



Funding opportunities of the EU Research Programme

Space Research Information Day

April 20, 2012

Beijing

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Head of Space Research and Development



European
Commission

Outline

- **A glimpse into the future:
Horizon 2020**
- **Opportunities in next FP7-Space
call: main topics open**
- **International cooperation**
- **Examples of cooperation with
China**
- **Conclusions**



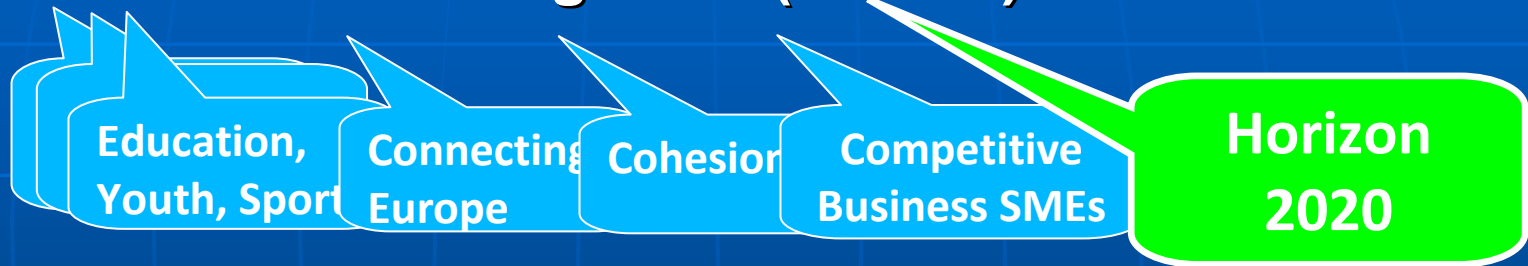
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The Multiannual Financial Framework 2014-2020: Commission's proposals of 29 June 2011

- Smart & inclusive growth (€491bn)

