January 2024

Investing with impact

Insights from the baseline stage of a water project's impact evaluation in Madagascar

The **Evaluation function (IG/EV) of the European Investment Bank Group (EIB Group)** promotes accountability and learning through evidence-based assessments of the Group's performance and results. Since 2021, IG/EV has been coordinating a rigorous impact evaluation (IE) for a water project in Madagascar.

THE PROJECT

The **Jirama Water III-Prioritaire (JWIII-P) project** aims to:

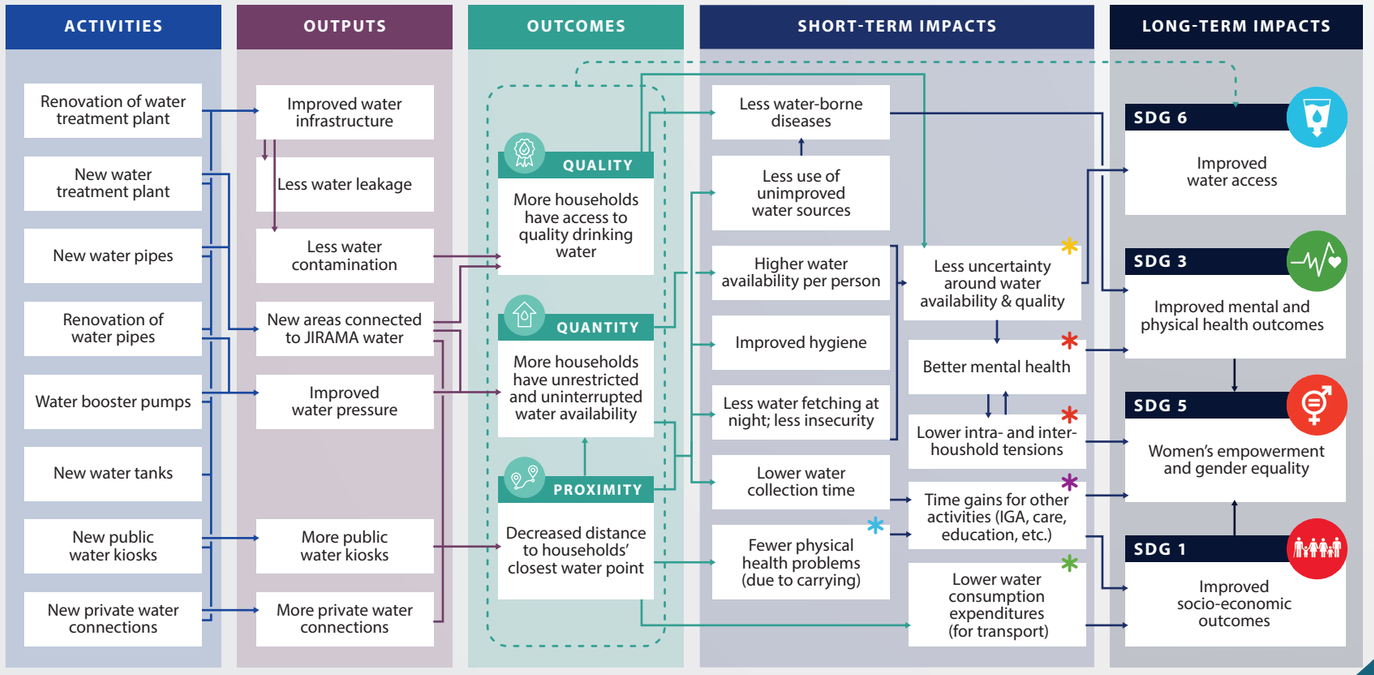
- Improve safe drinking water availability in Antananarivo to 87% coverage
- Improve well-being of the population
- Reduce poverty
- Supporting inclusive growth
- Improving the institutional framework (JIRAMA, WSUP)

The interventions of the JWIII-P project

- Renovation of the existing water treatment plant
- Construction of a new treatment facility
- Refurbishment of existing water pipes network
- Development of a new pipeline network
- Construction of new water tanks
- Installation of water booster pumps
- Establishment of ±400 water kiosks
- Establishment of ±5000 private water connections

THEORY OF CHANGE FOR THE JWIII-P PROJECT

Developing a Theory of Change (ToC) is a crucial step in designing an impact evaluation, as it helps align stakeholders on measurable outcomes, as well as on the timing and methods for assessing them. A ToC provides a clear visual representation of the entire causal chain showing how a program is expected to achieve its goals.



BASELINE MEASUREMENT

to manage expectations in terms of impact and its magnitude

Access

Water kiosks serve as the main source of water for urban households *(53%)*, peri-urban households mainly rely on **protected wells** *(40%)* while access to **private tap** remains scarce *(23% in urban area and 7% in peri-urban area)*

Proximity

Households spend on average **one hour per day** fetching water

Gendered burden

79% of water fetchers are **women**

Quality

Relatively high with areas for improvement

Quantity

21.3 L per day*

Much below recommended levels (40L per day) due to frequent water cuts and low pressure

**for households fetching water outside their house*

Reduced water insecurity for a subset of households
Baseline data shows that an improvement in water availability might benefit in particular households in peri-urban areas

Time gains

- Especially significant for households transitioning from fetching water at public kiosks to having private water connection at home
- Particularly relevant for women, who are primarily responsible for water collection
- Access to water throughout the day, reducing the burden and insecurity associated with water fetching at night
- No significant effect on education is expected, as water chores are not a major reason why youth/children miss school

Moderate alleviation of mental stress
Approximately 10% of the respondents reported experiencing intra-household tensions related to water issues. For those households, improved water availability has the potential to enhance beneficiaries' well-being

Water consumption expenditures
Some households may benefit from lower costs, but potential tariff increases could offset part of these gains

Physical health problems
Approximately 82% of respondents report experiencing at least one physical health problem related to carrying water from the source to their dwelling

WHAT IS IMPACT EVALUATION?

An impact evaluation rigorously measures the observed changes or 'impacts' caused by an intervention, comparing outcome changes over time with and without intervention. It ensures accountability and helps understand what works, what doesn't, why and for whom.

This baseline study uses primary quantitative and qualitative data collected in Antananarivo.

CONTRIBUTING TO THE SUSTAINABLE DEVELOPMENT GOALS (SDGs)

SDG 6: Improved Access to Water

The JWIII-P project is set to significantly improve clean water access for Antananarivo's population.

SDG 3: Improved Mental and Physical Health Outcomes

The JWIII-P project will improve both mental and physical health outcomes

SDG 1: Improved Socio-Economic Outcomes

The JWIII-P project plays a more indirect role in enhancing socio-economic conditions. Time saved from water collection - up to 30 hours per month for households gaining private connections - can be reallocated to income-generating activities or paid employment, particularly benefiting women.

SDG 5: Women's Empowerment and Gender Equality

The JWIII-P project has the potential to promote greater gender equality and empower women to take more active roles in their households and communities.

MEASURING JWIII-P'S IMPACT

NEXT STEPS

- Gather post-intervention data
- Confirm control/treatment classifications
- Reflect on the ToC and assumptions, adapting qualitative tools as needed
- Ensure consistency in follow-up: same households, same enumerators or survey firm
- Measure the impact of JWIII-P

Baseline offers an important learning opportunity. The analysis of qualitative and quantitative data helps validate the project's Theory of Change. More importantly, it provides a basis for managing expectations regarding the type of impact and its magnitude that water infrastructure interventions might have in specific context.

ADE Evidence for better policy | Leibniz Universität Hannover | UNU MERIT

10-04-2025 | This infographic was made by Job Bos | www.jobbos.nl