, Czech Republic
6. Vilniaus Gedimino Technikos Universitetas, Lithuania
7. Technische Universitat Berlin, Germany
8. Tongji University, China
9. State Higher Educational Establishment Donetsk Railway Transport Institute of Ukrainian State Academy of Railway Transport, Ukraine
10. Eurnex E.V., Germany
11. **Eirc Consulting Private Limited, India**
12. Petersburg State Transport University, Russia
13. Instytut Kolejnictwa, Poland

Project Details:

Call: FP7-SST-2012-RTD-1
Project Number: 314254
Instrument: CSA-CA
Project Start Date: 1 December 2012
Project Duration: 24 months
Project Cost: 962,831 €
EC Contribution: 887,003 €
Project website: <http://www.certh.gr/>



COOPERATION

Thematic Priority Area - 8

SOCIO-ECONOMIC SCIENCES AND HUMANITIES

Project Title: Europe-South Asia Exchange on Supranational (Regional) Policies and Instruments for the Promotion of Human Rights and Management of Minority Issues
Project Acronym: EURASIA-NET
Activity Area: Measures to support international cooperation



Project Description:

Human rights, and especially minority rights, have a clear supranational dimension both in Europe and in South Asia. Europe has made wide use of the mechanisms and soft law approaches developed and implemented at regional level by the OSCE, the Council of Europe and the European Union. In South Asia there is a long tradition of study and robust experience in the field of cultural, religious, linguistic and ethnic management, including the gender dimension, within national boundaries. However, it is only recently that some albeit limited attempts have been made to enhance regional cooperation on these very sensitive issues. Studies carried out by South Asian scholars have created the knowledge base underlying the first rudimentary attempts by the South Asian Association for Regional Cooperation (SAARC) and the foresight initiatives of human rights NGOs and activists. Furthermore, the geopolitical context is now particularly favourable to a supra-national discourse on human and minority rights as a consequence of recently improved relations between India and Pakistan.

The overall objective of EURASIA-Net is therefore to enhance the requisite knowledge-base for new policies and instruments to reduce ethnic-religious conflicts and to foster stability and security in South Asia.

The specific objectives are:

1. To develop a better understanding of regional South Asian attempts to define (by the research community) and implement (by decision-makers and activists) new supranational instruments for the protection and promotion of human rights, with a particular focus on cross-border minority issues.
2. To sustain Euro-Asiatic research cooperation and exchange on those issues and to enlarge the discussion forum to encompass politicians and human rights activists.
3. To create a framework for future research cooperation between Europe and South Asia that is twofold: (a) a Joint Research Agenda and (b) a modus operandi based on mutual knowledge and understanding.

Project Partners:

1. *Europäische Akademie Bozen / Accademia Europea Bolzano, Italy*
2. Brunel University, United Kingdom
3. Johann Wolfgang Goethe-Universität Frankfurt am Main, Germany
4. University of Dhaka, Bangladesh
5. Democratic Commission for Human Development, Pakistan
6. **Mahanirban Calcutta Research Group, India**
7. South Asia Forum for Human Rights, Nepal

Project Details:

Call: FP7-SSH-2007-1
Project Number: 216072
Instrument: CSA-CA
Project Start Date: 1 January 2008
Project Duration: 30 months
Project Cost: 723 629 €
EC Contribution: 643 686 €
Project website: www.eurac.edu/eurasia-net

Project Title: Transnationalisation, Migration and Transformation: Multi-Level Analysis of Migrant Transnationalism (TRANS-NET)

Project Acronym: TRANS-NET

Activity Area: Migration



Project Description:

The objective of this project is to clarify and compare the complex process of transnationalism. During the past few years, transnationalism has attained ever greater importance and topicality due to the increase in transnational mobility of people. In order to attain a comprehensive and valid insight into the topic in question we adopt a multilevel approach. The research conducted in Estonia, Finland, France, Germany, India, Morocco, Turkey, and the United Kingdom addresses both policy documents and individual migrants, including labour migrants; posted workers; family-based migrants; humanitarian migrants, and foreign degree students. The focus lies on their transnational networks and political, economic, and socio-cultural activities. Moreover, the topic of transnational empowering is of central importance. The following transnational spaces will be taken as the main units to analyse the border-crossing relationships: Estonia/Finland, India/UK, Morocco/France, and Turkey/Germany. Research data will be gathered through content analysis of policy documents and semi-structured and life-course interviews among a selected sample of respondents in each participating country.

Project Partners:

1. *Tampereen Yliopisto, University Of Tampere, Finland*
2. University of Paris 8, France
3. Tallinn University, Estonia
4. University Moulay Ismail, Morocco
5. Migration Research Program at the Koç University, Turkey
6. **Centre for Development Studies, India**
7. Universitaet Bielefeld, Germany
8. University of Sussex, United Kingdom

Project Details:

Call: FP7-SSH-2007-1

Project Number: 217226

Instrument: CP-FP

Project Start Date: 1 March 2008

Project Duration: 36 months

Project Cost: 1 916 160 €

EC Contribution: 1 499 920 €

Project website: www.uta.fi/laitokset/kasvlait/projektit/transnet/

Project Title: The changing nature of Internationalization of Innovation in Europe: impact on firms and the implications for innovation policy in the EU
Project Acronym: GLOBINN
Activity Area: Impact of internationalisation on Europe's research and innovation systems

Project Description:

The overall purpose of the GlobInn project is to improve our understanding of the changing nature of internationalization of Europe's innovation systems by studying the international knowledge sourcing strategies of European firms and their effect on performance. The starting premise of the project is that Europe's knowledge resources and its role in the global economy will be increasingly shaped by the ability of EU firms to source knowledge internationally. Firms can employ three modes in internationalizing their innovative activities: (a) the global trading of technology based services and licensing as firms seek to exploit the global markets for their technologies; (b) international collaborative agreements and strategic alliances as firms seek out international partners for their knowledge generating activities; and (c) the international dispersal of their own R&D and technology creating activities as they seek out new regions and resources in different parts of the world. The GlobInn project aims to bring together leading EU scholars involved in studying each of these modes largely in isolation to focus on an integrated analysis. In the first instance this analysis will map the trends in the growth of each of these modes with an emphasis on whether internationalization of innovation in European firms is an intra EU or extra EU phenomenon. The second focal point will be the organisational and managerial issues which influence the strategies of EU firms in seeking international sources of knowledge, and have an impact on their on innovation and economic performance. Both of these are essential for analysing the implications for national and EU-level policies. Indeed the underlying rationale for the GlobInn project is that devising appropriate policies requires a deeper understanding of each of the three modes and the firms level processes and strategies.

Project Partners:

1. *University of Sussex, United Kingdom*
2. Universiteit Maastricht, Netherlands
3. Centre for Technology, Innovation and Culture, Norway
4. Università Commerciale Luigi Bocconi, Italy
5. **Indian Institute of Management Bangalore, India**
6. UK Office for National Statistics, United Kingdom
7. Brunel University, United Kingdom

Project Details:

Call: FP7-SSH-2007-1
Project Number: 217296
Instrument: CP-FP
Project Start Date: 1 May 2008
Project Duration: 37 months
Project Cost: 1 450 808 €
EC Contribution: 1 111 808 €
Project website: <http://globinn.freeman-centre.ac.uk/>

Project Title: Advancing knowledge-intensive entrepreneurship and innovation for growth and social well-being in Europe



Project Acronym: AEGIS

Activity Area: Interactions between knowledge, economic growth and social well-being

Project Description:

The proposed research project will study the interactions between knowledge, economic growth and social wellbeing in Europe. It focuses on knowledge-intensive entrepreneurship as a necessary mechanism and an agent of change mediating between the creation of knowledge and its transformation into economic activity. Knowledge-intensive entrepreneurship is perceived herein as a core interface between two interdependent systems: the knowledge generation and diffusion system, on the one hand, and the productive system, on the other. Both systems shape and are shaped by the broader social context – including customs, culture, and institutions – thus also pointing at the linkage of entrepreneurship to that context.

The project has three main objectives (research thrusts). At the micro level, it purports to study in depth the very act of knowledge-intensive entrepreneurship, its defining characteristics, boundaries, scope and incentives. At the macro level, it will study the link between knowledge entrepreneurship, economic growth and social wellbeing, also extending to the socio-economic processes that help transform the “animal spirits” (John Maynard Keynes) into a self-reinforcing process for broader societal prosperity. The way the broader socio-economic environment stokes “animal spirits” and benefits from them will be studied within the contexts of various shades of capitalism in Europe and elsewhere, expanding beyond the growth accounting and endogenous growth approaches and issues to novel concepts of knowledge-intensive entrepreneurship in growth and, further, into the underlying issues of social wellbeing such as inclusion, cohesion, equity, opportunities, and social care. Finally, at the policy level, the project will take a systemic approach aiming at an organic integration of diverse sets of policies that influence the creation and growth of innovative entrepreneurial ventures based on knowledge generation and diffusion.

Project Partners:

1. Planet S.A., Greece
2. Université Louis Pasteur, Strasburg, France
3. Institute for Management of Innovation and Technology, Sweden
4. National Technical University of Athens, Greece
5. National Competitiveness Council, Croatia
6. Zhejiang University, China
7. The Finance Academy under the Government of the Russian Federation, Russian Federation
8. Centrum ekonomických studií Vysoké školy ekonomie a managementu, o.p.s., Czech Republic
9. Unidade de Estudos sobre Complexidade e Economia, Portugal
10. CASE - Center for Social and Economic Research, Poland
11. **Centre for Development Studies, India**
12. Technische Universität Dortmund, Germany
13. Università Commerciale Luigi Bocconi, Italy
14. Universiteit Maastricht, Netherlands
15. Institute of Economics - Hungarian Academy of Sciences, Hungary
16. Aalborg University, Denmark
17. Lunds universitet, Sweden
18. Max Planck Society for the Advancement of Science, Germany
19. University of Sussex, United Kingdom
20. University College London, United Kingdom

Project Details:

Call: FP7-SSH-2007-1
Project Number: 225134
Instrument: CP-IP
Project Start Date: 1 January 2009
Project Duration: 45 months
Project Cost: 4 281 626 €
EC Contribution: 3 300 000 €
Project website: www.aegis-fp7.eu

Project Title: European Union and the World Seen from Abroad
Project Acronym: EUROROADMAP
Activity Area: Europe seen from outside



Project Description:

Geographers are the most critical social scientists when it comes to the delimitation of borders of the so-called European continent. Continents as Huntington's civilisation are ideological productions that are certainly not based on natural facts. But they are deeply enhanced in the mind of European citizens and policy makers because they were historically produced by Europeans as a tool of world power. It is therefore crucial to examine which divisions of the world are perceived by people located outside the European Union, in order to produce a non Eurocentric view. The project EuroBroadMap is based on a worldwide survey trying to catch both the perception of European Union global role and attraction power level and the definition of EU from a qualitative and spatial point of view as well as the relative attraction of countries, or even cities that compose it.

The survey will be realized on a panel of license degree students in a relevant panel of external countries and in different academic fields. The questionnaire will combine different kinds of methods, like drawings on maps, open questions, ranking etc. Variations in answer will be examined according to both geographical location and social status. The individual mental maps will be compared to collective representations: websites of organization, tourist guides, teaching books, international media, etc. Particular attention will be paid to (carto)graphic representations of Europe and other world divisions. Spiritual flows that are revealed by individual and collective mental maps will be then compared to four types of effective flows linking EU and the rest of the world (Trade, Aid, FDI, Migrations) in order to examine possible discrepancies. The diffusion of results in various formats (report, website, teaching material,) will be organized in order to insure a growing awareness of the complexity of actual situation of Europe in the world, according to material and spiritual dimensions.

Project Partners:

1. *Centre National de la Recherche Scientifique (CNRS)* - France
2. *Université Paris Diderot - Paris 7 (UPD)* - France
3. *Université Libre de Belgique (ULB)* - Belgium
4. *Centro de Estudos Geográficos (CEG)* - Portugal
5. *Nordic Center for Spatial Development (NORDREGIO)* - Sweden
6. *IRMC* - Malta
7. *University Alexandru Ioan Cuza (UAIC)* - Romania
8. *Dokuz Eylül University (DEU)* - Turkey
9. *University of São Paulo (USP)* - Brazil
10. *Coalition for the Promotion of Urban and Periurban Agriculture in Africa (CAUPA)* - Cameroon
11. *East China Normal University (ECNU)* - China
12. **Department of Sociology, Delhi School of Economics - University of Delhi - India**

Project Details:

Call: FP7-SSH-2007-1
Project Number: 225260
Instrument: CP-FP
Project Start Date: 1 January 2009
Project Duration: 36 months
Project Cost: 2 008 760 €
EC Contribution: 1 490 076 €
Project website: www.eurobroadmap.eu

Project Title: Impact of Networks, Globalisation, and their Interaction with EU Strategies
Project Acronym: **INGINEUS**
Activity Area: Globalisation and its interaction with the European economy



Project Description:

INGINEUS addresses the evolution of global production networks (GPNs) into global innovation networks (GINs), and the impact this new process of global capitalism has on knowledge intensive activities in the EU. Global sourcing and assembly arrangements have been around for some three decades. They were principally based on efficiency considerations. Thus, multinational firms (MNCs) outsourced parts of production processes to manufacturers in Asia and other low-cost locations around the globe, while retaining the most knowledge intensive assets in the home country. This is no longer the case. MNCs increasingly scout the globe for locations where the right mix of local competences allows them to tap into sophisticated parts of value chains. This is not limited to advanced economies but more and more involves firms and regions in selected developing countries that position themselves as attractive knowledge-intensive locations in their own right.

INGINEUS studies the determinants of this process and analyses its implications both for the EU and its emerging partner countries in the developing world. First, it looks at the changing strategies of MNCs and the conditions under which it is favourable for them to offshore R&D and other knowledge-intensive parts of their production process. Second, it focuses on the evolving local capabilities in selected developing countries that allow them to claim increasingly complex parts of global value chains at much higher levels of technological sophistication than hitherto. Third, it analyses the consequences of the formation of GINs in the global economy and differentiates among their static and dynamic effects on growth, employment, and competitiveness in the EU. Finally, based on these insights, it derives policy recommendations that would allow the EU to benefit from the positive features of this process while mitigating its adverse consequences.

Project Partners:

1. *Fondazione Eni Enrico Mattei, Italy*
2. **International Institute of Information Technology Bangalore, India**
3. **Centre for Development Studies Society, India**
4. Deutsches Institut für Entwicklungspolitik GGMBH, Germany
5. Institute of Baltic Studies, Estonia
6. Graduate University of Chinese Academy Of Sciences, China
7. Fundação de Desenvolvimento da Pesquisa, Brazil
8. Norsk Institutt for Studier av Innovasjon, Forskning og Utdanning (Nifu Step), Norway
9. Copenhagen Business School, Denmark
10. Centro Studi Luca D'agliano, Italy
11. Human Sciences Research Council of South Africa, South Africa
12. Lunds Universitet, Sweden
13. University of Sussex, United Kingdom
14. University of Pretoria, South Africa

Project Details:

Call: FP7-SSH-2007-1
Project Number: 225368
Instrument: CP-IP
Project Start Date: 1 January 2009
Project Duration: 36 months
Project Cost: 3 333 313 €
EC Contribution: 2 600 000 €
Project website: www.ingineus.eu

Project Title: Urban Chances: City growth and the sustainability challenge; Comparing fast growing cities in growing economies
Project Acronym: chance2sustain
Activity Area: Cities and sustainable development



Project Description:

In this programme we want to examine how governments and citizens in cities with differing patterns of urban economic growth make use of participatory (or integrated) spatial knowledge management to direct urban governance towards more sustainable development (SD). Participatory spatial knowledge management is the main concept we use to study this issue, as it reflects a strategic resource, which all stakeholders can contribute to urban governance processes towards SD. It includes both expert knowledge and several forms of non-expert knowledge, such as knowledge from (working) experience (tacit), embedded sectoral knowledge, and social (or community-based) knowledge at the neighbourhood and city-wide level. Participatory processes of urban planning and management are strategic in eliciting these forms of spatially disaggregated (of specific) knowledge, which are usually not acknowledged in top-down, expert-driven models of urban governance and planning. Utilizing participatory spatial knowledge can make urban governance and planning more effective and gain wider acceptance, by incorporating both expert and local community knowledge. Although participatory spatial knowledge management is increasingly used in urban planning processes, its success depends on external political and economic conditions. A legal framework providing for fiscal decentralisation and funding, for instance, is a strategic support. The influence of various external conditions has not yet been analysed much locally, and certainly not comparatively across different socio-political contexts, although it is a strategic question, given the inherent trade-offs and potential political conflicts in combining environmental, social and economic goals (within SD). Therefore, our programme focuses on nine cities with contrasting economic and political conditions, with the main scientific objective of developing a model on participatory spatial knowledge management to direct urban governance to SD.

Project Partners:

1. *Eadi Europaischer Verband der Entwicklungs- Forschungs- und Ausbildungs, Germany*
2. **School of Planning and Architecture, India**
3. Universiteit van Amsterdam, Netherlands
4. University of Kwazulu-Natal, South Africa
5. Centre National de la Recherche Scientifique (CNRS), France
6. Centro Brasileiro de Análise e Planejamento, Brazil
7. Foro Ciudades para la Vida, Peru
8. Norwegian Institute for Urban and Regional Research, Norway

Project Details:

Call: FP7-SSH-2009-B
Project Number: 244828
Instrument: CP-SICA
Project Start Date: 1 April 2010
Project Duration: 48 months
Project Cost: 3 251 123 €
EC Contribution: 2 610 303 €
Project website: <http://www.chance2sustain.eu/>

Project Title: The role of Governance in the Resolution of Socioeconomic and Political Conflict in India and Europe



Project Acronym: CORE

Activity Area: Cultures of governance and conflict resolution in Europe and India

Project Description:

The post-cold war world, and especially the last decade, is faced by multiple challenges. The weakening of the nation-state and emergence of new forms of intra-state conflicts, leads to a need for substantial revision in approaches and strategies aiming to transform them. Conflict resolution agendas have in the last two decades been defined by the political objective of political and economic liberalization for the promotion of human rights, the rule of law and democracy. However, these strategies often fail to take into consideration the multiple local social and cultural contexts. There is a lack of substantial assessment of the impact of governance agendas on local conflict dynamics, and especially on conflicts where identity mobilisation is prominent.

This project will analyse the premises and operational initiatives of governance initiatives in conflict transformation processes through a combination of fieldwork, statistical analysis and theory development. The case studies of the project encompass recent governance practices in Bihar, Bosnia, Cyprus, Georgia, North East India and Kashmir. These studies will be conducted in collaboration between Indian and European research teams. The project partners introduce new subjects and disciplines to conflict resolution and governance research that are necessary for addressing the questions raised. The results will prepare the ground for systematic analysis, theoretical innovation and policy recommendations.

The project will result in a variety of outputs, including a report series addressed for EU and India policy makers and the wider public; two large international conferences; a database mapping key governance initiatives, scientific articles and working papers for the research community; several Policy reports, a published project publication; and a high profile web forum for enhanced communication between researchers, policy makers, practitioners and the wider public.

Project Partners:

1. *Institutt for Fredsforskning Stiftelse, Norway*
2. Central European University, Hungary
3. **Dehli University, India**
4. **Jawaharlal Nehru University, India**
5. **Malaviya Centre for Peace Research - Banaras Hindu University, India**
6. **Participatory Research Institute of Asia, India**
7. The University Court of the University of St Andrews, United Kingdom
8. Berghof Research Centre for Constructive Conflict Management, Germany
9. Istituto Affari Internazionali, Italy
10. **Mahanirban Calcutta Research Group, India**

Project Details:

Call: FP7-SSH-2010-3
Project Number: 266931
Instrument: CP-SICA
Project Start Date: 1 January 2011
Project Duration: 36 months
Project Cost: 2 896 226 €
EC Contribution: 2 366 173 €
Project website: <http://www.projectcore.eu>

Project Title: Enhancing Knowledge for Renewed Policies against Poverty
Project Acronym: NOPOOR
Activity Area: Tackling poverty in a development context



Project Description:

NOPOOR aims to build new knowledge on the nature and extent of poverty in developing countries to provide policymakers with a broader understanding of poverty. We believe that poverty cannot be tackled without a comprehensive approach. We know that poverty is a multidimensional phenomenon, but NOPOOR will explore new and uncharted dimensions. It is not just a picture of poverty, but an understanding of poverty entry and exit processes that is needed if policies are to be more effective.

The project will identify key mechanisms that explain the persistence and exacerbation of poverty, which have been altered by the insertion of developing countries into the globalization process, including trade, aid, FDI and migration, and by the growing interdependence of economies. Causes may differ between countries. This calls for policies and actions to be tailored to each poor country's characteristics, including their access to resources, political regime, quality of institutions and governance. These points are developed by various approaches, including political economics, and different methods: surveys, econometric studies and case studies.

NOPOOR will put significant resources into generating new knowledge from original surveys, database work and qualitative work. It will also look forward to future scenarios.

Nineteen experienced partners are involved in the project, which includes ten teams from developing and emerging countries in three regions (Latin America, sub-Saharan Africa and South Asia). These countries have implemented different poverty reduction policies, and this will form the basis for the comparative approach taken.

The project is policy-oriented and forms close links with stakeholders, including policymakers and civil society in the EU and developing countries. Substantial resources have been earmarked for the dissemination of progress with the research, its results and its conclusions.

Project Partners:

1. *Institut de Recherche pour le Developpement, France*
2. Facultes Universitaires Notre-Dame de la Paix de Namur, Belgium
3. Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico
4. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
5. Universidad Autonoma de Madrid, Spain
6. Universidad de Chile, Chile
7. Universidade Federal do Rio de Janeiro, Brazil
8. University of Antananarivo, Madagascar
9. University of Cape Town, South Africa
10. Centre d'Etudes de Populations, de Pauvreté et de Politiques Socio-Economiques, Luxembourg
11. **Centre for Development Economics, India**
12. Centre National de la Recherche Scientifique, France
13. Consortium pour la Recherche Economique et Sociale, Senegal
14. Ghana Centre for Democratic Development, Ghana
15. Giga German Institute of Global And Area Studies Leibniz Institut Fur Global Und Regionale Studien, Germany
16. Grupo de Analisis Para el Desarrollo, Peru
17. Institut fur Weltwirtschaft, Germany
18. Oikodrom - Forum Nachhaltige Stadt, Austria
19. Vien Khoa hoc xa hoi Viet Nam, Viet Nam

Project Details:

Call: FP7-SSH-2011-1
Project Number: 290752
Instrument: CP-SICA
Project Start Date: 1 April 2012
Project Duration: 60 months
Project Cost: 10 053 730 €
EC Contribution: 8 000 000 €
Project website: <http://www.nopoor.eu/>

Project Title: Fostering Human Rights Among European (External and Internal) Policies
Project Acronym: FRAME
Activity Area: Developing a Coherent EU Human Rights Policy

Project Description:

FRAME, a 4-year multidisciplinary project, represents a consortium of 19 internationally recognized and globally networked human rights institutes from across Europe and strategic regions around the world. Through FRAME, more than 100 leading researchers and practitioners - with a strong gender balance - aim to provide the necessary building blocks for a coherent EU human rights policy comprised of: (i) a sound knowledge base taking account of the factors, concepts, institutions and instruments underlying human rights protection; (ii) appraisal of the EUs full potential to contribute to global human rights governance through its relationship with multiple actors and its manifold policies; and (iii) a set of indicators, tools and policy proposals geared to strengthen human rights implementation in EU policy-making. Through 4 research clusters, FRAME offers creative solutions to enhance the coherence and effectiveness of EU human rights policy.

Cluster 1: Factors examines the key factors facilitating or hindering human rights protection, the concepts of human rights, democracy and the rule of law and the human rights protection institutions and instruments at global, regional and national level.

Cluster 2: Actors addresses the EUs human rights engagement with the UN, regional multilateral organizations, regional and strategic partnerships with third countries and non-state actors, as well as the relationship between EU institutions and the Member States.

Cluster 3: Policies hones the fostering of human rights in EU policies on development and trade, human rights violations in conflicts, freedom, security and justice and external human rights and democratization action.

Cluster 4: Tools develops indicators, tools and policy proposals, including policy benchmarking, to monitor and improve the effectiveness of EU human rights policy. FRAMEs vital impact on human rights research, education and policy innovation will continue beyond the projects lifetime.

Project Partners:

1. *Katholieke Universiteit Leuven, Belgium*
2. *Universidad de Sevilla, Spain*
3. *The University of Nottingham, United Kingdom*
4. *Universiteit Utrecht, The Netherlands*
5. *Centro Interuniversitario Europeo per i Diritti Umani e la Democratizzazione, Italy*
6. *Abo Akademi, Finland*
7. *Trustees of Columbia University in the City of New York, United States*
8. *Universidad de la Iglesia de Deusto, Spain*
9. *University College Dublin, Ireland*
10. *Pontificia Universidad Catolica del Peru, Peru*
11. *Uniwersytet Im. Adama Mickiewicza w Poznaniu, Poland*
12. *Eotvos Lorand Tudomanyegyetem, Hungary*
13. *University of Pretoria, South Africa*
14. *Institut for Menneskerettigheder, Denmark*
15. **Indian Society of International Law, India**
16. *Cairo Institute for Human Rights Studies Association, Egypt*
17. *Ludwig Boltzmann Gesellschaft Osterreichische Vereinigung zur Forderung der Wissenschaftlichen Forschung, Austria*
18. *China University of Political Science and Law, China*
19. *Europaisches Trainings und Forschungszentrum fur Menschenrechte und Demokratie, Austria*

Project Details:

Call: FP7-SSH-2012-1
Project Number: 320000
Instrument: CP-FP
Project Start Date: 1 May 2013
Project Duration: 48 months
Project Cost: 8,271,123 €
EC Contribution: 6,435,059 €
Project website: <http://www.kuleuven.be/kuleuven/>



COOPERATION

Thematic Priority Area - 9

SPACE

Project Title: Sustainable Irrigation water management and River-basin governance: Implementing User-driven Services
Project Acronym: SIRIUS
Activity Area: Stimulating the development of services



Project Description:

SIRIUS addresses efficient water resource management in water-scarce environments. It focuses in particular on water for food production with the perspective of a sustainable agriculture in the context of integrated river-basin management, including drought management. It aims at developing innovative and new GMES service capacities for the user community of irrigation water management and sustainable food production, in accordance with the vision of bridging and integrating sustainable development and economic competitiveness.

