

the project's priority areas. In the long term local authorities are expected to be able to better plan the territory as a whole. "Niger must solve water shortage problems and reduce subsistence agriculture. Agribusiness, in particular, given its importance to the national economy (45% of GDP), can be an important sector to transfer NPR (Next Production Revolution) approaches that can increase productivity and, at the same time, environmental resilience, including precision agriculture and bio-economy."

TARGET COUNTRIES

ETHIOPIA
KENYA
MOZAMBIQUE
NIGER
NIGERIA
TUNISIA

TIMEFRAME

18 Months
(Apr 18 - Oct 19)



1ST GENERATION

21 Experts
selected among over
450 candidates

2ND GENERATION

270 Experts
selected by the
1st generation



NIGER
**PROMOTING SMALL-SCALE DIGITAL IRRIGATION
SYSTEMS TO BOOST AGRICULTURAL PRODUCTION**

EMERGING AFRICAN INNOVATION LEADERS
G7 exchange & empowerment program for enabling innovation
within the next production revolution

AID 11346



PROMOTING SMALL-SCALE DIGITAL IRRIGATION SYSTEMS TO BOOST AGRICULTURAL PRODUCTION IN NIGER

Issue addressed

- Food insecurity
- Poor water management

Description

The project aims to develop small-scale irrigation systems designed and managed with digital technologies to boost agricultural production. The project is targeted at groups of individuals who have access to irrigable land and intend to improve its productivity. The project will give priority to groups and associations of women who practise agriculture out of season and do not have sufficient access to irrigation water. The project aims to operate in three regions in Niger: Diffa, Dosso and Tillaberi. These areas ensure availability of irrigation water. Large-scale irrigation areas for rice production along the Niger river have been developed in the Dosso and Tillaberi regions, while vegetable and legume production is encouraged along the Lake Chad shoreline in the Diffa region. Digital technologies support water infrastructure development both in the preparatory phase and in the operational phase. In the preparatory phase low-cost land analysis technologies process both global multispectral data collected by the Copernicus system, and local data collected on-site by drones. In the operational phase, technologies help monitor and regulate water distribution efficiently. Irrigation system planning is therefore adjusted according to land characteristics, hence allowing

for optimisation of water consumption and effective irrigation control in the area of interest.

Opportunities for Italian companies

Italian companies can put forward innovative infrastructure solutions and advanced analysis technologies to monitor and control the territory via satellite data and drones. The key factor is the affordability and the social and environmental sustainability of technologies in the Niger context. Italian companies and research centres can also train Niger workforce on digital technologies for irrigation and infrastructure, both on-site and in their headquarters in Italy.

Strategic value

Niger currently suffers from an extreme shortage of infrastructure. It is not surprising that the government launched an ambitious three-year socio-economic development plan for 2017 to 2020 including substantial infrastructure projects: the Cotonou-Niamey-Ouagadougou- Abidjan railway, a pipeline for the export of crude oil, the Salkadamna energy project and the Kandadji dam. The country is therefore very receptive to new solutions that combine real benefits and low development costs. By transferring digital irrigation technologies to farmers and expanding irrigated land, agricultural production is expected to increase, helping to secure families' basic needs. The project will assess the inventory of potential and existing irrigable sites along with technology transfer. The tangible result will be the modernisation and renovation of small-scale irrigation infrastructures, existing water tanks and irrigation systems in