



## **RANO WASH**

Rural Access to New Opportunities  
in Water, Sanitation, and Hygiene, Madagascar

# Quarterly Report

1st Quarter – October 1 to December 31, 2019

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## **DISCLAIMER**

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FRONT PICTURE: Véronique, a seamstress and VSLA member in Andemaka with her water social connection, Vatovavy Fitovinany (photo credit: RANO WASH)

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## ACRONYMS AND ABBREVIATIONS

<b>APS</b>	Avant-Projet Sommaire (Technical Scoping Study)
<b>APD</b>	Avant-Projet Détaillé (Detailed Project Design)
<b>AO</b>	Agreement Officer
<b>AOPDEM</b>	National Association of Private Water Providers
<b>AOR</b>	Agreement Officer Representative
<b>ASUREP</b>	Association des Usagers des Réseaux d'adduction en Eau Potable
<b>BC</b>	Behavior Change
<b>BCD</b>	Behavior-centered Design
<b>BNGRC</b>	Bureau National de Gestion des Risques et Catastrophes (National Bureau of Disaster Risk Management)
<b>BPOC</b>	Budget Programme par Objectif Communal (Communal Program Budget per Objective)
<b>BPON</b>	Budget Programme par Objectif National (National Program Budget per Objective)
<b>BPOR</b>	Budget Programme par Objectif et Région (Regional Program Budget per Objective)
<b>CARE</b>	Cooperative for Assistance and Relief Everywhere Inc.
<b>CHV</b>	Community Health Volunteers
<b>CLTS</b>	Community-Led Total Sanitation
<b>COP</b>	Chief of Party
<b>CRM</b>	Climate Risk Management
<b>CRS</b>	Catholic Relief Service
<b>CSO</b>	Civil Society Organization
<b>CTTP</b>	Center for the Triage and the Treatment of the Plague
<b>DCOP</b>	Deputy Chief of Party
<b>DGRE</b>	Direction de la Gestion des Ressources en Eau (Direction of Water Resource Management)
<b>DiMat</b>	District Monitoring Assessment Tool
<b>DMEAL</b>	Director of Monitoring, Evaluation, Accountability, and Learning
<b>DREEH</b>	Direction Régionale de l'Énergie, de l'Eau et des Hydrocarbures (Regional Direction of Energy, Water, and Hydrocarbon)
<b>DREN</b>	Direction Régionale de l'Éducation Nationale
<b>DRS</b>	Direction Régionale de la Santé Publique
<b>DSI</b>	Direction of the Information System
<b>DQA</b>	Data Quality Assessment
<b>EMMP</b>	Environmental Mitigation & Monitoring Plan
<b>ERF</b>	Environmental Review Form
<b>ERR</b>	Environmental Review Report
<b>ESF</b>	Environmental Screening Form
<b>FAA</b>	Fonds d'Appui pour l'Assainissement (Global Sanitation Fund)
<b>FUM</b>	Follow-up Mandona
<b>FY</b>	Fiscal Year
<b>GoM</b>	Government of Madagascar
<b>GSF</b>	Global Sanitation Fund
<b>IBM</b>	Integrated Behavioral Model



<b>ICT4D</b>	Information and Communication Technology for Development
<b>IP</b>	Implementing Partner
<b>IPTT</b>	Indicator Performance Tracking Table
<b>IWRM</b>	Integrated Water Resource Management
<b>JSR</b>	Joint Sectorial Review
<b>KRFF</b>	Local Committees at Fokontany Level
<b>LDP WASH</b>	Local Development WASH Plan
<b>LP2D</b>	Lettre de Politique pour la Décentralisation et le Développement Local
<b>LSHTM</b>	London School of Hygiene and Tropical Medicine
<b>MCSP</b>	Maternal and Child Survival Program
<b>MID</b>	Ministère de l'Intérieur et de la Décentralisation
<b>MEEH</b>	Ministère de l'Eau, de l'Energie et de l'Hydrocarbure (Ministry of Water, Energy, and Hydrocarbon)
<b>MEO</b>	Mission Environmental Officer
<b>MFI</b>	Micro-Finance Institution
<b>MHM</b>	Menstrual Hygiene Management
<b>MNP</b>	Madagascar National Parks
<b>MOC</b>	Maîtrise d'Ouvrage Communale (Communal Project Management)
<b>MoEEF</b>	Ministry of Environment, Ecology, and Forest
<b>MoFB</b>	Ministry of Finance and Budget
<b>MoID</b>	Ministry of Interior and Decentralization
<b>MoNE</b>	Ministry of National Education
<b>MoPH</b>	Ministry of Public Health
<b>MOU</b>	Memorandum of Understanding
<b>MTDN</b>	Minister of Posts, Telecommunications, and Digital Development
<b>NGO</b>	Nongovernmental Organization
<b>NPP-WSH</b>	National Platform for the Promotion of Water, Sanitation, and Hygiene
<b>ODF</b>	Open Defecation Free
<b>ODDIT</b>	Organisme de Développement de la Diocèse de Toamasina (Toamasina Diocese Development Organization)
<b>ONCD</b>	National Office of Concertation and Decentralization
<b>PCDEAH</b>	Plan de Développement Communal en Eau, Assainissement et Hygiène
<b>PCT</b>	Project Coordination Team
<b>PGDI</b>	Projet de Gouvernance et de Développement Institutionnel (Governance and Institutional Development Project)
<b>PGRM</b>	Projet de Gouvernance des Ressources Minières (Mining Resources Governance Project)
<b>PHE</b>	Population, Health, and Environment
<b>PIC</b>	Projet Pôles Intégrés de Croissance (Integrated Growth Pole Project)
<b>PIRS</b>	Performance Indicator Reference Sheet
<b>PMP</b>	Performance Monitoring Plan
<b>PNI</b>	WASH National Investment Plan
<b>PNP-EAH</b>	Plateforme Nationale de la Promotion de l'Eau, Assainissement et Hygiène (National Platform for the Promotion of Water, Sanitation and Hygiene)
<b>PPP</b>	Partenariat Public-Privé
<b>PPR</b>	Performance Plan Report

<b>PSEAH</b>	Programme Sectoriel en Eau, Assainissement et Hygiène
<b>QI</b>	Quarter one
<b>RANO WASH</b>	Rural Access to New Opportunities in Water, Sanitation, and Hygiene
<b>RDONE</b>	Regional Director of National Education
<b>RDOPH</b>	Regional Director of Public Health
<b>RDOWEH</b>	Regional Director of Water Energy and Hydrocarbon
<b>RPGEM</b>	Réseau des Promoteurs de Groupes d'Épargne à Madagascar
<b>SDG</b>	System Development Goal
<b>SE&amp;AM</b>	Suivi Eau et Assainissement de Madagascar (Madagascar Water and Sanitation Monitoring)
<b>SILC</b>	Specialized Investment and Lending Corporation
<b>SLC</b>	Structure Locale de Concertation (Local Dialogue Structure)
<b>SMILER</b>	Simple Monitoring of Indicators for Learning and Evidence-based Reporting
<b>SO</b>	Strategic Objective
<b>SRMO</b>	Structure de mise en œuvre de la coordination Régionale
<b>STEAH</b>	Service Technique de l'Eau, Assainissement et l'Hygiène (Water, Sanitation and Hygiene Technical Department)
<b>STEFI</b>	Technical and Financial Support
<b>STH</b>	Soil-transmitted Helminth Infections
<b>STTA</b>	Short-term Technical Assistance
<b>SWA</b>	Sanitation and Water for All
<b>SWAp</b>	Sector-wide Approach
<b>SWOT</b>	Strengths, Weaknesses, Opportunities, and Threats
<b>TA</b>	Technicien d'Appui
<b>TDY</b>	Temporary Duty
<b>TFP</b>	Technical and Financial Partner
<b>TOR</b>	Terms of Reference
<b>ToT</b>	Training of Trainers
<b>USA</b>	United States of America
<b>USAID</b>	United States Agency for International Development
<b>USG</b>	United States Government
<b>VAT</b>	Value Added Tax
<b>VA/PSP</b>	Village Agent/Private Service Provider
<b>VSLA</b>	Village Savings and Loan Association
<b>WALIS</b>	Water for Africa through Leadership Institutional Support
<b>WASH</b>	Water Sanitation and Hygiene
<b>WASH-BAT</b>	WASH Bottleneck Analysis Tool
<b>WASH-BC</b>	WASH Behavior Change
<b>WHO</b>	World Health Organization
<b>WMA</b>	WASH Market Assessment
<b>WMDP</b>	WASH Market Development Plan
<b>WQAP</b>	Water Quality Assurance Plan
<b>WSP</b>	WASH Service Provider

## I PROJECT OVERVIEW/SUMMARY

<b>Project Name:</b>	Rural Access to New Opportunities in Water, Sanitation, And Hygiene, Madagascar (RANO WASH)
<b>Activity Start Date and End Date:</b>	June 15, 2017, to June 15, 2022
<b>Name of Prime Implementing Partner:</b>	Cooperative for Assistance and Relief Everywhere Inc. (CARE)
<b>Cooperative Agreement Number:</b>	AID-687-A-17-00002
<b>Name of Subawardees</b>	Catholic Relief Services (CRS), WaterAid, BushProof and Sandandrano
<b>Major Counterpart Organizations</b>	Ministry of Water, Energy, and Hydrocarbon; Ministry of Public Health; Ministry of Interior and Decentralization; Ministry of National Education; Ministry of Environment, Ecology, and Forests; Ministry of Higher Education and Scientific Research; Ministry of Finance and Budget; Ministry of Population, Social Protection, and Woman Promotion; regional and commune governments
<b>Geographic Coverage</b>	<u>250 communes in 6 regions:</u> Alaotra Mangoro, Amoron'i Mania, Atsinanana, Haute Matsiatra Vakinankaratra, and Vatovavy Fitovinany regions, Madagascar
<b>Geographic Coverage in FY20</b>	<u>250 communes in 6 regions:</u> Alaotra Mangoro, Amoron'i Mania, Atsinanana, Haute Matsiatra Vakinankaratra, and Vatovavy Fitovinany regions, Madagascar
<b>Reporting Period:</b>	October 1 to December 31, 2019

### I.1 Project Description/Introduction

The Rural Access to New Opportunities in Water, Sanitation, and Hygiene (RANO WASH) Project aims to increase equitable and sustainable access to water, sanitation, and hygiene services; maximize the impact on human health and nutrition, and preserve the environment in 250 rural communes in six high-priority regions: Vatovavy Fitovinany, Atsinanana, Alaotra Mangoro, Amoron'i Mania, Haute Matsiatra, and Vakinankaratra.