SIRIUS merges two previously separate strands of activities, those under the umbrella of GMES, related to land products and services (which address water to some extent), and those conducted under FP5/6-Environment and national programs, related to EO-assisted user-driven products and services for the water and irrigation community.

As such, it will draw on existing GMES Core Services as much as possible, by integrating these products into some of the required input for the new water management services. It also makes direct use of the EO-assisted systems and services developed in the FP6 project PLEIADeS and its precursor EU or national projects, like DEMETER, IRRIMED, ERMOT, MONIDRI, AGRASER, all addressing the irrigation water and food production sectors, some of which have resulted in sustainable system implementation since 2005.

SIRIUS addresses users (water managers and food producers) at scales ranging from farm, over irrigation scheme or aquifer, to river-basins. It will provide them with maps of irrigation water requirements, crop water consumption and a range of further products for sustainable irrigation water use and management under conditions of water scarcity and drought, integrated in leading-edge participatory spatial online Decision-support systems. The SIRIUS service concept considers the economic, environmental, technical, social, and political dimensions in an integrated way.

Project Partners:

1. *Universidad de Castilla - La Mancha, Spain*
2. Colegio de Postgraduados (COLPOS), Mexico
3. Universidad Politecnica de Valencia, Spain
4. Ariespace SRL, Italy
5. EA-TEK, Turkey
6. Infoterra Limited, United Kingdom
7. Integrated Resources Management (IRM) Company Limited, Malta
8. Servicios de Estudios en Ingeniería y Sistemas S.A. de C.V., Mexico
9. Excelentísima Diputación Provincial de Alicante, Spain
- 10. University Visveswaraya College of Engineering, India**
11. Fundacao da Faculdade de Ciencias e Tecnologia da Universidade Nova de Lisboa, Portugal
12. Ministry of Agriculture and Rural Development, Romania
13. Sveriges Meteorologiska Och Hydrologiska Institut, Sweden
14. Institut de Recherche pour le Developpement, France
15. Institute of Agricultural Economics - Romanian Academy, Romania
16. Instituto Nacional de Pesquisas Espaciais, Brazil
17. Istituto Nazionale di Economia Agraria, Italy
18. Strategic Research Unit - National Water Research Center, Egypt

Project Details:
Call: FP7-SPACE-2010-1
Project Number: 262902
Instrument: CP-FP
Project Start Date: 1 October 2010
Project Duration: 36 months
Project Cost: 2 764 925 €
EC Contribution: 2 499 997 €
Project website: <http://www.sirius-gmes.es/>

Project Title: COronal Mass Ejections and Solar Energetic Particles: forecasting the space weather impact
Project Acronym: COMESEP
Activity Area: Security of space assets from space weather events



Project Description:

This project develops tools for forecasting geomagnetic storms and solar energetic particle (SEP) radiation storms based on scientific data analysis and modeling. During the solar cycle, the Sun goes from quiet conditions at minimum to levels of high activity at maximum, where energetic phenomena, particularly coronal mass ejections (CMEs) and SEPs, are common. These are accompanied by explosive release of mass, magnetic flux and energetic particles which may have damaging effects on satellites and on-board detectors. In extreme cases the effects may even be observed on ground-based systems (e.g., pipelines, power-grids). Returning humans to the Moon with the next possible stop Mars will mean ensuring the safety of the astronauts from these extreme conditions of space, especially the energetic particle environments. This includes particularly the sporadic SEP events that can disrupt the normal functioning of human cells. In this project data analysis and modeling will feed into the development of forecasting tools for both geomagnetic storms and SEPs. The tools will be incorporated into an automated operational European Space Weather Alert system. By analysis of historical data, complemented by the extensive data coverage of solar cycle 23, the key ingredients that lead to magnetic storm and SEP events and the factors that are responsible for false alarms will be identified. To enhance our understanding of the 3D kinematics and interplanetary propagation of CMEs, the structure, propagation and evolution of CMEs will be investigated. In parallel, the sources and propagation of SEPs will be examined and modeled. Based on the insights gained, and making use of algorithms for the automated detection of CMEs, forecasting tools for geomagnetic and SEP radiation storms will be developed and optimised. Validation and implementation of the produced tools into an operational Space Weather Alert system will be performed.

Project Partners:

1. *Institut d'Aéronomie Spatiale de Belgique, Belgium*
2. Danmarks Tekniske Universitet, Denmark
3. Sveuciliste U Zagrebu, Croatia
4. Universitaet Graz, Austria
5. University Of Central Lancashire, United Kingdom
6. Koninklijke Sterrenwacht Van Belgie, Belgium
7. National Observatory Of Athens, Greece

External collaborators

8. NASA Goddard Space Flight Center, United States
9. **Udaipur Solar Observatory, Physical Research Laboratory, India**

Project Details:

Call: FP7-SPACE-2010-1
Project Number: 263252
Instrument: CP-FP
Project Start Date: 1 February 2011
Project Duration: 36 months
Project Cost: 2 634 595 €
EC Contribution: 1 798 718 €
Project website: <http://www.comesep.eu/>

Project Title: **BIOdiversity Multi-Source Monitoring System:
From Space TO Species**
Project Acronym: **BIO_SOS**
Activity Area: Stimulating the development of services



Project Description:

BIO_SOS is a pilot project for effective and timely multi-annual monitoring of NATURA 2000 sites and their surrounding in support to management decisions in sample areas, mainly in Mediterranean regions and for the reporting on status and trends according to National and EU obligations. The aim of BIO_SOS is two-fold: 1) the development and validation of a prototype multi-modular system to provide a reliable long term biodiversity monitoring service at high to very high-spatial resolution; 2) to embed monitoring information (changes) in innovative ecological (environmental) modelling for Natura 2000 site management. The system will be developed and validated within ecologically sensitive 'sampling' sites and their borders exposed to combined human-induced pressures. Different environmental characteristics of the selected sites have been considered in order to ensure system robustness. Sites characteristics ranges from mountain rough to flat coastal morphologies, from rangeland to human dominated landscapes and land uses. BIO_SOS intends to deeply investigate issues related to very high spatial (VHR) (and spectral) resolution Earth Observation data(EO) image processing for automatic land cover maps updating and change detection. Such maps are at the base of biodiversity indicators provision. On the other hand, it intends to develop a modelling framework to combine multi-scale (high to very high resolution) EO data and in-situ/ancillary data to provide indicators and their trends. This means the development of more appropriate and accurate models in support to a deeper understanding, assessment and prediction of the impacts that human induced pressures may have on biodiversity loss.

Project Partners:

1. *Consiglio Nazionale Delle Ricerche, Italy*
2. Aberystwyth University, United Kingdom
3. Università Degli Studi di Bari, Italy
4. Università Degli Studi di Milano-Bicocca, Italy
5. University Of Ioannina, Greece
6. **Ashoka Trust for Research in Ecology and the Environment, India**
7. Institut de Recherche pour le développement, France
8. Altamira Information S.L, Spain
9. Planetek Hellas EPE, Greece
10. Planetek Italia Srl, Italy
11. Agenzia Spaziale Italiana, Italy
12. Centre for Research and Technology Hellas, Greece
13. ICETA - Instituto de Ciências e Tecnologias Agrárias e Agro-Alimentares, Portugal
14. Stichting Dienst Landbouwkundig Onderzoek, Netherlands

Project Details:

Call: FP7-SPACE-2010-1
Project Number: 263435
Instrument: CP-FP
Project Start Date: 1 December 2010
Project Duration: 36 months
Project Cost: 3 173 434 €
EC Contribution: 2 476 389 €
Project website: <http://www.biosos.wur.nl/UK/>



PEOPLE

MARIE CURIE ACTIONS
INTERNATIONAL RESEARCH STAFF
EXCHANGE SCHEME

Project Title: International Network in Theoretical Immunology
Project Acronym: INTI
Activity Area: International Research Staff Exchange Scheme

Project Description:

The main aim of this proposal is to set up an International Research Network in Theoretical Immunology that involves both experimental and theoretical immunologists. This Network will create new collaborations and reinforce existing ones in order to develop a lasting and fruitful research cooperation between all the partners.

Other objectives of this proposal are

1. Establish a lasting and fruitful research cooperation between the experimental and theoretical immunologists of the network with the aim to provide immunology with a more quantitative basis.
2. Establish a lasting and fruitful research cooperation between the different groups that work in theoretical immunology, with the aim to discuss, compare, test and validate different modelling approaches.
3. Train the new generation of theoretical immunologists, with the aim to exchange postgraduate students and research fellows, so that they benefit from the broader knowledge, skills and tools provided by the Network.
4. A final objective of the Network is to develop, by means of the Staff Exchange Scheme, four long-term directions for modelling in immunology. In particular,
 - a. To develop stochastic models for the motion of pathogens and of cells of the immune system, validated by comparing with experiments.
 - b. To build a model of the immune system as a whole using stochastic dynamics of interacting populations. We aim to understand how the system maintains its diversity of millions of lymphocyte populations and how populations of naive and memory cells are maintained.
 - c. To develop stochastic models of T cell and B cell maturation.
 - d. To develop models of autoimmunity.

Project Partners:

1. *University of Leeds, United Kingdom*
2. Los Alamos National Laboratory, United States
3. University of British Columbia, Canada
4. University of Frankfurt, Germany
5. Universidad de Vigo, Spain
6. The Walter and Eliza Hall Institute of Medical Research, Australia
7. University of Magdeburg, Germany
8. University of Auckland, New Zealand
9. Institute Pasteur, France
10. Wake Forest University, United States
11. Universidad de Comillas, Spain
12. University of Oxford, United Kingdom
13. University of Strathclyde, United Kingdom
14. University of Utrecht, Netherlands
15. Institute Gulbenkian, Portugal
16. University College London, United Kingdom
- 17. Indian Institute of Science, Bangalore, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2008
Project Number: 230665
Instrument: MC-IRSES
Project Start Date: 1 January 2009
Project Duration: 48 months
EC Contribution: 230 000 €
Project website: <http://www.maths.leeds.ac.uk/applied/INTI/>

Project Title: Partnerships for Sustainable Shrimp Aquaculture
Project Acronym: PASSA
Activity Area: International Research Staff Exchange Scheme

Project Description:

Aquaculture effluents represent a main environmental concern because of their high polluting potential. While fish farms of advanced countries adopt a medium/high-tech approach to this issue, less industrialised countries rely on low-tech systems, if any. Shrimp culture is an important economic sector in which Asian countries are the main producers/exporters and industrialised countries are the main importers/consumers. Asian aquaculture makes up almost 80% of world shrimp (*P. monodon* and *P. vannamei*) production. As most of the shrimp farms have serious negative impacts on environment caused by waste effluents containing pollutants, one of the main needs of Asian shrimp culture is the implementation of advanced effluent management systems which can burst the rearing efficiency up to manifold increase of production, reducing the environmental impact. On the other hand, EU aquaculture, which possesses a large know-how on intensive fish farming, lacks of intensive shrimp culture because the only species reared (*P. japonicus*) can be grown only in extensive plants. The present project envisages a complementary cross-exchange of their know-how and competencies in the field of shrimp culture between EU and Indian researchers. Respective aims are: (i) the implementation of cost-effective systems for the treatment of shrimp farm effluent to reduce the environmental impact of Indian commercial aquaculture; (ii) the implementation of closed systems for the reproduction and growth of new shrimp species (*P. monodon* and *P. vannamei*) suitable for intensive rearing in EU aquaculture. Available systems and applicable technology will be considered for application and their efficiency to prevent recipient ecosystem pollution will be verified and monitored through analytic characterisation of water, waste and the recipient ecosystems. Specific dissemination and training actions for will be performed to extend the knowledge to researchers, operators and policy makers of India and EU.

Project Partners:

1. *Universita' degli Studi del Salento, Italy*
2. **Cochin University of Science & Technology, India**
3. **National Institute of Oceanography, India**
4. Swansea University, United Kingdom

Project Details:

Call: FP7-PEOPLE-IRSES-2008
Project Number: 230847
Instrument: MC-IRSES
Project Start Date: 1 June 2009
Project Duration: 48 months
EC Contribution: 144 000 €
Project website:

Project Title: Wide Field Studies of Star Forming Regions
Project Acronym: SF-WF-MSF
Activity Area: International Research Staff Exchange Scheme

Project Description:

The UKIDSS survey and the upcoming VISTA surveys is/will produce unbiased wide field near-infrared observations that encompasses entire star forming regions. The same can be effectively combined with the Spitzer Space Telescope mid-infrared observations and the CO molecular line observations from the COMPLETE and millimeter continuum surveys from the SCUBA2 and HARP to conduct wide-field studies of star forming regions. Further, individual H₂ line surveys and CO line surveys will reveal the outflows in these molecular clouds.

We aim to combine this multi-wavelength observations to investigate the structure, evolution and dynamics of young stellar population in molecular clouds and embedded clusters and study the initial mass function, feed back mechanisms from outflows and winds from massive stars. The results can be used to test theoretical scenarios of star formation.

The same datasets will also be used to address a second objective to investigate the formation of massive stars within these molecular clouds. The mechanism of the formation of massive stars and their early influence on the evolution of the star formation process within the molecular clouds, influencing the variables such as star formation efficiency in the context of quiescent and triggered star formation will be examined.

The consortium members involved in the EU and third country(India) have individually and to some extent in collaboration pursued several aspects of the above research. The magnitude of available and to-be available data is enormous and efficient exploitation of these data for science investigation require multiple groups working on various aspects of the science. Through this proposal we aim to combine the expertise and efforts of three groups to obtain maximum output from the wide-field surveys of star forming regions.

Project Partners:

1. *Centro de Investigacao em Astronomia e Astrofisica da Universidade do Porto, Portugal*
2. **Tata Institute of Fundamental Research, India**
3. University of Kent, United Kingdom

Project Details:

Call: FP7-PEOPLE-IRSES-2008
Project Number: 230843
Instrument: MC-IRSES
Project Start Date: 1 February 2009
Project Duration: 36 months
EC Contribution: 43 200 €
Project website:

Project Title: Exchange Programme to advance e-
Infrastructure Know-How
Project Acronym: EPIKH
Activity Area: International Research Staff Exchange Scheme



Project Description:

Europe is heavily investing to create a continental e-Infrastructure based on Grid technology in order to turn the vision of a European Research Area (ERA) into reality. Nowadays, e-Science and e-Infrastructures are considered key enablers of the progress and sustainable development of a country and are concrete means to address the problems of the digital divide and the brain drain which are endemic in large parts of the world.

In the context of its Framework Programmes, EC has already co-funded several projects to stimulate and foster e-Science and Grids well outside its borders and in several parts of the world such as Asia, Latin America and the Mediterranean. However, the adoption of the Grid paradigm and the effective usage of e-Infrastructures require a capillary activity of knowledge dissemination and training to help scientists to make use of distributed computing capabilities for/in their scientific applications.

The strategic aims of the EPIKH project are to:

- Reinforce the impact of e-Infrastructures in scientific research defining and delivering stimulating programme of educational events, including Grid Schools and High Performance Computing courses;
- Broaden the engagement in e-Science activities and collaborations both geographically and across disciplines.

These ambitious goals translate into the following specific actions:

- Spreading the knowledge about the Grid Paradigm to all potential users: both system administrators and application developers through an extensive training programme;
- Easing the access of the trained people to the e-Infrastructures existing in the areas of action of the project;
- Fostering the establishment of scientific collaborations among the countries/continents involved in the project.

Project Partners:

1. *Consorzio COMETA, Italy*
2. Beihang University, People's Republic of China
3. Centro Federal de Educação Tecnológica Celso Suckow da Fonseca, Brazil
4. **Indian Statistical Institute, India**
5. Peking University, People's Republic of China
6. Tel Aviv University, Israel
7. Universidade Federal do Rio de Janeiro, Brazil
8. Universidad Nacional Autónoma de México, Mexico
9. Universidad Técnica Federico Santa María, Chile
10. University of Cape Town, South Africa
11. Centre de Recherche sur l'Information Scientifique et Technique, Algeria
12. Council for Scientific and Industrial Research, South Africa
13. Jordanian Universities Network, Jordan
14. Research Unit of Technologies of Information and Communication, Tunisia
15. Greek Research and Technology Network S.A., Greece
16. Centre National de la Recherche Scientifique, France
17. Centre National pour la Recherche Scientifique et Technique, Morocco
18. Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain

19. CESNET, zámovné sdružení právnických osob, Czech Republic
20. Electronics Research Institute, Egypt
21. Institute of High Energy Physics, People's Republic of China
22. Istituto Nazionale di Fisica Nucleare, Italy
23. Magyar Tudományos Akadémia Számítástechnikai és Automatizálási Kutató Intézet, Hungary

Project Details:

Call: FP7-PEOPLE-IRSES-2008
Project Number: 230842
Instrument: MC-IRSES
Project Start Date: 1 March 2009
Project Duration: 48 months
EC Contribution: 1 188 000 €
Project website: <http://www.epikh.eu/>

Project Title: Ciliates as NATural Reservoir of potentially PATHOgenic BACTERia: an ecological, functional and evolutionary genomic investigation
Project Acronym: CINAR PATHOBACTER
Activity Area: International Research Staff Exchange Scheme

Project Description:

In the last years, Protists (Protozoa) gained a significant attention from the scientific community because of their role as Trojan horses respect to opportunistic pathogens of humans and animals. Although this role is nowadays well established and accepted for some Protists like Acanthamoeba, little is known for other groups of possible hosts. Recently, members of the coordinating unit of Pisa got evidences that many of the natural occurring bacterial symbionts of ciliates have a strong phylogenetic affiliation to human and animal (especially fish) pathogens like Rickettsia (Vannini et al., 2005; Ferrantini et al., 2009; Ferrantini et al., in prep) and Francisella (Schrallhammer et al., in prep.). These observations raised the question whether ciliates may also represent natural reservoirs for potentially pathogenic bacteria especially in tropical regions where the environmental conditions favor microbial growth and fast evolution. Furthermore tropical countries are predicted as the Hot Spot for emerging infectious diseases and zoonosis due to hygienic standards lower than in Western countries and the living together of humans with their farmed animals. Aim of the present project is to set up an international research network that, starting from the collection of novel isolates especially from tropical regions, performs a complete ecological, functional and evolutionary genomic investigation on symbiotic bacteria retrieved from ciliates that shows phylogenetic affinities to pathogenic ones. Units from the proposed network posses expertise that ranges from the traditional morphological investigation to advanced ultrastructure, ecology, functional biology, molecular phylogeny, comparative genomics and postgenomics. Aim of the research network will be to coordinate the research activities of the involved units into joined projects and to transfer know-how to the younger researcher to allow them to re-establish the acquired competences in their home laboratories.

Project Partners:

1. *Universita di Pisa, Italy*
2. **Andhra University, India**
3. Indiana University, United States
4. Saint Petersburg State University, Russian Federation
5. Technische Universitaet Dresden, Germany
6. Universidade Federal do Rio de Janeiro, Brazil
7. Universitaet Stuttgart, Germany
8. Universite Montpellier 2 Sciences et Techniques, France
9. Yamaguchi University, Japan

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247658
Instrument: MC-IRSES
Project Start Date: 16 August 2010
Project Duration: 48 months
EC Contribution: 433 800 €
Project website:

Project Title: Cooling, AGN Feedback and Evolution in Groups
Project Acronym: CAFEGroups
Activity Area: International Research Staff Exchange Scheme

Project Description:

This proposal aims to facilitate close collaboration between researchers in the UK, Italy, USA and India to study the nature and consequences of the energy transferred from supermassive black holes at the centres of galaxies to the surrounding intergalactic medium (IGM) in groups of galaxies. The research combines data from opposite ends of the electromagnetic spectrum: low-frequency radio observations track the history of outbursts from the black holes, while X-ray data allow us to determine their effects on the ten-million-Kelvin gas of the IGM. The partner institutions have long records of internationally-recognised research in these areas. The University of Birmingham is one of the top few teams worldwide in the study of groups with a solid track record in X-ray astronomy (particularly using ESA's XMM-Newton X-ray observatory), while the University of Bologna and the INAF-Istituto di Radioastronomia provide access to some of Europe's best experts in the low-frequency radio regime. The Smithsonian Astrophysical Observatory (US) is the home of NASA's Chandra X-ray observatory, and has a strong claim as the preeminent X-ray astronomy institution worldwide, while the National Centre for Radio Astrophysics (India) operates the Giant Meterwave Radio Telescope (GMRT), the first and currently the only radio observatory to achieve high spatial resolution and sensitivity at low frequencies. The collaboration will bring together experts with diverse skills to study closely one of the outstanding puzzles of modern astrophysics, providing direct benefits to the European institutions involved, the wider scientific community, and to the European Research Area as a whole, through increased scientific returns from current European facilities, increased access to international resources, and the scientific and theoretical tools for wide range of future studies with Europe-based facilities (e.g., the European LOFAR radio observatory and ESA International X-ray Observatory).

Project Partners:

1. *The University of Birmingham, United Kingdom*
2. Alma Mater Studiorum-Universita Di Bologna, Italy
3. Smithsonian Astrophysical Observatory, United States
4. Istituto Nazionale di Astrofisica, Italy
5. **National Centre for Radioastronomy -Tata institute of Fundamental Research, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247653
Instrument: MC-IRSES
Project Start Date: 1 January 2011
Project Duration: 48 months
EC Contribution: 133 200 €
Project website:

Project Title: **Instability and CONTROL of MASSively SEparated Flows**
Project Acronym: **ICOMASEF**
Activity Area: International Research Staff Exchange Scheme

Project Description:

Flow separation determines the quality of environmental and biological flows alike. Large-scale separation on lifting surfaces, such as aircraft wings and wind-turbine blades, is a phenomenon of key technological significance, since it determines the performance characteristics of the surfaces involved. In addition, flow separation is a major contributor to aerodynamic noise generation. Analysis, computation and experimentation may all be used to identify physical mechanisms related with both hydrodynamic and aeroacoustic small-amplitude instabilities related with flow separation. Such linear perturbations may then be exploited in the context of theoretically-founded (active or passive) flow control at a rather small energy input. Of equal significance is the noise-reduction possibilities offered by precise knowledge of the noise generation mechanisms.

The proposed action brings together leading scientists in the fields of theoretical, computational and experimental fluid mechanics, whose past work has made substantial contributions to the present understanding of separated flow instability and flow control. The respective groups have access to world-class computational or experimental facilities and an interest in pursuing a coordinated effort in a jointly-defined common direction. The consortium comprises nine PIs and their respective groups from five nations: 2 EU MCs (2), Australia (2), Brazil (2) and India (3). The capacities of the EU partners are predominantly theoretical / computational, while the non-EU groups have demonstrated strengths in both computation and experiment. In the course of the present action, short-duration visits of senior personnel as well as longer-term stays of junior researchers have been planned, with a twofold aim: knowledge-sharing and experience interchange amongst the senior personnel, as well as broadening of career perspectives through acquisition of new skills by the younger researchers

Project Partners:

1. *Universidad Politecnica de Madrid, Spain*
2. Imperial College of Science, Technology and Medicine, United Kingdom
3. **Indian Institute of Science, India**
4. **Indian Institute of Technology Kanpur, India**
5. Monash University, Australia
6. Universidade de Sao Paulo, Brazil
7. **Jawaharlal Nehru Centre for Advanced Scientific Research, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247651
Instrument: MC-IRSES
Project Start Date: 1 January 2011
Project Duration: 36 months
EC Contribution: 216 000 €
Project website:

Project Title: Genomic & Epigenomic Complex Disease Epidemiology
Project Acronym: G_EoC_oD_E
Activity Area: International Research Staff Exchange Scheme



Project Description:

Genetic and epigenetic epidemiology are rapidly developing aspects of population-based health research that have clear translational potential. These endeavours both benefit considerably from extensive international collaborations. Establishing robust associations between genetic variation and common complex disease phenotypes requires very large sample sizes than can only realistically be generated through collaborative work. Furthermore, exploring associations in populations with different historical origins contributes to location of functional variation. Interactions of genetic variation and environmental exposures are best studied against a background of widely different environments, something that is best leveraged between, rather than within, countries. Epigenetic patterns are clearly influenced by exposures such as 1-carbon composition of the diet that differ between countries, allowing considerably greater power for establishing associations. Triangulating environmental exposures, genetic variation and epigenetic mediation offers to provide a step-change in ability to detect causal associations, of direct relevance to therapeutic and preventive activities. GeoCoDE will assemble a group of investigators who are custodians of world-leading population resources, have access to appropriate technologies and have been involved in advancing methods of data analysis. Through exchange visits of senior and junior research staff, workshops and extensive networking we will contribute to major advance in European capacity in this field.

Project Partners:

1. *University of Bristol, United Kingdom*
2. Brazilian National Institute of Cancer, Brazil
3. Erasmus Universitair Medisch Centrum Rotterdam, Netherlands
4. Frank Davis Gilliland, United States
5. Fundação Universidade Federal de Pelotas, Brazil
6. **King Edward Memorial Hospital Research Centre, India**
7. Massey University, New Zealand
8. Nanjing Medical University, People's Republic of China
9. Northwestern University, United States
10. The University of Exeter, United Kingdom
11. The University of Western Australia, Australia
12. Universidade de São Paulo, Brazil
13. Università Degli Studi di Torino, Italy
14. University of Alberta, Canada
15. University of Cape Town, South Africa
16. University of Queensland, Australia
17. University of Southampton, United Kingdom
18. University of the Witwatersrand Johannesburg, South Africa
19. Fuwai Hospital and Cardiovascular Institute, People's Republic of China
20. University of Newcastle upon Tyne, United Kingdom
21. The Children's Hospital of Philadelphia, United States
22. Broad Institute, United States
23. **Centre for Cellular and Molecular Biology, India**
24. Centre International de Recherche sur le Cancer, France
25. Fundacio Centre de Recerca en Epidemiologia Ambiental – Creal, Spain
26. Institute for Nutritional Sciences, People's Republic of China
27. **South Asian Centre for Chronic Disease Research, India**
28. **Tata Memorial Centre, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247642
Instrument: MC-IRSES
Project Start Date: 1 March 2010
Project Duration: 48 months
EC Contribution: 772 200 €
Project website: <http://www.bristol.ac.uk/caite/geocode/>

Project Title: World Wide NMR
Project Acronym: WW-NMR
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project brings together centres and institutions specialised in all aspects of NMR spectroscopy in Europe with newly developed laboratories in five other countries. It builds on EU-funded infrastructures and will enable the creation of strategic and sustainable links with nine Partners from countries outside Europe. In return Third Country Partners will gain access to highly sophisticated NMR equipment. NMR spectroscopy is a broadly applicable technology relevant to all aspects of Life Science research, with major influence and impact on the biomedical industries

The specific objectives will be reached through mutually beneficial collaborations:

SO1: Increasing awareness of the potential of NMR spectroscopy in essentially all areas of Life Sciences. Mutual advancement of the research portfolio of the Partners involved through global networking, training in advanced technologies and meetings to present cutting edge research projects.

