

Irrigation – Impacts at a glance

Irrigated agriculture generates income, employment and food security. The investments made by KfW Development Bank on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ) help smallholder farmers to increase their income and produce good food at affordable prices. They also strengthen their climate resilience and help to avoid conflicts over water resources. Currently, the irrigation projects supported by KfW are achieving:

**598,123
households**

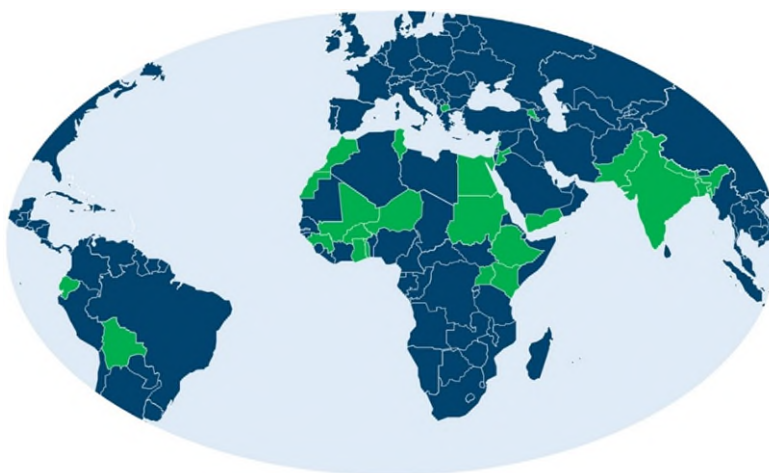
(approx. 2.99 million people)
benefit directly

**482,154
hectares**

new, modernized or
rehabilitated irrigation area

up to 276%
yield increases

up to 342%
income gains



Main Impacts

Productivity

- Smallholders can diversify their production, cultivate higher quality crops and sometimes extend cultivation into the dry season, which allows productivity increases of up to 276%

Income

- Particularly when changing from rain-fed farming to irrigation and with market access, smallholder farmers can substantially increase their income, in some cases more than double it
- More efficient irrigation methods, rehabilitated irrigation perimeters, or improved water management on agricultural land can also boost incomes

Employment

- Smallholder farmers – often temporarily underemployed – can reduce their underemployment
- Operation and maintenance staff is hired, and additional workers recruited during harvest times

- Other employment effects can arise for suppliers of seeds, fertilisers, machinery, in production groups and in food and feed processing plants

Nutrition & Health

- Irrigated vegetable gardens, often farmed by women, improve the health of families
- Irrigation can also increase the availability and quality of food in the region and thus also improve food security in our partner countries

Climate and Conflict Resilience

- Rural households are better protected against water insecurity and droughts
- Water efficiency measures can reduce water consumption
- Participatory community institution building helps to prevent conflicts over water resources
- In fragile contexts, irrigation development can support stabilization and conflict mitigation

Project examples

Kenya: Smallholder Irrigation Programme Mount Kenya (Phase I-IV)



8,276 households benefiting
3,024 ha irrigated area
Ø cost: 5,131 EUR/ha

- ◆ Promoting the transition from rain-fed to irrigated agriculture through small and medium perimeters (50-150ha)
- ◆ Innovative financing with 50% farmer's own contribution through local banks
- ◆ Relatively fast completion in 1-2 years per perimeters
- ◆ Small size and simple technical design make operation and maintenance easier for farmers
- Income increases of + 88 to 160%, mainly due to a shift from subsistence to cash crops (avocado, bananas, macadamia, papaya)

Mali: Support to the National Small-scale Irrigation Programme (REAGIR II)



25,940 households benefiting
10,359 ha irrigated area
Ø cost: 2,361 EUR/ha

- ◆ Construction and rehabilitation of irrigation perimeters
- ◆ Development of valley depressions for controlled flood irrigation
- Smallholder households incomes increased up to 342%, when changing from rainfed production to irrigated rice
- 1,870 women-led households benefit from the construction of irrigated vegetable gardens near the villages
- During the COVID-pandemic and the worsening of the security situation the project significantly contributed to stabilizing the livelihoods and food security of the population

Ecuador: Sustainable Management of Tungurahua Water Catchment Area



2,300 households benefiting
1,875 ha irrigated area
Ø cost: 6,400 EUR / ha

- ◆ Modernization of collectively managed irrigation systems
- ◆ Introduction of sprinkler and drip irrigation and establishment of a hydrometeorological monitoring system
- Average household incomes increased from approximately USD 180 to almost USD 420 (+ 233%), mainly as a result of increased fruit production (mandarins, blackberries, strawberries, avocados)
- Conflicts over water allocation have been significantly reduced in all ten supported project areas

Publisher

KfW Group

KfW Development Bank

Competence Center Economy, Jobs and Rural Development

Palmengartenstrasse 5–9

60325 Frankfurt / Main, Germany

Christiane.Ehringhaus@kfw.de

Antti.Seelaff_extern@kfw.de

www.kfw-entwicklungsbank.de

Photo Credits

Map: KfW

Picture 1: KfW / Anne Schönharting, OSTKREUZ

Picture 2: KfW / Michael Heiland

Picture 3: Embassy of the Federal Republic of Germany in Bamako, Mali