Building up the Sustainable Future on Urban-Rural Relationship

— Experience on the Eu-China Scientific Cooperation Project

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Research Field:
- Sustainable Development In Urban & Rural Area
- Preservation of traditional dwellings & Vernacular Architecture.
- Cultural Heritage Preservation
Outline

- Background
- Project Introduction
- Experience and Conclusion
- Future Scenario
1. Background

- **In 1999:** Met Dr. Dumericher & Prof. Richard S. Levine on the Sub Forum of Sustainable Towns on the 20th UIA (World Congress of Architects) in Beijing.

- **In 2000:** Got the International Cooperation Project on Village Investigation supported by Zhengzhou University
  - Invited Dr. Heidi Dumericher & Ms. Ina Ivanchanor participate the filed study

- **2002-2005:** The 5th Eu-China Project: Sustainable Users Concepts for China Engaging Scientific Scenarios (SUCCESS) (ICA4-CT-2002-10007) Team Leader of Sustainable Built Environment

Field Study in Xia futou Village, SUCCESS project
OIKODROM- Vienna Institute on Sustainable Towns

OIKODROM, as an NGO with great influence on sustainable towns, has coordinated several big international projects, including the 5th Eu-China project, the 6th Eu-Mediterranean Project, etc. Dr. Heidi Dumericher, head of OIKODROM, plays a great role on the comprehensive studies on Sustainable development.

CSC- Center for Sustainable Towns, Kentuck University.

Professor Richard S. Levine, head of CSC, is the pioneer of Ecological Architecture and Zero-energy Architecture. He is the chairman of the U.S Zero-energy Housing Committee and is well-known for the studies of sustainable towns.

PLANCENTER LTD, Finland

PLANCENTER LTD, the state institute on Urban planning of Finland, has finished more than 100 state master plan and national strategy plan in Asia, Europe, and Africa. Dr. Timo Linkola, head of PLANCENTER LTD, is well-known for his insight for Town planning.

International Cooperation Partners

• The 5th EU-China Project: Sustainable Users Concepts for China Engaging Scientific Scenarios (SUCCESS) (ICA4-CT-2002-10007)


• World Bank Support Project: Evaluation of Town and Regional planning in China TF030640
2. EU Project Introduction

1. 中欧第五科技合作框架项目：
   中国村庄的可持续性前景研究（SUCCESS）
   The 5th Eu-China Project:
   Sustainable Users Concepts for China Engaging Scientific Scenarios (ICA4-CT-2002-10007)
   www.china-eu-success.org

2. 欧盟-地中海国家第六科技合作框架项目：
   伊斯兰国家清真寺浴池与可持续发展社区研究（HAMMAM）
   The 6th Eu-Mediterranean Project:
   Hammam, Aspects and Multidisciplinary Methods of Analysis for the Mediterranean Region/ HAMMAM/517704 (INCO)
   FP6-2003-INCO-MPC-2 (Contract number: 517704)
   www.hammam.org
1. The 5th Eu-China Project: SUCCESS

Sustainable Users Concepts for China Engaging Scientific Scenarios (ICA4-CT-2002-10007)

www.china-eu-success.org

SUCCESS project, coordinated by Dr. Heidi Dumericher, Head of OIKODROM, Vienna Institute of Sustainable Towns, is the biggest study project on urban-rural development in the 5th EU-China Project. Altogether 18 units from 5 countries participated in this project. The study period is from 2002 to 2005.
STRUCTURE OF THE WORKPLAN – RESEARCH AS A PROCESS
Ecological and economic monitoring-tools and self-evaluation

LOCAL PROCESS/ LOCAL KNOWLEDGE

THE LEGAL FRAMEWORK - CHINESE OFFICIAL DOCUMENTS
DEFINING THE KEYWORDS OF SUSTAINABILITY

ECOLOGY MODULE 1
ECONOMY MODULE 2
SOCIO CULTURAL MODULE 3
BUILT ENVIRONMENT MODULE 4

SETTLEMENT PATTERNS

ECOLOGY MODULE 1
ECONOMY MODULE 2
SOCIO CULTURAL MODULE 3
BUILT ENVIRONMENT MODULE 4

SUSTAINABLE FUTURE SCENARIOS

DISSEMINATION

SCIENTIFIC PROCESS/ EXPERT KNOWLEDGE
Altogether there are 7 field study villages in SUCCESS project to implement different methodology according to their different situation.