SO2: Building joint collaborative projects for liquid-state and solid-state NMR investigations by providing access to NMR instrumentation, focussed on investigations of drug targets such as kinases, phosphatases, metalloproteinases, bromo domains, membrane proteins and their complexes with agonists and antagonists.

SO3: Learning and participating in training and application in the field of metabolomics research. Building a world-wide agenda for the role of metabolomics in diagnosis, predictive and individualised medicine supporting human health programmes and in fundamental research in the context of a mechanistic systems biology view to cellular function.

This project will support and reinforce the collaborative interactions amongst the participants and help to establish long-term research co-operation. Most importantly, WW-NMR will enable Europe to lead the agenda for future NMR activities on an international platform.

Project Partners:

1. *The University of Birmingham, United Kingdom*
2. Johann Wolfgang Goethe Universitaet Frankfurt am Main, Germany
3. Consorzio Interuniversitario Risonanze Magnetiche di Metalloproteine Paramagnetiche, Italy
4. Universiteit Utrecht, Netherlands
5. Centre National De La Recherche Scientifique, France
6. The Chancellor, Masters and Scholars of the University of Cambridge, United Kingdom
7. **Tata Institute of Fundamental Research, India**
8. The University of the Western Cape, South Africa
9. Council For Scientific And Industrial Research, South Africa
10. Instituto de Biologia Molecular y Celular de Rosario, Argentina
11. Associação Brasileira de Tecnologia de Luz Síncrotron, Brazil
12. Universidade Federal do Rio de Janeiro, Brazil
13. Wuhan Institute of Physics and Mathematics, People's Republic of China
14. Peking University, People's Republic of China
15. University of Science and Technology of China, People's Republic of China

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247546
Instrument: MC-IRSES
Project Start Date: 1 May 2010
Project Duration: 48 months
Project cost: 439 200 €
EC Contribution: 439 200 €
Project website:

Project Title: Food Research Exchange Programme between India and Europe
Project Acronym: EASTWESTFOOD
Activity Area: International Research Staff Exchange Scheme

Project Description:

EASTWESTFOOD is an exchange programme between the Centre for Advanced Food Studies (LMC), Denmark; Wageningen University, the Netherlands; Centre for Biotechnology, Anna University, India and Banaras Hindu University, India. The overall aim is to strengthen research in India and Europe within the food related sciences. This will be done by setting up a collaborative exchange programme for experienced and early stage-researchers with mutual benefits for all Participants. EASTWESTFOOD contains joint activities which will increase the sharing of knowledge between research groups in the East and West. It will improve research training through joint courses and it will build up a long-term cooperation between the Participants.

The joint activities in EASTWESTFOOD will take place within four areas of collaboration, organized in four work packages: 1) Healthy Diets in East and West, 2) Dairy Technology, 3) Metabolic Engineering and 4) Business Economics and Entrepreneurship. The research areas are highly relevant for the development of high quality healthy foods in the future and will benefit from the synergy arising from the complementary expertise of the Participants. A collaboration between Europe and India is becoming increasingly important as a result of the globalized food market and the rapid growth of the Indian economy. The added benefits for the European participants arise from the gained knowledge on Indian food culture, indigenous dairy products, healthy plant-based food, metabolic engineering with regard to food production as well as insight into the Indian business market. The collaboration on research and research training in these fields will simultaneously be very valuable for development of the food industry in India and support new research projects and research training at the Indian Partner universities. EASTWESTFOOD will also promote intra-European integration between LMC and Wageningen University.

Project Partners:

1. *Københavns Universitet, Denmark*
2. Wageningen Universiteit, Netherlands
3. **Anna University, India**
4. **Banaras Hindu University, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247521
Instrument: MC-IRSES
Project Start Date: 1 February 2010
Project Duration: 48 months
EC Contribution: 127 800 €
Project website:

Project Title: Novel opportunities for diagnosis and therapy of Wilson's disease in India
Project Acronym: WilsonIndia
Activity Area: International Research Staff Exchange Scheme

Project Description:

The aim of this proposal is to develop human potential in medical research and technology by joint research efforts. An ongoing research partnership for Wilson's disease (WD) was chosen by WilsonIndia to improve joined research, knowledge and career opportunities by developing a sustained partnership of EU with India. WilsonIndia targets the highly advanced knowledge of the EU of inherited fatal WD that has recently evolved as a model for establishment of novel research strategies in medicine. The technology involved by WilsonIndia comprises DNA chip-based diagnosis and adult stem cell-based therapy of liver disease. Gained knowledge by WilsonIndia can easily be transferred to other diseases and third countries other than India. The central part of WilsonIndia comprises staff exchange of young and experienced researchers, technicians and members of SME between the EU and India. WilsonIndia attracts experts from various fields (medicine, genetics, physics, biology, SME) and will undertake a joint project to (i) study important characteristics of WD in a world wide international dimension by on-site research visits, (ii) improve and validate state-of-the-art technology for diagnosis and therapy of WD, and (iii) aggravate the transfer of highly advanced knowledge in medical sciences from the EU to other parts of the world which have a dynamic and fast growing market. WilsonIndia targets a sustained collaboration between the EU and India with respect to research and technology transfer. As a result of the proposed activities WilsonIndia expects to broaden the quality of human resources at various career levels including young and experienced researchers and SME, and to multiply ongoing technology transfer between the EU and third countries for further improvement of career development and reciprocal benefits.

Project Partners:

1. *Westfaelische Wilhelms-Universitaet Muenster, Germany*
2. Harokopio University, Greece
3. **Christian Medical College and Hospital, India**

Project Details:

Call: FP7-PEOPLE-IRSES-2009
Project Number: 247506
Instrument: MC-IRSES
Project Start Date: 1 February 2010
Project Duration: 48 months
EC Contribution: 127 800 €
Project website:

Project Title: A North-South-Network on Urban Self-Organisation and Public Life in Europe, India and China
Project Acronym: URBANSELF
Activity Area: International Research Staff Exchange Scheme



Project Description:

URBANSELF - A North-South-Network on Urban Self-Organisation and Public Life in Europe, India and China builds on existing contacts of cooperative research and knowledge exchange. The objective of URBANSELF is to bring together and integrate competences on urban processes in Europe, India and China with a specific focus on urban self-organisation and how this can contribute to the development and enhancement of public dialogue within and between the three participating areas. Thus as well as seeking to further the role of civil society within Europe, India and China, URBANSELF intends to strengthen the North–South dialogue. In the “urban age” this is of particular relevance, because urban problems are increasingly global challenges and it is vital to share knowledge and understanding of these challenges and how to address them.

The bringing about of change in governance, policy and politics aimed at enhancing the role of the citizens, and their self-organising activities, will facilitate the rise of organisations that enable the articulation of interests and the creation of supporting socio-economic practices. Accordingly, urban governance has to interface with these citizen-based organisations. The support of self-organisation is the crucial process for such a transition towards real citizen participation. Consequently, self-organisation is a necessity for urban sustainability.

The key objective is to understand these forms of organisation through comparative discussion and knowledge transfer of existing research on European cities and rapidly growing cities in India and China. This then allows for empirically founded theoretical conclusions which in turn will provide the basis to identify innovative approaches to urban challenges from an actor-oriented perspective. The scientific results of urban self-organisation and associated developments in the public sphere will be addressed to the relevant stakeholders (local organisations, administration, and politician).

Project Partners:

1. *Universität Passau, Germany*
2. *Rijksuniversiteit Groningen, Netherlands*
3. **University of Madras, India**
4. *University of the West of England, Bristol, United Kingdom*
5. *Metropolitan Research Institute Ltd., Hungary*
6. *Yunnan Academy of Social Sciences, People's Republic of China*

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 268931
Instrument: MC-IRSES
Project Start Date: 1 July 2011
Project Duration: 36 months
Project Cost: 222 600 €
EC Contribution: 222 600 €
Project website: <http://urbanself-fp7.eu/>

Project Title: Multiscale Methods for Fracture
Project Acronym: MultiFrac
Activity Area: International Research Staff Exchange Scheme

Project Description:

The objective of this project is to setup and strengthen international collaborations in the field of 'multiscale modelling for fracture'. The scientific goal is to get a better understanding of how materials fail and to develop better predictive tools for engineering applications. This requires the combination of knowledge from different areas, i.e. Computational Mechanics, Computational Material Science and Experimental Testing. The partners ideally complement their associated expertise. The European partners have an extensive experience on modelling material failure on the continuum level while the Indian partner has focused on atomistic simulations for several years. The partner from South Africa complements the project with his experience in experimental testing. Our associated partner from the US is one of the most famous researchers in the field of Computational Mechanics and Modelling Material Failure.

The project is divided into five work packages (including the management work package) that bridges three different length scales from micro-scale over meso-scale to macro-scale. The goal is to develop effective multi-scale methods to model fracture on these three different scales and to apply the methods to composite materials. Therefore, three work packages are devoted to develop the theoretical framework and its extension to composite materials. The fourth work package aims to close the gap and validate the numerical results through experiments. We believe to significantly push forward the state of the art in that field with the proposed collaboration.

Project Partners:

1. *Bauhaus-Universitaet Weimar, Germany*
2. Cardiff University, United Kingdom
3. **Indian Institute of Science, India**
4. University of the Witwatersrand Johannesburg, South Africa
5. Northwestern University, United States

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269149
Instrument: MC-IRSES
Project Start Date: 1 January 2011
Project Duration: 36 months
EC Contribution: 245 700 €
Project website:

Project Title: Web Information Quality Evaluation Initiative
Project Acronym: WIQ-EI
Activity Area: International Research Staff Exchange Scheme

Project Description:

Today's information and data pools on the Web focus on the quantity of information rather than its quality; a fact observable through the increasing size of the blogosphere, the number of growing artificially created data, the well established copy & paste syndrome and the lack of semantically enriched data. The research underlying WIQ-EI's knowledge transfer addresses information quality in terms of determining web quality measures and the development of multi-lingual, automatic methods for estimating those measures.

Through a set of joint research stays on different topics in web information quality, the consortium consisting of 4 European and 5 non-European partners from Mexico, India and Argentina will transfer knowledge on defining and determining web information quality. Moreover, through joint organization of workshops and competitions, the consortium will provide tools, test data and evaluation measure for comparing different quality estimation approaches.

Project Partners:

1. *Kompetenzzentrum fur Wissensbasierte Anwendungen und Systeme Forschungs- und Entwicklungs GmbH, Austria*
2. **Anna University Chennai, India**
3. Bauhaus-Universitaet Weimar, Germany
4. Center for Computing Research of the National Polytechnic Institute (Centro de Investigacion en Computacion del Instituto Politecnico Nacional), Mexico
5. **International Institute of Information Technology, Hyderabad, India**
6. Universidad Nacional de San Luis, Argentina
7. Universidad Politecnica de Valencia, Spain
8. University of the Aegean-Research Unit, Greece
9. Instituto Nacional de Astrofísica, Óptica Y Electrónica, Mexico

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269180
Instrument: MC-IRSES
Project Start Date: 1 June 2011
Project Duration: 48 months
Project Cost: 287 700 €
EC Contribution: 287 700 €
Project website:

Project Title: Health Monitoring of Offshore Wind Farms
Project Acronym: HEMOW
Activity Area: International Research Staff Exchange Scheme

Project Description:

Offshore wind farm health monitoring and maintenance are major challenges for renewable energy generation due to large scale, high cost and extreme environments. The development of faults in the tower or blades can cause serious secondary damage to the whole wind turbine system if prompt repair action is not taken and can lead to catastrophic failure. Although numerous techniques are being developed worldwide to monitor changes in specific parts of structure, the wide variety of materials and techniques involved means that skills and expertise are disparate and disconnected. For this new interdisciplinary area, this project will bring well recognised scientific institutions and researchers with complementary research experience and skills together, in the context of a collaborative scheme of research exchanges and networking. The proposed project is endorsed by 5 institutions, 2 EU partners and research groups in China and India, agreeing for a common exchange program built around the work packages to develop methods, models, systems and ICT tools for health monitoring and maintenance of offshore wind turbines. The members of the project consortium will provide complementary knowledge and strengths, as they have all carried out leading research in the area of non-destructive evaluation, structural health monitoring, communications and networks, information management, etc. The complementary capabilities have been drawn out in accordance with a joint research vision, commonly shared by the partners at the moment of writing the proposal. The project will consist of targeted research project undertaken by key individual researchers, supplemented and supported by PhD students, researchers and professors. The exchanges will enable the reciprocal transfer of knowledge between the members of the consortium and will be deployed by a set of various activities (visits, training in laboratories, lectures, workshops, seminars) open also to external stakeholders.

Project Partners:

1. *University of Newcastle upon Tyne, United Kingdom*
2. College of Electrical Engineering, Zhejiang University, People's Republic of China
3. **Indian Institute of Technology Madras, India**
4. Nanjing University of Aeronautics and Astronautics, People's Republic of China
5. Zachodniopomorski Uniwersytet Technologiczny, Poland

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269202
Instrument: MC-IRSES
Project Start Date: 1 April 2011
Project Duration: 48 months
EC Contribution: 241 500 €
Project website:

Project Title: Extension, enhancement and strengthening of established collaborations for the purpose of a community-driven knowledge base for micronutrient genomics



Project Acronym: MICROGENNET

Activity Area: International Research Staff Exchange Scheme

Project Description:

MICROGENNET is a collaboration of 16 distinguished universities and research institutes worldwide. The overall aim of the exchange programme is to build, extend and strengthen sustainable collaborations between the partners so as to create a community driven knowledge base for micronutrient genomics research. Currently, the data on nutrient effects on health are scattered in publications and databases around the world. The aim of this work is to provide a public portal and bioinformatics toolbox to access and analyse collaborative and publically available data. Ultimately the goal is to develop individualized intake recommendations for specific micronutrients to promote prevention of both acute illness and chronic disease. The exchange objective is provide researchers with: an international platform to learn novel techniques and methods, the opportunity to formulate new joint collaborative research and funding proposals and international exposure and intercultural understanding. The exchange programme consists of visits ranging from 1-7 months for ESRs and ERs. The expertise and facilities of the partners are highly complementary and the synergy lies in the combination of expertise on identifying metabolic and functional target pathways for a range of micronutrients (Selenium, Zinc , Vitamins and vitamin-related compounds anti-oxidants) and bioinformatics expertise on pathway analysis and data integration. The concise work plan consists of 4 work packages, 2 related to data collection concerning minerals and vitamins, a third over-arching bioinformatic workpackage and one for management. The consortium will be sustainable through its close association with the Micronutrient Genomics Project and the Europe-led NuGO association. MICROGENNET contributes to the EC priorities because it uses mobility to transfer knowledge and will create a network through which European centres of excellence will enhanced through links with researchers from the rest of the world.

Project Partners:

1. *Universiteit Maastricht, The Netherlands*
2. Flinders University, Australia
3. Johns Hopkins University, United States
4. Københavns Universitet, Denmark
5. Rowett Institute of Nutrition and Health, University of Aberdeen, United Kingdom
6. The Governing Council of the University of Toronto, Canada
7. Universite du Luxembourg, Luxembourg
8. University of Newcastle upon Tyne, United Kingdom
9. AgResearch Limited, New Zealand
10. International Agency for Research on Cancer, France
11. US. FDA National Center for Toxicological Research, United States
12. Commonwealth Scientific and Industrial research Organisation, Australia
13. Istituto Nazionale di Ricerca per gli Alimenti e la Nutrizione, Italy
- 14. Manipal Life Sciences Centre – Manipal, India**
15. Universidade Estadual Paulista, Brazil
16. University of Adelaide - Basil Hetzel Institute, Australia

Project Details:
Call: FP7-PEOPLE-2010-IRSES
Project Number: 269210
Instrument: MC-IRSES
Project Start Date: 1 January 2012
Project Duration: 48 months
Project Cost: 547 945 €
EC Contribution: 180 600 €
Project website: www.microgennet.org/

Project Title: Analysis and Design of Earthquake Resistant Structures
Project Acronym: ADERS
Activity Area: International Research Staff Exchange Scheme

Project Description:

Worldwide, major earthquakes have caused tragic catastrophes with unparalleled losses in human life and property where inadequate design and construction practices have been identified as the major culprit. Thus, for mitigating the seismic risk, high quality training and education of professionals and researchers in analysis and design of structures has become of paramount importance. The proposed Network aims at promoting the research cooperation on the design of earthquake-resistant structures by creating strong synergies between research and practice among six countries under seismic threat: Greece and Cyprus (EU), Chile, India and Mexico (S&T) and Armenia (ENP). Bridging the gap between the Earthquake Engineering and Computational Mechanics scientific communities with the exploitation of the scientific potential and the complementary expertise of human resources of the Network, the research teams will further deepen, strengthen and advance their activities by addressing five major disciplines of Earthquake Engineering: (i) Stochastic characterization of seismic ground motions, for simple and accurate generation of synthetic accelerograms; (ii) Modeling and analysis of structures under seismic loading, aiming to validate and advance the cutting edge of computational methods; (iii-iv) Reliability- and performance-based seismic design, working towards a fully probabilistic framework for holistic structural design; and (v) Analysis and design of base-isolated structures, addressing the needs of high performance designs for critical facilities. For each topic, training programs will be provided through joint workshops, participation in thematic conferences and attendance of a specialized international MSc course hosted at the coordinating institution. Combining such focused training with diverse expertise and ensuring a strong connection between research and practice, the Network is set to have a lasting impact, pushing forward the boundaries of science in the field.

Project Partners:

1. *National Technical University of Athens, Greece*
2. American University of Armenia, Armenia
3. **Indian Institute of Technology Kanpur, India**
4. Universidad Autonoma Metropolitana, Mexico
5. Universidad Tecnica Federico Santa Maria, Chile
6. University of Cyprus, Cyprus

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269222
Instrument: MC-IRSES
Project Start Date: 1 May 2011
Project Duration: 48 months
Project Cost: 1.39M €
EC Contribution: 1.39M €
Project website:

Project Title: Dynamics of Weakly Bound Quantum Systems
Project Acronym: DWBQS
Activity Area: International Research Staff Exchange Scheme

Project Description:

This proposal entitled “Dynamics of Weakly Bound Quantum Systems” (DWBQS) describes a joint collaborative academic project and exchange scheme between researchers from Norway, Sweden and France as beneficiaries and Argentina and India as participants. The first focus of the proposed program is on the theoretical challenges regarding transfer and breakup mechanisms in excited atomic and molecular systems. We will study breakup and imaging of Rydberg atoms and molecules in laser fields and Rydberg like systems in collisions between ions. The ability to solve the time dependent Schrodinger equation in this regime results in new insights regarding novel quantum processes involving entangled particles. For interpretation of present and future experiments the need for parallel theory development cannot be overestimated.

A second focus will be to develop new understanding for the atomic structure problem in Super Heavy Elements (SHE) based on experience of many body physics in systems like large clusters and quantum dots. The DWBQS group with its new collaborative constellation of theorists and experimentalists, atomic and nuclear physicists, has a background which is well suited to secure the achievement of the proposed goals.

Project Partners:

1. *Universitetet i Bergen, Norway*
2. **Manipal University, India**
3. Stockholms Universitet, Sweden
4. Universite Pierre et Marie Curie - Paris VI, France
5. Comisión Nacional de Energía Atómica, Argentina

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269243
Instrument: MC-IRSES
Project Start Date: 1 May 2011
Project Duration: 48 months
EC Contribution: 283 500 €
Project website:

Project Title: Development of a new generation of CIGS-based solar cells
Project Acronym: NanoCIS
Activity Area: International Research Staff Exchange Scheme

Project Description:

The main objective of NanoCIS is the establishment of a cooperative partnership between research organizations through a joint program of exchange of researchers for developing a new generation of photovoltaic (PV) solar cells. This new generation of PV solar cells will be based in approaches involving the use of new materials with high conversion efficiencies and low-cost fabrication techniques.

The broad aim is the theoretical and experimental design, synthesis and characterization of new advanced materials, based on chalcopyrites absorbers, allowing the manufacture of an intermediate band solar cell. New concepts such as Intermediate band and luminescent materials for further development of CIGS solar cells are going to be investigated. This new class of materials has been predicted theoretically as potential candidates for providing very high efficiency (63%) in solar energy conversion. According to present knowledge, this compounds based on chalcogenide-type semiconductors are quite novel as general materials, especially in their application to solar energy.

Electrodeposition (ED) is the technique chosen for developing such approaches. ED is essentially a non-vacuum approach to fabricate high quality thin-film materials for PV modules that could lower the manufacturing costs by over 50% and increase the PV module efficiencies. The ED technique offers the most attractive range of benefits leading to the low cost fabrication of PV cells, such as high rate of deposition, high resolution, high shape fidelity, self purification, scalability and good compatibility with existing processes. ED adds another cost effective step in low-cost solar cell because the transparent conducting oxide layers (TCO) can be deposited by the same method. The use of inline processing through an exclusively non-vacuum technique will further contribute to the improvement of device performance.

Project Partners:

1. *Universidad Politecnica de Valencia, Spain*
2. Politechnika Warszawska, Poland
3. Universidad Catolica de Valparaiso, Chile
4. Universidad Politecnica de Madrid, Spain
5. Benemerita Universidad Autonoma de Puebla, Mexico
6. Universidade do Minho, Portugal
7. **Maharshi Dayanand University, India**

Project Details:

Call: FP7-PEOPLE-2010-IRSES
Project Number: 269279
Instrument: MC-IRSES
Project Start Date: 1 January 2011
Project Duration: 48 months
EC Contribution: 430 500 €
Project website:

Project Title: New Working Fluids based on Natural Refrigerants and Ionic Liquids for Absorption Refrigeration

Project Acronym: NARILAR

Activity Area: International Research Staff Exchange Scheme

Project Description:

Ionic liquids (IL) have been recently proposed as absorbents in absorption and refrigeration cycles (Cai, 2007). On the other hand, also recently a great attention has been redirected toward recovery of waste heat looking for working pairs with natural refrigerants that can be characterized by a well-balanced set of properties (Sen and Paolucci, 2006; Sen et al. 2007;?).

As a new type of fluids with a great hygroscopic character and other interesting properties such as a good thermal stability and very low vapour pressure, LIs can be excellent candidates as absorbents for absorption systems. As a drawback, the IL are highly viscous, specially at low temperature, restricting the flow of the absorbent in the machine. Nevertheless, addition of a molecular solvent reduces dramatically the viscosity. As a consequence an adequate design of a mixture LI + molecular solvent can lead to more efficient cycles.

A major focus of the network will be the study and development of new absorption refrigeration machines that can use solar/waste heat and overcome the limitations of the currently used water/lithium bromide and ammonia/water absorption machines.

NARILAR will consist of 2 university research groups from 2 European member countries and a Higher Education Institute and a research Laboratory from India as a country with which EU has and S&T Agreement. Research will be carried out in chemistry, physical chemistry and thermal and mechanical engineering.

The strategic goals of the project are to:

- Study the different ionic liquid-refrigerant pairs.
- Measure the properties of promising IL mixtures.
- Study the heat and mass transfer aspects of IL mixtures.
- Build and test some prototype absorption refrigeration machines with IL mixtures, for use with solar/waste heat.

The project implementation activities will be carried out at all the four locations of the project investigators, with work on refrigerators to be carried out at Tarragona and Chennai.

Project Partners:

1. *Universitat Rovira I Virgili, Spain*
2. Faculdade de Ciencias da Universidade de Lisboa, Portugal
3. **Indian Institute of Technology Madras, India**
4. **National Chemical Laboratory, India**

Project Details:

Call: FP7-PEOPLE-2010-IRSES

Project Number: 269321

Instrument: MC-IRSES

Project Start Date: 1 April 2011

Project Duration: 48 months

EC Contribution: 312 900 €

Project website:

Project Title: geohazards and geomechanics
Project Acronym: GEO
Activity Area: International Research Staff Exchange Scheme

Project Description:

This proposal aims to bring together the complementary expertise of world leading groups carrying out research on the engineering assessment, prevention and mitigation of geohazards, the main ones being floods, landslides, and earthquakes considering also the effect of climate change and human activity on soil degradation.

To mitigate these disasters it is necessary to improve our understanding of the failures taking place in flood defence embankments, to have better models for a more rational risk assessment of areas prone to flooding, to investigate the geomechanical conditions leading to the onset of landslides more in depth, to model debris flows and mudflows to estimate run-out distances and destructive power of the landslide materials, etc. In other words, prevention, preparedness and mitigation of geohazards rely on sound geo-engineering which requires competences in geomechanics, numerical modelling, constitutive models for soils, hazard zonation and risk assessment.

The goals of this proposal are: i) to investigate the key aspects of major geohazards (floodings, landslides, earthquakes) to bridge the current gaps in knowledge to improve significantly the current capabilities of prevention, preparedness and mitigation by bringing together specialists engaged in cutting edge research; ii) to enable knowledge exchange among experts in complementary research fields; iii) to train several Early Stage Researches (ESRs) to expand their knowledge during their stay at the host institution; iv) to improve the current normative standards and codes ruling geohazard prevention; v) to generate new approaches to the problems dealt with through exposure to different methodologies.

Project Partners:

1. *The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom*
2. **Indian Institute of Science, India**
3. Institut Polytechnique De Grenoble, France
4. Tongji University, People's Republic of China
5. Tsinghua University, People's Republic of China
6. Universitat Politecnica de Catalunya, Spain

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 294976
Instrument: MC-IRSES
Project Start Date: 1 February 2012
Project Duration: 48 months
Project Cost: 438 900 €
EC Contribution: 438 900 €
Project website:

Project Title: Urban Knowledge Network Asia
Project Acronym: UNKA
Activity Area: International Research Staff Exchange Scheme

Project Description:

Asia's mounting global importance includes a remarkable growth in urbanisation. Over 60 percent of the estimated 3.5 billion Asian population are now living in cities. A city's most important asset is indeed its inhabitants (ADB 2008, *Managing Asian Cities*). If we are to address such unparalleled growth of Asian megacities, effective urban management must be informed by qualitative analytical knowledge and framed within a global, pluri-disciplinary experience that a transcontinental mobility programme such as the International Research Staff Exchange Scheme (IRSES) can provide. The challenge is for urban scholars and practitioners – policy makers or community leaders – to create a balance between the benefits and costs of urbanisation with a view of improving the quality of life of millions. The objective is to nurture more contextualised and policy-relevant knowledge on Asian cities, through exchanges and targeted case-study-based research among participants from the 11 partner institutions, with the European institutions playing a key role.