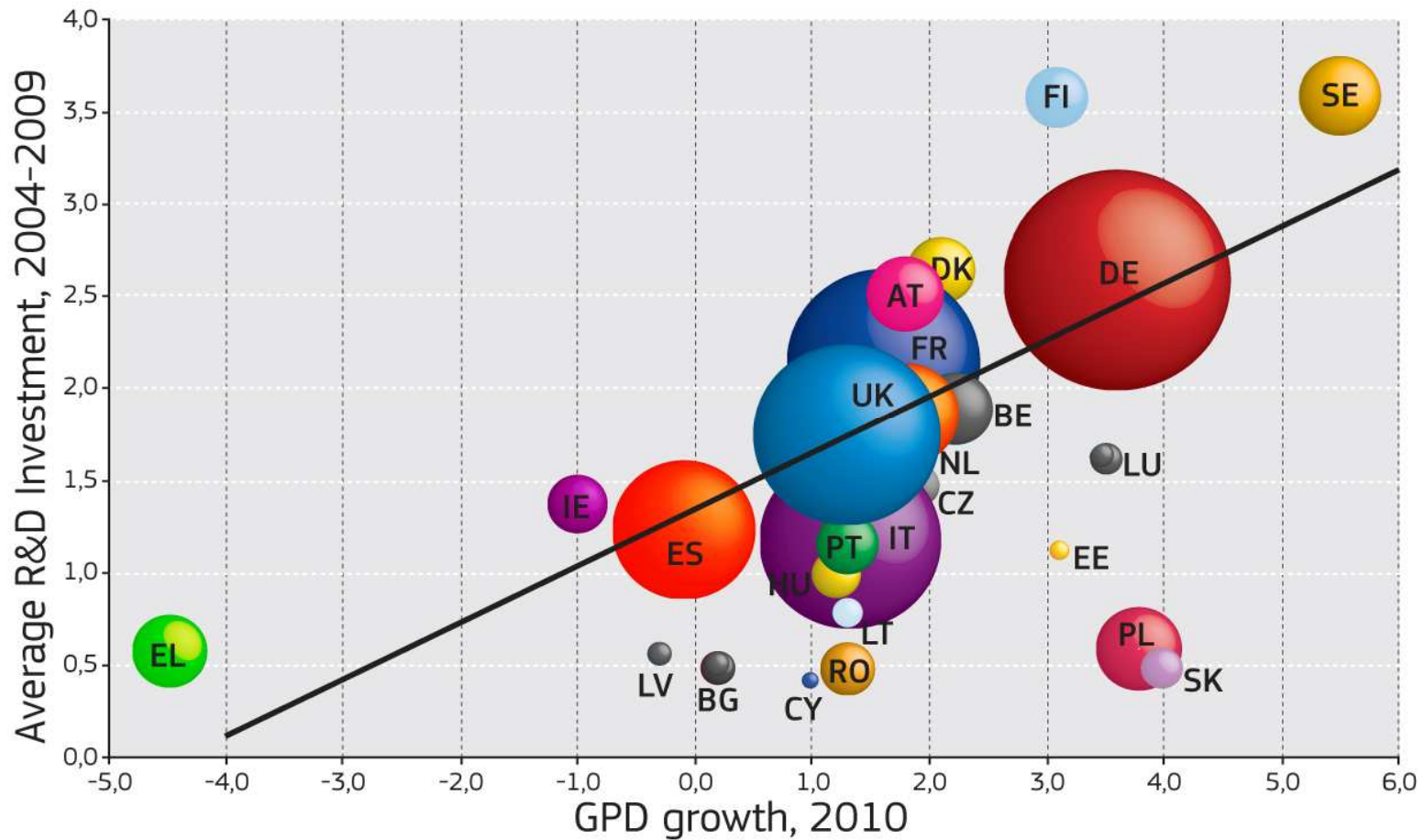


- Sustainable growth, natural resources (€383bn)
- Security and citizenship (€18.5bn)
- Global Europe (€70bn)
- Administration (€62.6bn)