**Field Study villages:**
- Beisuzha village, Hebei province
- Xiafutou village, Henan Province
- Jiangjiazhai village, Shaanxi Province
- Chiqiao village, Shanxi Province
- Xiaoqi village, Jiangxi Province
- Sanyuan village, Yunnan Province
- Dujia village, Yunnan Province
Village Photos of SUCCESS

Sanyan Village

Farmers in Sanyuan Village

Xiafutou Village

Dujia Village

Xiaoqi Village
Case Study in Xiafutou Village

- Public Bathhouse of Zero-Energy implement

- **Topic:**
  How to create an ideal built environment based on the comprehensive concept of Sustainability?
Design and Participatory Workshop of Public Bathroom

Sustainable design approach needs informed, empowered, gender-sensitive human actors who are the stakeholders in the sustainability negotiation process.

The challenge as we see it is to take the existing village and building as we find it and create a truly contemporary response that at the same time fully respects and even celebrates the traditional qualities of the village while creating a new facility that enhances the health and life quality of the villagers, enhances the sense of pride in what the village has been and is to become and whose genesis is also the beginning of a robust civil society process within the village. The bath house is to be located in an existing structure in the older, more traditional uphill part of the village. By locating it here and thus helping to revive the traditional village structures rather than in the more modern, downhill part of the village, it becomes a symbol of the values that could become the basis for a new robust, sustainable agenda within the village as a whole.
Design and Participatory Workshop of Public Bathroom

The project design developed over many months under a participatory process involving the local village ritual reference group, the Chinese expert partners and the outside Western expert group. An unused uphill dwelling typical of the older village style was donated by a villager who had moved to the more modern, downhill part of the village. The house was structurally sound, but in need of repair. It is small but has the elegant consistency of an architectural language that has evolved over centuries to reflect both the qualities of the local culture as well as the locally available materials and construction techniques. All of these characteristics are to be respected and enhanced in the adaptive reuse of the dwelling. The interior however needs to have facilities, some of which that have little precedent in tradition.

Yet even here, except for some modern electrical and plumbing, local materials and craft and construction techniques will be employed. While all construction will employ traditional materials and techniques (provide details for this), the water system, the water heating system and the insulation have been specified with an appropriate technology approach.

In particular the design of these systems have been determined by an alternative scenario building approach that we have developed as the general design method for generating sustainable solutions.
SUSTAINABLE APPROACH

A MODEST WAY TO THE CURRENT CULTURE LANDSCAPE
Output and Demonstration

- In the 3 year study period, all the researchers did 7 time field studies in 7 villages with 2 weeks per village, and organize more than 30 field study workshops and finished more than 30 research reports.

- The Project team members published more than 30 academic articles, especially publish 15 articles on Special Issues on SUCCESS on JEM(Journal of Environment Management), one the most well-known academic Journal, and all the articles are accepted by SCI.

- SUCCESS project participated the 3rd, 4th and 5th Chinese High tech conference to demonstrate the research achievement during its study period.

- SUCCESS Team delieved more than 7 time exhibition and lectures in Vienna, Beijing, Shanghai, Shenzhen and Hongkong.
1. Participated the 3rd, 4th and 5th High-tech conference on behalf of Eu Committee.

Mr. Sanders, the ex-Head of Science, Technology and Environment Section, Eu. visited the Exhibition (2003.10)

Ms. Wuyi, Vice prime minister, visited the exhibition, and mentioned that it's very important for the sustainable development in the rural area. (2004.10)
April, 2005. Turn on the Strategy toward Chinese sustainable village to the MOST in China and Display all the achievement of SUCCESS for the first time.

April, 2005. Hold Exhibition and Workshop on SUCCESS in Shanghai Social Science Academy.