Inspired by the new qualitative emphasis commanding European urban policy, the Urban Knowledge Network Asia intends to address critical urban development issues in Asia, taking into account the challenges of the diversity of urban societies, with their heterogeneous populations. The Urban Knowledge Network Asia aims, therefore, to study how Asian cities, taken as organic socio-spatial entities, manage their space and improve human liveability. To this end, the network put together by the International Institute for Asian Studies (IIAS) aims to host a variety of research projects covering three key areas of society in relation to the planning, management and governance of the urban environment: 1) shelter/housing (the house and the neighbourhood where people live), 2) the urban environment and its impact on living conditions, and 3) the city as a cultural nexus.

Project Partners:

1. *Universiteit Leiden, the Netherlands*
2. Beijing University of Technology, People's Republic of China
3. China Academy of Urban Planning and Design, People's Republic of China
4. Ecole Nationale Supérieure d'Architecture Paris-Belleville, France
5. Hong Kong University, Hong Kong
6. **Indian Institute for Human Settlements India,**
7. Shanghai Academy of Social Sciences, People's Republic of China
8. Technische Universiteit Delft, the Netherlands
9. Tianjin University, People's Republic of China
10. University College London, United Kingdom
11. University of Southern California, United States

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295114
Instrument: MC-IRSES
Project Start Date: 1 April 2012
Project Duration: 48 months
Project Cost: 1 204 000 €
EC Contribution: 1 204 000 €
Project website:

Project Title: The interplay among bone cells, matrices and systems
Project Acronym: INTERBONE
Activity Area: International Research Staff Exchange Scheme



Project Description:

It is now clear that there are multiple regulatory pathways that orchestrate the interplay between the skeleton and other organs to maintain the correct homeostasis of the body. INTERBONE is an interdisciplinary network for international exchange of scientists which will study the central role of the skeleton in three areas of health. INTERBONE will coordinate research and training activities between 5 institutions in Italy, Netherlands, Brazil, India and USA each with highly complementary and distinctive expertise. Work on energy metabolism will build on previous research findings that suggest a link between bone derived signals, glucose metabolism and insulin sensitivity. The network will also investigate the role of candidate secreted factors in the disruption of hematopoiesis in the development of leukemia. These activities will utilize new conditional knockout mouse models. Research on fracture repair and tissue regeneration will address biomaterials interactions with cells, and stimulation of angiogenesis in fracture repair with biophysical approaches. The planned research collaboration is supported by a programme of staff exchanges, training and networking activities. The network will involve regular meetings integrated with established international conferences in bone-related research, which will support networking and dissemination, a workshop on tissue regeneration and angiogenesis, and a programme of webinars. The staff to be exchanged will comprise 13 ESRs and 7 ERs who will benefit greatly from the transfer of knowledge and international experience. INTERBONE also makes a contribution to the opening of the European Research Area to international cooperation, and interaction with three of Europe's strategic global partners in this emerging interdisciplinary area of research.

Project Partners:

1. *Universita Degli Studi dell'Aquila, Italy*
2. **Anna University Chennai, India**
3. Erasmus Universitair Medisch Centrum Rotterdam, the Netherlands
4. Trustees of Columbia University in the city of New York, United States
5. Universidade Federal Fluminense, Brazil

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295181
Instrument: MC-IRSES
Project Start Date: 1 April 2012
Project Duration: 39 months
Project Cost: 254 100 €
EC Contribution: 233 100 €
Project website: <http://www.interbone.org>

Project Title: The public health implications of neoliberal policy and management on professions and vulnerable populations
Project Acronym: NL_SOCIAL
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project will explore the impact of global fiscal changes on social work practice and interventions to develop best practice models. The project focus is on the impact of neoliberalism on social work in the partner countries. Neoliberalism for this study refers to international economic frameworks that support social, cultural and political policies and practices that promote the management of services through these frameworks.

The aim of the project is to collect data on the current delivery, training and policy in the six partner countries in order to transfer knowledge and develop best practice frameworks. The consortium will use the knowledge exchange embedded in the project to provide an analysis of the different social work policies and practice in each partner country. This will then be used to create a best practice framework for teaching and delivery of social work using the core benefits identified in each partner organisation and country.

The project will be delivered through seven core work packages. Research to understand social work through training and in practice in each of the consortium organisations and their countries as a whole forms the basis of this project. Exchanging knowledge and expertise across the consortium through teaching workshops, collaborative working and first-hand experience of social work in each country.

The consortium partners are wide-ranging geographically and in experience (U.K, Finland, Italy, South Africa, India and Russia) this diverse expertise is the catalyst to bring together current policies and draw together best practice. The varied host country backgrounds and current financial status make these partners ideal for effective knowledge sharing and the development of new global social work best practice models.

Project Partners:

1. *Coventry University, United Kingdom*
2. *Laurea-Ammattikorkeakoulu Oy, Finland*
3. **Loyola Registered Society, India**
4. *Stellenbosch University, South Africa*
5. *St. Petersburg State Polytechnical University, Russian Federation*
6. *Universita della Calabria, Italy*

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295203
Instrument: MC-IRSES
Project Start Date: 24 March 2012
Project Duration: 36 months
Project Cost: 220 200 €
EC Contribution: 220 200 €
Project website:

Project Title: Integrated Risk Assessment of Hydrologically-Driven Landslides
Project Acronym: HYDRODRIL
Activity Area: International Research Staff Exchange Scheme

Project Description:

The scientific goal of HYDRODRIL is to investigate and evaluate the risk and nature of hydrologically-driven landslides, therefore making a contribution to a better understanding of the relationship between small-scale deformations in soil/rock structures, the failure mechanisms induced by these deformations and the following large-scale dynamic behavior, as well as a detailed risk assessment programme. Major entities of HYDRODRIL will be the extensive monitoring Xintan-landslide in the Three-Gorges region (Hubei province, China), correspondent experiments on a small-scale model in centrifuge tests and FEM and multiscale modeling approach of landslides in numerical simulations. The broad-based research group, consisting of experts in their respective fields, will cover geotechnical, geological, geophysical and geographical issues.

Project Partners:

1. *Universitaet fuer Bodenkultur Wien, Austria*
2. China University of Geosciences, Wuhan, People's Republic of China
3. **Indian Institute of Technology, Kharagpur, India**
4. National Autonomous University of Mexico, Mexico
5. The University of Nottingham, United Kingdom

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295225
Instrument: MC-IRSES
Project Start Date: 1 April 2012
Project Duration: 48 months
Project Cost: 264 600 €
EC Contribution: 264 600 €
Project website:

Project Title: Transition versus Transformation: comparing paths to democratic change in the former USSR using case study based evidence from civil society, international aid and domestic politics
Project Acronym: TRANSFOR
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project wants to fill this gap in the literature and study the interaction between civil society and the political forces operating at different levels of the state. In this respect this research aims at re-charting the relationships between civil society, international donors and the state in order to explore three questions:

- 1) What are the limits of international forces in democracy promotion strategies that target civil society as the main actor in the socio-political transition of a country?
- 2) What are the factors that allow civil society to play a role in effective pluralisation and democratization of a country?
- 3) Is there any mechanism diffusing those factors across regions and continents and what are the reasons for a successful exportation of factors and strategies? Conversely what factors have revealed been revealed to be most important in limiting this diffusion?

The project, in addition to creating experts in this field, will also contribute a significant body of knowledge in its own right. The research will explore the way post-Soviet consolidation has been conceived, implemented and applied to different political, economic and geopolitical realities across the region. To this end the interactions between researchers from different research centres will be constructed around two main axes. First, the researchers will coordinate on a joint research project. Second, different organizations will form collaborations between themselves that will lead to a constant and systematic transfer of knowledge between partners.

Project Partners:

1. Tallinn University, Estonia
2. Dublin City University, Ireland
3. Faculty of politics, National Research University - Higher School of Economics, Moscow, Russia, Russian Federation
4. Geowel Research, Georgia
5. **Jawaharlal Nehru University, India**
6. Marmara Universitesi, Turkey

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295232
Instrument: MC-IRSES
Project Start Date: 1 April 2012
Project Duration: 48 months
Project Cost: 188 800 €
EC Contribution: 188 800 €
Project website:

Project Title: Coherent Optics Sensors for Medical Applications
Project Acronym: COSMA
Activity Area: International Research Staff Exchange Scheme

Project Description:

The main objective of the project is to focus theoretical, experimental and clinical research of the participating groups on biomagnetism phenomena, with the specific aim to develop all-optical sensors dedicated to their detection and suitable for applications in clinical diagnostics.

A central role in the project is played by Optical Atomic Magnetometers (OAMs) that have the potential, in terms of sensitivity and budget, for a widespread use in hospitals. OAMs have the needed sensitivity and a very small sensor head, allowing for excellent spatial resolution and optimum coupling. We will develop OAMs specifically for clinical use. We will also adopt an original approach to magnetic shielding that consists of compensating rather than screening spurious magnetic fields. This eliminates the need for an expensive mu-metal isolated room, which would make a large scale use of OAMs in hospitals difficult.

The project sees the participation of 11 research groups from Italy, United Kingdom, Bulgaria, Israel, Armenia, Russia, India, Poland, USA. Nine teams (UniSi, IEBAS, UCL, IAE, IPR, JU, UCB, SOI, UC) involved in the project have long-lasting collaboration activities. The groups have the needed competences covering physics as well as medical issues. This makes a an efficient transfer of knowledge between the teams absolutely essential. We will establish links between groups, based on complementary competences. Knowledge transfer will be obtained with a reciprocal exchange of young and senior researchers. The obtained results will be transmitted to all involved groups.

Project Partners:

1. *Universita' Degli Studi di Siena, Italy*
2. Bar Ilan University, Israel
3. Federal State Unitary Enterprise Scientific and Industrial Corporationvavilov State Optical Institute, Russian Federation
4. Institute of Automation and Electrometry, Siberian Branch of the Russian Academy of Sciences, Russian Federation
5. Institut pro Elektronika na Ban - Institute Of Electronics Bulgarian Academy Of Sciences, Bulgaria
6. National Academy of Sciences of the Republic of Armenia, Armenia
7. Swansea University, United Kingdom
8. The Regents of the University of California, United States
9. University College London, United Kingdom
- 10. University of Calcutta, India**
11. Uniwersytet Jagiellonski, Poland

Project Details:

Call: FP7-PEOPLE-2011-IRSES
Project Number: 295264
Instrument: MC-IRSES
Project Start Date: 1 April 2012
Project Duration: 48 months
Project Cost: 254 100 €
EC Contribution: 231 300 €
Project website:

Project Title: A Multiple-Scattering Computing Platform For (Nano) Materials
Project Acronym: MSNano
Activity Area: International Research Staff Exchange Scheme

Project Description:

Our society relies more and more on the finding of new materials for the advancement of technology. Prior to being used for applications and in order to be tailored to specific properties, materials have to be carefully characterized and the connection between their properties and underlying electronic, magnetic and crystallographic structure must be clearly understood.

This is where electron and photon spectroscopies come into play. Thanks to their unique specificities and the use of synchrotron radiation, they have the capability to access all the requested information at the nanoscopic and the atomic levels with enhanced accuracy.

However, this accuracy can only be achieved by comparison to a calculation based on a suitable theoretical model, as no reliable inversion of the experimental data can directly achieve such a necessary accuracy. Moreover, recent breakthroughs in their theoretical modelling make us hopeful that in the coming years calculations of the experimental signal will reach a predictive level, thereby offering the possibility to by-pass some expensive experiments. Multiple scattering is a major issue in the devising of an accurate and flexible framework that can deal in the same way with periodic and non-periodic materials, with nanostructures and over a very wide range of energies. The purpose of the present project is to offer the scientific community a unique computing platform able to deal with the characterization of all sorts of materials using various spectroscopies. To this purpose, we will gather the expertise of nine participants, all specialized in the multiple scattering description of spectroscopies. The sharing of complementary expertise will allow us to propose to the user (experimentalists and theoreticians) a coherent set of computer programs that will have the generality and the multi-technique capability lacking in the actual individual codes.

Project Partners:

1. *Centre National de la Recherche Scientifique, France*
2. **Birla Institute of Technology and Science, Pilani, India**
3. Chiba Daigaku, Japan
4. Fyzikalni Ustav Av Cr V.V.I, Czech Republic
5. Istituto Nazionale di Fisica Nucleare, Italy
6. Ludwig-Maximilians-Universitaet Muenchen, Germany
7. Southern Federal University, Russian Federation
8. Universite de Bourgogne, France
9. University of Science and Technology of China, People's Republic of China

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 317554
Instrument: MC-IRSES
Project Start Date: 1 September 2012
Project Duration: 48 months
Project Cost: 269 200 €
EC Contribution: 269 200 €
Project website:

Project Title: International Collaboration on Computational Modelling of Fluidised Bed Systems for Clean Energy Technologies
Project Acronym: ICOMFLUID
Activity Area: International Research Staff Exchange Scheme

Project Description:

Our society relies more and more on the finding of new materials for the advancement of technology. iComFluid will develop an EU-India network for fluidised bed technology research by uniting activities among 4 top ranking European and Indian universities. 28 researchers will be exchanged and trained with latest techniques covering the full range of thermal conversion for clean energy generation including pyrolysis, gasification and combustion. iComFluid will set the foundation stones for long-term strategic collaboration between EU and India to confront the challenge of climate change and clean energy generation in a global framework.

Project Partners:

1. Cranfield University, United Kingdom
2. Université Catholique de Louvain, Belgium
3. Indian Institute of Technology Guwahati, India
4. Council of Scientific and Industrial Research, India

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 312261
Instrument: MC-IRSES
Project Start Date: 1 October 2012
Project Duration: 48 months
Project Cost: 617,400 €
EC Contribution: 617,400 €
Project website: <http://www.cranfield.ac.uk/>

Project Title: **Studies on Some Herbal Additives Giving Partial Protection Against Toxic or Immunosuppressive Effects of Some Mycotoxins and Improving Wound Granulation**
Project Acronym: **HERBAL PROTECTION**
Activity Area: International Research Staff Exchange Scheme

Project Description:

The applicants have addressed to mycotoxins involved in spontaneous animal mycotoxicoses encountered in their countries and the possible protective effects of some herbal additives in feeds, because the course of mycotoxicoses are often accompanied with higher mortality due to secondary bacterial infections provoked by immunosuppressive effects of mycotoxins. Such a problematic mycotoxicosis widely encountered in Bulgaria appears to be spontaneous porcine/chick nephropathy. The widely encountered renal disease may not only cause affected kidneys to be rejected, but it is also correlated with poor liveweight gains and carcass quality in affected animals. THE OBJECTIVES of this study is to explore some ways of safely utilizing chick feeds contaminated with nephrotoxic mycotoxins OTA or FB1 in order to reduce economic losses due to morbidity from secondary bacterial infections or decrease of weight gain in stock chicks and to avoid the rejection or condemnation of such feed. This will be achieved by addition of some herbs to animal feeds, which are known to have protective effects on kidney and liver (the main damaged organs by these mycotoxins) or known to have an immunostimulating effect.

Some of the same herbs, well known among Indian or African tribes to have strong healing effects on wounds or human health, will be further studied of their possible effects on wound granulation. By extending their expertise on the creation of research labs for biocharacterization of herbs and by sharing the technology for preparation and stabilization of herbal extracts the collaborators will help their countries to manage with the growing demands of the herbal medicine. Finally, some new cheap practical manners of herbal protection (in the form of feed supplements to the feeds) against the action of target mycotoxins will be elaborated, in addition to developing some herbal products, which can improve immune response and are useful for wound granulation, kidney or liver diseases.

Project Partners:

1. *Trakia University, Bulgaria*
2. Kaposvari Egyeteme, Hungary
3. University of Johannesburg, South Africa
4. **Ministry of Defence, India**
5. Rhodes University, South Africa

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 312261
Instrument: MC-IRSES
Project Start Date: 1 January 2013
Project Duration: 48 months
Project Cost: 189,000 €
EC Contribution: 189,000 €
Project website: <http://www.uni-sz.bg/>

Project Title: Indo-European Network in Mathematics for Health and Disease
Project Acronym: INDOEUROPEAN-MATHDS
Activity Area: International Research Staff Exchange Scheme

Project Description:

The main aim of this proposal is to set up an Indo-European Research Network in Mathematics for Health and Disease, INDOEUROPEAN-MATHDS that will allow the transfer of knowledge, research and training between partners. The Network will involve physicists, mathematicians, statisticians, probabilists, biologists, immunologists and engineers. The Network will create new collaborations and reinforce existing ones to develop lasting and fruitful research cooperation between all partners. Other objectives of this proposal are:

- (1) Establish research collaborations between the experimental, clinical and theoretical partners of the Network to develop mathematical and computational models for health and disease.
- (2) Establish research collaborations between the different theoretical groups to discuss, compare, test and validate different modelling approaches.
- (3) Train a new generation of multi-disciplinary (experimental, clinical and theoretical) scientists, with the aim to exchange postgraduate students and research fellows, so that they benefit from the broader knowledge, skills and tools provided by the Network.
- (4) Enhance the international outreach dimension of the EU partners by delivering lectures and seminars at the LANL q-bio series of Summer Schools and Conference, and the training events to be organised and hosted by the Indian partners.
- (5) Enhance the international dimension of research in India in the area of Mathematics for Health and Disease, by organising and hosting four training events (spring schools) in India.
- (6) Enhance the international outreach dimension of the LANL q-bio series of Summer Schools and Conferences.

A final research objective of the Network is to develop, by means of the Research Staff Exchange Scheme, four long-term directions in Mathematics for Health and Disease:

- (a) host-pathogen dynamics,
- (b) immune cellular processes and ageing,
- (c) receptor mediated processes, and
- (d) genomic fluidity of human pathogens.

Project Partners:

1. *University of Leed, United Kingdom*
2. University College London, United Kingdom
3. University Utrecht, The Netherlands
4. National University of Ireland Maynooth, Ireland
5. Universidad de Vigo, Spain
6. Universidad Pontificia Comillas, Spain
7. University of British Columbia, Canada
8. University of New Mexico, United States
9. Massachussets Institute of Technology MIT Corporation, United States
10. The Walter and Eliza Hall Institute of Medical Research, Australia
- 11. Indian Institute of Science, India**
- 12. University of hyderabad, India**
- 13. Jawaharlal Nehru Centre for Advanced Scientific Research, India**
- 14. The Institute of Mathematical Sciences Chennai Society, India**
- 15. National Institute of Immunology Society, India**
16. Universitaet Basel, Switzerland

Project Details:
Call: FP7-PEOPLE-2012-IRSES
Project Number: 317893
Instrument: MC-IRSES
Project Start Date: 1 May 2013
Project Duration: 48 months
Project Cost: 294,000 €
EC Contribution: 294,000 €
Project website: <http://www.leeds.ac.uk/>

Project Title: Stimulators and Inhibitors of Culture of Trust in Educational Interactions Assisted by Modern Information and Communication Technology
Project Acronym: SIT
Activity Area: International Research Staff Exchange Scheme

Project Description:

Undertaking the problem of culture of trust in the use of information and communication technology in education is justified by an increase in the number of available technological tools and associated with this the valuation and educational usefulness of digital information. The main task of the project is to learn the elements of the culture of trust in order to understand the behaviour of educational entities in situations of the usage of ICT tools and programs in globalizing societies. The object of study is formal education, non-formal and informal.

The research will be carried out in diverse environments in terms of education, history, economy, politics and religion from a perspective of: critical and emancipator pedagogy (Poland), multimedia learning (Norway), sensory learning (Germany), value pedagogy (India), pedagogical aspects of evaluation (China), pragmatic pedagogy and social constructivism (USA). It is important to discover the elements of a culture of trust in consideration of diverse media messages because of their source (who is the author of the information, opinion, appeal, advice), content (what is the subject of information, opinion, appeal, advice), motives, objectives and circumstances of resorting to the transmissions (why in what situation). The project will result in: 1) educational rapprochement of cultures, 2) breaking down of stereotypes, 3) preparation of professional teacher training standards in establishing a culture of trust in the use of digital media.

Project Partners:

1. *Uniwersytet Szczeciński, Poland*
2. Hogskolen I Nesna, Norway
3. Immanuel Kant Baltic Federal University, Russia
4. **Institute of Kashmir Studies Society, India**
5. Università degli Studi di Macerata, Italy

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318759
Instrument: MC-IRSES
Project Start Date: 1 February 2013
Project Duration: 24 months
Project Cost: 182,400 €
EC Contribution: 182,400 €
Project website: <http://www.univ.szczecin.pl/>

Project Title: Innovative Ionic Polymers from Natural Sources for Energy & Environment
Project Acronym: IONRUN
Activity Area: International Research Staff Exchange Scheme

Project Description:

IONRUN (Innovative Ionic polymers from Natural Sources for Energy&Environment) International Research StaffScheme aims to strengthen research partnerships through staff exchanges and networking activities between threeEuropean Research organizations: University of the Basque Country (Spain), University Cergy-Pontoise (France) andUniversity Nova of Lisbon (Portugal) and five non-EU Research Organizations: Russian Academy of Sciences (Russia), Vellore University-VIT (India), Soochow University (China), Federal University of Rio Grande do Sul (Brasil) and Scientific and Technical Research Council (Argentina). The project will provide support for the participating research organizations to establish or reinforce long-term research cooperation in the topic of innovative ionic polymers through a coordinated joint programme of exchange of researchers for short periods. This will include joint research and training activities and joint workshops and seminars, as well as other networking activities. The activities have been designed to exploit complementary expertise of the participants and to create synergies and to promote long term collaborations between the partners.

IONRUN will aim at developing high quality training opportunities and international collaborations through a synergistic collaborative research programme between European and Non-European organizations in the field of polymer science as applied to needs in energy&environment. IONRUN research goals include the development of innovative ionic polymer materials using natural and renewable sources, ionic liquid monomers and polymers, green catalysis and environmental friendly polymerization processes. The developed materials will be tested in Energy&Environment applications such as materials for electrochemical energy storage and water purification.

Project Partners:

1. *Universidad del Pais Vasco EHU UPV, Spain*
2. Université de Cergy-Pontoise, France
3. Instituto de Tecnologia Quimica e Biologica – universidade Nova de Lisboa, Portugal
4. Institute of The Russian Academy of Sciences A.N. Nesmeyanov Institute of Organoelement Compounds, Russia
5. **VIT University, India**
6. Soochow University, China
7. Universidade Federal do Rio Grande do Sul, Brazil
8. Universidad Nacional del Litoral, Argentina

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318873
Instrument: MC-IRSES
Project Start Date: 1 January 2013
Project Duration: 48 months
Project Cost: 533,600 €
EC Contribution: 533,600 €
Project website: <http://www.ehu.es/p200-shenhm/en>

Project Title: Global Perspectives on Learning and Development with Digital Video-Editing Media: A Qualitative Inquiry in Everyday Lives of Marginalized Young People
Project Acronym: DIGIT-M-ED
Activity Area: International Research Staff Exchange Scheme

Project Description:

The exchange concerns the social, cultural, media-analytical and educational-psychological dimensions of digital media practices with a focus on the devices that are used for capturing, editing and circulating video data. DIGIT-M-ED applies inter-disciplinary perspectives and knowledge to analyse how the use of digital technologies is shaped by and shapes today's global youth. Solid research synergies between German and Indian traditions of anthropological and sociological youth research, British scholarship in media analysis, Greek and Brazilian educational and youth research and Russian learning theories will be constructed more fully and creatively. Moreover, the methodological contribution of the project is very important. DIGIT-M-ED aims to develop an innovative methodology for the interdisciplinary and comparative/cross-cultural study of emerging digital media and technological practices and constellations with special attention to the voices and perspectives of the young people involved in the research. Existing theoretical and methodological tools from 1) post-Vygotskian psychology and learning theory 2) multimodal analysis and 3) anthropological theoretical and research traditions will be tested and further developed.

A small-scale inquiry with young people in the age of 16-21 years who live in marginalized urban milieus in Athens, New Delhi and Sao Paulo is planned with the aim of designing large-scale research in the near future. Further activities such as workshops, collaborative teaching and joint publications and presentations will expand and intensify existing research partnerships. DIGIT-M-ED will thus facilitate the development of a productive and sustainable international research network that will investigate how digital media and technologies transform the everyday lives and affect the development of young people in North and South Europe, Brazil, Russia and India in the years to come.

Project Partners:

1. *Panepistimio Kritis (University of Crete), Greece*
2. Freie Universitaet Berlin, Germany
3. Institute of Education, University of London, United Kingdom
4. Fundacao Sao Paulo, Brazil
5. **Jawaharlal Nehru University, India**
6. Moscow State University of Psychology & Education, Russia

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318909
Instrument: MC-IRSES
Project Start Date: 26 June 2012
Project Duration: 24 months
Project Cost: 222,100 €
EC Contribution: 222,100 €
Project website: <http://www.uoc.gr/>

Project Title: Crossing Boundaries: Knowledge and Technology Transfer and Innovation
Project Acronym: CROSSINGBOUNDARIES
Activity Area: International Research Staff Exchange Scheme

Project Description:

CrossingBoundaries aims to develop, through a programme of staff exchange, a new international & multi-disciplinary research community working in exploring the processes, challenges & implications on innovation performance of knowledge & technology transfer across national boundaries.

This research community will focus particularly in addressing five research questions:

1. Who are the actors involved in the process of knowledge & technology transfer for the purposes of innovation across national boundaries?
2. What are the processes of knowledge & technology transfer across national boundaries & how do these differ according to the actors involved?
3. How do contextual factors (such as institutional divergence, cultural differences & geographic distance) influence the processes of knowledge & technology transfer across national boundaries?
4. How do organisational factors (such as technological capabilities, & the absorptive capacity of the firm) influence the processes of knowledge & technology transfer across national boundaries?
5. What are the implications for policy & policy transfer for innovation?

The programme will contribute in the development of theoretical constructs in addressing the five research questions above, & provide an evidence base drawn from the experience of the countries involved in CrossingBoundaries that could be used to inform future research & policy. The proposed project will also develop country case studies that explore specific aspects (territorial, organisational and policy) aspects of these issues.

