REPOBLIKAN'I MADAGASIKARA
Fitiavana - Tanindrazana - Fandrosoana

SUSTAINABLE ENERGY FOR ALL



PROJECT NOTE

Agricultural Cold Chain Analysis and Prioritization (AgCAP)

OBJECTIVE

The Madagascar AgCAP implementation enhances the cooling potential identified in the Integrated Energy Plan (IEP) into settlement-level analysis. It equips policymakers, development partners and investors with evidence to guide investments into sustainable cooling for agriculture and fisheries.

CONTEXT AND CHALLENGES

With an electricity access rate of just 42.5%[1] in 2025, compounded by an often unstable and unreliable power supply, more than 20 million people, primarily in rural areas, remain exposed to risks associated with the lack of access to cooling solutions. Over 30% of perishable products are lost across Madagascar's main value chains[2], while modern cold chain equipment could prevent up to USD 230 million in annual losses across four value chains, according to PEI[3]. However, the lack of reliable data continues to hinder investment.

PARTNERS

The Madagascar AgCAP project was implemented in partnership with the Government of Madagascar, under the leadership of the Ministry of Energy and Hydrocarbons (MEH). It was steered by an Intersectoral Working Group including MEH, MiASA, MINEL, MPEB, MEDD, MIDSP, ADER and INSTAT, as well as several development partners (UNDP, WFP, UNIDO, FAO, GIZ and WWF).

WITH SUPPORT FROM

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Confédération suisse
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[1] Energy Sector Management Program. Tracking SDG7: The Energy Progress Report

[2] https://www.fao.org/in-action/seeking-end-to-loss-and-waste-of-food-along-production-chain/en/

[3] SEforALL, Madagascar IEP, Cold Chains component

FOR MORE INFORMATION

OUTPUTS

- **Nationwide agricultural cooling hotspot analysis**
  - Characterized over 14,500 settlements
  - 4,000 high-potential sites for cooling in fisheries
  - 2,900 high-potential sites for postharvest cooling
  - Only 15 percent of high-potential sites electrified
- **Fisheries and off-grid productive use case studies**
  Identification of high-potential sites for sustainable cooling in small fisheries, and for agricultural cooling as a productive use of energy at off-grid solar hubs in the Great South.
- **Pre-feasibility study of 10 sites**
  Pre-feasibility at priority sites was undertaken in southern Madagascar through data collection and a cooling solution for each was recommended. Solar ice production appeared as most viable.
- **AgCAP Insights Platform**
  All results are publicly available in English and French through an interactive platform.

APPROACH

- **Project governance**
  - Intersectoral Working Group for oversight and co-development
  - Consultations with government, development partners and private sector
  - Preliminary results and final co-construction workshops
- **Data collection and analysis**
  - Agricultural, fisheries, market, infrastructure, environmental and socio-economic indicators at settlement level
  - Primary data collection at identified sites
- **Geospatial cooling potential identification**
  - Settlement-level spatial analysis
  - Cooling potential indices
  - Multi-criteria prioritization for specific use cases
- **Validation and pre-feasibility**
  - Technical, market and financial assessment of 10 sites
- **Dissemination and capacity building**
  - All results on the AgCAP Insights Platform
  - Summary report and companion pre-feasibility study
  - Training on the AgCAP model and Insights Platform usage