



Picture: Nirmal Chandra Bepary

# Water and Food Security

Himalayan Adaptation, Water and Resilience



Picture: McKay Savage

*"To achieve food nutrition, growing more of the same staple crops will not be enough; we need agriculture to be climate and nutrition-smart. We must meet the needs of communities and nations in the shift of climate by opting for food systems that are diverse, efficient and resilient."*

*Kofi Annan at Global Panel on Agriculture and Food Systems for Nutrition annual meeting, Accra, 2016*

Climate change affects agriculture and food production in a number of ways, including through changes in temperature, rainfall, and climate extremes. To deal with the future weather conditions, information is needed on when and where water shortages are to be expected in order to adapt agricultural practices. Wageningen Environmental Research translates outputs from climate and socio-economic models into information on regional impacts on water demand and availability.

Research Program  
Sustainable Water Management

### Our water & food services

Water scarcity and related reductions in food production are a major threat for South-Asia. We provide tailor-made products to communicate the latest scientific insights on climate change impacts on agriculture. In interaction with stakeholders we support the design of the most appropriate adaptation strategies.

We offer core expertise to assist governments, agencies and farmer groups in identifying and implementing solutions:

- Assessing water availability for agriculture under a changing climate
- Optimizing agricultural, municipal and industrial water allocation and water saving practices under a changing climate
- Supporting agricultural development and agribusiness using public private partnerships
- Policy recommendations and evaluation for water management and food security

### Example: Himalayan Adaptation, Water and Resilience (HI-AWARE)

To enhance the adaptive capacities and climate resilience of the vulnerable communities living in the mountains and flood plains of the Indus, Ganges, and Brahmaputra river basins, through HI-AWARE, Wageningen is:

- generating science-based knowledge on the biophysical, socio-economic, gender, and governance conditions and drivers leading to vulnerability to climate change impacts in agriculture
- creating robust evidence to improve understanding of the potential of adaptation approaches and practices in agriculture
- develop stakeholder-driven and gender-inclusive adaptation pathways based on the up- and outscaling of institutional and on-the-ground adaptation innovations

#### Contact

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