An important aim of the programme is to create an enduring partnership and future collaborative research. This will be achieved in two ways. Firstly, the development of cross institutional doctoral supervision partnerships that will develop new researchers (augmenting the research community); secondly, the involvement of the partner institution's research and international officers in the programme of exchanges.

Project Partners:

1. *University of Bradford, United Kingdom*
2. Tallinna Tehnikaulikool, Estonia
3. Instituto Universitario de Lisboa, Portugal
4. HES, Russia
5. **Jawaharlal Nehru University, India**

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318928
Instrument: MC-IRSES
Project Start Date: 1 December 2012
Project Duration: 48 months
Project Cost: 194,300 €
EC Contribution: 194,300 €
Project website: <http://www.bradford.ac.uk/external/>

Project Title: Improvement of Technologies and Tools, e.g. Biosystems and Biocatalysts, for Waste Conversion to Develop and Assortment of High Added Value Eco-Friendly and Cost-Effective Bio-Products

Project Acronym: BIOASSORT

Activity Area: International Research Staff Exchange Scheme

Project Description:

The overall aim of this program is to improve technologies and biological tools for conversion of wastes that are abundantly discharged in EU, by eco-friendly and eco-efficient production of high added values bioproducts such as ligno-cellulolytic enzymes, fuel ethanol (EtOH), polylactic acid (PLA) and polyhydroxyalkanoates (PHAs). One of the main objectives is enlarging the patrimony of microbes for waste valorisation by i) screening the assortment of thousand microbes belonging to the collections of Brazilian and Indian partners to select the microbes most efficient in producing enzymes, EtOH, LA, PHAs ii) discovering novel strains with high potential of production of these products exploring the biodiversity of micro flora from India and Brazil and iii) exchanging technologies and tools developed by different EU and ICPC partners for genetic engineering of different microbes. Optimization of processes for production of different products and assessment of their economic and environmental feasibility will be performed with the above microbes taking advantage from the complementary consolidated expertises of the partners. Partners will have open access to complex databases developed during program implementation on the microbial patrimony of the network and the main systems, tools and technologies developed. Besides training through research performed during secondments of researchers to implement the above scientific activities, transfer of knowledge will be also achieved by summer schools, workshops and intensive virtual networking activities, covering not only scientific but also parallel sectors. Staff exchanges and networking activities between European and Indian and Brazilian research organisations will strengthen research partnerships. Dissemination of program results and best practices to external target groups to improve social acceptance and public perception of the new processes and materials and their exploitation in the market will be carried out.

Project Partners:

1. *Università degli Studi di Napoli Federico II, Italy*
2. Ecole Polytechnique Fédérale de Lausanne, Switzerland
3. **Council of Scientific and Industrial Research, India**
4. Universidade Federal do Parana, Brazil
5. Michigan State University, United States

Project Details:

Call: FP7-PEOPLE-2012-IRSES

Project Number: 318931

Instrument: MC-IRSES

Project Start Date: 30 July 2012

Project Duration: 48 months

Project Cost: 296,100 €

EC Contribution: 296,100 €

Project website: <http://www.unina.it/index.jsp>

Project Title: Civil Engagement in Social Work: Developing Global Models
Project Acronym: CIVIL_SW
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project aims to examine the role of social work and its engagement with civil society in supporting vulnerable members of the community. It will examine the relationship within the context of social welfare reform in response to neoliberal reform and new public management initiatives. Social work provides an important role in civil society of protecting, supporting and advocating for societies vulnerable members. Whilst there is an agreed international definition of social work, the practice, structure and socio-political support for the profession varies internationally. The values, training and structure of the profession require social work to question how it should best service citizens through advocacy, promoting social cohesion, developing social capital and supporting broader public health for individual and communities. These services previously enjoyed support due to progressive policies aimed at reducing poverty, social inequality and social exclusion. They are however increasingly being subject to pressures of marketisation, austerity and statutory intervention, many of which may be impacting negatively on the profession. The structure of the profession and social welfare services, the role and changes across international and cultural boundaries and engagement with civil society in this regard is under researched, with few opportunities for the development of international researchers. The project involves EU and associated countries that are undergoing significant social and economic change, namely England, Italy, Portugal, Spain and Turkey, whilst non EU countries, Brazil, Russia, India, China and South Africa are newly advanced economic development countries. Through the development and co-ordination of trans-continental researchers it will enhance the understanding, knowledge base and develop models of global sustainable social welfare service delivery.

Project Partners:

1. Coventry University, United Kingdom
2. Università della Calabria, Italy
3. Instituto Universitario de Lisboa, Portugal
4. Universidad de Alicante, Spain
5. Kocaeli Universitesi, Turkey
6. Saint Petersburg State University – SPSU, Russia
7. Stellenbosch University, South Africa
8. Loyola College Society, India
9. Sun Yat-Sen University, China
10. Universidade Federal do Espirito Santo

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318938
Instrument: MC-IRSES
Project Start Date: 27 May 2013
Project Duration: 36 months
Project Cost: 292,600 €
EC Contribution: 292,600 €
Project website: <http://www.coventry.ac.uk/>

Project Title: Ultrafast Photonic Processes & Interactions
Project Acronym: UP-PI
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project involves researchers from Dublin City University, Ireland, the Optoelectronic Research Centre, United Kingdom, the Indian Institute of Technology Madras and Indian Institute of Technology Dehli, India.

Our main objectives are to:

- 1 Deliver a dynamic programme of scientific and engineering missions strongly focused on young researchers (longer term mission, months), but also encompassing experienced researchers (shorter term mission, weeks).
- 2 Ensure that visiting researchers are integrated into existing research activities at the host centre, and have full visiting researcher status with access to facilities and equipment on the same basis as local staff.
- 3 Manage a network of structured projects with defined deliverables and milestones.
- 4 Ensure research visitors are exposed to training opportunities, research seminars, summer schools and short courses/modules relevant to their research or professional development.
- 5 Deliver high impact outputs from the joint research activities. These will include;
 - 5a Establishment of a framework for future networked collaborations building on this programme
 - 5b Joint publications in high impact international journals
 - 5c Joint grant applications under FP7/FP8, and National European programmes.

The overarching goal of this 4-year project is contribute positively and proactively to these interlinked challenges by establishing an EU-India research and education program designed to reinforce scientific and technological excellence in high speed and ultrafast photonic interactions and processes in systems from atomic ensembles to devices. The programme will deal with the design of non-linear materials, and its characterisation, the generation and applications in communication and biotechnology of short pulses in extreme ultra-violet and in telecom spectral range, and the use of these ultra-fast materials for short pulse characterisation.

Project Partners:

1. *Dublin City University, Ireland*
2. University of Southampton, United Kingdom
3. **Indian Institute of Technology Madras (IITM), India**
4. **Indian Institute of Technology Delhi, India**

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318941
Instrument: MC-IRSES
Project Start Date: 1 January 2013
Project Duration: 48 months
Project Cost: 306,600 €
EC Contribution: 306,600 €
Project website: <http://www.dcu.ie/>

Project Title: Risk Analysis, Ruin and Extremes
Project Acronym: RARE
Activity Area: International Research Staff Exchange Scheme

Project Description:

This project, named Risk Analysis, Ruin and Extremes (RARE), aims at developing the theoretical side of the analysis of ruin probabilities in case of disasters or extreme shocks for insurance-like risk pools, by the introduction and analysis of new risk measures, and by (asymptotic) quantification of aggregated risk, central topics of interest for the prediction of financial disasters and more generally for risk management.

Since specialists working on the areas of extremes and rare events are scarce and sparse, such an exchange program helps creating a needed network of knowledge, ideas and experience. We propose 12 international leading research centres from European, emergent and developed countries, to establish an initial network basis of 20 experienced researchers and 20 early stage researchers.

Project Partners:

1. *The University of Liverpool, United Kingdom*
2. Association Groupe Essec, France
3. Eidgenoessische Technische Hochschule Zurich, Switzerland
4. Université de Lausanne, Switzerland
5. **Indian Institute of Management Bangalore Association, India**
6. **Indian Statistical Institute, India**
7. Monash University, Australia
8. M.V. Lomonosov Moscow State University, Russia
9. Nankai University, China
10. The Ritsumeikan Trust Academic Juridical Person, Japan
11. Board of Regents, NSHE, obo, University of Nevada, Reno, United States
12. Uniwersytet Wroclawski, Poland

Project Details:

Call: FP7-PEOPLE-2012-IRSES
Project Number: 318984
Instrument: MC-IRSES
Project Start Date: 1 December 2012
Project Duration: 48 months
Project Cost: 783,000 €
EC Contribution: 783,000 €
Project website: <http://www.liverpool.ac.uk/>



PEOPLE

**MARIE CURIE ACTION:
INDUSTRY ACADEMIA PARTNERSHIPS AND
PATHWAYS**

Project Title: Development of a new generation of DIABetic footwear using an integrated approach and SMART materials

Project Acronym: DiaBSmart

Activity Area: Industry Academia Pathways and Partnerships

Project Description:

DiaBSmart project aims to generate, transfer and exchange the clinical, academic and production knowledge between the partners to create a new generation of diabetic footwear through a newly developed patient assessment system. The transfer of knowledge (TOK) between various sectors ensures that the need of patients is considered and transferred effectively to product development using a scientific approach. The objectives include: (1) the design and development of an integrated system of DIABetic foot assessment (2) to validate the newly developed system using experimental methods (3) to develop a suitable material to meet the mechanical and clinical requirements (4) to evaluate the mechanical and clinical effectiveness of material choice in reducing the potential risk of foot complications. The Numerical, Experimental and Mathematical Analyses system will integrate all aspects of diabetic footwear including; clinical and biomechanical assessment, material choice and aesthetic design. Proposed interdisciplinary, intersectorial approach is unique and brings together the expertise from research institutions, industry and clinics. TOK between these sectors will ensure the synergy and efficient use of information in patient assessment, monitoring, product development and customisation in an objective manner. This project while enhancing the knowledge base in diabetic assessment; will have a clear impact on new product development leading to both clinical and economic benefits. The products include a new generation of integrated SMART /multi material midsoles and/or orthoses for diabetic footwear. Properties of the materials will be optimised with a view to minimise/ redistribute the pressure and hence the stress on the soft tissue in the critical plantar areas of the foot. Whilst significantly affecting the course of the disease, the products will aim to reduce the risk of limb loss in patients with diabetes, the most frequent cause of non-traumatic lower-limb amputations.

Project Partners:

1. Staffordshire University, United Kingdom
2. Hochschule Magdeburg-Stendal FH, Germany
3. Salts Healthcare Limited, United Kingdom
4. Technofootbed, Spain
5. **India Diabetes Research Foundation, India**

Project Details:

Call: FP7-PEOPLE-2011-IAPP
Project Number: 285985
Instrument: IAPP
Project Start Date: 1 November 2011
Project Duration: 48 months
Project Cost: 809 238 €
EC Contribution: 809 238 €
Project website: <http://www.staffs.ac.uk/diabsmart/>



PEOPLE

**MARIE CURIE ACTION:
INITIAL TRAINING NETWORKS**

Project Title: Diasporic Constructions of Home and Belonging
Project Acronym: CoHaB
Activity Area: Initial Training Networks



Project Description:

All over the world, stable concepts of home and belonging have, for a variety of reasons, become the exception rather than the rule. This has led to dramatic cultural, social and political changes and challenges. The study of diaspora and migration has therefore evolved into a burgeoning field of research with an urgent practical relevance. In a wide and sometimes confusing array of approaches it is mainly covered by the humanities and the social sciences. The CoHaB Network unites world-leading institutions in this field in the conviction that interdisciplinary training as well as international and inter-sectoral co-operation are key to any productive study of diasporas. CoHaB gains scope and momentum by its 'Network of Networks' rationale, binding together already existing cooperations. It is based on the resolve to strengthen interdisciplinary research in the field with a view to establishing diaspora studies as a transdisciplinary research area in its own right. Training young researchers on the basis of this conviction means to provide them with the opportunity to conduct their work in a variety of disciplinary environments as well as outside a purely academic context. Specifically, CoHaB aims at stimulating and facilitating cooperation by negotiating core concepts between the various disciplines involved among the partner institutions. Each of these disciplines has developed its own, highly sophisticated understanding of diaspora studies, and it is high time that these diverse understandings entered into a sustained dialogue. For this purpose, early stage researchers from various disciplinary backgrounds, but with similar interests in the field of diaspora studies, will join forces to develop their projects on a shared platform. This will assist them in opening their projects to a strong, interdisciplinary research environment and in producing tangible results for their own research careers, for the scientific community, and for the general public at large.

Project Partners:

1. *Westfaelische Wilhelms-Universitaet Muenster, Germany*
2. School of Oriental and African Studies, University of London, United Kingdom
3. Stockholms Universitet, Sweden
4. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
5. **The University of Mumbai, India**
6. The University of Northampton, United Kingdom

Project Details:

Call: FP7-PEOPLE-2011-ITN
Project Number: 289672
Instrument: MC-ITN
Project Start Date: 1 November 2011
Project Duration: 48 months
Project Cost: 3 350 000 €
EC Contribution: 3 350 000 €
Project website: <http://www.itn-cohab.eu/>

Project Title: Thermo-Acoustic and Aero-Acoustic Nonlinearities in Green Combustors with Orifice Structures
Project Acronym: TANGO
Activity Area: Initial Training Networks

Project Description:

Combustion instabilities represent a serious problem for combustion-driven devices, such as gas turbine engines and domestic burners. These instabilities can cause intense pressure oscillations, which in turn causes excessive structural oscillations, fatigue and even catastrophic damage to combustor hardware. In recent years, the development of clean combustion systems with reduced pollution of the environment has become a priority; however, such systems are particularly prone to combustion instabilities. There is an urgent need to understand the physical processes that are responsible so that methods to predict and prevent these instabilities can be developed.

The research in TANGO is intended to address these issues. Fundamental studies will give physical insight into the three-way coupling between sound, combustion and vortices in a combustion chamber. On the applied side, TANGO will develop active and passive control methods to allow safe operation of gas turbines on a variety of fuels and operating conditions.

TANGO is a multi-disciplinary project that provides training for 14 ESRs and 1 ER in fluid mechanics, thermodynamics, mechanical and control engineering, all from an analytical, numerical and experimental perspective. The consortium has been chosen so as to bring together complementary skills from internationally renowned experts from both academia and industry. The "icing on the cake" of this large engineering project is the number of female scientists involved: 5 out of the 9 scientists in charge are women. It is expected that this will act as a magnet for young women who are considering a career in science or engineering. The network thus addresses the EU policy of increasing the number of female researchers in Europe. In order to promote the public understanding of science, the researchers will engage in various outreach activities.

Project Partners:

1. *University of Keele, United Kingdom*
2. Technische Universiteit Eindhoven, The Netherlands
3. Technische Universitaet Muenchen, Germany
4. Kungliga Tekniska Hogskolan, Sweden
5. Ansaldo Energia SpA, Italy
6. LMS International nv, Belgium
7. IFTA Ingenieurbuero fur Thermoakustik GMBH, Germany
8. **Indian Institute of Technology Madras (IITM), India**
9. Bekaert Combustion Technology bv, The Netherlands

Project Details:

Call: FP7-PEOPLE-2012-ITN
Project Number: 316654
Instrument: MC-ITN
Project Start Date: 1 November 2012
Project Duration: 48 months
Project Cost: 3,736,307 €
EC Contribution: 3,736,307 €
Project website: <http://www.keele.ac.uk/>

Project Title: Investigating Tectonism-Erosion-Climate-Couplings
Project Acronym: ITECC
Activity Area: Initial Training Networks

Project Description:

Tectonics and climate are interdependent. The tectonics of orogens are moderated by climate through erosion. Exposure of rock by tectonics or erosion is critical to the feedback which governs changes in global climate, whilst topography influences rainfall. The principle objective of iTECC is to use the Himalaya as a natural laboratory to train young scientists in understanding such coupled processes. iTECC will integrate information from sedimentary archives with work on present-day tectonics, weathering, erosion and climate. Hereto, iTECC brings together and develops expertise in: observation and modelling of the active deformation of the lithosphere; processes of weathering and erosion; study of the geological records of the past evolution of these processes; and modelling of present and past climate change. The breadth of this research provides training in observational, analytical and mathematical methods applied in Earth and environmental sciences.

The proposed interdisciplinary training will result in a cohort of Earth Scientists with the cross-disciplinary expertise to enable them to tackle the problems posed in understanding the complex earth processes which moderate our surface environment.

Project Partners:

1. *Stichting Vu-Vumc, The Netherlands*
2. The Chancellor, Masters and Scholars of the University of Cambridge, United Kingdom
3. Lancaster University, United Kingdom
4. Université Joseph Fourier Grenoble 1, France
5. Commissariat à l'Energie Atomique et aux Energies Alternatives, France
6. Thermo Fisher Scientific (Bremen), Germany
7. Universitaet Potsdam, Germany
8. **Cairn India Limited, India**
9. Centre National de la Recherche Scientifique, France
10. Universitaet Bremen, Germany

Project Details:

Call: FP7-PEOPLE-2012-ITN
Project Number: 316966
Instrument: MC-ITN
Project Start Date: 1 January 2013
Project Duration: 48 months
Project Cost: 4,018,969 €
EC Contribution: 4,018,969 €
Project website: <http://www.vu.nl/nl/index.asp>

Project Title: Nanochemistry of Molecular Materials for 2-photon Funcional Applications
Project Acronym: NANO2FUN
Activity Area: Initial Training Networks

Project Description:

Nano2Fun's main target is the education of a new generation of scientists with a solid multidisciplinary scientific background, a good attitude to team-work in an international environment and a well-developed propensity to exploit advances in fundamental research towards innovative applications. To achieve this ambitious goal, a network of advanced research laboratories operating both in the public and private sectors is proposed where a group of 17 young and brilliant researchers will be trained through research.

Technological development through research and knowledge transfer are the flag-words of Nano2Fun, a multidisciplinary project that will bring the techniques of two-photon microscopy (2PM) and two-photon polymerization (2PP) to their full maturity, allowing their exploitation in commercially and industrially relevant applications.

The precise chemical and photophysical control of the 2PM and 2PP processes at the nanoscale will be achieved through a coordinated effort of 16 teams with well-established expertise in the diverse and complementary research fields of (a) molecular and supramolecular synthesis, (b) advanced optical spectroscopy and photophysics, (c) theory and (d) the 2PM and 2PP technological applications. The effort of the academic research teams will be fully integrated with applied research and development going on in the advanced R&D laboratories of the 5 partners from the private sector in a virtuous loop that will cooperatively enhance the effectiveness of Nano2Fun team. The inherently multidisciplinary character of the research, that spans a full range of disciplines between chemistry and physics, and is precisely located where fundamental research meets commercial and industrial applications, offers an extremely profitable environment for the education of young researcher both in public and private sectors in a lively international environment at the forefront of research.

Project Partners:

1. *Università degli Studi di Parma, Italy*
2. Agencia Estatal Consejo Superior de Investigaciones Cientificas, Spain
3. Universiteit Antwerpen, Belgium
4. Camelot Biomedical Systems Srl, Italy
5. LZH Laserzentrum Hannover e.v., Germany
6. Pianeta Srl, Italy
7. Nanomol Technologies SA, Spain
8. **Jawaharlal Nehru Centre for Advanced Scientific Research, India**
9. Akademia Pomorska w Slupsku, Poland
10. Centre Technologique Alphanov, France
11. Université Bordeaux 1, France

Project Details:

Call: FP7-PEOPLE-2013-ITN
Project Number: 607721
Instrument: MC-ITN
Project Start Date: 1 September 2013
Project Duration: 48 months
Project Cost: 3,651,982 €
EC Contribution: 3,651,982 €
Project website: <http://www.unipr.it/>



CAPACITIES

RESEARCH INFRASTRUCTURES

Project Title: Facility for Antiproton and Ion Research
Project Acronym: FAIR
Activity Area: Preparatory phase for the projects in the 2006 ESFRI Roadmap



Project Description:

Subject of this EU project is the implementation of the FAIR GmbH for the construction of the new research infrastructure FAIR. The "Facility for Antiproton and Ion Research" is an integrated system of particle accelerators which will provide high energy and high intensity beams of ions from antiprotons to uranium with unprecedented quality for basic research in different fields of physics. The total cost of the FAIR project is 1002 M (investment) and 185 M for personnel. Under the supervision of the International Steering Committee the scientific and technical preparations of the project have been evaluated and completed. The necessary legal documents for the establishment of international company FAIR GmbH have been worked out. This EU project concentrates on activities which still have to be successfully completed for the implementation of the FAIR project.

Project Partners:

1. Gesellschaft für Schwerionenforschung mbH, Germany
2. Helsinki Institute of Physics, Finland
3. University of Jyväskylä, Department of Physics, Finland
4. Austrian Academy of Sciences - Stefan Meyer Institute, Austria
5. **Department of Science and Technology, Government of India, India**
6. **Variable Energy Cyclotron Center / Department of Atomic Energy, India**
7. Queen's University, Department of Physics and Astronomy,, United Kingdom
8. Ministry of Science and Higher Education, Poland
9. Swietokrzyska Academy, Institute of Physics, Poland
10. Forschungszentrum Jülich GmbH, Institut für Kernphysik, Germany
11. Jagiellonian University, M. Smoluchowski Institute of Physics, Poland
12. Ministère Délégué à la Recherche, France
13. Commissariat à l'Energie Atomique, Direction Sciences de la Matière, France
14. Russian Federal Atomic Energy Agency, Russian Federation
15. National Authority for Scientific Research, Romania
16. National Institute of Physics and Nuclear Engineering, Romania
17. Ministry of Education and Science, Spain
18. Consejo Superior de Investigaciones Científicas, Spain
19. Swedish Research Council, Sweden
20. University of Pavia, Dipartimento di Fisica Nucleare e Teorica, Italy
21. Bundesministerium für Wissenschaft und Forschung, Austria
22. Bundesministerium für Bildung und Forschung, Germany
23. Science and Technology Facilities Council, United Kingdom
24. Uppsala University, Department of Nuclear and Particle Physics, Sweden

Project Details:

Call: FP7-INFRASTRUCTURES-2007-1
Project Number: 211382
Instrument: CP-CSA-INFRA
Project Start Date: 1 August 2007
Project Duration: 36 months
Project Cost: 5 401 266 €
EC Contribution: 4 900 000 €
Project website: www.gsi.de/fair

Project Title: Bringing Europe's Electronic Infrastructures to Expanding Frontiers II

Project Acronym: BELIEF-II

Activity Area: Studies, conferences and coordination actions supporting policy development, including international cooperation, for e-Infrastructures



Project Description:

BELIEF-II, building on achievements & momentum created by BELIEF [2005-2007], aims to coordinate effective communication, results, networking & knowledge flow between EU eInfrastructure projects and their users, promoting their development and exploitation globally.

BELIEF-II seeks to:

- Ensure Europe's diverse eInfrastructure projects evolve in synergy with one another to ensure common directions & efficient interaction;
- Reinforce the relevance of Europe's eInfrastructures worldwide sustaining successful development & exploitation;
- Network a wide range of stakeholders through a coordinated mechanism to support a vibrant eInfrastructure community;
- Synchronise eInfrastructures priorities through easy to read eInfrastructure communication products;
- Provide a unique, communication platform for projects to manage their content, communicate activities to users and the public to learn more about eInfrastructures.

BELIEF-II, owing to its qualified and committed international consortium of partners, is in the optimal position to address these strategic needs through: eConcertation coordination, Brainstorming Workshops, eInfrastructure Guides, Digital Library evolution and outreach in Latin America, S. Africa & India through International Symposia.

These actions will maximise the overall communication of eInfrastructures potential, and increase the visibility of EC Programmes in developing countries aiming at evolving & supporting a qualified, research and enterprise eInfrastructures community globally. Major results of BELIEF-II are: 2 eConcertation meetings with Reports, 2 European Brainstorming events, 2 editions of eInfrastructures guide, 1 DVD, 2 EC eInfrastructure dissemination publications, 5 Research Infrastructures News publications, 3 International Symposia. The DL implemented in BELIEF will be further enhanced in BELIEF-II with a number of services and functionalities to provide improved support for the community (eConcertation, Symposia, RI News, etc).

Project Partners:

1. *Metaware SpA, Italy*
2. Meraka Institute (African Advanced Institute for Information & Communications Technology) of the CSIR, South Africa
3. Fundação de Apoio a Universidade de Sao Paulo, Brazil
4. **Ernet India, India**
5. Consiglio Nazionale Delle Ricerche, Italy
6. National and Kapodistrian University Of Athens, Greece
7. Brunel University, United Kingdom

Project Details:
Call: FP7-INFRASTRUCTURES-2007-2
Project Number: 223759
Instrument: CSA-SA
Project Start Date: 1 April 2008
Project Duration: 24 months
Project Cost: 1 242 846 €
EC Contribution: 900 000 €
Project website: www.beliefproject.org

Project Title: India-Europe Cooperation to promote IPv6 adoption

Project Acronym: 6CHOICE

Activity Area: Studies, conferences and coordination actions supporting policy development, including international cooperation, for e-Infrastructures



Project Description:

The EU and India have established an extensive Information Society dialogue. On the research side, six priority sectors were highlighted at the occasion of the last EU-India Information Society Forum: EUROINDIA 2006. Internet security, next generation mobile wireless, migration from IPv4 to IPv6, languages technologies, Open Source software and high capacity research and education network (e.g. possible connection of the European network GEANT to its Indian counterpart ERNET) are the main topics of such dialogue.

ERNET, the educational and Research Network in India has deployed nationwide high speed networks to cover all universities and public research institutes. According to the new government policy, the broadband is of high priority along with IPv6 technology.

With 6CHOICE Proposal, the close co-operation between ERNET and European GEANT and GRID network is planned. 6CHOICE project supports such co-operation through joint network interconnection, service planning and the experiments will be facilitated across ERNET and GEANT linked universities and research institutes. This will be complemented with number of workshops to be held and conducting workshops to different level of target audience and complemented with training events with experts involved.

6CHOICE will complement the implementation of the Framework Programme across Europe and India for future Community research and technological development policy activities including monitoring and assessment activities. In particular, the project will involve conferences, seminars, studies and analysis, working groups and expert groups, operational support and dissemination, information and communication activities, or a combination of these, as appropriate in each case.

The activities proposed encourage and facilitate the participation of small research teams, newly developed and remote research centres in the activities of the Communication Network Development scheme.