A CARE International-led consortium that includes Catholic Relief Services (CRS), WaterAid, BushProof, and Sandandrano is implementing the RANO WASH project.

To accomplish this goal, the project develops systematic partnerships with national and regional governments, water and sanitation institutions, communities, private sector actors, civil society organizations, and beneficiaries. The aim is to implement a strategic set of mutually supportive activities that contribute to three interlinked strategic objectives:

1. Strengthening the governance and monitoring of water and sanitation;
2. Increasing the engagement of the private sector in the delivery of WASH services;
3. Accelerating the adoption of healthy behaviors and the use of WASH services.

This report covers the period from October to December 2019, which corresponds to the first quarter of the FY20 fiscal year and the first reporting quarter of the RANO WASH project.

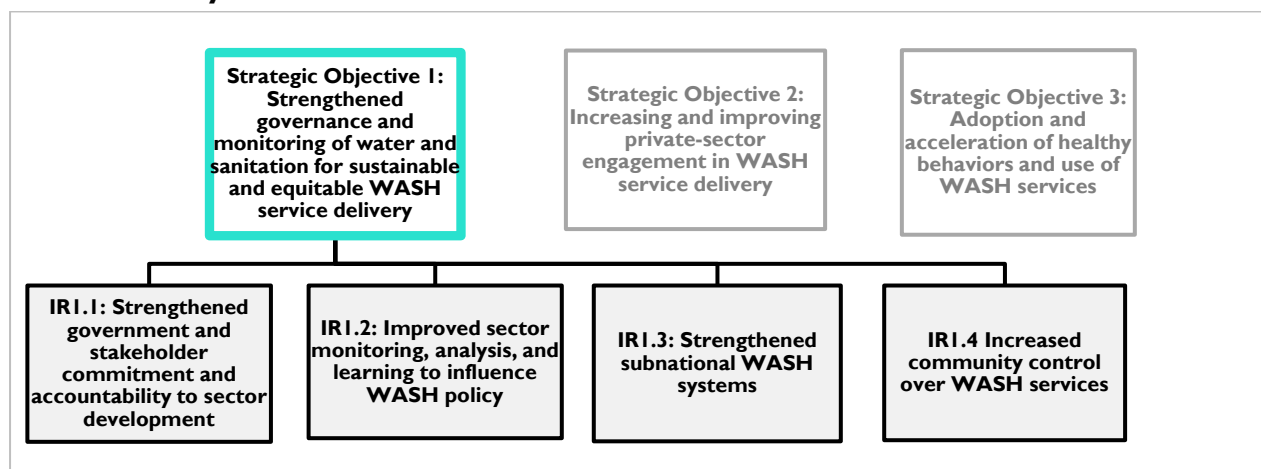
## 2 ACTIVITY IMPLEMENTATION PROGRESS

### 2.1 Implementation Status

Table 1. Summary progress towards key indicators Q1.20 update

Key Indicators	Q1		Q2	Q3	Q4	FY20	
	Target	Actual	Target	Target	Target	Target	Actual
# of people gaining access to basic drinking water services	7,049	192	9,176	2,000	34,275	52,500	192
# of people gaining access to safely managed drinking water services	1,038	601	3,712	4,750	10,500	20,000	601
# of people gaining access to a basic sanitation service	2,592	2,370	3,045	7,750	11,613	25,000	2,370
# of people gaining access to a limited sanitation service	11,512	1,351	12,760	21,358	24,370	70,000	1,351
# of institutional settings gaining access to basic drinking water services	2	2	2	18	54	76	2
# of communities verified as ODF	36	40	206	475	333	1,050	40

## 2.1.1 Strategic Objective I: Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH service delivery.



### Key achievements

- RANO WASH conducted a workshop on WASH systems strengthening with the participation of the MEEH, MoID, and other implementing partners and stakeholders in the sector. Besides defining a common understanding of the systems approach among these actors, the MEEH adopted the life-cycle costs approach for the sector plan, which ensures the plan reflects the full costs needed to deliver and sustain long-term WASH services.
- The regional coordination structures (SRMOs) of each intervention region successfully mobilized stakeholders and held at least two regular meetings to update data, review 2019 achievements, and develop a 2020 annual regional plan.
- With support from RANO WASH and UNICEF, the MEEH continued to lead the procurement process for the SE&AM upgrade, including the preselection of three firms. RANO-WASH also successfully engaged with UNICEF and WaterAid to secure funding for this activity.
- Of the 110 communes supported by RANO WASH in FY19, 85% updated their SE&AM data in Q1. This result is a clear improvement compared to last year, and it shows the full engagement and participation of the communes in the regional monitoring process.
- RANO WASH began supporting an additional 102 communes in Q1 of FY20, extending our commune intervention to 212 of 250 communes targeted in FY20.

**Table 2. Summary of progress towards key SOI indicators**

Key Indicators	Q1 Target	Q1 Actual	FY 20 Target	FY 20 Actual
<b>Progress on the pathways to setup regional coordination*</b>	Phase 3	Phase 3	Phase 5	Phase 3
<b>% communes reporting in SE&amp;AM</b> (out of 250 Communes)	26%	38%	52%	38% (94/250 communes)
<b>Progress of Capacity of DREAH to train and coach communes</b>	Training tools updated	Training tools updated	6 DREAH have finalized the training of their STEAH (Step I and II)	6 DREAH ready to conduct training of STEAH in their region
<b># new communes trained on MOC</b>	New communes selected	New communes selected	140 Communes Trained	New communes selected
<b># new STEAH trained</b>	New communes selected	New communes selected	30 STEAH trained	New communes selected
<b># communes with OSC-EAH operational</b>	47	32	110	51
<b># communes with accountability mechanisms operational</b>	6	44	100	44

\*See Figure 1. Phases to set up a regional coordination mechanism

## **IRI.1 Strengthened government and stakeholder commitment and accountability to sector development**

Output I.1.1 Sector coordination and learning mechanisms operating effectively under strong national leadership

### **Box 1. Context**

Following the transition from the Ministry of Energy, Water, and Hydrocarbons (MEEH) to the Ministry of Water, Sanitation, and Hygiene (MEAH), the Minister of Posts, Telecommunications, and Digital Development (MTDN) was appointed the acting minister of the newly formed MEAH. The permanent appointment of the new minister is expected after the government's performance review in January 2020.

To support the functionality of regional coordination structures, RANO WASH supported the DREAH teams to

- (1) hold SRMO meetings to share learning and follow the coordination operational plan,
- (2) conduct a sector review per region, and

- (3) develop an annual regional plan for 2020 that considers the recommendations of the review.

These aim to achieve the FY20 RANO WASH target "Yellow" stoplight rating for WASH sector coordination, corresponding to the "regional body for WASH sector coordination operational with meetings held." The regional coordination mechanisms were implemented during Q1 FY20 and Q4 FY19, and progress in the "pathway to setup coordination mechanism" showed that they were operational.

Through the SRMO, RANO WASH, and the DREEH, co-led the preparation and facilitation of regional sector reviews in Atsinanana, Alaotra Mangoro, Vakinankaratra, and Vatovavy Fitovinany. RANO WASH participated as a member in the review for the Amoron'i Mania and Haute Matsiatra regions. The first review identified a budget development gap in ensuring all proposed activities and beneficiary numbers were included in action plans. Other regional-level difficulties pertain to the mobilization of all stakeholders, as no per diems were available; therefore, some people from the districts were not able to participate.

Figure 1 describes the phases to set up a regional coordination mechanism (Phases 1 and 2) and the cyclical annual planning cycle managed by the coordination structure (Phases 3 to 6).



Figure 1. Phases to set up a regional coordination mechanism

With the sector review results, the SRMOs in Vatovavy Fitovinany and Atsinanana finalized their 2020 regional plans, and the plans and financing gap analyses for Alaotra Mangoro, Alaotra Mangoro, Vakinankaratra, Amoron'i Mania, and Haute Matsiatra will be finalized in Q2. Finalizing 2020 regional plans was one of the DREEH's priority activities per the directive from the MEEH, contributing to a government-led process of review and course correction.

FY20 Q1 was also marked by the consultation of sector stakeholders for developing the national WASH policy with the support of the USAID-funded Health Policy Plus (HP+) project. The HP+ project hired a consultant, and RANO WASH participated in small-group discussions and the stakeholder consultation workshop in Antsirabe. HP+ will share the workshop report in Q2. The presentation of the draft policy was postponed by the MEEH.

RANO WASH also participated in the "Institutional Arrangements" working group, where the following themes were highlighted as priorities for the upcoming policy:

- Water, sanitation, and hygiene should be managed in an integrated manner
- The WASH sector is under the supervision of a ministry for the promotion of WASH services
- Promotion of the pooling of inter-municipal WASH services according to the needs/priorities of the communes
- Promotion of district-level decentralization of WASH services
- Ensuring commune-level decentralization of WASH services
- The coordination of all sectors is led by the state representative (CODES: Steering Committee for Economic and Social Development), including a WASH group (SRMO)
- Promotion of the implementation of WASH standards in institutions (WASH in Institutions)

Output 1.1.2 Ministry in charge of WASH institutional capacity developed to meet strategic needs

#### **Box 2. Context**

Dialogues for developing the WASH sector policy in Madagascar were initiated with the support of the USAID HP+ project. The sector plan (PSEAH) development process has not really progressed, and clarifications were provided by sector stakeholders to support the consultant in charge of drafting the document. However, three ongoing challenges to the continuation of the process remain: the technical quality of the document, coherence with the sector policy under development, and possible changes in strategic orientation because of the new minister's arrival in January.

