Fact sheet ISWC – Wageningen UR collaboration

Background

ISWC and Wageningen UR have reached a milestone by working together continuously in joint projects and programs for over 20 years!

The Institute of Soil and Water Conservation (ISWC), Chinese Academy of Sciences (CAS) & Ministry of Water Resources (MWR), was founded in 1956 and was the first scientific research institution established in the Northwest of China by CAS. It came under the direction of CAS and MWR both from 1987. In 1998, ISWC became part of the "Pilot Project of the Knowledge Innovation Program (PPKIP)" in the first group of CAS Institutes. In 1999, ISWC participated in establishing the Northwest A&F University, in accordance with the direction of the State Council. In 2001, ISWC came under the direction of both CAS and the Ministry of Education as the Research Center of Soil & Water Conservation and Ecological Environment. During these years, ISWC received funding by the National Knowledge Innovation Project of CAS continuously.

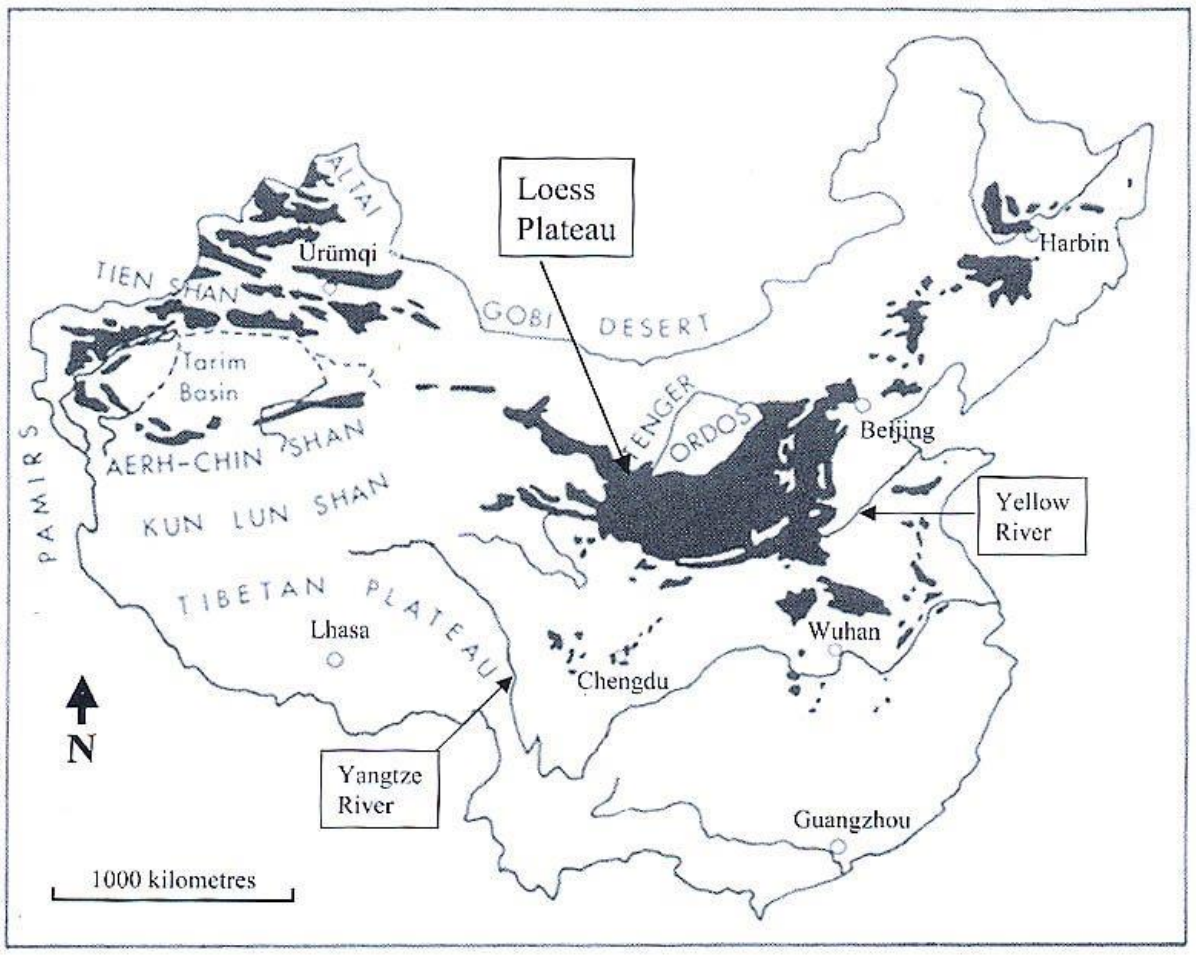


Figure 1 Location of the Loess Plateau in China