Project Partners:

1. *Telscom Consulting GmbH, Switzerland*
2. **SIFY Ltd, India**
3. **Hewlett Packard India Software Operations Ltd, India**
4. Group d'Interet Public Reseau National de telecommunications pour la technologie, l'Enseignement, France
5. **ERNET INDIA, India**
6. University College London, United Kingdom
7. **Indian Institute of Science, India**
8. Telefonica Investigacion Y Desarrollo Sa Unipersonal, Spain

Project Details:

Call: FP7-INFRASTRUCTURES-2007-2
Project Number: 223804
Instrument: CSA-CA
Project Start Date: 1 March 2008
Project Duration: 24 months
Project Cost: 754 467 €
EC Contribution: 550 000 €
Project website: www.6choice.eu

Project Title: Sustainable e-Infrastructures across Europe and India

Project Acronym: EU-IndiaGrid2

Activity Area: Studies, conferences and coordination actions supporting policy development in the context of international cooperation for e-Infrastructures



Project Description:

EU-IndiaGrid2, capitalising on the achievements of the FP6 EU-IndiaGrid (EUIG1) project and huge developments in India on infrastructure and leveraging the expertise and experience obtained by its partners during EUIG1, will continue the momentum, attained in e-Infrastructures evolution in Europe and India, to create and ensure sustainable collaboration in many new areas of science, education and technology across the two regions.

EU-IndiaGrid2 main objectives are to:

- consolidate & enhance cooperation between European and Indian e-Infrastructures for the benefit of EU-Indian collaboration in e-Science EU-IndiaGrid2 will make full use of the EUIG1 project achievements and of the strong cooperation links established with the foremost European and Indian e-Infrastructure initiatives paving the way for successful sustainable cooperation across European and Indian e-Infrastructures.
- support a set of new grid applications in areas strategic for EU-Indian collaboration EU-IndiaGrid2 will support a set of applications in the domain of Climate Change, High energy Physics, Biology, Material Science which are considered strategic for EU-Indian collaboration in the ICT domain.
- ensure a sustainable approach to e-Infrastructures across Europe and India through dissemination actions, meetings & workshops EU-IndiaGrid2 will continue supporting the Roadmap for Sustainability outlined by the EUIG1 project relying on the progress towards objectives O1 and O2 and on targeted dissemination actions, meetings and events
- foster and enhance cooperation with other European Initiatives in the Asian region and worldwide EU-IndiaGrid2 will continue the strong cooperation links established by EUIG1 with the most relevant projects and institutions e.g. EGEE/EGI, GEANT and the major Indian e-Infrastructure Initiatives as GARUDA NGI and NKN. It will also cooperate with regional projects like EELA2, EuAsiaGrid, SEEGRID and, if approved the EUMEDSupport and EUChinaGrid2 project

Project Partners:

1. *Istituto Nazionale Di Fisica Nucleare, Italy*
2. The Chancellor, Masters And Scholars Of The University Of Cambridge, United Kingdom
3. Commissariat Energie Atomique CEA, France
4. Consortium GARR, Italy
5. Trust-IT Services Ltd, United Kingdom
6. The Abdus Salam International Centre for Theoretical Physics, Italy
7. Bhabha Atomic Research Centre, India
8. **The Centre for Development of Advanced Computing, India**
9. **ERNET India, India**
10. **Indian Institute of Science, India**
11. **Indian Institute of Technology Delhi, India**
12. **Department of Physics and Centre for Simulation and Modelling, University of Pune, India**
13. **Saha Institute of Nuclear Physics, India**
14. **Tata Institute for Fundamental Research, India**
15. **Variable Energy Cyclotron Centre, India**

Project Details:
Call: FP7-INFRASTRUCTURES-2009-1
Project Number: 246698
Instrument: CSA-CA
Project Start Date: 1 January 2010
Project Duration: 24 months
Project Cost: 1 171 951 €
EC Contribution: 824 202 €
Project website: <http://www.euindiagrid.eu/>

Project Title: Co-ordination and Harmonisation of Advanced e-INFRASTRUCTURES

Project Acronym: CHAIN

Activity Area: Coordination actions, conferences and studies supporting policy development, including international cooperation, for e-INFRASTRUCTURES



Project Description:

Over the past 6 years, the EC has invested to extend the European eInfrastructure technology and European eInfrastructure (and particularly Grid) operational and organisational principles to a number of regions in the world, and reinforcing the close collaboration and exchange of know-how with similar technologies in other areas. A number of different collaboration models have thus been established between Europe and the rest of the world, while the projects implementing these collaborations have had impacts typically focused on their regions. The CHAIN project aims to coordinate and leverage these efforts and their results with a vision of a harmonised and optimised interaction model for eInfrastructure and specifically Grid interfaces between Europe and the rest of the world. The project will elaborate a strategy, define the instruments and deploy them in order to ensure coordination and interoperation of the European Grid Infrastructures with other external e-INFRASTRUCTURES. The CHAIN consortium, consisting of leading organisations in all the regions addressed by the project, will ensure global coverage, European leadership, and most efficient leveraging of results with respect to preceding regional initiatives. First, the project will define and deploy a coherent operational and organisational model, where a number of EU countries/regions will act, in collaboration with EGI.eu, as bridges/gateways to other Regions/Continents. Further, the project will validate this model by supporting the extension and consolidation of worldwide virtual communities, which increasingly require distributed facilities (large instruments, distributed data and databases, digital repositories, etc.) across the regions for trans-continental research. Finally, the project will act as a worldwide policy-watch and coordination instrument, by exploring and proposing concrete steps for the coordination with other initiatives and studying the evolution of e-INFRASTRUCTURES.

Project Partners:

1. *Istituto Nazionale Di Fisica Nucleare, Italy*
2. The University Of Auckland, New Zealand
3. Greek Research And Technology Network S.A., Greece
4. Institute of High Energy Physics, People's Republic of China
5. The Ubuntunet Alliance For Research And Education Networking, Malawi
6. Centro De Investigaciones Energeticas, Medioambientales Y Tecnologicas-CIEMAT, Spain
7. CESNET, Zajmove Sdruzeni Pravnickyh Osob, Czech Republic
8. Cooperacion Latinoamericana De Redes Avanzadas, Uruguay
9. **Office of the Principal Scientific Adviser to the Government of India, India**

Project Details:

Call: FP7-INFRASTRUCTURES-2010-2
Project Number: 260011
Instrument: CSA-SA
Project Start Date: 1 December 2010
Project Duration: 24 months
Project Cost: 2 887 153 €
EC Contribution: 1 687 186 €
Project website: <http://www.chain-project.eu>

Project Title: A Preparatory phase proposal for the Square Kilometre Array



Project Acronym: PREPSKA

Activity Area: Preparatory phase for the projects in the 2006 ESFRI Roadmap

Project Description:

The Square Kilometre Array (SKA) will be one of the largest scientific projects ever undertaken. It is a machine designed to answer some of the big questions of our time: what is Dark Energy? Was Einstein right about gravity? What is the nature of dark matter? Can we detect gravitational waves? When and how did the first stars and galaxies form? What was the origin of cosmic magnetism? How do Earth-like planets form? Is there life, intelligent or otherwise, elsewhere in the Universe? There are several issues that need to be addressed before construction of the SKA can begin: 1. What is the design for the SKA? 2. Where will the SKA be located? 3. What is the legal framework and governance structure under which SKA will operate? 4. What is the most cost-effective mechanism for the procurement of the various components of the SKA? 5. How will the SKA be funded? The purpose of this proposal is to address all of these points. We seek funding to integrate the R&D work from around the globe in order to develop the fully-costed design for Phase 1 of the SKA, and a deployment plan for the full instrument. With active collaboration between funding agencies and scientists, we will investigate all of the options for the policy-related questions. The principal deliverable will be an implementation plan that will form the basis of a funding proposal to governments to start the construction of the SKA.

Project Partners:

1. *Science and Technology Facilities Council, United Kingdom*
2. National Astronomical Observatories, China
3. Cornell University Corporation, United States
4. The Chancellor, Masters and Scholars of the University of Oxford, United Kingdom
5. National Research Council Canada, Canada
6. Department Of Innovation Industry Science And Research, Australia
7. Joint Institute for V.L.B.I. In Europe (J.I.V.E.), Netherlands
8. Korea Astronomy and Space Science Institute, Republic of Korea
9. Chalmers Tekniska Hoegskola AB, Sweden
10. Stichting Astronomisch Onderzoek in Nederland, Netherlands
11. **Tata Institute of Fundamental Research, India**
12. Observatoire de Paris, France
13. Rijksuniversiteit Groningen, Netherlands,
14. Commonwealth Scientific and Industrial Research Organisation, Australia
15. University of Calgary, Canada
16. Universite d'Orleans, France
17. The University of Manchester, United Kingdom
18. National Research Foundation, South Africa
19. Istituto Nazionale di Astrofisica, Italy
20. Centre National de la Recherche Scientifique, France
21. Nederlandse Organisatie voor Wetenschappelijk Onderzoek, Netherlands
22. Max Planck Gesellschaft zur Foerderung der Wissenschaften E.V., Germany
23. The Chancellor, Masters and Scholars of the University of Cambridge, United Kingdom
24. Instituto de Telecomunicacoes, Portugal

Project Details:
Call: FP7-INFRASTRUCTURES-2007
Project Number: 212243
Instrument: CP-CSA
Project Start Date: 1 April 2008
Project Duration: 48 months
Project Cost: 35 688 626 €
EC Contribution: 5 500 000 €
Project website: <http://www.jb.man.ac.uk/prepska/>

Project Title: Support at the Virtual Atomic and Molecular Data Centre
Project Acronym: SUP@VAMDC
Activity Area: Building upon the VAMDC e-infrastructure

Project Description:

The Virtual Atomic and Molecular Data Centre (VAMDC) is a major new European initiative now building a unified, secure, documented, flexible and interoperable e-science environment-based interface to 17 existing A+ M databases. The SUP@VAMDC (Support at VAMDC) aims at building upon the VAMDC e-infrastructure, supporting different studies and actions linked to the VAMDC e-infrastructure that will in accord with the mission of INFRA-2012-3.3: (i) Provide operational, legal and technological support for studies aimed at developing a sustainable open scientific data e-infrastructure in Atomic and Molecular Data; (ii) Provide the support and medium for including authentication, authorisation and accounting (AAA) as well as licensing and tools within the VAMDC brand; (iii) Promote and fashions future interoperability (technical, semantic, reference architecture, etc) across A&M data community through the promotion, monitoring and adoption of common standards; (iv) Provide support for dissemination actions aimed at raising the visibility of the VAMDC e-infrastructure towards wider audiences such as other domains which could use the VAMDC e-infrastructure for their own science or for their own dissemination of data, such as students and/or citizen-scientists. This programme includes the development of education-related tools linking VAMDC's scientific repositories and research data infrastructures, including establishing a free open access repository containing all peer-reviewed articles resulting from the VAMDC programme. Provide support in developing a globally connected and interoperable VAMDC e-infrastructure between EU and the rest of the world, including Brazil, South Africa, Asia, Australia, India through hosting workshops and supporting dialogue between such synergistic structures. Analyse and evaluate possible business models for supporting an Open Science model (OPEN VAMDC) whilst assessing the impact of such a modeling in achieving financial sustainability.

Project Partners:

1. *Observatoire de Paris, France*
2. **Tata Institute of Fundamental Research – TIFR, India**
3. University College London, United Kingdom
4. The Open University, United Kingdom
5. Korea Atomic Energy Research Institute, South Korea
6. Uppsala Universitet, Sweden
7. Universitaet zu Koeln, Germany
8. University of South Africa, South Africa
9. The Chancellor, Masters and Scholars of the University of Cambridge, United Kingdom

Project Details:

Call: FP7-INFRASTRUCTURES-2012-1
Project Number: 313284
Instrument: CP-CSA
Project Start Date: 1 December 2012
Project Duration: 24 months
Project Cost: 1,069,045 €
EC Contribution: 775,000 €
Project website:



CAPACITIES

SCIENCE IN SOCIETY

Project Title: Pharma-Innovation - Patent-2
Project Acronym: INNOVA-P2
Activity Area: Research underpinning policy related to ethics, precaution and sustainable development



Project Description:

We seek to develop a plan for amending the current Intellectual Property Rights (IPR) regime for rewarding pharmaceutical innovations. The existing IPR regime is highly problematic. This has become obvious in the wake of a series of public health emergencies, most notably the AIDS crisis, which pits the vital needs of poor patients against the need of pharmaceutical companies to recoup their investments.

Amending the current system represents one of the major 21st century challenges, namely delivering reasonably priced health care to patients around the world. This is a challenge that lies at the heart of biomedical ethics striving for sustainable world development.

Our effort to take up the challenge focuses on a potential two-tiered patent system. This scheme would create a new patent (Patent-2) that is complementary to existing monopoly patents, leaving innovators free to choose a patent of either kind. Patent-2 holders would not have veto powers over the reproduction of their inventions, thus allowing medicines to become available at competitive market prices without delay. Patent-2 holders would be rewarded, out of public funds, in proportion to the impact of their invention on the global burden of disease.

A first sketch of the “Patent-2” scheme has already been developed through a grant from the Australian Research Council. However, the system is now in urgent need of development with input from a range of experts and policy-makers. In order to forge a policy consensus, some of the most influential social philosophers and economists world-wide (Nobel Laureate Joseph Stiglitz, Peter Singer and Thomas Pogge) will be joined by key policy institutes to use their cumulative weight to enhance and promote a proposal that has the clear potential to provide access to essential medicines to poor patients whilst increasing the possibilities for innovation in the pharmaceutical sector.

Project Partners:

1. *University of Central Lancashire, United Kingdom*
2. University of the Philippines Manila, Philippines
3. Assistance Publique Hopitaux de Paris, Centre d'ethique clinique a Hopital Cochin, France
4. University of Melbourne, Australia
5. China Academy for Science and Technology for Development, Ministry of Science and Technology, China
6. **Research and Information System for Developing Countries, India**
7. Dr David Coles, Netherlands

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2007-1
Project Number: 217665
Instrument: CP-FP
Project Start Date: 1 June 2008
Project Duration: 36 months
Project Cost: 930 130 €
EC Contribution: 728 640 €
Project website: www.uclan.ac.uk/innova

Project Title: CSO Engagement with Ecological Economics
Project Acronym: CEECEC
Activity Area: CSO capacity building in research

CEECEC

Project Description:

Ecological economics (EE) and, in general, sustainability sciences make important contributions to the analyses of sustainability policies in Europe and worldwide. EE develops physical indicators and indices, provides economic valuation of environmental services and negative externalities, applies tools of multi-criteria evaluation to resource use, and promotes environmental policy instruments such as eco-taxes and marketable permits. To provide policy makers with high quality, relevant research, increased collaboration between ecological economists and CSOs is needed. Many CSOs already have a large stock of environmental knowledge but need increased capacity in EE to give an analytical foundation to activism and policy making. The social and disciplinary divide between CSO and academic research poses significant challenges. At the same time, there are real-world demands from CSOs for knowledge of EE – for instance, to assess the liability of companies in oil extraction conflicts, to evaluate plans for palm oil plantations for biofuel exports, or to establish alternative energy plans at the regional level. This project addresses CSO capacity weakness in EE through a number of coordinated activities.

The focus is not on theory but on case study learning. Joint working groups will identify and report on key issues for research in water management, mining, energy, forestry and agriculture, based on CSO needs and interests. Previous cooperative research activities will be reviewed and assessed in terms of their effectiveness in meeting CSO needs, and documented and disseminated. In addition, options for future research cooperation will be explored in order to apply EE methods, tools and indicators to CSO work. Findings will be presented and enhanced at symposia embedded in the 2008 EE world conference in Nairobi (with UNEP) and the 2009 conference of the European Society for EE. A website will disseminate the project's work and continue the capacity building process.

Project Partners:

1. *Universitat Autònoma de Barcelona, Spain*
2. Université Libre de Bruxelles, Belgium
3. Grupo de Ecología del Paisaje y Medio Ambiente Universidad de Buenos Aires, Argentina
4. Endemit, Serbia
5. Association for Nature, Environment and Sustainable Development Sunce Split, Croatia
6. Instituto Rede Brasileira Agroflorestal, Brazil
7. Vlaams Overleg Duurzame Ontwikkeling, Belgium
8. Centre pour l'Environnement et le Développement, Cameroon
9. Accion Ecologica, Ecuador
10. A Sud - Ecologia E Cooperziona Onlus, Italy
11. Foundation of the Faculty of Sciences and Technology - New University of Lisbon, Portugal
12. Centre for Science and Environment, India
13. SERI Nachhaltigkeitsforschungs und -kommunikations GmbH, Austria
14. Universitaet Klagenfurt, Austria

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2007-1
Project Number: 217745
Instrument: CSA-SA
Project Start Date: 1 April 2008
Project Duration: 30 months
Project Cost: 814 102 €
EC Contribution: 730 011 €
Project website: www.ceecec.net

Project Title: Science, Ethics and Technological Responsibility
in Developing and Emerging Countries
Project Acronym: SET-DEV
Activity Area: CSO capacity building in research



Project Description:

The project general aim is to support the research systems of two countries, India (an emerging economy/EE) and Kenya (a Developing Country/DC), by assisting them in developing their own research ethics perspective within the context of an initiative in favour of research activity and in the sharing of responsibility on scientific and technological research (STR). The promoters intend to contribute to achieving the objective of developing actions of capacity building in DC and EE, by means of an international dialogue, in the field of ethics and science. The specific objectives to be achieved through initiatives of coordination, capacity building, training and awareness raising, are: to strengthen the levels of information and awareness on ethical issues connected with ST by fostering a dialogue among scientists from different parts of the planet; to integrate ethical issues to the wider issue of enhancing the socialisation of research (this notion refers to the dynamics and processes of a social nature that are incorporated in scientific and technological research.), in view of the strengthening of local research systems (with particular attention to the factors that can facilitate or hinder the development of STR systems; to activate processes of building institutional capacities and skills on these themes; to develop ethical guidelines and standards that refer to international instruments and codes on ethics but which are also sensitive to and compatible with the local values, STR levels and needs; to define perspectives of socialisation of science and technology that take into consideration local needs and are in compliance with EU standards in ethics. The project will have an overall duration of 36 months and include 12 WP.

Project Partners:

1. *Consiglio Nazionale delle Ricerche, Italy*
2. University of Central Lancashire, United Kingdom
3. **Centre for World Solidarity, India**
4. Intermedia NCG, Kenya
5. Minerva Consulting & Communication, Belgium
6. **University of Hyderabad, India**
7. African Technology Policy Studies Network, Kenya
8. Laboratorio di Scienze della Cittadinanza (Laboratory of Citizenship Sciences), Italy
9. Max-Delbrück-Centrum Für Molekulare Medizin Berlin-Buch, Germany
10. Universiteit Maastricht, Netherlands
11. Lunds Universitet, Sweden

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2007-1
Project Number: 217811
Instrument: CSA-CA
Project Start Date: 1 March 2008
Project Duration: 36 months
Project Cost: 1 589 836 €
EC Contribution: 1 343 477 €
Project website: www.set-dev.eu

Project Title: Rising pan-European and International Awareness of Biometrics and Security Ethics

Project Acronym: RISE

Activity Area: Promotion of pan-European and international awareness of the ethical aspects of security technologies



Project Description:

RISE is a CSA (coordinating), which aims to promote pan-European and International Awareness on Ethical Aspects of Biometrics and Security Technologies. In particular the project aims to deepen, enlarge, and ensure continuity to transnational (European) and international dialogue already instigated by the international conferences on ethics and biometrics organised by the EC DG Research and the US DHS Privacy Office respectively in Brussels and Washington DC in 2005 and 2006. RISE's point is the new political landscape created by the Treaty of Lisbon of the European Union. The EU is now on the verge of a multifaceted reform of its decision-making rules for security, which may have deep ethical and political implications. RISE will address this issue.

Project Partners:

1. *Centre for Science, Society And Citizenship, Italy*
2. **Data Security Council of India, India**
3. Global Security Intelligence LLC, United States
4. Center for Policy on Emerging Technologies, United States
5. Hong Kong Polytechnic University, China
6. European Biometric Forum, Ireland
7. University of Tartu, Estonia
8. Aristotle University, Greece
9. University of Lancaster, United Kingdom

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2008-1

Project Number: 230389

Instrument: CSA-CA

Project Start Date: 1 March 2009

Project Duration: 36 months

Project Cost: 1 253 746 €

EC Contribution: 919 501 €

Project website: www.riseproject.eu

Project Title: Science Education for Diversity
Project Acronym: SED
Activity Area: International dimension of research on science education



Project Description:

Recruitment to careers in science is falling in Europe which is a challenge to Europe's future in the knowledge economy. We propose to learn how to respond to this situation in collaboration with international partner countries where science remains a popular career choice. Understanding the dynamics of the relationships between culture, gender and science education in the diverse contexts offered by the partners to this bid, the UK, the Netherlands, Turkey, Lebanon, India and Malaysia, will give us a good basis for designing new flexible and diverse approaches to science education that will appeal to all students within Europe and the world. We will develop a theoretical understanding of the relationship between cultural diversity, gender and science education and also provide guidelines and programmes for effective intervention to improve the take up of science education. One focus will be the impact of Islamic culture and religious belief in a range of contexts. We will use case study and design study approaches to understand the process whereby career determining attitudes towards science are formed between the ages of 10 and 14. The evidence available so far suggests that social networking technologies have contributed to creating a multiplicity of identities amongst young people in a way that can make the apparent unity and authority often presented by school science appear irrelevant to many. Our response to this will be to explore using the same technology to engage children and young people in the real enterprise of science as shared enquiry across boundaries in a spirit of risk and dialogue where real issues that matter to the future of the planet are at stake. The outcomes will be literature reviews, insights into how attitudes to science are formed, guidelines for curriculum and pedagogical development to encourage more people into science careers and examples of good practice.

Project Partners:

1. *The University of Exeter, United Kingdom*
2. American University of Beirut, Lebanon
3. **Homi Bhabha Centre for Science Education, India**
4. Kolej Tunku Abdul Rahman, Malaysia
5. Technische Universiteit Eindhoven, Netherlands
6. Pamukkale University, Turkey

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2009-1
Project Number: 244717
Instrument: CP-SICA
Project Start Date: 1 January 2010
Project Duration: 36 months
Project Cost: 1 410 613 €
EC Contribution: 999 999 €
Project website: <http://education.exeter.ac.uk/projects.php?id=470>

Project Title: Global Ethics in Science and Technology
Project Acronym: GEST
Activity Area: The role of Ethics under EU policy and law: the EU as a global actor



Project Description:

GEST aims to explore the role of ethics in science and technology (S&T) policy as it is currently developing both in Europe and in the two main global emerging economies of China and India. S&T ethics has been widely debated in Europe in the last two decades leading to a number of policy initiatives that have influenced the development of new technologies in the European Research Area. The way in which ethical considerations are incorporated in S&T policy in Europe creates an environment that inevitably affects the EU's global position.

At the same time Europe is increasingly co-operating and competing with the two major emerging economies of China and India, which are also keen to develop their S&T sectors. Interdependences between these three global actors require ever closer collaboration, preferably undertaken in a highly transparent manner. However S&T debates in each of the three regions follow local dynamics that are not necessarily easily understood, even by expert communities in those regions. Interdependent development (and even positive competition) requires mutual respect and understanding, but this relies upon close collaboration in exploring common issues and significant differences.

GEST aims to create such collaboration between key S&T policy advisory institutes in the three regions in order to provide a clear understanding of the role of ethics in S&T debates. GEST offers a unique chance to analyse and debate relevant issues while learning from experience gathered in Europe and in the two emerging economies. A group of experts with a wide disciplinary and geographical distribution will provide input for kick-starting a global debate on the dynamics of ethics in S&T policy. In order to address the implications for effective global governance of science, GEST will provide concrete, realistic policy recommendations in the form of a collaborative roadmap and an action plan for science in society that will consider policymaking needs in all three research areas.

Project Partners:

1. *University of Central Lancashire, United Kingdom*
2. *Karlsruher Institut fuer Technologie, Germany*
3. **Research and Information System for Developing Countries, India**
4. *Koninklijke Nederlandse Akademie van Wetenschappen – KNAW, Netherlands*
5. *National Research Centre for Science and Technology for Development, People's Republic of China*

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2010-1
Project Number: 266592
Instrument: CP-FP
Project Start Date: 1 February 2011
Project Duration: 36 months
Project Cost: 892 295 €
EC Contribution: 696 820 €
Project website: http://www.uclan.ac.uk/schools/school_of_health/research_projects/gest.php

Project Title: Environmental Justice Organizations, Liabilities and Trade
Project Acronym: EJOLT
Activity Area: Mobilisation and Mutual Learning Actions



Project Description:

Environmental Justice Organizations (EJOs) are civil society organizations locally or globally involved in conflicts over resource extraction or waste disposal. Such conflicts increase in number as the world economy uses more materials and energy. The EJOs focus on the link between the need for environmental security and the defence of basic human rights. The project EJOLT unites a consortium of international actors (scientists, activist organizations, think-tanks, policy-makers) across a range of fields (environmental law, environmental health, political ecology, ecological economics) to promote mutual learning and collaboration among stakeholders who make use of Sustainability Sciences, particularly on aspects of Ecological Distribution. Central concepts are Ecological Debts (or Environmental Liabilities) and Ecologically Unequal Exchange. We focus on the use of these concepts in science and in environmental activism and policy-making. EJOLT will explore the roots of increasing ecological distribution conflicts at different scales, and how to turn such conflicts into forces for environmental sustainability.

Thus one of the primary purposes is to empower EJOs and the communities they support that receive an unfair share of environmental burdens to defend or reclaim their rights. Participatory methods, action research and a range of methodologies will be applied to capacitate EJOs, communities and citizen movements to monitor the state of their environment, and document its degradation, learning from other experiences and from academic research how to argue to avoid the growth of ecological debts or environmental liabilities. EJOLT will build on EJO's knowledge of environmental risks and legal mechanisms and the translation of their research findings into the policy arena. In the process, EJOLT will enrich the sustainability sciences through the accumulated knowledge of the EJOs and lead to enhanced application of these sciences to real-life policy question.