In Q1, RANO WASH organized a WASH System Strengthening Workshop for its stakeholders, which defined a common understanding of a systems strengthening method and introduced the analytical tools for such an approach. The workshop was attended by representatives of the MEEH, MoID, and DREEHs teams from the six intervention regions and partners in the sector, including HP+, UNICEF, and FAA, among others. The workshop resulted in the adoption of a life-cycle costs approach and toolkit to ensure the sector plan accurately reflects the full- and long-term costs of sustaining WASH infrastructure and services. The key outcomes and decisions from this workshop are discussed in the sections below.

As a result of the workshop, the participants realized why financing is important. Also, in Q1, the RANO WASH team provided technical support and coaching to the MEEH team to improve their financial planning process and helped them assess the costs of the sector plan (PSEAH). Figure II below describes the required components to ensure a life-cycle cost approach for sustainable WASH services. This exercise helped build the MEEH's capacity to accurately project costs over the WASH service life cycle and match these costs with funding sources, which is key to achieving and monitoring progress toward SDG 6 and achieving RANO WASH's target of increasing new funding for WASH services.

Once the broader life-cycle approach was introduced during the workshop, RANO WASH facilitated a separate discussion with the MEEH to introduce methodologies that will be used in a life-cycle costing of the WASH sector plan, talk through the required desk review of



existing tools and methodologies, and outline the steps needed to prepare and facilitate a dialogue among key actors in the sector on the methodology.

At the regional level, RANO WASH provided on-the-job support to the DREEH team on implementing effective communication activities as well as preparing and conducting workshops and meetings to ensure the effectiveness of regional coordination structures (SRMO) discussed in the section above. This will be crucial in helping systematize reporting by sharing the sector's progress with performance contracts at each meeting.

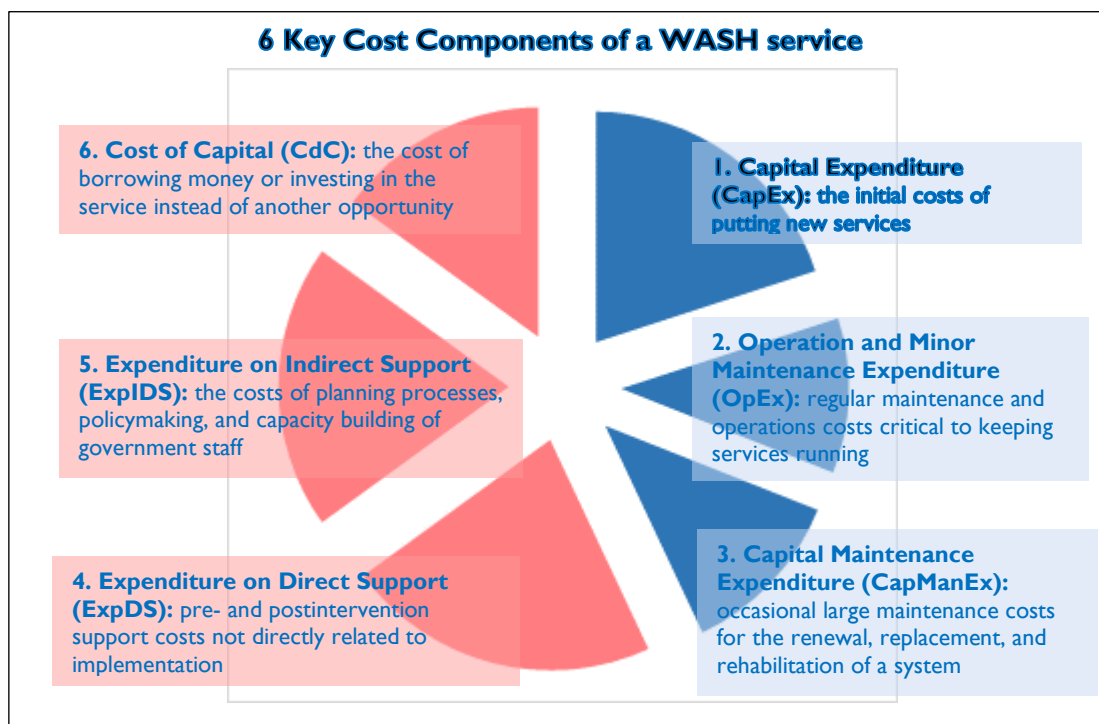


Figure 2. Key components for costing a WASH sector plan

### Activities planned for next quarter

- Support the DREEH in each region to finalize annual regional plans through the SRMO and assess resource gaps for its implementation. The plan and budget will be shared with the Structure de Coordination National du Secteur WASH (SCN) at the national level, including the additional funds needed for the MEEH.
- Work with the MEEH to develop methodologies and tools to evaluate sector plan costing (PSEAH) and train the MEEH on the process and these tools.
- Support SRMOs in RANO WASH intervention regions to use the WASH system analysis tools to analyze sector progress and guide future investments in WASH for each region.

### IRI.2 Improved sector monitoring, analysis and learning to influencing policy

#### Output 1.2.1 SE&AM strengthened and extended

RANO WASH continues to support the MEEH in strengthening the SE&AM platform to measure progress in water and sanitation and thus support planning and decision-making for the sector.

This quarter, efforts focused on (1) clarifying all WASH stakeholders' expectations in relation to the SE&AM upgrade and supporting the procurement process for recruiting the consultant

for the upgrade and (2) supporting the DREEH in maintaining the frequency and timeliness of regional data updates with its partners and municipalities.

As part of the procurement process for the SE&AM upgrade and a member of the technical committee, RANO WASH provided support throughout the recruitment process, for instance, the development of the call for expressions of interest, its publication, and the selection of consultants. The MEEH faced challenges in ensuring that (1) the contracting process met donors' requirements (WaterAid, UNICEF, and USAID) and (2) the terms of reference met the required sector standards' stakeholder expectations. RANO WASH, UNICEF, and WaterAid provided on-the-job training to the MEEH to ensure the documents and procurement process met requirements. We also prepared training materials to develop an information system approach called "urbanization of information systems." This is a method for organizing complex information systems to help simplify and streamline data—thereby optimizing added value and making it responsive and flexible.

As part of regional data updates, the SRMO integrated the updated SE&AM data into each meeting. The project also continued to support communes in their quarterly SE&AM updates. Of the 110 supported communes, 94 (85%) carried out the update this quarter. The delay in the remaining 29 communes was linked to the mayoral elections, which disrupted the STEAH's ability to support data collection. Our target for FY20 is to have 130 communes updating their SE&AM data at least once during this fiscal year.

#### Output 1.2.2 Implementation of the learning agenda to increase and better regulate private-sector engagement in WASH

To strengthen learning and knowledge sharing in the WASH sector, RANO WASH works on two components: (1) mobilizing stakeholders to create learning groups and implement a common learning plan and (2) promoting the use of the MEEH digital library as a sharing space for all WASH-related documents.

Regional-level information sharing and exchange is becoming increasingly structured with the implementation of SRMOs. The SRMOs have been used as a space for regional-level discussion to share and discuss performance against regional objectives and decide on sector-wide initiatives, such as the adoption of the open defecation-free (ODF) certification protocol and the Madagascar Madio 2025 campaign against open defecation in Madagascar.

In Vatovavy Fitovinany and Atsinanana, RANO WASH supported the SRMOs to conduct performance monitoring of private operators using the technical and financial support tool (STEFI). RANO WASH facilitated an exchange visit for WASH stakeholders in Alaotra Mangoro, Atsinanana, Vatovavy Fitovinany, and Vakinankaratra to learn from the Haute Matsiatra region's experience using STEFI. The SRMO in Vakinankaratra also initiated a sharing session on integrated water resource management (IWRM) principles to strengthen actors' capacity to deal with the frequent social conflicts related to water management for agriculture.

Regarding the digital library, the MEEH still requires additional support to use it internally and to encourage WASH stakeholders to share reports and tools in the library. During regional coordination meetings, RANO WASH will present case studies demonstrating the benefits of sharing documents through the library and reemphasize the need to use it as a sharing tool for thematic reflections within the SRMO.

## Activities planned for next quarter

- Train MEEH agents on the urbanization of the information systems <sup>1</sup>approach and support the MEEH in finalizing the terms of reference and firm recruitment up to contract signing.
- Continue to coach communes and the DREEHs to maintain the frequency of updating SE&AM and to strengthen communal-level data archiving.
- Mobilize private sector groups at the regional level to conduct learning activities and share and document results within the SRMO.

## IRI.3 Strengthened subnational systems

### Output 1.3.1 Decentralized resources available for sustained WASH service delivery

#### Box 1. Context

The Ministry of the Interior and Decentralization (MID) implemented a roundtable on decentralization and local development with a view to develop the new Policy Letter on Decentralization and Deconcentration (*Lettre de Politique sur la Décentralisation et la Déconcentration*, or LP2D) with the support of the UNDP and GIZ. These discussions reinforced the role of the representatives of the state (prefect, district) as the coordinators of decentralized technical services (i.e., regional director of WASH (DREEH), regional director of health (DRS), regional director of education (DREN)) as well as the duties of these decentralized technical services and state representatives in supporting local authorities for local economic development, administration activities, service standards, and the establishment of quality basic services. Finally, the general director of the decentralization (MID) said, “The decentralization is not an option, each sectorial ministry has to set-up plan to transfer financial resources and human resources so the region and commune can undertake their competencies.”