Wageningen UR is a collaboration between Wageningen University and DLO Foundation (including its applied research institutes). The mission of Wageningen UR is 'To explore the potential of nature to improve the quality of life'. A staff of 6,000 and 8,500 students from over 100 countries work everywhere around the world in the domain of 'healthy food and living environment' for governments and the business community-at-large. The Department of Environmental Sciences (DES) of Wageningen UR consists of specific groups from Wageningen University, Alterra and ISRIC, with around 650 employees in total. DES is a well-functioning department with good to excellent peer review results, working on sustainable use and management of natural resources.

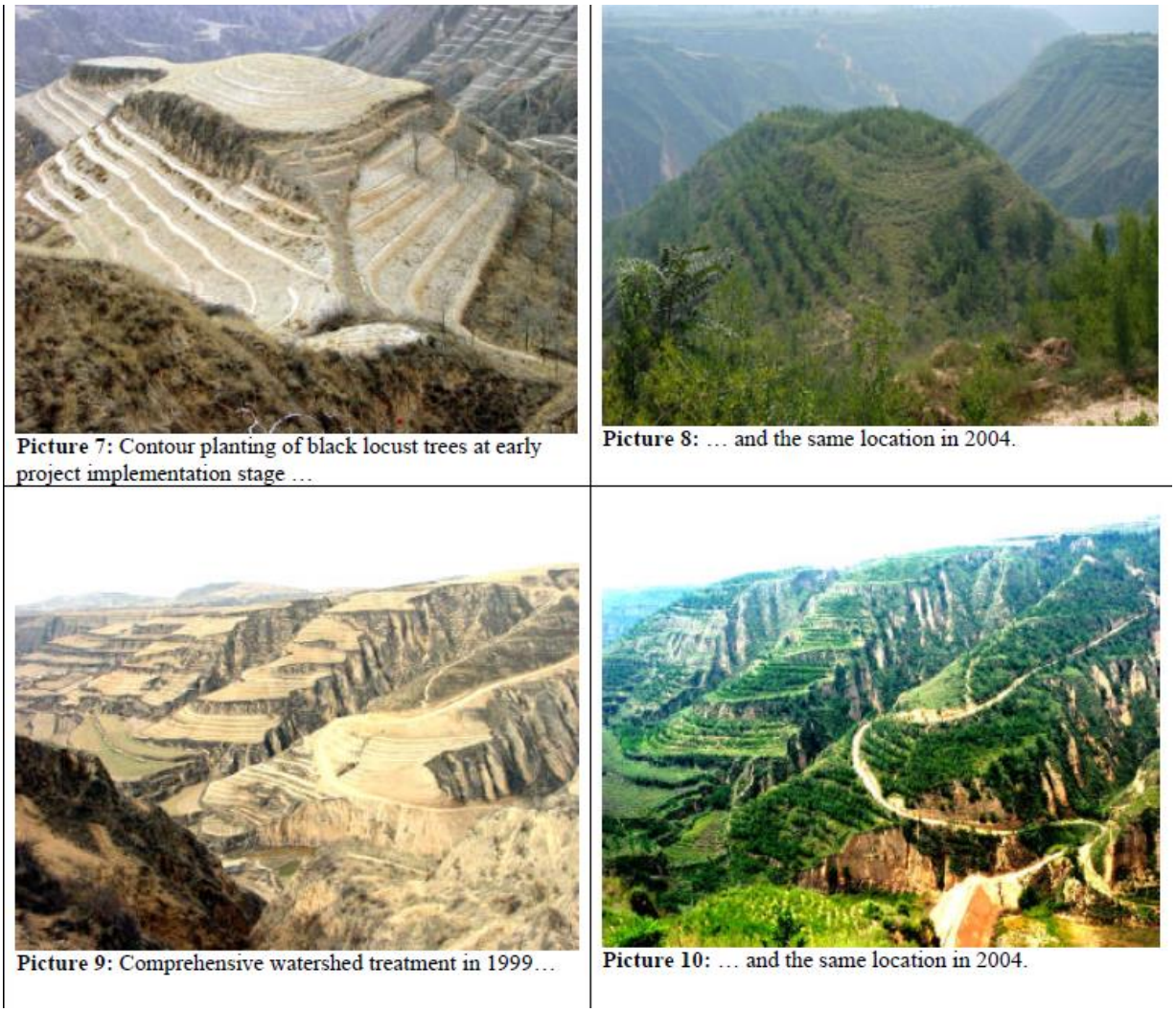
Both ISWC and Wageningen UR, specifically DES, underpin that there are major environmental and societal changes at the global level that affect the liveability of our world. Relevant topics to be addressed are soil, water and ecosystem degradation and restoration, food security, biodiversity conservation, climate change, natural hazards, and designing and implementing nature-based solutions, accounting for biophysical, social and economic aspects.