Project Partners:

1. *Universitat Autònoma De Barcelona, Spain*
2. Bogazici Universitesi, Turkey
3. Lunds Universitet, Sweden
4. The University of KwaZulu-Natal Centre for Civil Society, South Africa
5. Universitaet Klagenfurt, Austria
6. Universitat Rovira I Virgili, Spain
7. Universite de Versailles Saint Quentin en Yvelines, France
8. CRIIRAD, France
9. Earthlife Namibia, Namibia
10. Environmental Association "Za Zemiata", Bulgaria
11. Environmental Rights Development Foundation, Nigeria
12. Focus drustvo za sonaraven razvoj, Slovenia
13. The East Africa Natural History Society, Kenya
14. **Toxics Watch Alliance, India**
15. World Rainforest Movement, Uruguay
16. Accion Ecologica, Ecuador Brazil
17. Associazione Sud Ecologia E Cooperazione Zione-Onlus, Italy
18. Fundacao Oswaldo Cruz, Brazil
19. Stichting Tot Ondersteuning Van Anped, Alliance Of Northern People For Environment And Development, Netherlands
20. Business & Human Rights Resource Centre, United Kingdom
21. Citizens For Justice, Friends of the Earth Malawi, Malawi
22. GRAIN, Spain

23. Sustainable Europe Research Institute SERI Deutschland.V., Germany

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2010-1
Project Number: 266642
Instrument: CSA-SA
Project Start Date: 15 March 2011
Project Duration: 48 months
Project Cost: 4 091 152 €
EC Contribution: 3 651 921 €
Project website: <http://www.ejolt.org/project/>

Project Title: **PROMoting Global Responsible Research and Social and Scientific Innovation**
Project Acronym: **PROGRESS**
Activity Area: Promoting Global Responsible Research and Social and Scientific Innovation

Project Description:

Delivering European Renewal relies heavily on the advancement of Responsible Research and Innovation (RRI) that is, research and innovation which is: - is ethically acceptable, - is sustainable by avoiding significant adverse effects and - drives towards the common good, i.e. societal desirability. To achieve maximum impact where it is most needed, ProGReSS concentrates on the underexplored and least converging part of RRI, namely achieving societal desirability. The project will link existing international networks of RRI from all continents with European partners and policy-makers, policy-advisors, funders, industry and non-governmental organisations. In interactive discussions with relevant societal actors as well as innovators, we will move RRI debates from the national or regional to the global level and achieve the following objectives:

1. Link existing international networks of RRI with relevant societal actors on a global scale to focus innovation on societal desirability.
2. Complete a major fact-finding mission comparing science funding strategies and innovation policies in Europe, the US, China, Japan, India, Australia, and South Africa.
3. Advocate a European normative model for RRI globally, using constitutional values as a driver to inform societal desirability.
4. Develop a strategy for fostering the convergence of regional innovation systems at the global level.

Project Partners:

1. *University of Central Lancashire, United Kingdom*
2. University of Cape Town, South Africa
3. Europäische Akademie zur Erforschung von Folgen Wissenschaftlich-Technischer Entwicklungen, Germany
4. **Research and Information System for Developing Countries, India**
5. Fundacion Tecnalia Research & Innovation, Spain
6. Institute of World Economics and Politics Chinese Academy of Social Sciences, China
7. Centre for Science, Society and Citizenship, Italy
8. Charles Sturt University, Australia
9. Illinois Institute of Technology, United States
10. The South African San Institute Trust, South Africa

Project Details:

Call: FP7-SCIENCE-IN-SOCIETY-2012-1
Project Number: 321400
Instrument: CSA-SA
Project Start Date: 1 February 2013
Project Duration: 36 months
Project Cost: 1,715,490 €
EC Contribution: 1,486,664 €
Project website: <http://www.uclan.ac.uk/>

Project Title: Social Innovation on Active and Healthy Ageing for Sustainable Economic Growth
Project Acronym: SIFORAGE
Activity Area: Developing a New Vision of Ageing

Project Description:

The general aim of SIFORAGE project will be to strengthen the cooperation mechanisms and tools among the stakeholders working along the value chain of active and healthy ageing, with the aim of improving the performance of the European Union competitiveness and growth, through research and innovative products for more and better lives.

The objective is change minds and attitudes for a new vision of ageing. This new way of understanding ageing has been embraced under the concept of active and healthy ageing (AHA), as an inclusive term to framework the transformation of ageing vision.

The specific objectives addressed in the project will be:

1. To develop the supporting tools and mechanisms for the Social Innovation Incubator on AHA;
2. To engage and empower society and civil society organisations in research on AHA;
3. To introduce evidence-based policymaking, through training activities with policymakers, to address future shaping of ageing research programmes and funding schemes;
4. To raise awareness among the scientific community on the importance of social responsibility and ethics in ageing research, and offer practical guidance on how to address them;
5. To analyse and improve the existing mechanisms for accessing the market of innovative products and solutions for older people;
6. To actively involve the wide range of stakeholders of the value chain and spread knowledge generated along the project duration.

The consortium involved in the project is compounded of 20 different partners at EU and International level, representing a remarkable well-balanced consortium with complementary backgrounds and expertise and representing different stakeholders along the value chain of ageing research, from universities, civil society organisations, final users groups, think tanks, public administrations, technology research centres and companies.

Project Partners:

1. *Universitat de Barcelona, Spain*
2. Deutsches Forschungszentrum fuer Kuenstliche Intelligenz GMBH, Germany
3. Université de Pau et des Pays de l'Adour, France
4. Fundacion Instituto Gerontologico Matia – INGEM, Spain
5. Fundacao Universidade de Brasilia, Brazil
6. Basque Culinary Center Fundazioa, Spain
7. Asociacija Senjoru Iniciatyvu Centras, Lithuania
8. Instituto Universitario de Lisboa, Portugal
9. Fondazione per la Cittadinanza Attiva, Italy
10. Mermaid Venture Aps-Investornet Gate2growth Dk Gate2Financing Dk Brabo Ventures, Denmark
11. Città di Torino, Italy
12. Urzad Miasta Krakowa, Poland
13. **Silver Inning Foundation Public Trust, India**
14. Eurag Bund fur die Altere Generation Europas, Luxembourg
15. Carinna Agence pour la Recherche et l'Innovation en Champagne-Ardenne, France
16. Santa Casa de Misericordia de Lisboa, Portugal
17. Universidad de Lleida, Spain
18. The University of Sheffield, United Kingdom
19. Saglik Akademisyenleri Dernegi, Turkey
20. Latvijas Universitate, Latvia

Project Details:
Call: FP7-SCIENCE-IN-SOCIETY-2012-1
Project Number: 321482
Instrument: CSA-SA
Project Start Date: 1 November 2012
Project Duration: 48 months
Project Cost: 4,098,762 €
EC Contribution: 3,484,788 €
Project website: <http://www.ub.edu/web/ub/ca/>



CAPACITIES

SPECIFIC ACTIVITIES OF INTERNATIONAL COOPERATION

Project Title: European Union and India Enhanced Cooperation Framework for Improved Bilateral Dialogue in the Fields of Science and Technology

Project Acronym: EUINEC

Activity Area: Bilateral coordination for the enhancement and development of S&T Partnerships



Project Description:

India and the EU signed an S&T agreement in 2001 and since then several actions have been taken to implement the agreement in practice. Indian organizations have participated in approximately 80 projects under FP6, but this number is expected to increase in FP7 given all new funding opportunities forecasted to be launched. In order to realize increased cooperation, set out in the agreement, in practice, universities, industry, government and civil society must all be empowered with relevant knowledge and provided with the appropriate cooperation facilities in order to enable an increased participation in FP7 and contribute to enhanced cooperation between India and the EU.

The overall objective of the EUINEC project is to improve the S&T cooperation between Europe and India by establishing the EU-India Research Co-op based on a multifunctional portal allowing for the exchange of information and partner search, serve as the base for the practical and user-orientated training package and be the frame for policy development and the identification of areas of cooperation.

Project Partners:

1. *Europa Media Public Service Corporation, Hungary*
2. **Centre for development of advanced Computing, India**
3. **Council for Scientific and Industrial Research, India**
4. *Agenzia per la Promozione della Ricerca Europea, Italy*

Project Details:

Call: FP7-INCO-2007-2

Project Number: 222787

Instrument: CSA-SA

Project Start Date: 1 October 2008

Project Duration: 36 months

Project Cost: 587 497 €

EC Contribution: 500 000 €

Project website: www.euinec.org

Project Title: Initiative for the Development and Integration of Indian and European Research
Project Acronym: NEW INDIGO
Activity Area: ERA-NET projects "International Cooperation"



Project Description:

New INDIGO is a follow-up of the SSA project AOUDA, which was aimed at mapping and analysing existing bilateral S&T cooperation programmes between European member states and India. In view of its growth and dominant position in Asia, India has been quoted a strategic target country by the European Commission. On the other hand longstanding scientific cooperation between India and certain European countries has been vigorous and fruitful. Despite these facts, there is little multilateral S&T cooperation between the European Union and India, and there is no dedicated program of cooperation between these two big scientific poles.

The aim of New INDIGO is to help filling these gaps and ultimately provide the most relevant framework to allow the scientific community and institutions of India to access the European Research Area, and the Euro-Indian S&T cooperation to fully benefit from the new networking tools which have been set up by the European Commission.

For this purpose New INDIGO will develop a large database, but also it will set up a two years long Networking Pilot Program (NPP) to be launched at the ERA scale, taking advantage of existing bilateral programs and enhancing existing networks or clusters as well as arousing new ones. The scientific projects will be selected according to a rigorous process, then they will be followed and analysed in order to evaluate the strength and weaknesses of the programme and to pave the way to future integrated programmes of cooperation between Europe and India.

To achieve these goals, a consortium composed of 12 European and 3 Indian prominent S&T institutions has been set up. A group of observers will also advise the consortium.

The expected outcomes are the promotion of an integrated Europe-India research area, the raising of awareness and networking between European and Indian S&T research, including new member states, and a significant contribution to the elaboration of S&T policies in both Europe and India.

Project Partners:

1. Centre National de la Recherche Scientifique, France
2. Asociación De Industrias De Las Tecnologías Electrónicas Y De La Información Del País Vasco, Spain
3. **Ministry of Science & Technology, India**
4. Ministère des Affaires étrangères et européennes, France
5. Centre for Social Innovation, Austria
6. Deutsches Zentrum fuer Luft- und Raumfahrt e. V., Germany
7. Bundesministerium für Bildung und Forschung, Germany
8. Ministère de l'enseignement supérieur et de la recherche, France
9. **Council of Scientific and Industrial Research, India**
10. Türkiye Bilimsel ve Teknolojik Arastirma Kurumu (The Scientific and Technological Research Council of Turkey), Turkey
11. National Office for Research and Technology, Hungary
12. Fundação Para A Ciência E Tecnologia, Portugal
13. Bundesministerium für Wissenschaft und Forschung, Austria
14. Netherlands Organisation for Scientific Research, Netherlands

Project Details:
Call: FP7-INCO-2007-3
Project Number: 226167
Instrument: CSA-CA
Project Start Date: 1 January 2009
Project Duration: 48 months
Project Cost: 2 939 614 €
EC Contribution: 2 488 785 €
Project website: www.newindigo.eu

Project Title: Increasing the Dialogue between India and Europe by Improving EU Awareness and Access to Indian Research and Innovation Technology Programmes



Project Acronym: INDIA GATE

Activity Area:

Project Description:

The main objective of the INDIA GATE project is to increase the S&T cooperation between India and the EU by creating a “one-stop shop” for funding opportunities that are available in India for European organisations. The INDIA GATE project will identify Indian research and innovation funding programmes, the obstacles that inhibit EU researchers and organizations from taking part in the identified opportunities and make the information available in a user-friendly manner to stimulate, encourage and facilitate participation.

INDIA GATE project starts with a review of the available funding opportunities and an analysis of the obstacles facing European organisations wanting to take part in Indian funded projects. The information will support the development of effective dissemination tools to be used in the dissemination strategy. A dynamic webpage will be developed and serve as a “one-stop shop” for information on Indian programmes open for European organisations with all relevant information available both in webformat, e-training format and as downloadable material. Additionally, the participation rate will be monitored allowing to provide expert input to decision makers and the Joint Committee.

INDIA GATE will bring EU-India scientific cooperation forward by an increased participation of European organisations in Indian funding programmes and contribute to an increased mutual understanding of EU-India respective research systems.

Project Partners:

1. *Europa Media Public Service Corporation, Hungary*
2. **Indian Institute of Foreign Trade, India**
3. **Euro India Research Centre Consulting, India**
4. Agence Bruxelloise pour l'Entreprise, Belgium
5. Agenzia per la Promozione della Ricerca Europea, Italy
6. **Council of Scientific and Industrial Research, India**
7. Foundation for Research and Technology Hellas, Greece

Project Details:

Call: FP7-INCO-2009-5
Project Number: 244442
Instrument: CSA-SA
Project Start Date: 1 January 2010
Project Duration: 36 months
Project Cost: 628 991 €
EC Contribution: 499 817 €
Project website: <http://www.access4.eu/india/>

Project Title: Indo-European Research Facilities for Studies on Marine Ecosystem and Climate in India
Project Acronym: INDO-MARECLIM
Activity Area: Strengthening European research facilities in third countries

Project Description:

INDO-MARECLIM capitalizes on the Norwegian institutional establishment, infrastructure and network of scientific cooperation built up India since 1998 around the Nansen Environmental Research Centre-India (NERCI) in Kerala, India. INDO-MARECLIM aims at facilitating and improving the co-operation between the European Union Members States and Associated Countries and India and includes partners from UK, France, Italy, the Netherlands and Norway, involved in research topics of relevance to India.

The project objective is to use and extend NERCI as a joint research facility for scientific co-operation between India and the European Union member states and associated countries in the areas of monsoon climate variability, marine ecosystems and coastal management including impact on society.

INDO-MARECLIM will organize and host workshops and summer school inviting European and Indian scientists, post-docs and PhDs.

INDO-MARECLIM will define, prepare and submit competitive new joint scientific research projects in cooperation between Indian and European research institutions to national and international funding agencies, including EU

INDO-MARECLIM prepares the way for institutional arrangements at NERCI to include research organizations from additional Member States and Associated Countries strengthening and sustaining the scientific cooperation between Europe and India.

The project is built on five work packages:

1. Indo-European research facilities for studies on marine ecosystem and climate in India
2. Strengthen the INDO-MARECLIM partnership and building network of cooperation between Europe and India
3. Organizing and hosting of summer schools for PhD and Post-docs
4. Development of joint Indo-European research project proposals
5. Opening the INDO-MARECLIM institutional arrangements to additional European partners.

Project Partners:

1. **Nansen Environmental Research Centre – (India), India**
2. Centro Euro-Mediterraneo per I Cambiamenti Climatici Scarl, Italy
3. Institut Francais de Recherche pour l'Exploitation de la Mer, France
4. Plymouth Marine Laboratory, United Kingdom
5. Stichting Dienst Landbouwkundig Onderzoek, Netherlands
6. Stiftelsen Nansen Senter For Fjernmaaling, Norway

Project Details:

Call: FP7-INCO-2011-7
Project Number: 295092
Instrument: CSA-SA
Project Start Date: 1 February 2012
Project Duration: 36 months
Project Cost: 2 527 891 €
EC Contribution: 1 998 663 €

Project Title: Feasibility Study for the Opening of an EU-India Joint House for Science, Technology and Innovation
Project Acronym: EU-IN-STI-HOUSE
Activity Area: Strengthening joint European S&T centres in Third Countries

Project Description:

European MS & AC have a long tradition to collaborate with India, this has led both to a large potential for fruitful collaborations at EU level, and a fragmentation of actions at countries level. In order to push up a more ambitious integrated actions, and to be able to adopt the best practices in leveraging the science, technology, innovation (STI) relationship, and to cope with the intense worldwide competition for international alliances, EU must overcome this fragmentation. Hence we propose to provide the EC with a feasibility study of the opening of an EU-In STI House aimed at boosting the STI collaboration in a sustainable manner. The specific aims are to explore EU-In STI House project's partners, and beyond when possible: 1/ the political commitment; 2/ the legal frameworks; 3/ the scientific priorities. The results will be synthesized in a Forward Look that will provide recommendations. During this study, benchmarking, mapping, and SWOT analyses of existing bilateral and multilateral schemes of collaboration including PPP, to delineate the most common schemes of cooperation with India. This project is built upon the Indo-French CEFIPRA funding structure, which does exist for more than 20 years. For the strategic management of this project, an External Advisory Board (EAB) will be set up since the Month 1. Its composition will vary in function of the topic addressed. Besides the presence of Indian decision makers and partners, interested non-partner EU MS & AC will be invited to EAB. The EU-In STI House project will disseminate permanently its results thanks to its website and tool box, in an openly way, giving cooperatively access to other EU-India funded projects. The impacts of this project will spread up along three dimensions: 1/ boost in the coordination of EU MS & AC; 2/ increased visibility and improved quality of EU actions; 3/ enhanced coordination of science diplomacy.

Project Partners:

1. *Observatoire Des Sciences Et Techniques, France*
2. *Ecole Polytechnique Federale de Lausanne, Switzerland*
3. *Uniwersytet warszawski, Instytut Stosunków Międzynarodowych, Centrum Badań nad Współczesnymi Indiami, Poland*
4. *Europa Media Non Profit Ltd., Hungary*
5. **Indo French Centre for the Promotion of Advanced Research, India**
6. *Ministère des Affaires étrangères et européennes, France*
7. *Agenzia per la Promozione della Ricerca Europea, Italy*
8. **Council of Scientific and Industrial Research, India**
9. *Vlaamse Instelling Voor Technologisch Onderzoek N.V., Belgium*

Project Details:

Call: FP7-INCO-2011-8
Project Number: 295060
Instrument: CSA-SA
Project Start Date: 1 February 2012
Project Duration: 24 months
Project Cost: 479 228 €
EC Contribution: 479 228 €
Project website:

Project Title: Innovation Driven Initiative for the Development and Integration of Indian and European Research
Project Acronym: INNO INDIGO
Activity Area: Developing a More Relevant STI Approach in Terms of Social and Technical Innovation

Project Description:

INNO INDIGO will set up a more relevant STI approach in terms of social and technical innovation, a broader in terms of funding and a more focussed in terms of topics - to answer the needs of the European as well as Indian societies and markets and address the needs of the engines for innovation. These are SMEs and industries as well as existing clusters of excellence. Future joint programmes will be directed towards the interaction of academia and industry a critical interface for effective innovation. It is also very important to use the STI experience of regions successful funding clusters of excellence for joint calls. On a larger scale INNO INDIGO aims at contributing to ensure global competitiveness and to satisfy social needs through innovation.

Another important task of INNO INDIGO will be to optimize the outreach of the project and facilitate the networking of funding organizations in Europe and India in order to discuss, prepare and implement joint calls on a regular basis. Therefore an open platform for funders will be implemented. A number of national funding agencies have been involved in the joint calls of the ongoing ERA-Net. This was important to gain experiences, approve and adjust tools and methods in existing strategies for the call management. Within the INNO INDIGO process of the future joint calls the strategies for an enhanced management structure will steadily analysed and optimized also in order to develop common governance principles. Further funding organizations in both Europe and India will be informed about the ongoing collaboration in order to raise their interest in a participation and therefore to enlarge the outreach of the project. In Europe this implies especially Member States as well as Associated Countries that do not have bilateral research programmes with India and would also benefit from the Innovation approach of INNO INDIGO. Furthermore scenarios for cooperation beyond the lifetime of INNO INDIGO will be developed.

Project Partners:

1. *Deutsches Zentrum fuer Luft – und Raumfahrt ev, Germany*
2. *Turkiye Bilimsel ve Teknolojik Arastirma Kurumu, Turkey*
3. *Zentrum fuer Soziale Innovation; Austria*
4. *Nederlandse Organisatie voor Wetenschappelijk Onderzoek, The Netherlands*
5. *Fonds zur Forderung der Wissenschaftlichen Forschung, Austria*
6. **Global Innovation & Technology Alliance LTD, India**
7. *European Business and Innovation Centre Network, Belgium*
8. *Fundacao para a Ciencia e a Tecnologia, Portugal*
9. *Agenzia per la Promozione della Ricerca Europea, Italy*
10. **Council of Scientific and Industrial Research, India**
11. *Euskal Herriko Elektronika Eta Informazio, Spain*
12. *Suomen Akatemia, Finland*
13. *Centre National de la Recherche Scientifique, France*
14. **Ministry of Science and Technology, India**

Project Details:

Call: FP7-INCO-2013-3
Project Number: 609515
Instrument: CSA-CA
Project Start Date: 1 November 2013
Project Duration: 36 months
Project Cost: 2,927,975 €
EC Contribution: 2,499,829 €
Project website: <http://www.dlr.de/dlr/en/desktopdefault.aspx/tabid-10002/>

Project Title: Support for the Advancement of Policy Cooperation between India and Europe in Research and Innovation

Project Acronym: INDIGO POLICY

Activity Area: Strengthening the Scientific Cooperation between Europe and India

Project Description:

From 2013-11-01 to 2016-10-31 | INDIGO POLICY website Bibliometric and project participation analysis highlights that scientific cooperation between India and Europe increased significantly in recent years. STI policy stakeholder have supported this dynamic development by agreeing on an EU-India S&T Agreement, and added concrete value through co-drafting an EU/MS-India Strategic Agenda for Research and Innovation, which pinpoints specific thematic ar...

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Objective

Bibliometric and project participation analysis highlights that scientific cooperation between India and Europe increased significantly in recent years. STI policy stakeholder have supported this dynamic development by agreeing on an EU-India S&T Agreement, and added concrete value through co-drafting an EU/MS-India Strategic Agenda for Research and Innovation, which pinpoints specific thematic areas of common interest. In this Strategic Agenda a new organisational structure for the strategic STI dialogue between EC/MS and India consisting of a Group of Senior Officials assisted by a dedicated working group and thematic/industry groups is proposed.

By building on mutual Europe-Indian interest, INDIGO POLICY is committed to support these STI dialogue structures through the provision of analytical evidence, operational STI policy support, dedicated PR measures, and concrete pilot activities. In particular, INDIGO POLICY

- 1) Concentrates its activities on those Societal Challenges which are outlined in the Strategic Agenda on Research and Innovation, and which can be meaningfully tackled by focussing on biotechnology and water-related R&D activities;
- 2) Provides continuous monitoring, evidence-based analytical input as well as policy-advice to stimulate and enhance STI cooperation between Europe and India especially with regard to Horizon 2020;
- 3) Supports STI policy cooperation in a flexible geometry that facilitates a regular exchange between the EC, MS/AC and major stakeholders in India;
- 4) Pilots two concrete joint activities to support STI cooperation between Europe and Indian research organisations and researchers at operational level.

INDIGO POLICY is supported in India by the Ministry of Science and Technology, the Council of Scientific and Industrial Research, and a centre for excellence from the Confederation of Indian Industry.

Project Partners:

1. *Zentrum fuer Soziale Innovation, Austria*
2. **Aurelie Martine Lydwine Pachkoff, India**
3. Ministerie Van Economische Zaken, The Netherlands
4. Deutsches Zentrum fuer Luft – und Raumfahrt ev, Germany
5. **Ministry of Science and Technology, India**
6. Centre National de la Recherche Scientifique, France
7. Agenzia per la Promozione della Ricerca Europea, Italy
8. **Council of Scientific and Industrial Research, India**

Project Details:

Call: FP7-INCO-2013-2
Project Number: 609535
Instrument: CSA-SA
Project Start Date: 1 November 2013
Project Duration: 36 months
Project Cost: 1,501,344 €
EC Contribution: 1,349,961 €
Project website: <https://www.zsi.at/>



EURATOM

***NUCLEAR FISSION AND RADIATION
PROTECTION***

Project Title: Severe Accident Research Network of Excellence 2

Project Acronym: SARNET2

Activity Area: Sustainable integration of European research on severe accident phenomenology and management



Project Description:

Most of the actors involved in severe accident research in Europe, plus Canada, Korea and the United States (41 partners), will network in SARNET2 (Severe Accident Research NETWORK of Excellence - Phase 2) their capacities of research in order to resolve important pending issues on postulated severe accidents of existing and future Nuclear Power Plants (NPPs).

The project has been defined in order to optimize the use of the available means and to constitute a sustainable consortium in which common research programmes and a common computer tool to predict NPP behaviour during a postulated severe accident (ASTEC integral code) are developed.

With this aim, the SARNET2 partners contribute to a Joint Programme of Activities, which consists of:

- Maintaining and improving an advanced communication tool (developed during SARNET Phase 1) for accessing all project information, fostering exchange of information, and managing documents;
- Harmonizing and re-orienting the research programmes, and defining new ones;
- Performing experimental programmes on high priority issues, defined during SARNET Phase 1;
- Analyzing experimental results in order to elaborate a common understanding of relevant phenomena;
- Developing the ASTEC code (including its applicability to all types of European NPPs), which capitalizes in terms of physical models the knowledge produced within SARNET2;
- Developing Scientific Databases in which all the results of research programmes are stored in a common format (DATANET);
- Developing education courses on severe accidents for students and researchers, and training courses for specialists;
- Promoting personnel mobility amongst various European organizations;
- Organizing yearly a large international conference on Severe Accident research (ERMSAR).

After the first phase (2004-2008), and the four-year proposed second phase, co-funded by the EC, the network will evolve toward self-sustainability: a legal entity will be created.