In FY20, RANO WASH continued its efforts to strengthen regional governance and use regional tools by (1) improving the DREEH's leadership and planning and monitoring capacity and (2) strengthening the DREEH's capacity to effectively support their respective municipalities. A study will be done in Q4 to evaluate progress against the target of 90 institutions strengthened to manage water and/or WASH services.

In Q1, we (1) updated our approaches, (2) began generating buy-in and planning to implement the technical and financial monitoring system (STEFI) and (3) supported the new regional teams to build on best practices and lessons learned in FY18 and FY19. The quarter was also marked by project support to the DREEH in updating the SE&AM, leading their coordination meetings, and conducting regional review and planning to produce regional strategies for 2020.

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<sup>1</sup> The urbanization of information systems is “a method for organizing complex information systems to help simplify and streamline—thereby optimizing added value and making it responsive and flexible.”

<http://www.greenit-monaco.com/en/urbanization.htm>;

<https://www.supinfo.com/articles/single/2987-urbanisation-systemes-information>

The urbanization of the information system is analogous to that of a city. This analogy compares information system to the image of a city, that is, thoughtfully designed, structured, sustainable. Following on from this analogy—which has its limits—IS urbanization consists of planning structural redesigns to optimize exchanges, services, flexibility, modularity, among others, and, more generally, to respond to the company's IS strategy in parallel with the evolution of the business.

This approach is promoted by the Malagasy government to make its administrative processes digital; thus, RANO WASH works within this framework.

As part of the previously discussed systems strengthening workshop, the program also focused on ensuring regional structures, including the DREEH and RANO WASH regional teams, understand the systems approach. The workshop highlighted the need to clarify the roles of the MEEH and the DREEH to ensure the following:

- i) sustainability of services (considering sustainability in planning, capacity building of agents, regulation of services),
- ii) long-term cost components for inclusive and sustainable services; and
- iii) the importance of conducting similar workshops at the regional and communal levels to consider the characteristics of each regional context. These workshops will help stakeholders identify a shared vision for each region.

Following the LP2D<sup>2</sup> workshop led by the MoID, RANO WASH will organize a meeting with the MID and its partners such as GIZ and UNDP to reflect on decentralization issues, RANO WASH's systems approach, and the points to which the LP2D can respond.

### Output 1.3.2 Commune management capacities strengthened for WASH service delivery

#### **Box 5. Context**

Communal elections were held in late November 2019, preceded by a month of campaigning. Final results are expected in mid-January 2020. According to provisional results, nearly 79% of the mayors of our intervention communes were not reelected. This will require the project to reinvest in encouraging buy-in and strengthening capacity at the communal level.

To strengthen municipalities' capacity to fulfill their mandate to provide quality WASH services, RANO WASH focused on two key points in Q1:

1. Advocate and work with communes to integrate WASH into their budgets and implement a tax revenue mobilization strategy.
2. Strengthen the RANO WASH project team's capacity and confidence in using governance analysis tools at the communal level to support planning and course correction at the same level.

Although the allocation of resources to WASH services at the communal level continues to be a challenge, a total of 16 communes (out of an FY20 target of 15) have integrated a WASH line item in their initial budget, and 13 communes have established their strategy for improved tax revenue for 2020. These figures should improve during the next budget review, as some communes preferred to finalize their budgeting process when their new mayor takes office following communal election results. Preliminary analyses indicate that these results are correlated with municipalities with active CSOs for WASH and/or active STEAH, highlighting the importance of these local structures in demanding quality services. The buy-in and support of the districts and prefects, as in the case of Vatovavy Fitovinany, kickstarted the process of tax revenue mobilization strategies for commune development.

In addition, RANO WASH trained field agents (TA) in the Vatovavy Fitovinany region on the project's systems strengthening approach, with the aim to apply the tools at the communal level and to ensure communes can plan and prioritize sustainable services. The project also reviewed its joint approach with the DREEH to support the development of communal plans (PDECAH).

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<sup>2</sup> Policy Letter on Decentralization and Deconcentration (Lettre de Politique sur la Décentralisation et la Déconcentration, or LP2D).

The training modules and outlines of the communal plans (PCDEAH) were reviewed to further clarify the expectations, roles, and responsibilities of different actors and to facilitate the capacity building of mayors, mayoral staff, STEAH, and SLCs.

### Activities planned for next quarter

- Train and support municipalities in implementing the PCDEAH.
- Train field agents on the analysis tools provided by the WASH systems approach and coach them to apply them at the communal level.
- Train new communes to set up or reinforce their STEAH.
- Continue to support communes to mobilize resources.

### IRI.4 Increased community control over WASH services

Output 1.4.1 Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation

RANO WASH relied on communal CSO-WASH groups and local water users' associations (ASUREP) to raise awareness of rights to WASH in their respective communities. The table below shows some results achieved by CSO groups across the RANO WASH intervention regions.

**Table 3 Examples of quick wins by WASH-CSO during Q1**

Amparafaravola district, Alaoatra Mangoro region	<b>Regional WASH-CSO</b> District chief's field visit to sensitize the population on the relevance of sanitation and hygiene (October 2019)
Ambatondrazaka commune, Alaoatra Mangoro region	<b>Regional WASH-CSO</b> Issuance of a communal decree for public latrine construction in collaboration with the FIFAM association
Ampasimbe Onibe commune, Atsinanana region	<b>Communal WASH-CSO</b> Issuance of a communal decree for installing a communal garbage dump, managing garbage at the household level, and installing communication signs to support the implementation
Ambatomena Vakinakaratra region	<b>Communal WASH-CSO</b> Mobilization by the community's chief fokontany for the protection of a water supply source that benefits 200 households (December 2019)
Soanirainy commune, Vakinakaratra region	<b>Communal WASH-CSO</b> Decision of the mayor to provide public access to communal office latrines and clean garbage dumps at the commune office (December 2019)

Encouraging CSOs to implement small, feasible actions was among the messages during FY19 so that these structures could gain legitimacy within their communities and strengthen their effectiveness. These CSOs' regional exchanges in the coming quarter (Q3) will focus on articulating more objectives and clearing pathways to achieve these.

In the new communes, RANO WASH began a discussion with the regional CSO-WASH to map existing communal CSOs in their respective regions and to assess the required support to activate their WASH sector involvement.

Output 1.4.2 Communes with functional WASH accountability mechanisms

To encourage beneficiaries' participation and consider their ideas in decision-making processes, RANO WASH relied on (1) local consultation structures (SLCs) and (2)

accountability mechanisms to increase decision-making transparency and improve water service providers' responsiveness to community feedback.

At the SLC level, RANO WASH focused its support on demand-driven coaching, depending on their needs, to help them become progressively independent. The achievements in Box 6 illustrate SLC activities in Q1. Since the mayor is also the president of the SLC, the frequency of SLC meetings has decreased to avoid confusion between political rallies for the municipal election and development consultations.

**Box 6. Example of results and findings from SLCs:**

- SLCs were able to persuade the communes to adopt regulations against open defecation and convince them of their obligation to build latrines when applying for building permits (seven communes in the Alaotra Mangoro region).
- Tax collection strategies were developed from the SLC dialogue for 13 municipalities (Vatovavy Fitovinany region).

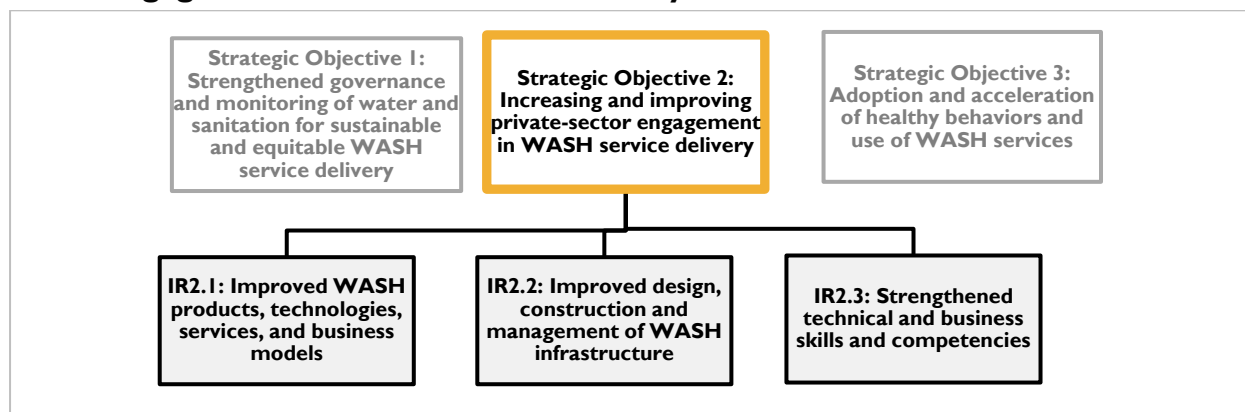
Regarding accountability mechanisms, the commune governments received feedback from their suggestion boxes. These suggestions were mainly concerned with (1) clarification of roles and responsibilities of the communes, fokontany, and communal CSOs; (2) complaints and demands for constructing WASH infrastructures at the institutional level, such as latrines, garbage bins, and showers; and (3) nonfunctional human-powered pumps.

The project is currently monitoring the responses from communal officials and WASH service providers.

**Activities planned for next quarter**

- Follow-up and coach operational WASH-CSOs and support new communes to identify individuals and/or groups that should participate in CSO-level discussions and decision-making processes to ensure a rich variety of voices within each community.
- Support new municipalities in revitalizing their existing structures or setting up CSOs according to need.

