P.I.A.N.O.

Policies, Innovation And Network for enhancing Opportunities for China-Europe water cooperation

PIANO has the MAIN objective to create a strategic cooperation between China and Europe in the water research and innovation domain.

The strategic cooperation promoted by PIANO encompasses **FIVE** WATER domains: Agriculture water management, Urban and Rural water management, Water in Industry, Energy production and river basin management

First activity of PIANO - which will end in 2018 - is the identification of European technological water innovations by means of an inventory of best technologies, with potential for effective implementation in CHINA, able to solve such water challenges

In the context of municipal water management, major challenges are those aiming at ensuring a stable and safe water supply and minimizing the environmental impact of the generated wastewater. Urban drainage systems in the major cities are inefficient in their capacity to cope with urban floods, and this is one of the major Chinese challenges.

Agricultural water domain encompasses challenges associated with water scarcity, surface and groundwater pollution. In 2013, the agricultural water sector used 63% of the total 618 billion m^3 water used in China. Nowadays most of these waters are highly polluted.

Industrial water use accounts for 23% of the total water use in China … Industrial water domain encompasses challenges associated with water use efficiency and water treatment.

Flood protection, groundwater pollution and water resources management are the major Challenges in the domain of River basin management.

PIANO selects the state-of-the-art of European technologies in the field of agricultural water management, municipal water management, industry and energy production and river basin water management;

Tools, devices, innovative decision-support-systems, new ECO-CITY technologies as well as new technologies for water distribution, treatment and re-use are selected and compared with Chinese technologies;

Furthermore, PIANO will identify barriers that may impede the application of technologies in CHINA, and elaborate strategies for overcoming such barriers and taking advantages for replication of such technologies in CHINA.

A jointly elaborated Strategic Research and Innovation Agenda will include all potential research and innovation areas, strategies to facilitate and promote market entry in China, cooperation opportunities and further potential demonstration projects. This Agenda will support the transfer to CHINA of European know-how, expertise and water technologies creating synergies between countries. In view of the objectives of the Europe 2020 “Innovation Union” initiative, the PIANO project intends to pursue the objective of increasing implementation and replication of European water know-how in CHINA

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PIANO项目的主要目标是建立中国与欧洲间在水资源研究与发明方面的战略性合作。

PIANO项目主要推广在五个方面的战略合作，包括：农业水资源管理，城市与农村水资源管理， 工业水管理， 能源生产与流域管理。

PIANO项目的第一部分工作将于2018年完成。这部分工作包括在众多的欧洲水科技发明中识别出能够帮助改善以上五个方面问题的，并且最有潜力在中国进行有效推广的欧洲水科技发明。

在城市水管理方面，目前所面临的最主要问题是保障稳定和安全的用水供应，以及最大程度降低城市污水给环境所带来的负面影响。

此外，大型城市中的城市排水系统普遍不能满足有效防治城市洪水的要求也是中国城市水管理工作中所面临的主要挑战之一。

与农业用水相关的工作主要包括水资源短缺，地表水以及地下水污染。2013年，农业用水占全国用水总量（6180亿立方米）的63%，
这之中大部分水资源受污染严重。

工业用水约占全国用水总量的23%。与工业用水相关的工作主要包括在用水效率以及水处理方面的挑战。

洪水防御，地下水污染以及水资源管理是流域管理工作中所遇到的主要挑战。

PIANO项目将针对农业水管理，城市水管理，工业水管理，能源生产以及流域水管理五个方面，对在欧洲处于领先地位的技术进行识别。

这方面的工作将对在水资源分配，供应，处理以及再利用环节中所需要的工具，设备，创新型决策支撑系统以及生态城市技术进行识别并与同类的中国技术进行对比。

除此之外，PIANO项目将对阻碍欧洲水科技在中国落地与推广的主要因素与障碍进行识别， 并对如何克服这些障碍并充分从技术复制中获益制定相应战略。

一份共同制定的战略研究与创新议程将包含所有可能的研究和创新领域，支持与推动进出中国市场的策略，合作机会以及更多的开展示范项目的机会。这份新的议程将对欧洲向中国输入新的专业知识以及水科技进行支持并在中欧间创造更多的共通点与合作机遇。

根据欧洲2020
”创新联盟”倡议所提出的目标，PIANO项目将致力于推动更多欧洲水技术在中国进行使用与复制这个目标的实现。