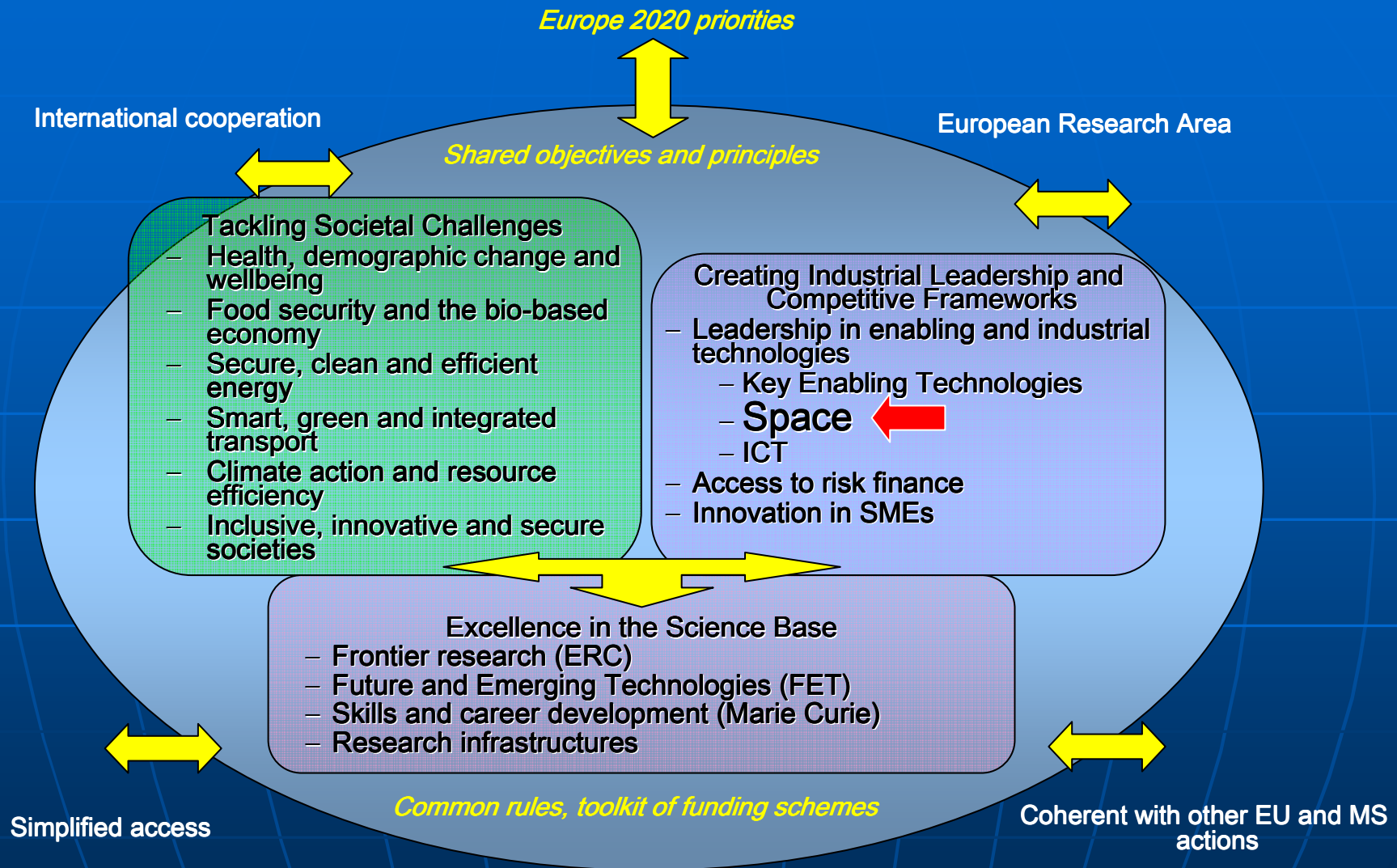
**Total:
€ 1,025bn**



Impact of R&D on economic recovery



Horizon 2020 – Objectives and structure



Horizon 2020: Industrial Leadership pillar

- Leadership in enabling and industrial technologies

- ICT

- Nano-, materials, processing

- Biotechnology

- **Space 1737 M€**

Key Enabling
Technologies

- Access to risk finance

- Innovation in SMEs

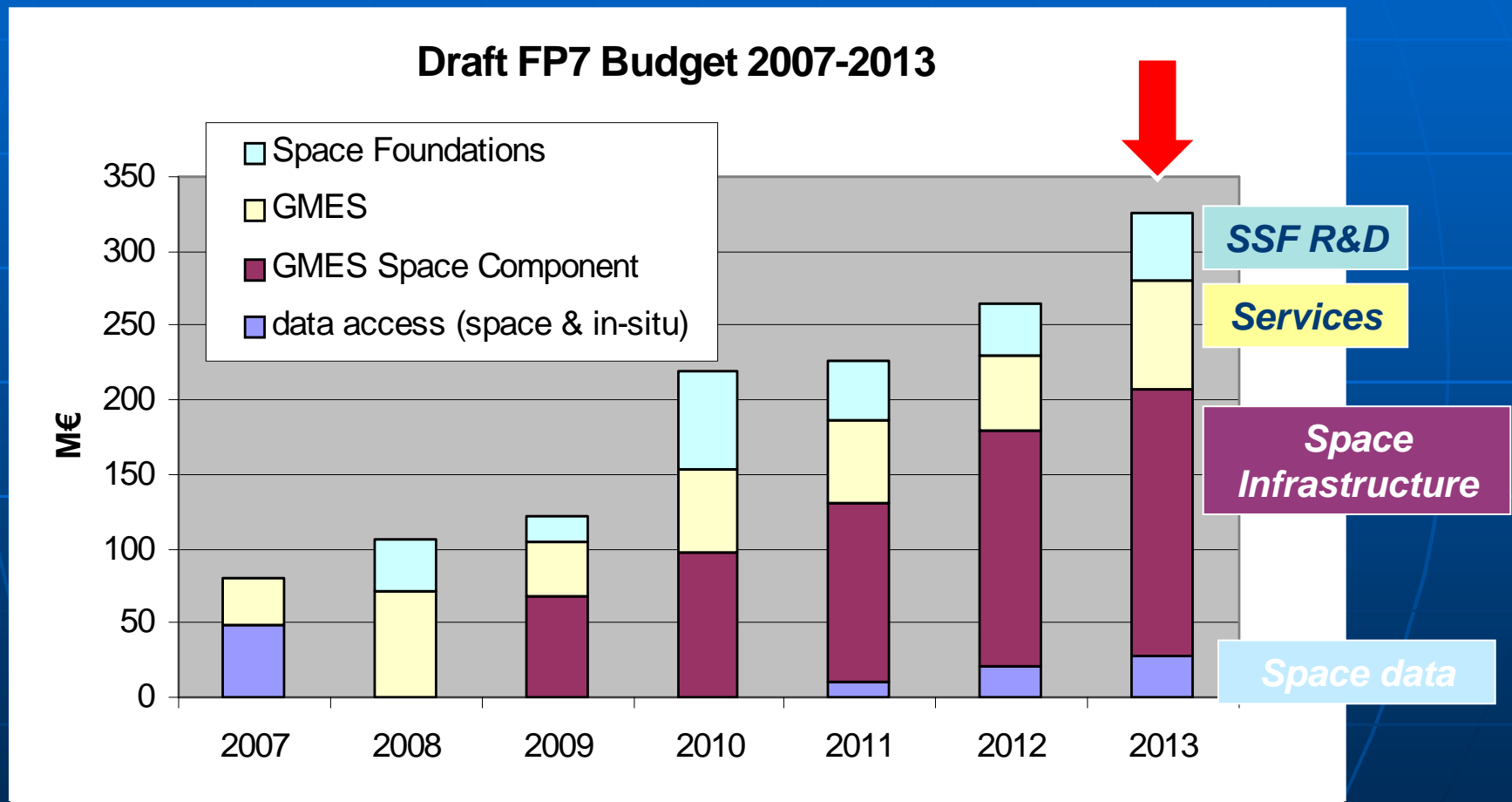


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Evolution of budget

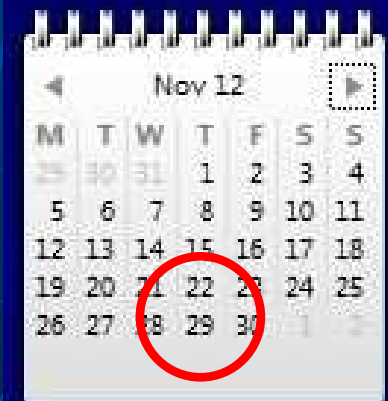


Timeline for Call 6

- **mid July 2012 publication foreseen**
 - <http://ec.europa.eu/embrace-space>
 - <http://ec.europa.eu/research/participants/portal/page/home>



- **late November 2012 deadline**
- ***Dec-Feb 2012/2013 evaluation by REA***
- ***Proposal negotiation in 2013***



FP7-Space

Space-based applications at the service of the European Society (principally GMES)

9.1

R&D strengthening Space foundations

9.2

Cross-cutting issues

9.3

126 M€



FP7-Space

Space-based applications at the service of the European Society (principally GMES)

**R&D strengthening
Space foundations**

Cross-cutting issues

9.1

59 M€



GMES topics

- 20th century re-analysis and future coupling methods
- Ensemble system of regional re-analyses
- Quality assurance system for Essential Climate Variables - ECVs
- Provision of access to simulated and observed climate datasets and climate indicator toolbox
- Attribution products
- Stimulating development of downstream services
- Remote sensing methods
- Integrating satellite communication and/or **satellite navigation** solutions into space based observing systems



FP7-Space

