

CGIAR Research Program 5: Water, Land and Ecosystems (CRP5)



The global population is predicted to reach nine billion by mid-century. To feed the world in 2050 and beyond, we will need to intensify agricultural production. Many believe, however, that intensification will cause unacceptable harm to the environment, perhaps even undercutting the ecosystems that support agriculture.

The CGIAR Research Program on Water, Land and Ecosystems (CRP5) challenges this perspective. It examines how we can intensify agriculture, while still protecting the environment and lifting millions of farm families out of poverty.

CRP5, approved for funding in late 2011, combines the resources of 14 CGIAR centers and numerous external partners to provide an integrated approach to natural resource management research. The coordinating partner is the International Water Management Institute (IWMI).

The program focuses on the three critical issues of water scarcity, land degradation and ecosystem services. It will also make substantial contributions in the areas of food security, poverty alleviation and, to some extent, health and nutrition.

Conceptual framework

CRP5 examines how changes in external drivers affect production systems and how management responses in turn impact ecosystem services and the broader environment. It aims to determine how these changes will impact natural resources at basin and landscape scales, how to measure changes in critical ecosystem services and how to use this information to improve land and water policy decisions and management responses.

Portfolios

Within the broad topic of Water, Land and Ecosystems, we have identified five Strategic Research Portfolios (SRPs):

- Irrigated agricultural systems
- Rain-fed agricultural systems
- Resource recovery and reuse
- River basins
- Information systems

In addition to the five SRPs, we have established two cross-cutting themes that will influence and enhance our research:

- Ecosystem services
- Institutions and governance.

Within each SRP we will promote ecosystem resilience and minimize negative impacts on ecosystem services. We will seek to enhance, and increase the value placed upon, ecosystem services. In doing so, we will work to improve resilience and provide farmers and pastoralists with production systems that are better adapted to environmental change.

Regional setting

CRP5 will work initially in eight regions that are centered on large river basins:

Region	Basin
Southeast Asia	Mekong
South Asia	Indus and Ganges
Central Asia	Amu Darya and Syr Darya
Middle East	Tigris and Euphrates
West Africa	Volta and Niger
East Africa	Nile
Southern Africa	Limpopo and Zambezi
Latin America	Andes basins

Initial funding will be in the region of US\$75 million per year. Preliminary estimates suggest that at least 300 million people can benefit from the outcomes of CRP5 during the next 10 to 20 years. Additionally, the work on Resource recovery and reuse and rain-fed systems may help another 200 million poor people, including some in urban communities. By crafting new partnerships and enhancing existing relationships, CRP5 researchers will strengthen links with universities, national research institutes and global organizations.

Research under CRP5 will start in early 2012.

