

# Evaluation Summary

## PPINK : Pilot Participatory Irrigation from the Nam kata

Country: **Lao PDR**

Sector: **Irrigation / Rural Development**

**Evaluator:** Christopher Flint and Team

**Date of the Evaluation:** August to December, 2023

### Key data on AFD's support

**Project number:** CLA1081

**Amount:** 4,500,000 Euro

**Disbursement rate:** 100 %

**Signature of financing agreement:** 1 June 2016,  
with an amendment on 11 June 2021

**Completion date:** Last disbursement on 31-12-23

**Total duration:** 7.5 years



### Context

The PPINK project is located in Bualapha District, the easternmost District of Khammoune Province in central Laos. It is just west of the Hin NamNor proposed world heritage site, close to Vietnam, and one of the poorest regions in the country.

The economy of Bualapha is based on agriculture: rice, crops and some cattle. Mining is increasingly important, while nature tourism has good potential.

The area is populated largely by Mon-Khmer ethnic groups. In the past, access to the area has been difficult, but has recently seen much improvement.

### Actors and operating method

The implementation of the project was delegated to the **Department of Irrigation**, Ministry of Agriculture and Forestry (Vientiane) and the **Irrigation Section of the Provincial Agriculture and Forestry Office** (Khammoune Province).

Locally, the project was implemented through **District Agriculture and Forestry Office of Bualapha District**.

The Feasibility Study was conducted by a Lao consulting company. SOFRECO was then contracted as the TA for component 2 and 3, with IRD and CIRAD engaged to provide specialist TA. Société du Canal de Provence (SCP) was contracted to develop the ESMP, to survey and design the irrigation system, then monitor construction, as per component 1. Construction was undertaken by a local construction company.

### Objectives

The **Project Objective** was to fight poverty and increase agricultural production in the target villages of Bualapha district, Khammouane province, through:

- The Nam Kata Irrigation System constructed and operational;
- Improved farming systems in the target villages;
- MAF disseminating the project approach and lessons learnt in future similar projects.

**The Projects Expected Outputs were:**

#### Component 1: Infrastructure

- A new weir and rehabilitated/expanded irrigation network;
- Social and environmental impacts assessed and mitigation measures implemented.

#### Component 2: Accompanying measures

- Increased PAFO/DAFO capacity to support the WUG and agricultural extension.
- A WUG established and managing the irrigation scheme.
- Operation and Maintenance (O&M) procedures used.
- Village Development Plans designed by villages.
- The Village Development Plans implemented: improved farming techniques, crops diversification and marketing.

#### Component 3: Monitoring and capitalization

- Strengthened PAFO/DAFO capacity to undertake M&E/
- Project approaches/results are capitalized, disseminated.

## Performance assessment

### Relevance (A – very satisfactory)

Irrigation System rehabilitation and construction are priorities in the strategies and plans of the Ministry of Agriculture and Forestry and its Department of irrigation, and the Provincial And District Irrigation Service. Boualapha District is one of the poorest District in Central Lao, and villagers much appreciate donor efforts to provide them with irrigated agriculture opportunities and related livelihood improvements.

### Effectiveness (C - somewhat satisfactory)

The project was moderately effective. While a solid irrigation network has been constructed, some components are not complete (some canal tail structures and the tertiary canal network) and repairs are required to some sections or structure.

While the initial aim was to provide irrigation water to a command area of around 300 ha, this was revised down to 145 ha. However, in the 1<sup>st</sup> two seasons of wet season supplementary irrigation, only 90 hectares received irrigation water.

A WUG was established, but initially has not proved to be effective in water management and distribution, or at least documentation of the same. This may be partly due to issues in the irrigation network itself.

Village Development Plans were not drafted or implemented, although community agricultural development plans were made.

The agricultural extension and trialling activities were relatively effective during the project period, but most were conducted before the irrigation water started flowing. In addition, they were not focussed in the irrigation area, they have not been effective in developing productive irrigated agriculture inside the command area where rice yields remain low. The monitoring and evaluation of the project has not been effective. There was no mid-term evaluation.

### Efficiency (C - somewhat satisfactory)

While the project period was planned to be 4 years, actual duration was 7.5 years. One reason was the covid lockdown that delayed progress by about 1 year. The main reason, though, was that the initial feasibility study and then the survey and infrastructure design were faulty, and had to be partly repeated, leading to inefficiencies.

### Impact

(No rating a) It is too early to evaluate impact as the project recently finished in September 2023 and water distribution and the irrigated agriculture have yet to be fully developed. Nonetheless, the project should increase the rice production in Boualapha District by about 100 tonnes per year, grown by around 90 families. Other farmers will earn income by providing food for the local population from wet and dry season vegetables and crops, from cattle grazed on forage plots and from fish grown in the rice fields and the irrigation reservoir.

### Sustainability (B – satisfactory)

Both the weir and the irrigation canals are solidly constructed, providing a good foundation for long-term sustainability, contingent upon timely maintenance and repairs.

### Added value of AFD's contribution (B - satisfactory)

The added value of AFD's contribution primarily lies in the mobilization of French TA expertise and the experience of AFD staff in Laos.

## Conclusions and lessons learnt

Many lessons have been learned, including:

An inadequate understanding of a preceding irrigation system often leads to the failure to apply the lessons learned from it in improving the planning and design of subsequent irrigation projects.

Insufficient quality, detail, and consideration of local context in a feasibility study, as well as in subsequent survey and design work, can result in later challenges in the functionality and utility of the irrigation system. Similarly, an unacceptable feasibility study should not be approved. Furthermore, survey and design work that is challenging for stakeholders to review and provide input on should also be rejected.

Failure to adequately study and map the soil quality, particularly water infiltration rates, and the cadastre of the command area can lead to significant flaws in the design of the irrigation system.

Successfully involving beneficiary villagers in crucial aspects of irrigation system design is challenging, yet failure to do so may compromise the optimal functioning of the IS.

If the DAFO and the WUG do not have (a) a good and appropriate O+M Manual, (b) a good map of the irrigation system, and (c) a technically correct and user friendly methodology to implement water distribution and management, then the operation of the irrigation system will be less than optimal, and good yields over the whole IS will not be achieved.

Without data and understanding of river flows and rainfall patterns, effectively managing water in the NKIS for optimal distribution and achieving good rice yields will be challenging. Also, providing explanations for seasonal differences in rice yields or assessing the influence of climate change will remain difficult.

If the DAFO lacks sufficient equipment and funds to carry out the work, its ability to manage the NKIS alongside the WUG is significantly diminished, resulting in the irrigation system not reaching its full potential.