Space-based applications at the service of the European Society (principally GMES)

**R&D strengthening
Space foundations**

Cross-cutting issues

51 M€

9.2



SSF topics

- Exploitation of **space science and exploration data**
- Earth-analogue research preparing for space exploration
- Space critical technologies
- Space-weather events
- Security of space assets from **in-situ orbit collisions** – mission concepts



FP7-Space

Space-based applications at the service of the European Society (principally GMES)

R&D strengthening
Space foundations

Cross-cutting issues

16 M€

9.3



Cross-cutting topics

- SME space technology research and technology transfer
- Cooperation with third countries
 - > **specific focus on China** in the air-quality monitoring domain



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International cooperation

- **Participation** is encouraged to researchers and research organisations **from all third countries**
- The **active participation** of third country partners, e.g. from China represents an added value
- **Financing is possible**, if the contribution is essential for reaching the objective of the project
- This year, a specific topic encouraging **cooperation with China (air quality)**



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Space research interests in China

- One major area of interest is air-quality monitoring
- China will establish an **integrated nationwide ambient air quality monitoring network** in 2015 integrating various monitoring networks into one platform:
 - Atmospheric background
 - Rural air quality
 - Acid deposition
 - Sand and dust storms
 - Greenhouse gases



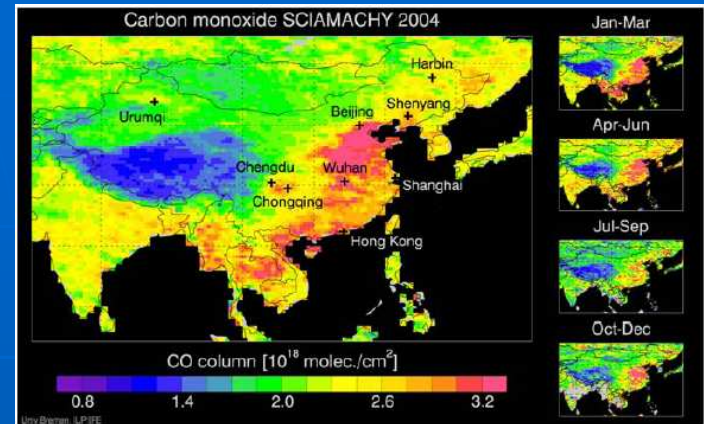
EU Space research projects with Chinese partners