## 2.1.2 Strategic Objective 2: Increasing and improving private sector engagement in WASH service delivery



### Key achievements

- WMA results were validated, and the WMDP process started in Vakinakaratra and Amoron'i Mania.
- One water supply system, in Alaotra Mangoro, among the seven systems started at the end of FY19, has been technically approved. The remaining six are under completion and awaiting technical reception planned for Q2.
- An additional 192 people gained access to basic drinking water services and 601 to safely managed drinking water services.
- Seven new APS studies were conducted and validated, and 10 APD studies were carried out including two that were validated by the municipalities and the regional MoWASH team. Validation for the remaining studies is in progress.
- RANO WASH participated in Satopan's visit to Madagascar in December 2019 to share the project's perspectives on market-based sanitation and to explore a potential partnership with Satopan.
- An after-action review of the procurement process for water supply infrastructures was held on December 11, allowing the PCT technical team and the consortium organizations' administration and procurement teams to discuss and determine the causes of successes and failures and to extract lessons learned.

Table 4. Summary of progress towards key SO2 indicators

Key Indicators	Q1		Q2	Q3	Q4	FY20		Comments
	Target	Actual	Target	Target	Target	Target	Actual	
# of people gaining access to basic drinking water services	7,049	192	9,176	2,000	34,275	52,500	192	The start of marketing campaigns for private and social connections in Q2 FY20 will improve the number of water service users for the 12 operational FY19 systems.
# of people gaining access to safely managed drinking water services	1,038	601	3,712	4,750	10,500	20,000	601	
# APS/APD completed	APS: 0 APD: 6	APS: 7 APD: 10	APS: 14 APD: 1	APS: 22 APD: 10	APS: 4 APD: 9	APS: 40 APD: 26	APS: 7 APD: 10	The tendering process for the water system construction (from 10 APD) will be launched in Q2 FY20.

## IR2.1 Strategic development and innovation for private-sector engagement in WASH service provision

### Output 2.1.2 Regional WASH market development plans drafted

RANO WASH organized a two-day regional workshop in Amoron'i Mania and Vakinankaratra to communicate the results of the WASH market assessments and present the market development plan concept and its elaboration process.

Participants included government officials, representatives from the DREEH technical services, microfinance institutions and local banks, water service operators, local masons, seamstresses, and entrepreneurs. A total of 20 participants attended in Antsirabe in the Vakinankaratra region, and 32 attended in Ambositra in the Amoron'i Mania region.

RANO WASH organized a follow-up workshop with the same actors to identify and evaluate potential WASH services and products, business models, and actors to strengthen WASH's value chains. Working groups for each "Water - Sanitation - Hygiene3" component developed the following: (i) analyses of the business environment including barriers to scale, and an assessment of service providers' SWOT, and (ii) prioritization of WASH products and services that serve local contexts and meet the objectives defined in the BPORs and regional development plans.

<sup>3</sup> The three main products/services to be addressed are drinking water services, services around latrines, and sanitary towels.



The WMDPs for the three former regions (Atsinanana, Vatovavy Fitovinany, and Alaotra Mangoro) are being drafted, with initial versions available in Q2. To date, four of six regional market development plans have been developed and have undergone an iterative and consultative process with stakeholders.

#### **Output 2.1.3 Type and range of financial products for WASH services and products available and accessible increased**

To date, the project has supported the setup and revitalization of 840 VSLAs in its regions of intervention. In Q1 FY20, the project developed a partnership with the RPGEM to strategically help us improve the integration of VSLAs and WASH issues.

We defined four objectives for the partnership:

- Assess the capacities of existing VSLA groups to categorize them according to dynamism and advancement, and propose specific courses of action for each category.
- Analyze the skills of the village agents/private service providers (VAs/PSPs) in collaborating with the project and develop a professionalization process to support them.
- Collaborate with MFIs to develop financial services adapted to VSLA groups and WASH private operators and improve their access to more substantial funding from formal financial institutions (banking, microfinance, and mobile money) while promoting existing financing mechanisms such as Solidis and Banyan Global. These financial products will enable private operators to contribute financially to the initial investment in the PPP model and ensure operation and maintenance as well as network expansion.
- Design and support the implementation of strategies to identify entrepreneurs interested in WASH products and services, and pilot support models to engage them. Priority will be given to VSLA entrepreneur members.

Activities with RPGEM will begin in Q2.

#### **Activities planned for next quarter**

- Continue WMDP development for Vakinankaratra, Amoron'i Mania, and Haute Matsiatra regions.
- Validate WMDP documents with stakeholders in Atsinanana, Vatovavy Fitovinany, and Alaotra Mangoro.

### **IR 2.2 Improved design, construction, and management of WASH infrastructure**

#### **Output 2.2.1 - Design and construction of sustainable WASH infrastructure improved**

##### **Technical feasibility studies (APs) and construction-project detailed designs (APDs)**

Of the 44 APs and 23 APDs studies expected in FY20, a total of 7 APs and 10 APDs studies were realized in Q1 by Sandandrano and BushProof. Three of the APD studies in the Atsinanana region were validated at the commune and regional levels; the remaining six in Vatovavy-Fitovinany and one in Alaotra Mangoro are being validated by their respective DREEH technical teams (Annex 10. Maps of Communes with APS APD and Water Systems Constructed; Annex 11. List of Communes with APS APD and Water Systems Constructed).

The PCT team will analyze these APDs for decision-making on the water systems to be implemented by the project before starting the procurement process for a private operator in Q2.

### **ESF, WQAP, and CRM monitoring and implementation**

The project began drafting the ESF for new APDs validated by the PCT (among the 10 APDs mentioned above) and will submit it to USAID for approval in February 2020.

An updated EMMP for FY20 (Annex 14) defines threshold determinations for the main activities within the RANO WASH program in accordance with the strategic objective. Moreover, this document outlines several mitigation and monitoring measures for infrastructure-related activities categorized under negative determination with conditions.

Following USAID's training on environmental compliance rules and climate risk management in September 2019, a series of cascade training sessions were organized for regional technicians, BushProof and Sandandrano technicians, and then for all stakeholders in the field (water service providers, municipality technicians and service user association representatives, and RANO WASH field agents). The training focused on environmental measures developed in the ESFs of each construction site and clarified each stakeholder's roles and responsibilities.

The objectives are to provide all stakeholders the same understanding of the measures to be taken and of their importance to the sustainability and quality of services and to ensure clarity among private operators on the environmental activities in their action plans and budgets and on each stakeholder's roles and responsibilities. Tools for monitoring these measures were developed and shared with all stakeholders.

### **Construction works on the nine systems started in FY19**

In Q1, water system construction is underway in seven of the nine USAID-approved contracts in FY19.

Of these seven sites, the DREEH of Alaotra Mangoro led the technical reception of the water supply system in Anosibe Ifody. Construction progress in the remaining six sites varied from 44% to 84%. Technical reception is expected in January and February 2020 for all sites except Lokomby. The catchment source construction required additional hydrogeological studies to determine the exact location of the drilling point. The related procurement process for this site will be launched in January 2020 (Annex 12. Water System Construction, Q1.20 Update).

The overall delay in water system construction is mainly due to events beyond the control of the enterprises, such as weather changes or a collective delay in piping delivery because of stock shortage at the main supplier level. On the other hand, the times allocated for the validation of the execution plan (15 days) and the attachment reports certifying work completion (5 days) were not specified in the contracts with these service providers. This is a lesson learned for the project, and we will plan more time for the FY20 infrastructure to avoid such delays.

The two other construction works in Amparafaravola (Ambongabe and Betatamo systems) were cancelled after the project nullified the contract with the SRAFI company because of the latter's failure to satisfy its commitments after notification. The tender committee awarded the contract to a second company (TAMBY) after verifying its performance with other organizations. This final contract was submitted to USAID for approval at the end of December 2019.

**Table 5. Number of people gaining access to basic and safely managed drinking water services as a result of USG assistance**

	Q1		Q2	Q3	Q4	FY20	
	Target	Actual	Target	Target	Target	Target	Actual
Access to basic drinking water services							
Alaotra Mangoro	49	68	2,451	2,000	2,060	<b>6,560</b>	<b>68</b>
Atsinanana	0	92	600	0	9,030	<b>9,630</b>	<b>92</b>
Vatovavy Fitovinany	7,000	32	6,125	0	0	<b>13,125</b>	<b>32</b>
Vakinankaratra	0	0	0	0	11,375	<b>11,375</b>	<b>0</b>
Amoron'i Mania	0	0	0	0	5,250	<b>5,250</b>	<b>0</b>
Haute Matsiatra	0	0	0	0	6,560	<b>6,560</b>	<b>0</b>
<b>Total</b>	<b>7,049</b>	<b>192</b>	<b>9,176</b>	<b>2,000</b>	<b>34,275</b>	<b>52,500</b>	<b>192</b>
Access to safely managed drinking water services							
Alaotra Mangoro	38	147	712	750	1,000	<b>2,500</b>	<b>147</b>
Atsinanana	0	445	0	3,000	600	<b>3,600</b>	<b>445</b>
Vatovavy Fitovinany	1,000	9	3,000	1,000	0	<b>5,000</b>	<b>9</b>
Vakinankaratra	0	0	0	0	4,400	<b>4,400</b>	<b>0</b>
Amoron'i Mania	0	0	0	0	2,000	<b>2,000</b>	<b>0</b>
Haute Matsiatra	0	0	0	0	2,500	<b>2,500</b>	<b>0</b>
<b>Total</b>	<b>1,038</b>	<b>601</b>	<b>3,712</b>	<b>4,750</b>	<b>10,500</b>	<b>20,000</b>	<b>601</b>

In Q1, an additional 192 people gained access to basic drinking water services and 601 people to safely managed drinking water services among the 12 operational water supply systems from FY18–19 in Atsinanana, Vatovavy Fitovinany, and Alaotra Mangoro. This represents about 10% of the Q1 target (-8,087 people) for basic and safely managed drinking water services. However, we expect to fill the gap in Q2–Q4 to reach the annual combined target of 72,500 for basic and safely managed drinking water services in FY20. The seven new systems under

construction have an estimated catchment population of 30,150 people, and the planned water supply systems are estimated to reach 42,350, and the project will test models for extending access to remote/ultra-remote households and continue to promote flexible payment models and strengthen private operators' marketing capacity, which will help generate demand gradually.

