



A Proposal for

# **PROGRAMME SEKOLY: ANTAHOVARY PRIMARY SCHOOL**

---

**Improving health and education in rural Madagascar**

November 2023

## Introduction

---

SEED Madagascar (SEED) is currently seeking *£70,957* for a *seven-month project that aims to improve the quality of health and education at Antahovary Primary School*. SEED will construct *a fully furnished three-classroom school building, five gender-segregated latrines complete with handwashing stations and a menstrual hygiene management (MHM) facility, teachers' accommodation, and provide a 10,000-litre rainwater harvesting system*. The provision of infrastructure will be complemented by sustainable water, sanitation, and hygiene (WASH) education, delivered to students and teachers through a train-the-trainer model. The *installation of a solar system on the school site* will provide the school population as well as community members with solar energy. SEED will also *offset the carbon emissions of the project* through the development of a community-managed tree planting site.

## Context

---

### Education and Water, Sanitation, and Hygiene in Madagascar

Ranking 173/191 on the Human Development Index, *Madagascar remains one of the poorest and least developed countries in the world*.<sup>1</sup> Children bear the brunt of this burden, with over 70% of Malagasy children living in poverty.<sup>2</sup> *Over 900,000 children are not attending school*, and only 63% complete primary school.<sup>3</sup> These issues are amplified in rural schools across Madagascar's under-resourced Anosy region, where 51.5% of six to 10 year-olds have never attended school.<sup>5</sup>

Moreover, it is estimated that *6,900 Malagasy children die annually from WASH-related diseases*, though in some instances this figure can be almost double.<sup>6</sup> Countrywide, 81% of schools have no water service, and a staggering *97% of the Anosy population do not have access to basic sanitation*.<sup>6</sup> Insufficient or non-existent WASH infrastructure in schools contributes to the transmission of diseases, whilst impeding academic achievement.<sup>7</sup> Female students are further disadvantaged due to a lack of MHM facilities, which prevents them from safely managing menstruation in school, exacerbating school absenteeism.<sup>8</sup>

### Antahovary Primary School

Antahovary Primary School exemplifies the Anosy region's education and WASH challenges. The isolated rural community of Antahovary is located a 15-minute walk from the nearest road – which is only accessible to vehicles with four-wheel drive – and reaching the village requires a river crossing. The previous wooden school building was destroyed by a fire in January 2021. At present, the school has no education infrastructure. Five teachers and 150 students are temporarily using a three-metre square room in the Village Leader's house as a classroom. Due to overcrowding, student grades take turns receiving lessons, significantly reducing students' classroom time. The youngest four grades attend only half-day classes, with the oldest grade being the only students able to receive full-day lessons to prepare them for their final exams. The 25 preschool students attend school under a tree in front of the building, and as a result are unable to attend when it rains. Before the fire destroyed the original school building, Antahovary Primary School hosted 250 students. Approximately 100 students have dropped out over the past two years due to the limited classroom space, as well as parents' reluctance to send their children to a school that is currently being held on private property.

Students and teachers are unable to adopt healthy WASH behaviours due to the school's lack of WASH infrastructure. Having no sanitation facilities inhibits privacy for all, particularly for those who are menstruating and cannot practice safe MHM at school. Students rely on an unprotected and contaminated water source located off the school site. The absence of a functioning onsite water source and handwashing facilities further prevents students and teachers from adopting health-promoting habits. These poor WASH conditions contribute to rates of open defecation in the community, which can contaminate water points and increase the risk of communal disease transmission, exacerbating the already difficult conditions of having very limited access to health services.



*The Village Leader's house being used by the school (left), interior of the small room being used for classes (right).*

## Proposed Project

---

SEED aims to address these challenges by conducting a seven-month construction project at Antahovy Primary School. This project intends to improve the education and WASH environment of the school by achieving the following outcomes:

---

### **Outcome One:**

Enable 150 students to attend school full time through the construction of a fully furnished three-classroom school building.

### **Outcome Two:**

Improve staff absenteeism by constructing onsite teacher accommodation.

### **Outcome Three:**

Improve WASH access for 150 students and five teachers through the installation of a 10,000-litre rainwater harvesting system with handwashing stations.

### **Outcome Four:**

Improve gender-equitable sanitation for 150 students and five teachers through the construction of five gender-segregated ventilated-improved pit (VIP<sup>a</sup>) latrines and an MHM facility.