- **Currently 4 projects funded under Space theme in area of atmosphere/climate:**
 - **AMFIC (completed)**
 - **DRAGONESS (completed)**
 - **CARBONES (ongoing)**
 - **CORE-CLIMAX (recently selected)**
- **But also 1 project relating to cubesats:**
 - **QB50 (ongoing)**





AMFIC



- Title: **Air Quality Monitoring and Forecasting in China**
- EU contribution: €1.1 million
- Chinese participants:
 - IAP Institute of Atmospheric Physics
 - National Satellite Meteorological Center - NSMC



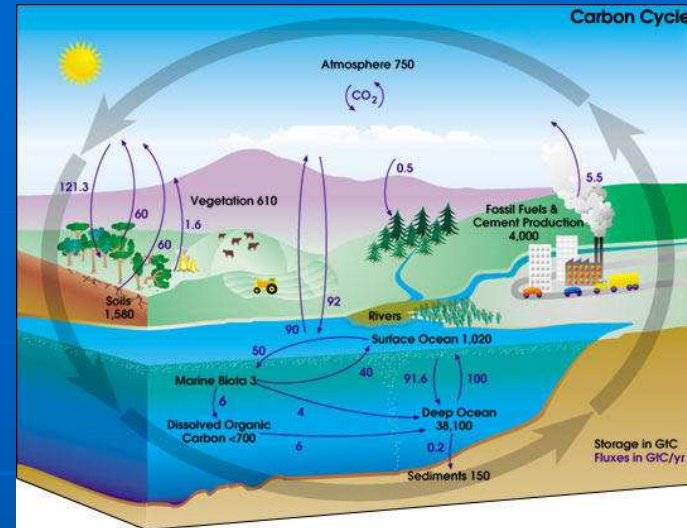
DRAGONESS



- Title: Dragon in support of harmonising European and Chinese **marine monitoring** for environment and security system
- EU contribution: €0.5 million
- Chinese partners:
 - Ocean University of China, Coordinator
 - The Institute of Atmospheric Physics (IAP), the Chinese Academy of Sciences (CAS)
 - National Marine Environmental Forecasting Center
 - National Satellite Ocean Application Service
 - Nansen-Zhu international research center
 - Second Institute of Oceanography – State Oceanic Administration
 - Beijing Normal University
 - Ministry of Science and Technology



CARBONES



- Title: 30-year **re-analysis of carbon fluxes and pools** over Europe and the Globe
- EU contribution: €2.6 million
- Chinese partner: Beijing University



QB50

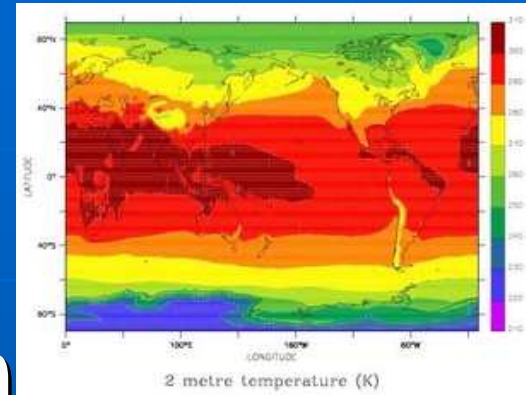


- Title: International network of **50 CubeSats** for multi-point, in-situ measurements in the lower thermosphere and re-entry research
- EU contribution: €8.0 million
- Chinese partner: Northwestern Polytechnic University



CORE-CLIMAX

- Title: Coordinating Earth observation data validation for re-analysis for climate services
- EU contribution: €2.0 million
- Chinese partners:
 - Institute of Tibetan Plateau Research
 - Chinese Academy of Sciences
 - Cold and Arid Regions Environmental and Engineering Research Institute



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Conclusions

Opportunities for Chinese cooperation

- **Both GMES and Strengthening Space Foundations**
- **Specific topic to encourage Chinese participation in air-quality monitoring projects**
- **Heritage of Chinese participants in FP7 projects, available to give advice**



謝謝

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http://ec.europa.eu/enterprise/policies/space/research/index_en.htm