These results and consultations with private operators also indicate that people are more interested in private connections than social water connections. During review workshops, private operators reported that customers favor private connections more, with the latest figures showing 601 people using private connections compared to 192 using social ones. Reasons cited by customers include flexibility and convenience as well as avoiding conflict with neighbors. To increase the number of private and social connections, the project is hiring an entrepreneurship and marketing specialist to work with BushProof and Sandandrano to help water private operators design marketing plans.

### **Management contract for water system set up by RANO WASH**

For the PPP "coinvest, build, and operate" model adopted by RANO WASH, two contracts are expected to be signed:

1. Service contract for co-financing the water supply systems, signed between RANO WASH and the investor-builder-manager, to be signed before the works start.
2. Contract for delegating water system management, which would govern the system's management and operation, signed between the investor-builder-manager and the commune, as the contracting authority, under MEEH approval. The contract constitutes the formal document, ensuring the right of the investor-builder-manager to operate the system and, in return, to receive compensation from the tariff paid by users to recover its costs.

The contract will last from 15 to 20 years and will be drawn up in accordance with existing Madagascar laws and with the Water Code (Law N° 98 - 029) and its implementing decrees.

All water operators selected for the 12 water systems constructed in FY18 have received notifications from DREEH. A total of 8 of 10 contracts are signed by the commune and the water private operators, and water operators are fully functional in each. The signing of contracts for the two remaining sites was hampered by the cancellation of the previous contract with the former manager of Andemaka and the negotiation of taxes to be regularized over the period before the contract addendum for Foulpointe. In addition, frequent changes at the MEEH level (priorities, the minister) delayed the contract signing by the minister.

### **PPP strategies**

Although great progress has been made in implementing the "co-invest, build, operate" model, operators face challenges in reaching all potential customers in their drinking water supply areas. This poses a risk to the private service delivery model's financial viability. To address this challenge, the project developed a flexible PPP model as part of each region's market development strategy. With the support of BushProof and Sandandrano, RANO WASH will focus on integrating secondary networks or technical water supply options such as small rural systems, or boreholes, which will be market based and require relatively low capital investment to expand coverage and diversify options for low-income, rural, and remote customers to access water. The project developed a video of the related strategies, called "PPP Plus," which can be seen in the link below:

<https://www.youtube.com/watch?v=t3gF8D66L4Q&feature=youtu.be>

A brainstorming workshop was held between the PCT and SO2 regional and procurement teams to jointly develop a plan to implement these strategies. Table 3 summarizes these strategies:

Table 6. PPP strategies

Water product/service	Objective	Activity type/project support	Target	Budget estimate (USD)
<b>Phase 1: In FY18 and FY19, implement Co-finance – Build and Operate model</b>				
Big system: S1, S2, S3	New construction/rehabilitation of water systems	APS and APD studies, Co-finance the coinvest-build-operate model Introduce a promotional price for the first 100 water connections	Main town with 1,000–7,000 targeted people	60,000–150,000
	Increase the number of users	Support for managers to develop marketing strategy		1,500/system
	Network extension	Link local operators to MFIs/banks		0
<b>Phase 2: From FY20, implement Co-finance – Build and Operate model and promote range of safe water services and products for remote villages to foster economy of scale</b>				
Small water systems, boreholes	Small systems in unserved villages incorporated under big systems, with a single service provider	Identify appropriate system model: profitability and feasibility study Co-funding with the existing manager	Remote village/ODF village: 300–1,000 targeted people	10,000–20,000 per system
Range of products (BioSand filter, chlorine, etc.)	Provide appropriate WASH products for unserved villages	Support private operators to select and promote appropriate WASH products (profitable, user-friendly product) Support the business plan development of operators ready to invest and provide services Train masons/groups of masons ready to promote the BioSand filter on the manufacturing and marketing of filters	Remote village/ODF village: <300 targeted people	3,000/region
Other WASH services/products	Provide diversified products according to demands	Support the business plan development of operators ready to invest and provide services Link local operators to MFIs/banks	Chefs lieu des communes	
Big system	New water system construction/rehabilitation	APS and APD, Co-finance coinvest-build-operate model Introduce a promotional price for the first 100 water connections	Main town with 1,000–7,000 targeted people	80,000 on average

### **Activities planned for next quarter**

- Operationalize contract management teams at all construction sites for proper monitoring of contract implementation.
- Finalize and submit ESF for the FY20 construction works and launch the procurement procedure.
- Proceed to the technical and provisional acceptance of the seven sites undergoing construction.
- Monitor the constitution of files for water system management contracts and signatures at all levels.

### **IR2.3 Strengthened technical and business skills and competencies**

#### **Output 2.3.1 Capacity building for private sector in business systems and technical operations strengthened**

In FY20, the project's objective is to support initiatives by local operators to expand their WASH businesses and service delivery models beyond the local mason. As of Q1, the project has developed 12 business plans for each water supply operator against a yearly target of 48. The project will also develop business plans for the nine water supply systems ongoing construction.

In Q1, RANO WASH focused its support on evaluating the masons and seamstresses trained by the project and providing capacity building to those interested in increasing their services and scaling up their sanitation enterprises. The results showed that masons were often unable to meet the orders received especially in Atsinanana, where only 159 of 296 orders for latrines with SanPlat slabs were fulfilled. This is likely due to households making payments only after the products were delivered, which required masons to have enough start-up capital to produce slabs before receiving payment; most of them did not have the funds to meet the demand. In Vatovavy Fitovinany, the demand for latrines is still low; thus, masons could fulfill it. This indicates a need for masons to engage in more marketing activities. Households in Alaotra Mangoro are looking for easy-to-wash products like the Satopan, which the project will have the opportunity to pilot in Q2.

To address the findings above, the project trained 211 local masons in Atsinanana, Vatovavy Fitovinany, and Alaotra Mangoro on marketing and management techniques (financial management, stock management, etc.) and provided a refresher on latrine construction technology. Sharing of experiences on innovative toilet models and slabs and contracting with MFIs to access credit also took place during the training. The local masons in Atsinanana visited the Sani-market in Toamasina, which is managed by the NGO Saint Gabriel, to learn about different potential products and different payment modalities that can be applied.



Picture 2: Toilet seat and lid with ferrocement and washable tile with plastic waste recycled by a local mason, Ramanadafy Heritiana, in Vodiriana, Alaotra Mangoro

In Alaotra Mangoro, seamstresses have excelled in their business. Four of the 14 trained seamstresses have recorded significant sales: 5,022 pads (MGA 10 044 000) sold with 497 orders pending. A woman, Mrs. Adele in Ambohijanahary, has become an entrepreneur of washable sanitary napkins, both production and training. Her attendance at the various world days and national social events is part of her keys to success. Mrs. Adele recorded a sales record of 1,242 washable sanitary napkins (MGA 2 484 000), which represents almost 25% of sales in the region.

In general, seamstresses' customers include students and young mothers in the village as well as older women. In Q1, 59 seamstresses benefited from a refresher and exchange of experiences in the manufacture of washable sanitary pads in the four intervention regions of Atsinanana, Vatovavy Fitovinany, Alaotra Mangoro, and Vakinankaratra.

As for drinking water services, the project intends to strengthen managers' capacity to ensure quality service over the long term and succeed in consolidating their business on the one hand and satisfy beneficiaries' growing demand on the other. Hence, the project is looking for a company specialized in the field and capable of providing technical assistance to the private sector in water systems.

The objectives of the support are as follows: (i) assess the completeness and quality of the current business plans of existing managing enterprises and capacity building needs in commercial management and marketing, (ii) develop proven management tools and methodologies adapted to local contexts to facilitate water system operations management and monitoring, (iii) create a training package for managers considering the experiences of the various actors and train enterprises on the basics of finance/accounting, and (iv) support the MEEH/DREEH in improving the management delegation contract and monitoring the performance of system managers.

### **Visit of SatoPan manufacturer in Madagascar**

In December 2019, the general manager of SATO Africa visited Madagascar. This visit was organized with UNICEF, whom SATO Africa is already partnering with in other countries. The objective here was for SATO Africa to assess the potential sanitation market for their products in Madagascar. SATO Africa is a social business arm of LIXIL, a global company specializing in water and housing products. SATO focuses on toilet access and user experience. So far, over 3.4 million toilet products from SATO are used by over 39 countries, impacting the sanitation conditions of 16 million people. During a workshop with sanitation partners such



as RANO WASH, UNICEF, WSUP, DIOTONTOLO, Loowatt, and ARAFA, SATO Africa presented their business model and discussed how they promote their products.

During the workshop, RANO WASH presented its activities and part of the results of its WASH market assessment of the six intervention regions. This piqued the interest of SATO Africa, as there is obviously potential for the sanitation market in rural areas. SATO Africa is currently exploring the sanitation network in Madagascar to assess whether their business structure is feasible. This includes contacting local manufacturers, providing marketing support for national distributors, and orienting governments and NGOs and/or projects such as RANO WASH. We plan to reach out to SATO Africa in Q2 to launch discussions on the possible implementation of pilot activities in one or more of our regions.