### **Outcome Five:**

Increase WASH knowledge and behaviours amongst students and teachers through the delivery of WASH education sessions and the establishment of a school WASH committee.

### **Outcome Six:**

Provide the school as well as wider community with green solar energy through the installation of a solar system powering 96 power banks and LED lights.

### **Outcome Seven:**

Offset project-related carbon emissions through the establishment of a community-managed tree planting site.

---

<sup>a</sup> VIP latrines are designed to increase air circulation, minimising smell and mitigating the presence of disease-transmitting flies.



*A three-classroom school recently built by SEED (left), the interior of a SEED-built classroom with new desk-benches (right).*

## **Classroom Infrastructure**

At Antahovary Primary School, SEED will construct a fully furnished three-classroom school building. The construction of new classrooms will provide 150 student spaces, improving the existing learning environment and enabling students to attend full-day classes. In response to widespread cyclone damage to schools in southeast Madagascar in early 2022, the construction of the school building will include the addition of a cyclone-resistant design to reinforce the roof and classrooms against adverse weather conditions.

## **Teacher Accommodation**

SEED will construct teacher accommodation at the school. This onsite housing aims to support teacher livelihoods, minimise staff absenteeism, and enhance school management and security. Teachers' capacity to report to school without fail and on time has shown to be highly associated with the distance between their home residence and work, making the provision of quality onsite accommodation a key strategy for increasing teacher attendance.<sup>9</sup>

## **Water Provision**

SEED will facilitate the installation of a 10,000-litre capacity rainwater harvesting system at Antahovary Primary School, which when full provides two months' worth of clean drinking water without need for replenishment. The rainwater harvesting system will also supply running water to the handwashing stations and MHM facility, providing access to an onsite water source for students and teachers.

## **Latrines, Handwashing, and MHM**

SEED will construct five gender-segregated VIP latrines to support the school's growing population. This will reduce the student-to-latrine ratio well below the national ministry guideline of 50:1.

Handwashing stations will be constructed at the school, equipped with behavioural 'nudges'<sup>b</sup> to encourage students to adopt positive hygiene practices. SEED will also construct an MHM facility which will provide students with a safe space to manage their menstruation at school with privacy and dignity.

---

<sup>b</sup> Nudges are environmental features that are created to 'nudge' a person's decision-making and encourage health-promoting behaviours, such as paths with painted footprints leading from latrines to handwashing stations, and WASH murals with messaging painted on latrines and MHM facilities which encourage their use.



*SEED-built latrines complete with behavioural 'nudges'.*

## **Water, Sanitation, and Hygiene Education**

To complement the provision of infrastructure, SEED will deliver WASH education sessions to teachers and students using a train-the-trainer approach, designed to encourage the use of facilities and promote healthy behaviours beyond project end. WASH education will include information on water treatment, handwashing, latrine use and maintenance, as well as guidance for use of the MHM facility.



*SEED's WASH Officer conducting WASH education sessions with teachers.*

## Project Masoandro<sup>c</sup>: Solar Energy Provision

SEED will partner with [Jiro-VE](#), a Madagascar-based social enterprise specialising in solar installation and service provision, to facilitate the installation of a 1200-watt solar system and light library<sup>d</sup> at Antahovary Primary School. The light library charges 96 portable power banks per day with attachable LED lights available for rent, providing the community of Antahovary with access to affordable and clean energy. This enables activities such as studying and doing homework after dark without the need for kerosene lamps, which are more expensive and contribute to poor health outcomes. Antahovary Primary School will receive two free-to-use power banks and LED lights to be used at the teachers' discretion, including to grade work and lesson plan outside school hours, as well as to increase security on the school site.



*Solar system installed on a school roof (left), light library at a school site (centre), Jiro-VE power banks (right).*

## Sekoly Maintso<sup>e</sup>: Carbon Offsetting Education Infrastructure

The production and transportation of building materials to school sites, produces carbon dioxide emissions that negatively contribute to climate change. This disproportionately affects the communities we work with in southeast Madagascar, like Antahovary, where there are increasingly unpredictable and adverse weather patterns, including cyclones, floods, and droughts. Recognising our responsibility to reduce carbon emissions and protect the environment, SEED's Project Sekoly Maintso aims to reduce the carbon footprint of school constructions and repairs by offsetting the carbon emissions of all recent and future school builds.