March, 2006. Hold Exhibition and Workshop on SUCCESS in the 10th international sustainable development conference in Hongkong.

March, 2006. Lecture on SUCCESS in the architecture department, Chinese University of Hongkong.

April, 2006. Lecture on SUCCESS, invited by prof. Qianyi, in the School of Environment Engineering, Tsinghua University.
2. **The 6th EU-Mediterranean Project: HAMMAM**

欧盟-地中海国家第六科技合作框架项目：伊斯兰国家清真寺浴池与可持续发展社区研究

- FP6-2003-INCO-MPC-2 (Contract number: 517704)
  [www.hammam.org](http://www.hammam.org)

- HAMMAM is the biggest study project of the 6th EU-Mediterranean project. Altogether there are 19 research units participated the HAMMAM project, including Austria, Great Braintan, France, U.S. Gemeny, China and the units of the Mediterrance countries, Turky,Maraco, Syria, Egypt, Algeria,etc. CSD, Zhengzhou University is the only Chinese research units in the HAMMAM project.
Framework:

Replicability
The development of strategies and scenarios for the sustainable use or adaptive use of historic hammams will take into account the specificity of each location as well as the common factors between the six cities under investigation. The methodology adopted in this study will be replicable to other case studies of cultural heritage buildings with a high social value. We will proceed to show examples for other similar cultural heritages, considered not only as architectural highlights of cultural heritage, but also as having a major contribution to urban day-to-day-life. We will study sustainable and innovative ways of restoration and revitalisation which will be applicable to a wide variety of contexts. Particular recommendations for the different sites under investigation will therefore be replicable to other sites of cultural heritage.

Multidisciplinarity
The multidisciplinary approach of this study offers possibilities for developing innovative solutions in solving complex environmental and socio-political and economical problems in the Mediterranean Countries. These innovations could have a positive impact for EU Countries as well. The future scenario making based on a multi-disciplinary approach work will provide innovative strategies for the use and revitalisation of heritage buildings to benefit a sustainable life style approach.

Integrated technologies
We will develop a tool for integrated technologies which shall lead to a sustainable approach towards the restoration and adaptive re-use of the hammams. Particular attention will be paid to the vernacular technologies, the revival of traditional construction know how, the recycling of water, the reduction of environmental pollution and the use of renewable energy.
The case-study-approach: Six Hammams in six Mediterranean countries

The Hammam study uses the methodology of case-studies in order to fulfill the need for an integrative approach to the research-issue. Starting from the investigation of the local situation (cultural and technical) of specific Hammams in six different Mediterranean countries, the study develops sustainable future scenarios for these Hammams. These strategies will be carried out on the basis of six carefully selected Hammams in the following countries:

- Morocco
- Algeria
- Egypt
- Syria
- Turkey
- Palestine
Damas ville historique. Le cadre urbain et patrimonial

Damas, comme Jérusalem et Alep, et contrairement au Caire et à Bagdad, est une ville fixée autour d’un centre très ancien, en effet, l’histoire de la ville Damas remonte, au moins, au IIIème millénaire avant notre ère.

Le quartier d’Al-Uqayba

C’est à l’époque Omayyade, alors que la ville est la capitale d’un vaste empire, que les premières installations hors les murs sont attestées : ces tirs d’arrosage interrompent, souvent brutalement, le développement urbain, mais tout au long des époques qui vont suivre cette croissance extrêmement rapide va se poursuivre avec des périodes de dynamisme certain sous les Ayyoubides, les Mamlouks et les Ottomans.

Les bains de Damas

Hammam Ammounëh. Héritage tangible

L’étude comparative des baies de Damas ainsi que l’analyse de leur architecture et décor intérieurs entreprise en 1982 par Michel Escard et Claude Lecoeur, permet de situer la fondation de ce bain à la fin du XIIème siècle. En effet, par son plan de type rectangulaire, par ses décors intérieurs, cet édifice se rattache aux baies d’époque ayyoubide, époque qui correspond au développement des maisons d’appartements, dite d’Al-Uqayba.