Figure 2 View on the hilly part of the Loess Plateau in China (Source: Zhu Xianmo (Ed.), 1986. Land Resources in the Loess Plateau of China)

Collaboration highlights during the last 20 years

Official contacts between ISWC (Prof. Dr. Li Rui, director) and Wageningen UR (Dr. Coen J. Ritsema) started around 1994 due to joint interests to work intensively on tackling the severe soil erosion problems on the Loess Plateau in China. Since that moment, ISWC and Wageningen UR were capable in attracting funds for executing a range of challenging and highly recognized projects and programs together, among the following:

- EROCHINA `Soil and water conservation on the Loess Plateau in Northern China by combined use of land evaluation and modelling techniques'. This was a 0.9 million Euro project executed in collaboration with the Institute of Soil and Water Conservation (ISWC), Beijing Normal University, the Research Centre for Ecological and Environmental Sciences, Utrecht University, and the Swedish University of Agricultural Sciences. This project has been executed from 1997-2002. Besides regular contract deliverables, the project resulted also in a joint special issue in one of the leading scientific journals in this field (CATENA), containing more than 15 research papers.



Picture 7: Contour planting of black locust trees at early project implementation stage …

Picture 8: … and the same location in 2004.

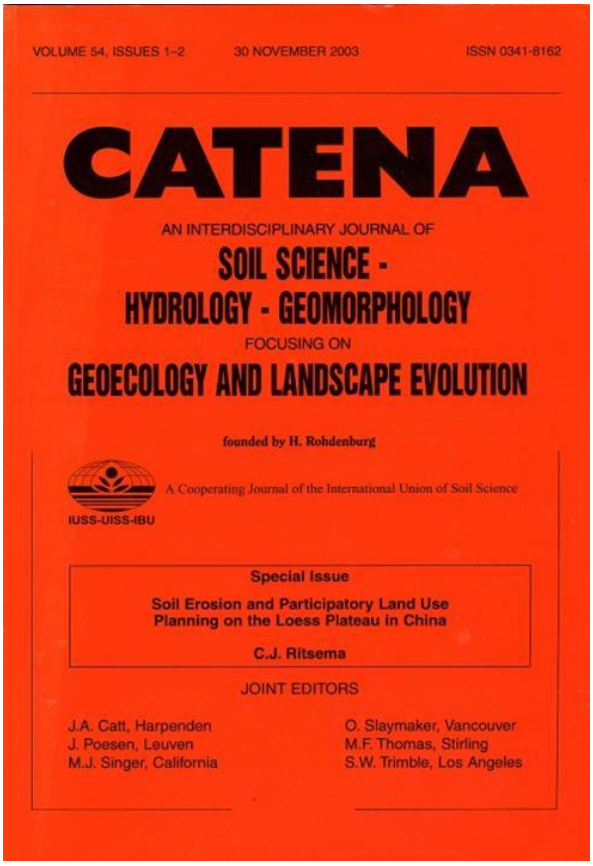
Picture 9: Comprehensive watershed treatment in 1999…

Picture 10: … and the same location in 2004.