### Sustainability

Following project completion, the school will be responsible for managing all infrastructure, which has been designed to minimise maintenance costs. SEED will establish a WASH maintenance committee and provide infrastructure management training, enabling committee members to coordinate repairs if necessary. The integrated train-the-trainer approach will enable the school to sustainably and autonomously use infrastructure and deliver WASH education sessions. SEED will also organise an electricity management committee within the community, in order to ensure sustainability of the solar energy provision and oversee all light library operations.

## SEED's Capacity to Deliver

SEED is an award-winning, holistic international development charity that envisages communities and ecosystems thriving across Madagascar. SEED has over 15 years of experience responding to the need for improved education infrastructure and access to WASH in the southeast of Madagascar.

<sup>c</sup> Malagasy for sun.

<sup>d</sup> Kiosk constructed on the school site where a franchisee selected from the community runs all solar operations.

<sup>e</sup> Malagasy for green school.

The Sekoly Programme has a history of improving design approach in response to localised needs. In 2011, SEED moved from building wooden schools to durable concrete buildings, providing more sustainable weather-resistant learning environments. Responding to the challenge of teacher absenteeism and progressively addressing the impacts of gender and sanitation on students' education, each school build includes teacher accommodation, gender-segregated latrines, MHM facilities, and handwashing stations.

Access to water provision has adapted from primarily focusing on groundwater wells to including rainwater harvesting systems, whilst WASH education sessions and 'nudges' have progressed to reinforce healthy WASH behaviours. Since 2021, SEED has pledged that going forward all school projects will be carbon neutral with a community-managed tree planting site offsetting construction and transportation emissions.

In 2023, SEED piloted its first solar project in two school sites, providing solar energy to students, teachers, parents, and the wider community. Going forward, Project Masoandro will be incorporated into the Sekoly Programme and will be scaled up across multiple sites in the region of Anosy.

Effective Monitoring, Evaluation, and Learning (MEL) is a priority for SEED. An MEL Framework informs design of MEL approaches tailored to each project, supported by a dedicated MEL Committee. SEED uses industry-standard methodologies to monitor and analyse impact, and responds to emerging needs as they arise, whilst keeping donors regularly informed of progress.

## Summary

---

Programme Sekoly: Antahovary Primary School aims to tackle two serious barriers to development: access to quality education, and clean water and sanitation. These have been highlighted as priorities by the UN Sustainable Development Goals 4 and 6, respectively. This project also contributes to the long-term goal of achieving a net-zero contribution to climate change by seeking to offset SEED's carbon footprint.

To achieve these goals, SEED will construct three classrooms, teacher accommodation, and five latrines complete with an MHM facility. SEED will also facilitate the installation of a rainwater harvesting system with handwashing stations. This will be complemented with WASH education delivered through a train-the-trainer model to sustainably improve students' knowledge and behaviours. The provision of a solar system and light library onsite will supply clean energy through the rental of rechargeable power banks and LED lights. SEED will offset the carbon footprint of the project by establishing a community-managed tree planting site.

The project will ultimately enable students at Antahovary Primary School to gain an education in a safe environment with dignity.

## Budget Overview

Programme Sekoly: Antahovary Primary School	Budget Total MGA	Budget Total GBP
Accommodation and Per Diems	16,370,000	3,274.00
Staff Accommodation and Per Diems	16,370,000	3,274.00
Activities	131,405,000	26,281.00
Carbon Offset Planting Site	33,000,000	6,600.00
Handover	800,000	160.00
Monitoring, Evaluation, and Learning	5,100,000	1,020.00
Project Launch	1,050,000	210.00
Rainwater Harvesting System	14,000,000	2,800.00
Solar System	75,000,000	15,000.00
WASH Education	2,455,000	491.00
Administrative Costs	4,240,000	848.00
Communication Resources	4,240,000	848.00
Equipment, Materials, and Resources	110,703,500	22,140.70
Annealing wire	720,000	144.00
Cement	37,500,000	7,500.00
Gravel	3,084,000	616.80
Lumber	25,617,000	5,123.40
Nails	1,700,000	340.00
Nuts and bolts	720,000	144.00
Paint work	5,437,500	1,087.50
Rebar	11,530,000	2,306.00
Rocks	4,500,000	900.00
Roof sheeting	9,982,000	1,996.40
Sanitation facilities	426,000	85.20
Tools	4,801,000	960.20
Windows and doors	426,000	85.20
Health and safety equipment	3,260,000	652.00
Material storage	1,000,000	200.00
Human Resources	116,689,498	23,337.90
Administration	15,100,000	3,020.00
Employed by SEED Madagascar (in-country partner)	21,766,500	4,353.30
Hired for Project	79,822,998	15,964.60
Running Costs	69,417,000	13,883.40
Madagascar Running Costs	49,995,000	9,999.00
UK Running Costs	19,422,000	3,884.40
Transportation	13,960,000	2,792.00
Material Transport	7,980,000	1,596.00
Staff Transport	5,980,000	1,196.00
<b>Grand Total</b>	<b>462,784,998</b>	<b>92,557.00</b>
<b>Total Funded</b>	<b>108,000,000.00</b>	<b>21,600.00</b>
<b>Total remaining</b>	<b>354,785,000.00</b>	<b>70,957.00</b>