Les visites récentes et les relevés architecturaux en cours nous permettent de faire le point sur l’état de conservation général du Hammam qui est à première abord attrayant mais qui a connu des restaurations, en particulier la grande salle de bains dite d’Al-Uqayba, avec décorations douloureuses et de sols de dallage traditionnel bichromes.
Process:
1. August, 2005   Starting Conference of HAMMAM, Vienna, Austria
2. March, 2006    Field study and Project Conference, Cairo, Egypt
3. Experience on the EU project

- Capture the cooperation Information and Direction based on sharp intuition.
  以敏锐地研究直觉，捕捉合作信息和动向
- Participate Interdisciplinary Research according to open minded thought.
  以开阔的思路，参与跨学科的合作研究
- Build up long term academic cooperation relationship based on honest and friendly attitude.
  以坦诚友好的合作态度，建立长期学术合作与交流关系
- Explore new cooperation field based on Forging ahead spirit.
  以开拓进取的精神，不断拓展合作领域和方向
1). Capture the cooperation Information and Direction based on sharp intuition.

- The keypoint of the international cooperation project is that how to build up understanding and appreciation while each one is looking for the right research partner and suitable research field. Therefore, it is very important to find the hot topic in your own research field and the ideal research partner in this field according to the investigation and acute intuition.

- 国际合作项目的契机往往在于各国学者在寻找合适的合作伙伴以及研究热点和前沿中的相互认同和相互欣赏。因此，在自己所研究的领域中寻求研究热点，并以敏锐地研究直觉，寻找合作伙伴在国际合作项目中是非常重要的一个环节。
2). Participate Interdisciplinary Research according to open minded thought

- Most International research projects are comprehensive and interdisciplinary, especially on urban-rural sustainable development which I participated in, which relates to economy, ecology, social culture and built environment, and it cannot be solved by one specific major. Therefore, In order to achieve the satisfying results on the cooperation project is it very important to have modest and open minded attitude, explore the possibilities beyond one specific major.

- 国际合作项目往往有综合性、多学科交叉性强等特点，而我所参与的合作项目多属于村镇及社区可持续发展领域的研究，涉及经济、生态、社会文化以及建筑形态等多个领域，是某一个专业无法单独解决的问题。因此，要求研究者具有开阔的思路以及兼容并蓄的研究精神，摒弃一家之言，突破专业的束缚，才能在跨学科的国际合作研究中充分发挥自己的作用，取得合作项目研究的圆满成功。
3). Build up long term academic cooperation relationship based on honest and friendly attitude

以坦诚友好的合作态度，建立长期学术合作与交流关系

- Because the researchers of the international cooperation project come from everywhere in the world with different culture and different religion, it is normal that there will be culture shock at the beginning of the cooperation. Therefore it is very important to be friendly to each other and show respect to other culture and religion during the whole research process.

- International cooperation project中的研究者来自世界各地，有着不同的文化背景、不同的信仰以及研究背景，因此，在项目合作的磨合期中要始终保持坦诚友好的合作态度，表现出中国学者不卑不亢、谦虚谨慎的学术涵养，对于国际合作项目的开展至关重要。

- 通过国际项目合作，与各国学者建立长期友好的合作关系以及信任关系，对于开展以后的国际合作项目申请、联系等都起到了积极地推进作用。
4). Explore new cooperation field based on Forging ahead spirit.

以开拓进取的精神，不断拓展合作领域和方向

- Sustainability is the key issue of the whole world which cannot be limited in a narrow field. Therefore, it is important to explore the possibilities of different field, especially focus on the important items that relates national warefare and people's livlihood.

- 关于可持续发展以及建筑等领域的国际合作项目研究不能仅仅局限于某个较为偏狭的领域，而是要关注涉及到这些方面的所有合作课题，尤其是关系到国计民生的重大问题。譬如中欧第五框架合作项目：“中国村庄的可持续前景研究”就是对于中国农村、农民和农业问题的较为系统和深入的研究项目。
4. Future Scenario

our Common Goal:

- CHINA in HORIZON 2020
Thank U for your Attention!
感谢聆听！

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