Figure 3 Big changes on the Loess Plateau (Source: World Bank Report 34612)

- EROCHINUT `An interdisciplinary approach to reduce water, soil and nutrient losses by erosion in the agricultural Hilly Purple area, China, by combined use of participatory and modelling techniques'. This was an international 1.0 million Euro project, executed in collaboration with the Institute of Soil and Water Conservation (CN), Institute of Soil Sciences (CN), Soil and Fertilizer Institute (CN), the International Institute for Environment and Development (UK), and the Swedish University of Agricultural Sciences (SE). Besides regular contract deliverables, the project resulted also in a joint special issue in one of the leading scientific journals in this field (Soil and Tillage Research), containing around 8 research papers.

- DESIRE 'Desertification mitigation and remediation of land – a global approach for local solutions'. This was a 9.1 million Euro EU Integrated Research Project, consisting of 28 partner institutions from Asia (ISWC), Europe, USA, Australia, Africa, and South America. The project has been executed from 2007-2012. For more info, please, visit www.desire-project.eu. Main output consists amongst others of 3 special issues in high impact journals (Environmental Management, CATENA and Land Degradation and Development, respectively, with a total of 23 publications), and a synthesizing more practical oriented book for end-users (DESIRE for Greener Land).



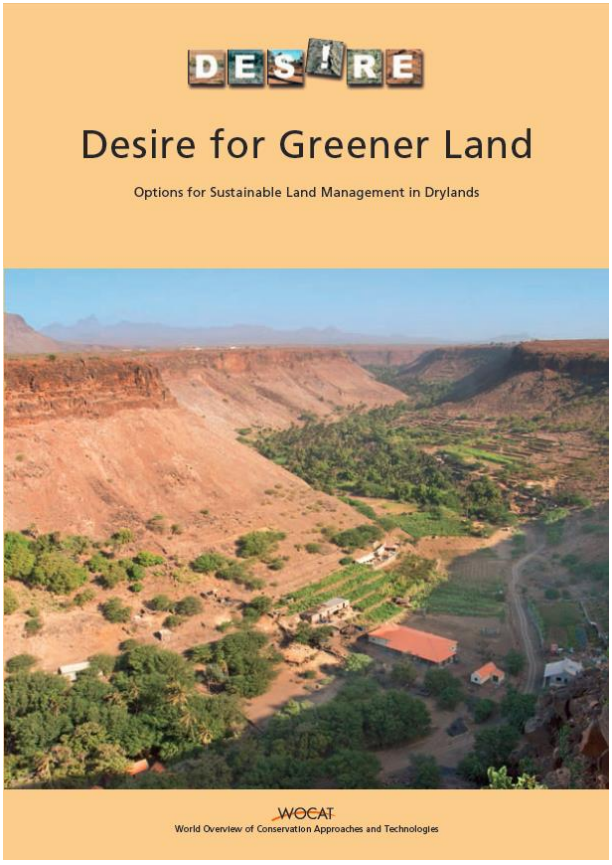


Figure 4 Examples of output from the EU-funded EROCHINA and DESIRE projects

- NWO-CAS-JSTP 'Development of strategies to improve hydrological and environmental conditions in the Wei River, China'. This is a 0.4 million Euro project, exclusively coordinated and executed by ISWC and Wageningen UR. The project runs from 2011 to early 2016, and will result in multiple PhD theses and publications of different postdocs (around 15 joint publications).

- iSQAPER 'Interactive soil quality assessment in Europe and China for agricultural productivity and environmental resilience'. This is a 5.8 million Euro project, bringing together 27 partners from Europe and China (amongst others ISWC). This recently started project will be executed during 2015-2020. For more info, please, visit www.isqaper-project.eu.

Figure 5 Plenary meeting of the DESIRE project at ISWC, Yangling, China

During the last 20 years, the joint collaboration between ISWC and Wageningen UR resulted in around 60 research papers with varying (co)authors, and other related output like numerous conference and workshop presentations, television documentaries (e.g. http://www.desire-project.eu/), targeted training sessions, excursions etc.

The forthcoming future

Officially acknowledging and formalizing the long-lasting collaboration between ISWC and Wageningen UR through signing of an official Memorandum of Understanding will provide the best possible basis for both organizations to continue the outstanding work in the near and long-term future.

Contacts

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