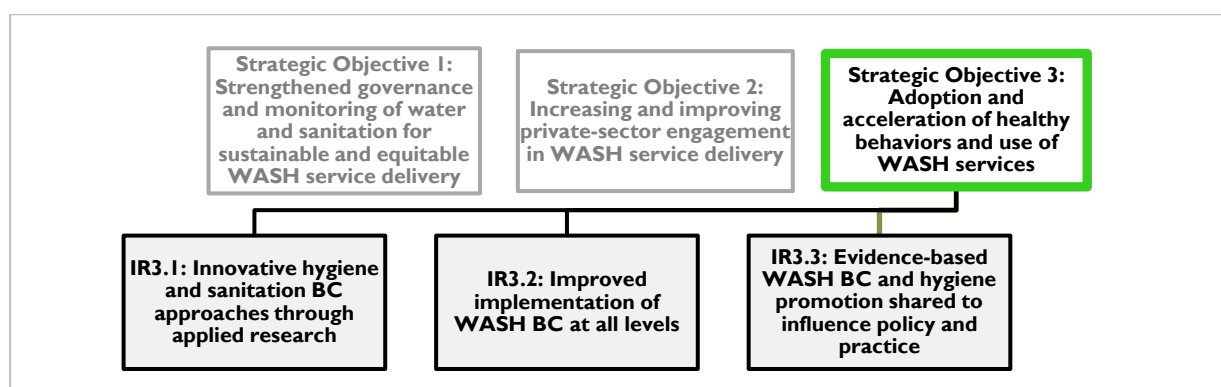
#### Output 2.3.2 Development of professional associations

In December 2019, RANO WASH conducted the restitution of the WASH Market Assessment conducted in Vakinankaratra, Amoron'i Mania and Haute Matsiatra regions. This event provided an opportunity to associate regional members of the *Association des Opérateurs Privés Distributeurs d'Eau à Madagascar* (AOPDEM) and to familiarize them with the market development process and opportunities initiated by the project. RANO WASH will continue facilitate linkages between regional and national WASH actors and promote their engagement with the AOPDEM.

#### Activities planned for next quarter

- Identify, train, and coach local operators to extend and implement their business plan for sanitation service supply, networks of local masons, and WSPs operating in the intervention regions.
- Reach out to SATO Africa and launch a pilot project in Alaotra Mangoro.

#### 2.1.3 Strategic Objective 3: Accelerating adoption of health behaviors and use of WASH services



#### Key achievements

- RANO WASH and the London School of Hygiene and Tropical Medicine (LSHTM) developed a research protocol to understand current sanitation practices in villages where CLTS has been previously implemented to understand factors that contribute to sustained latrine use in Madagascar.
- The first iteration of the Grow-up sticker approach was reviewed. Key findings are in Annex 16.



- A total of 911 households were targeted with behavior change activities under the Grow-up sticker concept.
- Forty new villages were verified as open defecation free (ODF).
- A total of 661 VSLA members invested in WASH products and services
- As part of the VSLA contests, 2,096 members and their respective households gained access to an improved latrine, an appropriate shower, and a food hygiene–friendly kitchen.
- Support was sustained for WASH-friendly institutions process at the national, regional, and local levels. RANO WASH helped update the national WASH-friendly school training pack for teachers and school managers and worked with schools and health centers to identify local solutions to improve access to better WASH services for their institutions.

**Table 7. Summary of progress towards key SO3 indicators**

Key Indicators	Q1		Q2	Q3	Q4	FY20		Comments
	Target	Actual	Target	Target	Target	Target	Actual	
Number of households targeted	N/A	911	4,300	21,266	5,264	31,022	911	The 911 achieved is from the previous evaluation in FY19. The new cycle is not due to start until Q2.
Number of new communities verified as ODF	36	40	206	475	333	1,050	40	Most CLTS triggering will occur in Q3 and Q4 because of low rainfall and higher cash in hand among HHs.
VSLA members investing in WASH products and services	2,339	661	1,725	2,301	1,585	7,950	661	This period is characterized by rainfall and lower cash, and VSLA members tend to use their funds to afford food rather than WASH products. It is also the back-to-school season, and VSLA members prioritize education.

### **IR3.1 Improved hygiene and sanitation behavior change solutions through applied research**

**Output 3.1.1: Behavioral science innovations for WASH BC explored, iterated, and evaluated**

Q1 focused on the rapid evaluation of the existing behavior change strategy following its first implementation cycle, which lasted 6–8 months. The main objectives of this evaluation phase were to

- assess the fidelity of strategies and understand reasons for any discrepancies
- identify more efficient and cost-effective methods and tools
- identify the main difficulties encountered by the implementation team in finding solutions, and
- ensure that the project is addressing the right drivers to trigger changes by listening to feedback from households

This initial review provided insights into improving the BC strategy, specifically the Grow-up sticker approach. One of the notable results was the effect of the Grow-up sticker campaign on non-ODF villages. The original strategy was to roll out BC activities in certified ODF villages to maintain their status and enable scaling up to other behaviors, but the review found that household support through the Grow-Up Sticker campaign helped villages reach ODF status where RANO WASH has not implemented CLTS. The project will explore how to diversify its BC approaches and their relevance to the local context for achieving and maintaining ODF status. The detailed results of this first review are in Annex 16.

Based on these results, the project will adjust its strategy in Q2 and consider segmenting the target audiences of the BC strategy to ODF and non-ODF communities.

The project also developed a research protocol for its CLTS study, which will be conducted with the LSHTM. It will investigate determinants of sustained ODF status, slippage, and non-adoption at the community level as well as sustained latrine use, slippage, and non-adoption at the household level. This research is qualitative and complements the outcome survey research conducted by WSSCC and the FAA, which is more quantitative. The detailed research protocol will be submitted to an ethics committee in Q2 for validation. The draft of the detailed research protocol can be found in Annex 18.

**Output 3.1.2: Studies of integrated population, health, and environment (PHE) programming models stimulating cross-sectoral collaboration**

For FY20, the RANO WASH PHE activity will focus on two main activities:

- (i) Undertaking research to help build a body of knowledge around population, health, and environment (PHE) programming, especially on how WASH activity promotion can lead to better health, nutrition, and even environmental preservation outcomes and how the project can improve local coordination to encourage different stakeholders to work complementarily and achieve better results.
- (ii) Collaborating with environmental stakeholders in areas where the project is setting up infrastructures to facilitate the implementation of actions to protect water sources and the environment.

In Q1, the project contacted different environmental partners in the six intervention regions by collaborating with the existing PHE network. We obtained verbal commitments from entities such as Madagascar National Parks (MNP), Conservation International, Centre Valbio Ranomafana, PIVOT Project, and Save the Lemurs. The project will continue to explore how to better collaborate and develop MOUs in Q2.

At the regional and local level, the project has facilitated intersectoral meetings to improve the coordination of PHE-related activities. In Alaotra Mangoro, this led to the development of a common action plan between the Regional Directorate of Health; the Regional Directorate of Water, Energy, and Hydrocarbons; the Regional Directorate of National Education; the Regional Office of Nutrition; and public-sector environmental stakeholders. These intersectoral action plans will be facilitated in other regions to promote alignment among health, nutrition, and environmental protection activities.

RANO WASH identified three pilot sites to test intersectoral coordination mechanisms: the Antetetzambaro commune in Atsinanana, which is home to the Ivoloina National Park; the Morarano Gara commune in Alaotra Mangoro; and the Kelilalina commune in Vatovavy Fitovinany, which also borders Ranomafana National Park.

### Output 3.1.3: WASH–Nutrition linkages researched

In Q1, the project continued to explore and strengthen its partnership with the regional nutrition offices at both the local and regional level to further improve the coordination and impact of integrated WASH and nutrition activities. UNICEF has also approached the project to support the development of a national WASH–nutrition strategy, including sharing relevant project experiences.

#### Activities planned for next quarter

- Readjustment of the behavior change strategy, including updating activities with a better impact on nutrition.
- Finalization of the research protocol for CLTS sustainability and validation by the ethics committee, and initiation of research activities in the field.
- Continued collaboration with PHE partners, particularly the establishment of MOUs and intersectoral action plans.
- Contribution to the development of the national WASH–nutrition strategies with UNICEF.



Picture 3: A community plate at the entrance of an ODF village

### IR3.2 Improved implementation of WASH behavior change at all levels: communities, government, and private sector

Output 3.2.1: WASH BC program coordination improved in RANO WASH regions

In Q1, RANO WASH participated in the improvement of regional BC activities through the SRMO, which is highlighted in detail in the SO1 section of this report.

Output 3.2.2: Innovative CLTS and WASH BC implementation activities

For the first period of FY20, the project achieved the following:

#### CLTS

**Table 8. Number of communities verified as "open defecation free" (ODF) as a result of USG assistance**

Regions	Q1		Q2	Q3	Q4	FY20	
	Target	Actual	Target	Target	Target	Target	Actual
Alaotra Mangoro	20	20	95	95	45	255	20
Amoron'i Mania	0	0	10	40	37	87	0
Atsinanana	0	5	51	119	80	255	5
Haute Matsiatra	0	0	0	40	17	57	0
Vakinankaratra	6	6	29	31	30	96	6
Vatovavy Fitovinany	10	9	21	150	124	300	9
<b>TOTAL</b>	<b>36</b>	<b>40</b>	<b>206</b>	<b>475</b>	<b>333</b>	<b>1,050</b>	<b>40</b>

A total of 40 out of 1,050 villages planned for FY20 were verified ODF. Although some villages that started in late FY19 and early FY20 are still in the verification process, this seemingly low result is because the rural areas held many cultural events in Q1, such as the *Tsaboraha*,<sup>4</sup> Day of the Dead, Christmas Day, and New Year's Eve. Follow-up activities of previous ODF villages have also been carried out to assess the sustainability level of their ODF status.

In Q1, 79% of villages maintained their ODF status. The main learnings from this process are the implementation of community agreements or rules such as DINA (a Malagasy concept that describes a social convention that sets a community's social norms/standards) and the construction of sustainable latrines adapted to the soil context. In five villages, a return to open defecation has been observed, caused by the weak implementation of community measures,

<sup>4</sup> A traditional event for the Betsimisaraka tribe to invite their extended family, slaughter a cow, and speak to their dead ancestors while giving them offerings to obtain their blessing.

especially during family events (marriage, funerals, etc.) where a large influx of members from outside the community makes it difficult to maintain ODF status. These lessons will help the team improve its support to villages in maintaining their ODF status, including advocating for public latrines. The project will support SLCs to bring up and discuss these issues and together find local solutions to address them.

