



## Objective

**The project's aim is to develop and instigate adaptation options and strategies with people managing and living in salinity-affected agricultural landscapes in the southern Indus Basin in Sindh and southern Punjab.**

The objectives are to:

- Build scientific and policy capacity within Pakistan around salinity and land and water resources.
- Improved management of land and water resources to produce food more sustainably, while adapting to climate variability and mitigating the impacts of climate change.
- Improve food security and reduce poverty among smallholders and rural communities.

## Expected scientific results

- More explicit and quantitative incorporation of salinity into water management, including through systematic salt balances to complement water balances at the canal command scale.
- Improved understanding of the types and range of landscapes affected by salinity across the southern Indus Basin through mapping, modelling and management scenarios for more effective targeting of adaptation interventions across the range of contexts.
- Improved understanding of the impacts of seawater intrusion from monitoring, mapping, modelling, the design of management scenarios, and from selected interventions.
- Improved management and use of marginal quality groundwater for irrigated agriculture and for salt tolerant fodder and crops, and other uses.
- Improved local understanding of salinity measurement in relation to its impacts on crop and fodder productivity.
- New models for institutional arrangements that empower communities to plan for the future in adverse conditions.
- New insights into the benefits and constraints of undertaking multidisciplinary and transdisciplinary applied research, and how research outputs and outcomes can be co-produced through integrated efforts, including the co-creation of futures and planning strategies.

## Expected impact/outcomes

- Newly developed and existing knowledge about salinity in the southern Indus Basin of Pakistan available to Pakistan-based projects, programs and organisations relevant to agricultural development.
- Improved understanding of the opportunities for, and constraints to, current opportunities for adapting to salinity among community members and their institutional support networks.
- Increased capacity among individuals and groups (including women and youth) to plan their own futures for adapting well to salinity.
- Engagement between relevant government departments, policy makers, donors and other institutions, and support for locally and collaboratively determined adaptation planning and action, including through co-development of future research projects.