## References

---

- <sup>1</sup> UNDP, (2022). *Human Development Report 2021-22*. Available at: [https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf\\_1.pdf](https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf)
- <sup>2</sup> UNICEF, (2018). *Progress for Every Child in the SDG Era*. Available at: [https://www.unicef.org/media/48066/file/Progress\\_for\\_Every\\_Child\\_in\\_the\\_SDG\\_Era.pdf](https://www.unicef.org/media/48066/file/Progress_for_Every_Child_in_the_SDG_Era.pdf)
- <sup>3</sup> World Bank, (2019). Primary completion rate, total (% of relevant age group) - Madagascar. Available at: <https://data.worldbank.org/indicator/SE.PRM.CMPT.ZS?locations=MG>
- <sup>4</sup> World Bank, (2018). *The Deep South*. Available at: <https://documents1.worldbank.org/curated/en/587761530803052116/pdf/127982-WP-REVISED-deep-south-V27-07-2018-web.pdf>
- <sup>5</sup> UNICEF & Government of Madagascar: Ministry of Water, Sanitation and Hygiene, (2016). *Investing in water, sanitation and hygiene in Madagascar: The business case*. Available at: <https://www.unicef.org/esa/sites/unicef.org.esa/files/2019-04/Investment-Case-for-WASH-in-Madagascar-Summary-%282016%29.pdf> ; Our World in Data, (2019). *More than half a million children die from diarrhea each year. How do we prevent this?* Available at: <https://ourworldindata.org/childhood-diarrheal-diseases>
- <sup>6</sup> UNICEF & WHO, (2018). *Drinking water, sanitation and hygiene in schools: Global baseline report 2018*. Available at: <https://washdata.org/report/jmp-2018-wash-schools-final> ; INSTAT & UNICEF, (2018). *Multiple indicator cluster survey 6: Madagascar eau de boisson, assainissement et hygiene*. Available at: <https://www.unicef.org/madagascar/media/2381/file/MICS6-Madagascar-2018-WASH.pdf>
- <sup>7</sup> WHO & UNICEF, (2015). *25 years' progress on sanitation and drinking water*. Available at: [https://www.unicef.org/media/50806/file/Progress\\_on\\_Sanitation\\_and\\_Drinking\\_Water\\_2015\\_Update-ENG.pdf](https://www.unicef.org/media/50806/file/Progress_on_Sanitation_and_Drinking_Water_2015_Update-ENG.pdf)
- <sup>8</sup> SEED Madagascar, (2021). *A Rapid Needs Assessment Report for Project Mahampy - MHM*. Available at: <https://madagascar.co.uk/application/files/1916/1614/0794/2021.03.16-Mahampy-MHM-RapidAssessment-Report.pdf>
- <sup>9</sup> Karamperidou, D., Brossard, M., Peirolo, S., & Richardson, D., (2020). *Time to Teach: Teacher attendance and time on task in Eastern and Southern Africa*. Available at: [https://www.unicef-irc.org/publications/pdf/Time-to-Teach-Report\\_Teacher-attendance-and-time-on-task-in-Eastern-and-Southern-Africa.pdf](https://www.unicef-irc.org/publications/pdf/Time-to-Teach-Report_Teacher-attendance-and-time-on-task-in-Eastern-and-Southern-Africa.pdf)