

VIETNAM

Sharing and better distributing the capricious waters of the Red River



AFD is addressing the devastating dangers of climate change in the Mekong Delta regions by helping the region better protect densely populated territories from climate excesses, particularly floods, increase crop productivity by modernizing irrigation systems and creating new infrastructure, and bring about a spirit of cooperation and solidarity on water use in the basin. A climate change adaptation project.

CONTEXT

The turbulent and unpredictable Red River forms the backbone of northern Vietnam. With its tributaries, it provides essential irrigation for rice-growing and a waterway between the Gulf of Tonkin and southern China. But this river also causes natural disasters. During the wet season, it has many flash floods, which can be devastating, as in 1945 and 1971. Downstream, the river's waters can rise very rapidly, as a result of the combined effect of heavy rainfall and strong tides. Some 30 million Vietnamese (20 million in the delta area) live under the threat of the “soaring dragon”, in the words of the geographer Pierre Gourou.

The Red River crosses Hanoi and Haiphong, two of the three most populous cities in the country, and its delta accounts for over a quarter of national GDP and 20% of national rice production. In addition to the meteorological dangers, there are the ongoing and future consequences of climate change. A one degree increase in the average temperature would cut rice yields in the basin by 10%. Half of the land on the delta is below an altitude of two meters and is therefore directly threatened by the rising sea levels.

In addition, the construction of hydroelectric dams upstream – on the other side of the Chinese border – disrupts the Vietnamese part of the Red River. Finally, growing urbanization modifies stormwater runoff and increases flood risks. In the Red River Delta, there is water everywhere, but it is poorly distributed. Its distribution needs to be redefined because of the obsolete irrigation infrastructure, cumbersome and centralized bureaucracy and a lack of consultation between the various actors, territories and even countries (Vietnam and China).

DESCRIPTION

The project has a total cost of some EUR 135m and is being financed by the Government, the Asian Development Bank

31/08/2011 30/04/2018
Project start date Project end date

 Fleuve Rouge, Vietnam
Location

 Agriculture and Rural Development , Water and Sanitation , Climate sector(s)

 Loan
financing tool(s)

 20 000 000 EUR
Financing amount

 7 years
Duration of funding

ACHEVÉ
Status

Red River region
Beneficiaries

(AsDB) and AFD. It comprises three main components:

1. Water Resources University

- The project is financing part of the first construction phase for a new campus for the Water Resources University (WRU) in the Chuong My District in Hanoi and the overhaul of its teaching based on disciplines that integrate the new challenges facing the country, at the intersection of water and climate change issues. This component is fully financed by the Asian Development Bank and Vietnamese Government.

2. Capacity building for actors in the Bac Hung Hai area

- The project is contributing to building the capacities of water management organizations in the Bac Hung Hai area with the financing of the first phase of a Supervisory Control and Data Acquisition (SCADA) system. The system will be managed centrally by the Hai Duong Irrigation Company, which will thereby be able to measure in real time the level and drainage of water in key places in the system. Furthermore, a pilot operation in Gia Binh District (Bac Ninh Province) is contributing to building/strengthening the capacities of actors at the level of the weakest link (agricultural production cooperatives in villages), as well as to strengthening water management institutions by involving all actors (from the Irrigation Management Company to village cooperatives) in the management of a Local Infrastructure Development Fund (LIDF). Finally, the project is participating in the study conducted by WRU and BRL Engineering on the consequences of climate change in the Red River Delta and the resulting adaptation measures required (communication made at COP 21). AFD is financing, in the form of a grant, the pilot operation in Gia Binh District and the study on the consequences of climate change in the Red River Delta.

3. Construction and rehabilitation of water infrastructure in Bac Hung Hai

- The project is financing the construction of eight new pumping stations and the rehabilitation of two existing stations. The bulk of the investments concern the drainage of the area, whose total flow after the completion of works will be increased by 135.2 m³/s. The catchment area of the stations to be rehabilitated or created stands at some 49,000 ha. Only one station involves pumping water for irrigation in part of Bac Ninh Province. Some 11,200 ha will benefit from a doubling of the water flow available for irrigation. At an equal irrigation or drainage flow, the project will drain an additional surface area of some 35,000 ha and irrigate an additional surface area of 5,600 ha.

AFD's financing covers the entire cost of the investments planned in Bac Ninh Province and, in order to make the best possible use of the available funds, the cost of an investment in Hai Duong Province and another in Hung Yen Province.

Intervenors and operating method:

The Ministry of Agriculture and Rural Development is the project contracting authority and is delegating the authority to a Central Project Management Unit in the Central Project Office. The implementing agencies include the Irrigation and Drainage Management Company of Bac Hung Hai, the Provincial People's Committees and the Departments of Agriculture and Rural Development. A team of consultants, INROS LACKNER AG, recruited to assist the contracting authority and support each project management unit responsible for project management. Progress: 95% of the works have been completed. Three of the five structures have been fully completed, one of which has been operational since 2015 (managed by the Water Structure Management Company of Nam Duong).

IMPACTS

- Modernization of the water network in Bac Hung Hai: physical (construction and rehabilitation of infrastructure), managerial and “institutional” (improvement in the principles of water management and the management of the water itself).
- Improvement in water quality on the entire network and in the general environment.
- Improvement in living conditions for the population of the Red River Delta and more specifically the Bac Hung Hai plot, the largest plot in the delta.