Project Partners:

1. *Institut de Radioprotection et de Sûreté Nucléaire, France*
2. Urad Jadrovehu Dozoru Slovenske Republike, Slovenia
3. Tractebel Engineering, Belgium
4. Thermodata, France
5. Centro de Investigaciones Energeticas Medio Ambientales y Technologicas, Spain
6. VTT Technical Research Centre of Finland, Finland
7. Università di Pisa, Italy
8. Korea Institute of Nuclear Safety, Republic of Korea
9. KFKI Atomic Energy Research Institute, Hungary
10. Forschungszentrum Juelich GmbH, Germany
11. National Nuclear Laboratory Ltd., United Kingdom
12. United States Nuclear Regulatory Commission, United States of America
13. Suez-Tractabel S.A., Belgium
14. Karlsruher Institut für Technologie, Germany
15. Institute for Nuclear Research and Nuclear Energy, Bulgaria

16. Department of Atomic Energy, India

17. Technical University of Sofia, Bulgaria
18. Ente per le Nuove Tecnologie, l'Energia e l'Ambiente, Italia
19. Paul Scherrer Institute, Switzerland
20. Commissariat à l'Energie Atomique et aux Energies Alternatives, France
21. EURATOM Joint Research Centre, European Commission
22. AREVA NP GmbH, Germany
23. Lithuanian Energy Institute, Lithuania
24. Ricerca sul Sistema Energetico SpA, Italy
25. Gesellschaft für Anlagen- und Reaktorsicherheit mbH, Germany
26. University Of Newcastle Upon Tyne, United Kingdom
27. VUJE Trnava, a.s. Inzinierska, Projektové a Vyskumna Organizacia, Slovakia
28. Inzinierska Vypoctova Spolocnost Trnava Ltd., Slovakia
29. Electricité de France, France
30. Nuclear Research & Consultancy Group v.o.f., Netherlands
31. NUBIKI Institute for Electric Power Research Co., Hungary
32. Ustav Jaderneho Vyzkumu Rez a.s., Czech Republic
33. Budapest University of Technology and Economics, Institute of Nuclear Techniques, Hungary
34. Atomic Energy of Canada Limited, Canada
35. AREVA NP SAS, France
36. Chalmers University of Technology, Sweden
37. National Centre for Scientific Research, Greece
38. Energy Institute JSC Sofia, Bulgaria
39. National Autonomous Company for Nuclear Activities, Nuclear Research Subsidiary Pitesti, Rumania
40. Josef Stefan Institute, Slovenia
41. Kungl Tekniska Högskolan, Sweden
42. Korea Atomic Energy Research Institute, Korea
43. Ruhr-Universität Bochum, Germany
44. University of Stuttgart, Germany

Project Details:

Call:	FP7-EURATOM-FISSION
Project Number:	231747
Instrument:	NoE
Project Start Date:	1 April 2009
Project Duration:	48 months
Project Cost:	39 588 707 €
EC Contribution:	5 750 000 €
Project website:	http://www.sar-net.eu/

Project Title: Code for European Severe Accident Management
Project Acronym: CESAM
Activity Area: Improving Adequate Severe Accident Management Measures

Project Description:

The Fukushima accidents highlighted that both the in-depth understanding of such sequences and the development or improvement of adequate severe accident management measures is essential in order to further increase the safety of the nuclear power plants operated in Europe. CESAM (Code for European Severe Accident Management) is a R&D project that aims in particular at the improvement of the European reference code ASTEC towards a usage in severe accident management analysis for nuclear power plants (NPP).

The models of ASTEC that are available for the relevant phenomena during severe accidents in the reactor core as well as in the spent fuel ponds are assessed and recommendations for improvement are developed. The lessons learned from the severe accident in Fukushima will be especially considered. Based on these recommendations ASTEC models will be improved and validated by the partners.

In addition, ASTEC will be coupled to environmental consequences tools and a methodology will be investigated that evaluates the probability of different possible accident scenarios based on available on-site data during an accident in a nuclear power plant. This way, ASTEC will be extended to become a tool used for decision-making in emergency cases.

ASTEC reference datasets for the main generic types of NPPs in Europe (PWR, BWR, CANDU) will jointly be prepared to give users appropriate guidance how to apply ASTEC for real plant analyses used e.g. for accident management. Plant analyses and possible improvements of SAM measures based on various plant scenarios and accounting for the lessons drawn from the Fukushima accidents, will be performed. A workshop will be organized to elaborate on ASTEC capabilities for calculations of the Fukushima accidents, both in the reactor core and the spent fuel ponds.

Project Partners:

1. Gesellschaft fuer Anlagen – und Reaktorsicherheit (GRS) MBH, Germany
2. Institut Jozef Stefan, Slovenia
3. Universitaet Stuttgart, Germany
4. Ruhr-Universitaet Bochum, Germany
5. Karlsruher Institut fuer Technologie, Germany
6. **Department of Atomic Energy, India**
7. Paul Scherrer Institut, Switzerland
8. Inzinierska Vypoctova Spolocnost Trnava S.R.O, Slovakia
9. Lietuvos Energetikos Institutas, Lithuania
10. Vuje AS, Slovakia
11. Centro de Investigaciones Energeticas, Medioambientales y Tecnologicas- CIEMAT, Spain
12. Teknologian Tutkimuskeskus VTT, Finland
13. JRC – Joint Research Centre – European Commission, Belgium
14. Institute of Nuclear Research and Nuclear Energy – Bulgarian Academy of Sciences, Bulgaria
15. Nubiki Nuclear Safety Research Institute LTD, Hungary
16. Institut de Radioprotection et de Sureté Nucleaire, France
17. Areva NP SAS, France
18. Agenzia Nazionale per le Nuove Tecnologie, l'Energia e lo Sviluppo Economico Sostenibile, Italy

Project Details:

Call: FP7-Fission-2012
Project Number: 323264
Instrument: CP
Project Start Date: 1 April 2013
Project Duration: 48 months
Project Cost: 6,266,433 €
EC Contribution: 3,597,179 €
Project website: <http://www.grs.de/>

Index of Projects

Cooperation

Health

1. **PREGVAX:** Plasmodium Vivax Infection in Pregnancy
2. **PreMalStruct:** Structural analysis of the CSA binding interactions involved during pregnancy associated malaria
3. **GEN2PHEN:** Genotype-To-Phenotype Databases: A Holistic Solution
4. **OpenTox:** An Open Source Predictive Toxicology Framework
5. **SYBILLA:** Systems biology of T-cell activation in health and disease
6. **LACTOBODY:** Production and delivery of antibody fragments against gastrointestinal pathogens by lactobacilli
7. **KALADRUG-R:** New tools for monitoring drug resistance and treatment response in visceral leishmaniasis in the Indian subcontinent
8. **trypobase:** Nucleobase derivatives as drugs against trypanosomal diseases
9. **HIVIND:** The antiretroviral roll out for HIV in India - generating evidence to promote adherence and patient follow-up in the context
10. **NATT:** New approaches to target Tuberculosis
11. **MEPHITIS:** Targeting Protein Synthesis in the Apicoplast and Cytoplasm of Plasmodium
12. **MALSIG:** Signalling in life cycle stages of malaria parasites
13. **NOstress:** Unravelling the molecular mechanism of nitrosative stress resistance in tuberculosis
14. **HESVIC:** Health system stewardship and regulation in Vietnam, India and China
15. **CAREPNEUMO:** Combating Antibiotics Resistant Pneumococci by Novel Strategies Based on in vivo and in vitro Host – Pathogen Interactions
16. **LEISHDNAVAX:** Development of a DNA vaccine for visceral leishmaniasis
17. **RAPSODI:** Pre-clinical studies of a PSA-based human vaccine candidate targeting visceral, cutaneous and mucocutaneous leishmaniasis and development of the associated procedures for further clinical trials
18. **TBsusgent:** Sustaining research momentum over the coming decades: mentoring the next generation of researchers for tuberculosis
19. **EUCO-NET:** European network for global cooperation in the field of AIDS & TB
20. **CBHI-INDIA:** Developing efficient and responsive community based micro health insurance in India
21. **EVIMalaR:** Towards the establishment of a permanent European Virtual Institute dedicated to Malaria Research
22. **REDMAL:** Clinical development of a Pfs48/45-based malaria transmission blocking vaccine
23. **UMPIRE:** Use of a multi-drug pill in reducing CV events
24. **NIDIAG:** Syndromic approach to Neglected Infectious Diseases (NID) at primary health care level: an international collaboration on integrated diagnostic-treatment platforms
25. **MM4TB:** More Medicines for Tuberculosis
26. **MATIND:** Large scale innovative pro-poor programs focused on reducing maternal mortality in India: a proposal for impact evaluation
27. **EVAL-HEALTH:** Developing and Testing of New Methodologies to Monitor and Evaluate Health Related EU-Funded Interventions In Cooperation Partner Countries
28. **Health Inc.:** Socially inclusive health care financing in West Africa and India
29. **AMASA:** Accessing Medicines in Africa and South Asia
30. **ToxBank:** Supporting Integrated Data Analysis and Servicing of Alternative Testing Methods in Toxicology
31. **DEM-CHILD:** A Treatment-Oriented Research Project of NCL Disorders as a Major Cause of Dementia in Childhood
32. **ARCADE RSDH:** Asian Regional Capacity Development for Research on Social Determinants of Health
33. **DIFFER:** Diagonal Interventions to Fast-Forward Enhanced Reproductive Health
34. **GIFTS:** Genomic and lifestyle predictors of foetal outcome relevant to diabetes and obesity and their relevance to prevention strategies in South Asian peoples
35. **Epi-Migrant:** Identification of epigenetic markers underlying increased risk of T2D in South Asians
36. **HPV-AHEAD:** Role of human papillomavirus infection and other co-factors in the aetiology of head and neck cancer in India and Europe
37. **EMERALD:** Emerging Mental Health Systems in Low- and Middle-Income Countries
38. **KINDRED:** Kinetoplastid Drug Development: Strengthening the Preclinical Pipeline

Food, Agriculture and Fisheries, and Biotechnology

1. **TAPSIM**: Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets
2. **BENWOOD**: Coordination Actions in Support Of Sustainable and Eco-Efficient Short Rotation Forestry in CDM Countries
3. **FMD-DISCONVAC**: Development, enhancement and complementation of animal-sparing, foot-and-mouth disease vaccine-based control strategies for free and endemic regions
4. **NTB-IMPACT**: Assessment of the impacts of non-tariff barriers - NTB on the competitiveness of the EU and selected trade partners
5. **PEGASUS**: Public Perception of Genetically modified Animals - Science, Utility and Society
6. **SWEETFUEL**: Sweet Sorghum : an alternative energy crop
7. **BIOCIRCLE**: Creating a CIRCLE by extending the BIO NCP network to Third Country NIPs
8. **MAREX**: Exploring Marine Resources for Bioactive Compounds: From Discovery to Sustainable Production and Industrial Applications
9. **JATROPT**: Jatropha curcas Applied and Technological Research on Plant Traits
10. **BIOCORE**: Biocommodity refinery
11. **BIO CIRCLE 2**: Reinforcing the international cooperation in FP7 FAFB strengthening the CIRCLE of Third Countries BIO NCPs
12. **VEG-I-TRADE**: Impact of climate change and globalisation on safety of fresh produce – governing a supply chain of uncompromised food sovereignty
13. **STAR-IDAZ**: Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses
14. **APROPOS**: Added value from high protein & high oil industrial co-streams
15. **SECUREFISH**: Improving Food Security by Reducing Post Harvest Losses in the Fisheries Sector
16. **OPTIMA**: Optimization of Perennial Grasses for Biomass Production
17. **AFSPAN**: Aquaculture for Food Security, Poverty Alleviation and Nutrition

Projects Funded under the EU-India Coordinated Call for Proposals on food and nutrition research

1. **FUNCFOOD**: Impact of Agents with Potential Use in Functional Foods on Biomarkers for Induction of Age Related Diseases
2. **NAMASTE**: New Advances in the integrated Management of food processing waste in India and Europe: use of Sustainable Technologies for the Exploitation of byproducts into new foods and feeds

Projects Funded under the EU-India Partnering initiative on biomass production and biowaste conversion through biotechnological approaches

1. **SAHYOG**: Strengthening networking on Biomass research and bio waste conversion – biotechnology for EuroPe India integration

Projects Funded under the EU-India Coordinated Call for Proposals in water related research

1. **WATER 4 CROPS**: Integrating bio-treated wastewater with enhanced water use efficiency to support the Green Economy in EU and India

Information and Communication Technologies

1. **Euro-India**: Euro-India ICT Co-operation
2. **Flossinclude**: Free/Libre and Open Source Software: International Cooperation development roadmap
3. **GRIFS**: Global RFID Interoperability Forum for Standards
4. **GENESYS**: Good practices for European developers of advanced ICT-enabled energy-efficiency Systems
5. **LivingKnowledge**: LivingKnowledge – Facts, Opinions and Bias in Time
6. **COCKPIT**: Citizens Collaboration and Co-Creation in Public Sector Service Provision
7. **Euro-India SPIRIT**: Euro-India Synchronisation of Policy Initiatives & Research and Innovation Trajectory
8. **GEYSERS**: Generalised architecture for dynamic infrastructure services
9. **SYNCHRONISER**: Synchronising the Research Policy Dialogue to the Indian Dimension
10. **IDEALIST2011**: Trans-national cooperation among ICT National Contact Points
11. **EUCLID**: Strengthening EU-India collaboration in networked monitoring and control systems technologies
12. **MyFIRE**: Multidisciplinary networking of research communities in FIRE
13. **FIGARO**: Future Internet Gateway-based Architecture of Residential Networks

14. **CASAGRAS2**: Coordination and Support Action for Global RFID-related Activities and Standardisation – 2
15. **EU-INCOOP**: EU-India Fostering Cooperation in Computing Systems
16. **TrendMiner**: Large-scale, Cross-lingual Trend Mining and Summarisation of Real-time Media Streams
17. **WATTALYST**: Modelling and Analysing Demand Response Systems
18. **idealist2014**: Trans-national cooperation among ICT NCPs
19. **WiBRATE**: Wireless, Self-Powered Vibration Monitoring and Control for Complex Industrial Systems

Nanosciences, Nanotechnologies, Materials and New Production Processes

1. **ICPCNanoNet**: A web-based repository of Nanosciences and nanotechnology publications, database of researchers and online forum, to inform and facilitate networking between EU and ICPC RTD
2. **IRIS**: Integrated European Industrial Risk Reduction System
3. **EICOON**: Euro-Indo forum for nano-materials research coordination & cooperation of researchers in sustainable energy technologies
4. **MACAN**: Merging Atomistic and Continuum Analysis of Nanometer Length-Scale Metal-Oxide Systems for Energy and Catalysis Applications
5. **InForm**: Integrating Nanomaterials in Formulations
6. **NanoValid**: Development of reference methods for hazard identification, risk assessment and LCA of engineered nanomaterials
7. **ECO-SEE**: Eco-Innovative, Safe and Energy Efficient Wall Panels and Materials for a Healthier Indoor Environment

Projects Funded Under the Eu-India Coordinated Call for Proposals in Computational Materials Science

1. **AMCOS**: Advanced materials as CO₂ removers: A computational study of CO₂ sorption thermodynamics and kinetics
2. **HYPOMAP**: New materials for hydrogen powered mobile applications
3. **MONAMI**: Modeling of nano-scaled advanced materials intelligently
4. **DYNAMAG**: Advanced computational studies of dynamic phenomena in magnetic nano-materials
5. **ATHENA**: Advanced theories for functional oxides: new routes to handle the devices of the future
6. **SIMUGLASS**: Development of a synergistic computational tool for material modeling, process simulation and optimization of optical glass molding

Energy

2. **SAFEWIND**: Multi-scale data assimilation, advanced wind modelling and forecasting with emphasis to extreme weather situations for a secure large-scale wind power integration
3. **OPTFUEL**: Optimized Fuels for sustainable transport in Europe
4. **SetatWork**: Sustainable Energy Technology at Work: Thematic Promotion of Energy Efficiency and Energy Saving Technologies in the Carbon Markets
5. **VALORGAS**: Valorisation of food waste to biogas
6. **BioWALK4Biofuels**: Biowaste and Algae Knowledge for the Production of 2nd Generation Biofuels
7. **GHG2E**: Greenhouse Gas Recovery from Coal Mines and Unmineable Coalbeds and Conversion to Energy
8. **OPTIMASH**: Optimizing gasification of high-ash content coals for electricity generation

Projects Funded Under the Eu-India Coordinated Call for Proposals in Solar Energy Systems

1. **ESCORT**: Efficient Solar Cells based on Organic and hybrid Technology
2. **LARGECELLS**: Large-area Organic and Hybrid Solar Cells
3. **AGATHA**: Advanced Grating for Thin Films Solar Cell

Environment (including climate change)

1. **LiveDiverse**: Sustainable Livelihoods and Biodiversity in Riparian Areas in Developing Countries
2. **ISSOWAMA**: Integrated Sustainable Solid Waste Management in Asia
3. **CLIMATECOST**: Full Costs of Climate Change
4. **CEOP-AEGIS**: Coordinated Asia-European long-term Observing system of Qinghai – Tibet Plateau hydro-meteorological processes and the Asian-monsoon system with Ground satellite Image data and numerical Simulations
5. **HighARCS**: Highland aquatic resources conservation and sustainable development

6. **POEM:** Policy Options to engage Emerging Asian economies in a post-Kyoto regime
7. **RISKCYCLE:** Risk-based management of chemicals and products in a circular economy at a global scale
8. **CONVERGE:** Rethinking Globalisation in the light of Contraction and Convergence
9. **HighNoon:** adaptation to changing water resources availability in northern India with Himalayan glacier retreat and changing monsoon pattern
10. **CORFU:** Collaborative research on flood resilience in urban areas
11. **RESPONSES:** European responses to climate change: deep emissions reductions and mainstreaming of mitigation and adaptation
12. **SECOA:** Solutions for Environmental Contrasts in Coastal Areas
13. **ENV-NCP-TOGETHER:** Environment NCPs cooperating to improve their effectiveness
14. **GMOS:** Global Mercury Observation System
15. **PURGE:** Public health impacts in Urban environments of Greenhouse gas Emissions reduction strategies
16. **AMPERE:** Assessment of Climate Change Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates
17. **LIMITS:** Low climate Impact scenarios and the Implications of required Tight emission control Strategies
18. **Saph pani:** Enhancement of natural water systems and treatment methods for safe and sustainable water supply in India
19. **OPENNESS:** Operationalisation of Natural Capital and Ecosystem Services: from Concepts to Real-World Applications

Projects Funded under the EU-India Coordinated Call for Proposals in water related research

1. **ECO-INDIA:** Energy-efficient, community-based water- and wastewater-treatment systems for deployment in India
2. **NAWATECH:** Natural Water Systems and Treatment Technologies to cope with Water Shortages in Urbanized Areas in India
3. **SARASWATI:** Supporting consolidation, replication and up-scaling of sustainable wastewater treatment and reuse technologies for India
4. **SWINGS:** Safeguarding Water resources in India with Green and Sustainable technologies
5. **WATER4INDIA:** Smart, Cost-effective Solutions for Water Treatment and Monitoring in Small Communities in India. Decision Support System Integration.

Transport (including Aeronautics)

1. **ASSET-ROAD:** ASSET Advanced Safety and Driver Support in Essential Road Transport
2. **FIREPROOF:** Probabilistic Framework for Onboard Fire-Safety
3. **SIMBA II:** Strengthening road transport research cooperation between Europe and emerging international markets II
4. **DIVEST:** Dismantling of Vessels with Enhanced Safety and Technology
5. **CETRRA:** Actions to stimulate participation of cooperation partners in surface transport research
6. **SAFER BRAIN:** Innovative Guidelines and Tools for Vulnerable Road Users Safety in India and Brazil
7. **STADIUM:** Smart Transport Applications Designed for large events with Impacts on Urban Mobility
8. **NEAR2:** Network of European Asian Rail Research Capacities

Socio-economic Sciences and the Humanities

1. **EURASIA-NET:** Europe-South Asia Exchange on Supranational (Regional) Policies and Instruments for the Promotion of Human Rights and Management of Minority Issues
2. **TRANS-NET:** Transnationalisation, Migration and Transformation: Multi-Level Analysis of Migrant Transnationalism
3. **GLOBINN:** The changing nature of Internationalization of Innovation in Europe: impact on firms and the implications for innovation policy in the EU
4. **AEGIS:** Advancing knowledge-intensive entrepreneurship and innovation for growth and social well-being in Europe
5. **EUROBROADMAP:** European Union and the World Seen from Abroad
6. **INGINEUS:** Impact of Networks, Globalisation, and their Interaction with EU Strategies
7. **chance2sustain:** Urban Chances: City growth and the sustainability challenge; Comparing fast growing cities in growing economies

8. **CORE:** The role of Governance in the Resolution of Socioeconomic and Political Conflict in India and Europe
9. **NOPOOR:** Enhancing Knowledge for Renewed Policies against Poverty
10. **FRAME:** Fostering Human Rights Among European (External and Internal) Policies

Space

1. **SIRIUS:** Sustainable Irrigation water management and River-basin governance: Implementing User-driven Services
2. **BIO_SOS:** Biodiversity Multi-Source Monitoring System: From Space to Species
3. **COMESSEP:** Coronal Mass Ejections and Solar Energetic Particles: forecasting the space weather impact

People

Marie Curie Action: International Research Staff Exchange Scheme

1. **INTI:** International Network in Theoretical Immunology
2. **PASSA:** Partnerships for Sustainable Shrimp Aquaculture
3. **SF-WF-MSF:** Wide Field Studies of Star Forming Regions
4. **EPIKH:** Exchange Programme to advance e-Infrastructure Know-How
5. **CINAR PATHOBACTER:** Ciliates as Natural Reservoir of potentially Pathogenic Bacteria: an ecological, functional and evolutionary genomic investigation
6. **CAFEGroups:** Cooling, AGN Feedback and Evolution in Groups
7. **ICOMASEF:** Instability and Control of Massively Separated Flows
8. **GEoCoDE:** Genomic & Epigenomic Complex Disease Epidemiology
9. **WW-NMR:** World Wide NMR
10. **EASTWESTFOOD:** Food Research Exchange Programme between India and Europe
11. **WilsonIndia:** Novel opportunities for diagnosis and therapy of Wilson's disease in India
12. **URBANSELF:** A North-South-Network on Urban Self-Organisation and Public Life in Europe, India and China
13. **MultiFrac:** Multiscale Methods for Fracture
14. **WIQ-EI:** Web Information Quality Evaluation Initiative
15. **HEMOW:** Health Monitoring of Offshore Wind Farms
16. **MICROGENNET:** Extension, enhancement and strengthening of established collaborations for the purpose of a community-driven knowledge base for micronutrient genomics
17. **ADERS:** Analysis and Design of Earthquake Resistant Structures
18. **DWBQS:** Dynamics of Weakly Bound Quantum Systems
19. **NanoCIS:** Development of a new generation of CIGS-based solar cells
20. **NARILAR:** New Working Fluids based on Natural Refrigerants and Ionic Liquids for Absorption Refrigeration
21. **GEO:** geohazards and geomechanics
22. **UNKA:** Urban Knowledge Network Asia
23. **INTERBONE:** The Interplay among bone cells, matrices and systems
24. **NL_SOCIAL:** The public health implications of neoliberal policy and management on professions and vulnerable populations
25. **HYDRODRIL:** Integrated Risk Assessment of Hydrologically-Driven Landslides
26. **TRANSFOR:** Transition versus Transformation: comparing paths to democratic change in the former USSR using case study based evidence from civil society, international aid and domestic politics
27. **COSMA:** Coherent Optics Sensors for Medical Applications
28. **MSNano:** A Multiple-Scattering Computing Platform For (Nano) Materials
29. **ICOMFLUID:** International Collaboration on Computational Modelling of Fluidised Bed Systems for Clean Energy Technologies
30. **HERBAL PROTECTION:** Studies on Some Herbal Additives Giving Partial Protection Against Toxic or Immunosuppressive Effects of Some Mycotoxins and Improving Wound Granulation
31. **INDOEUROPEAN-MATHDS:** Indo-European Network in Mathematics for Health and Disease
32. **SIT:** Stimulators and Inhibitors of Culture of Trust in Educational Interactions Assisted by Modern Information and Communication Technology
33. **IONRUN:** Innovative Ionic Polymers from Natural Sources for Energy & Environment

34. **DIGIT-M-ED**: Global Perspectives on Learning and Development with Digital Video-Editing Media: A Qualitative Inquiry in Everyday Lives of Marginalized Young People
35. **CROSSINGBOUNDARIES**: Crossing Boundaries: Knowledge and Technology Transfer and Innovation
36. **BIOASSORT**: Improvement of Technologies and Tools, e.g. Biosystems and Biocatalysts, for Waste Conversion to Develop and Assortment of High Added Value Eco-Friendly and Cost-Effective Bio-Products
37. **CIVIL_SW**: Civil Engagement in Social Work: Developing Global Models
38. **UP-PI**: Ultrafast Photonic Processes & Interactions
39. **RARE**: Risk Analysis, Ruin and Extremes

Marie Curie Action: Industry Academia partnerships and pathways

1. **DiaBSmart**: Development of a new generation of Diabetic footwear using an integrated approach and SMART materials

Marie Curie Action: Initial Training Networks

1. **CoHaB**: Diasporic Constructions of Home and Belonging
2. **TANGO**: Thermo-Acoustic and Aero-Acoustic Nonlinearities in Green Combustors with Orifice Structures
3. **ITECC**: Investigating Tectonism-Erosion-Climate-Couplings
4. **NANO2FUN**: Nanochemistry of Molecular Materials for 2-photon Funcional Applications

Capacities

Research Infrastructures

1. **FAIR**: Facility for Antiproton and Ion Research
2. **BELIEF-II**: Bringing Europe's Electronic Infrastructures to Expanding Frontiers II
3. **6CHOICE**: India-Europe Cooperation to promote IPv6 adoption
4. **EU-IndiaGrid2**: Sustainable e-Infrastructures across Europe and India
5. **CHAIN**: Co-ordination and Harmonisation of Advanced e-Infrastructures
6. **PREPSKA**: A Preparatory phase proposal for the Square Kilometre Array
7. **SUP@VAMDC**: Support at the Virtual Atomic and Molecular Data Centre

Science in Society

1. **INNOVA-P2**: Pharma-Innovation - Patent-2
2. **CEECEC**: CSO Engagement with Ecological Economics
3. **SET-DEV**: Science, Ethics and Technological Responsibility in Developing and Emerging Countries
4. **RISE**: Rising pan-European and International Awareness of Biometrics and Security Ethics
5. **SED**: Science Education for Diversity
6. **GEST**: Global Ethics in Science and Technology
7. **EJOLT**: Environmental Justice Organizations, Liabilities and Trade
8. **PROGRESS**: PROMoting Global Responsible Research and Social and Scientific Innovation
9. **SIFORAGE**: Social Innovation on Active and Healthy Ageing for Sustainable Economic Growth

Specific Activities of International Cooperation

1. **EUINEC**: European Union and India Enhanced Cooperation Framework for Improved Bilateral Dialogue in the Fields of Science and Technology
2. **NEW INDIGO**: Initiative for the Development and Integration of Indian and European Research
3. **INDIA GATE**: Increasing the Dialogue between India and Europe by Improving EU Awareness and Access to Indian Research and Innovation Technology Programmes
4. **INDO-MARECLIM**: Indo-European Research Facilities for Studies on Marine Ecosystem and Climate in India
5. **EU-IN-STI-HOUSE**: Feasibility Study for the Opening of an EU-India Joint House for Science, Technology and Innovation

6. **INNO INDIGO:** Innovation Driven Initiative for the Development and Integration of Indian and European Research
7. **INDIGO POLICY:** Support for the Advancement of Policy Cooperation between India and Europe in Research and Innovation

Euratom

Nuclear Fission and Radiation Protection

1. **SARNET2:** Severe Accident Research Network of Excellence 2
2. **CESAM:** Code for European Severe Accident Management