**Table 9. Percentage of verified ODF communities that remained as such following validation**

Regions	FY20 Target	Q1 Actual
Alaotra Mangoro	75%	83%
Atsinanana	75%	63%
Vatovavy Fitovinany	75%	71%
Vakinankaratra	75%	100%
<b>TOTAL</b>	<b>75%</b>	<b>79%</b>

NB: A total of 38 of 48 villages monitored in Q1 (79%) remained ODF. There are no achievements for Amoron'i Mania or Haute Matsiatra since no post-ODF verification monitoring will happen until villages are verified ODF in these regions.

**VSLAs and VSLA contests**

In Q1, 661 VSLA members invested in WASH products. The total amount of investment this quarter is 7,545,652 MGA (\$2,096) among 3,694 members.

The following table summarizes of the number of VSLA members investing in different products. Note that numbers are not cumulative, as households can invest in more than one type of product or service.

**Table 10. number of VSLA members investing in different products**

Products purchased	Can for water storage	SanPlat slab	Soap	Water treatment products	Products related to food hygiene (storage, plates, etc.)
Number of VSLA members investing	411	364	550	617	647

The VSLA contest initiated in FY19 ended this quarter with the participation of 187 VSLA groups in 17 municipalities. The contest aimed to boost household investment in WASH services and thus accelerate behavior change. Out of the 2,489 VSLA members who participated in the contest, 2,096 members and their respective households now have access to an improved latrine, an appropriate shower, and a food hygiene–friendly kitchen.

In addition, four villages that were not yet ODF at the start of the competition became ODF afterward. The competition also generated a ripple effect among neighboring households and encouraged groups to take WASH-related initiatives. For example, a VSLA group in Alaotra Mangoro decided to help the local health center by providing it with garbage pits.



Pictures 4, 5, and 6: Toilet, shower, and kitchen after the VSLA contest

### **Institutional WASH**

Support for schools and health centers continued this quarter, including the selection of new institutions. The capacity of government partners (RDoNE, RDoPH, and their collaborators at the district level) to conduct routine follow-up activities remains a challenge at the moment, both because of scheduling conflicts and sustainability challenges with implementing a per diem policy given the number of schools and health centers to be covered in the regions.

### **Activities planned for next quarter**

- Continuation of CLTS activities: triggering, FUM, and post-ODF follow-up of villages already ODF in previous years.
- Implementation of behavior change activities following strategy readjustment.
- Continuation of support to VSLA groups for the use of WASH services: training and technical support for village agents.
- Continuation of activities in support of WASH-friendly institutions and various officials from the two ministries in partnership with WSUP, UNICEF, and FAA, at the regional or national level.

### **IR 3.3 Evidence-based WASH behavior change and hygiene promotion shared to influence policy**

#### **Output 3.3.1 National-level networks, policies, and programs engaged for sustainable WASH BC**

For Q1, the project continued its efforts to support the MEEH in its commitment to the Madagasikara Madio 2025 program. This led to the official validation of the ODF certification guidelines that will be used in all CLTS programs. RANO WASH updated its own follow-up tools and mechanisms to align with these new guidelines. The project also supported the Ministry of National Education in updating the training curriculum for WASH-friendly schools in partnership with other actors such as UNICEF, WSUP, FAA, the Merieux Foundation, and WaterAid. Updating this curriculum will address common challenges faced by different implementing partners; this will be done by employing both shorter and more relevant training sessions and decentralizing the activity to regional trainers as well as organizing more intensive post-training follow-up by different stakeholders at the local, district, and regional levels.

#### **Activities planned for next quarter**

- Continuation of activities in support of the Ministry of National Education for the WASH-friendly school process.
- Collaboration with the Ministry of Health and other partners to improve the process for WASH-friendly health facilities.
- Continued support from the MEEH for activities related to Madagasikara Madio 2025.

## **2.2 Gender Mainstreaming**

In FY20 Q1, RANO WASH conducted capacity building for communities, especially women, girls, youth, and people with disabilities on their rights and duties in relation to WASH. This was vital in empowering communities to assert their rights and participate in community- and communal-level decision-making to improve WASH services in their localities. Communication materials on people's rights and duties surrounding WASH were also developed and disseminated in municipalities where RANO WASH operates.

A total of 210 discussion groups were held in the intervention communes to give space to men, women, young people, girls, boys, including people with disabilities, to discuss their rights and duties in WASH and to express their expectations toward different structures, such as the CSOs, SLCs, and communal authorities. These focus groups are also part of capacity building for women, girls, young people, and people with disabilities on their rights and duties and on the different structures they can consult in case of problems and the different accountability mechanisms they can use to voice their requests and questions about WASH services.

In December 2020, as part of the 16 Days of Activism global campaign, the Ministry of Population, Social Protection, and Promotion of Women mobilized all partners to organize a training workshop for journalists with the theme of "Orange the World: Generation Equality Stand against Rape." RANO WASH seized this initiative and brought four journalists from the project's intervention regions to participate in this training. The objective was to build a pool of gender-sensitive journalists who can produce articles that promote social inclusion; gender; human rights, especially those of women, girls, and people with disabilities; and combat gender-based violence.



Following a conference debate with women leaders in Alaotra Mangoro in September 2019, a brief paper (Annex 20: English Version of the Brief Paper) was designed, highlighting takeaways to be shared with men, women, and RANO WASH field technicians to raise awareness of women's and young women's leadership.

### **Activities planned for next quarter**

- Conduct an after-action review session with RANO WASH field technicians through the Engaging Men for Women's Empowerment approach to share successes, good practices, and gaps and identify recommendations to better apply the approach.
- Provide technical support and monitor the application of inclusive infrastructure models in the municipalities of intervention.
- With support from a gender technical advisor from CARE International, review the project's gender and social inclusion strategy and revise the implementation plan for FY20 and the overall plan for FY21–FY22.
- Work with the project governance team to review the application of social accountability mechanisms supported by the project at the intervention commune level.

### **2.3 Implementation Challenges and Modifications/Issues Addressed from the Last Quarterly Report**

- Develop water service models adapted to small and remote villages, especially for ODF communities, to sustain their ODF status and improve access to safe water.
- Conduct regular post-ODF verification follow-up to assess and ensure that previously verified ODF communities remain as such and that activities continue in those communities to allow progressive sustainability.
- Continue working with the Ministry of Public Health and the Ministry of Education to support the WASH-friendly process in institutions and also continue local processes to facilitate certification for schools and healthcare facilities that have made progress.
- Initiate and facilitate behavior change strategies and practice discussions during SRMO sessions.

## **3 MONITORING, EVALUATION, ACCOUNTABILITY, AND LEARNING (MEAL)**

### **3.1 Performance Monitoring Plan (PMP) Update**

Annual targets were revised during the PPR process in Q1 FY20. The initial annual targets submitted for the PPR aligned with the approved FY20 AIP. However, the feedback from USAID during the PPR revision process was that it was not advised to have larger targets for FY20 when RANO WASH was unable to meet FY19 targets.

Following this feedback, RANO WASH reduced FY20 targets to be more achievable considering FY19 performance and planned FY20 activities. Annual water supply targets were revised to better align with anticipated demand and provision of water supply services, considering the gap between completing construction and setting up water connections.

Given this adjustment, FY21 and FY22 targets were revised to maintain the same five-year total. Revisions presented in the Q1 report aligned with all FY20 and FY21 targets submitted



for the PPR but have been modified since the FY20 AIP submission. For all revised indicator targets, comments in the IPTT note the former target.

The revised PMP and FY20 targets are presented in Annex 4. The updated IPTT with a full list of achievements for Q1 by region is in Annex 5.

In Q1, RANO WASH revised the PIRS for indicator 3.2.1: % communities verified ODF that remain ODF following validation. Following the revised national protocol for ODF verification released in November, RANO WASH updated the process and schedule for monitoring ODF status post verification. ODF status monitoring will now be conducted (1) by the ODF verification committee instead of field agents and (2) 6 and 12 months post verification instead of quarterly, which was deemed unnecessarily frequent and complicated to manage. The revised PIRS for indicator 3.2.1 is in Annex 6. Any future modifications to indicator definitions will be annexed to quarterly/annual reports.

## **3.2 MEAL System Update**

### **3.2.1 MEAL Capacity Building**

In November, 17 new field agents and three district supervisors in Atsinanana received Android tablets and training on the project MEAL system. These workshops focused on the practical applications of the MEAL system, with training on data collection forms, use of tablets, and best practices for mobile data collection, the project beneficiary census, and accountability mechanisms. To acquire practical experience, the agents field-tested the data collection forms in project communities under the supervision of MEAL staff. In Vatovavy Fitovinany, an additional census training on beneficiary identification was conducted with five new field agents and the subgrantee team.

In December, a MEAL capacity building rollout was piloted for the supervision team (district supervisors and programming staff) in Alaotra Mangoro. This workshop aimed to strengthen the regional reporting system and improve data quality. It focused on integrating district supervisors into the data validation process (via CommCare HQ) and improving field agent supervision. This workshop will be fine-tuned and rolled out to Vatovavy Fitovinany and Atsinanana in Q2.

### **3.2.2 Data Quality**

In Q1, RANO WASH revised the commune- and district-level reporting framework, developing new tools for monthly reporting by commune-level field agents and district supervisors. These tools will be used for monthly activity planning, achievement reporting, and sharing challenges/lessons learned among regional teams and the PCT. With increased access to data from individual field agents via CommCare HQ, district supervisors will take a more active role in supervising field agent performance and ensuring high-quality reporting.

In December, USAID conducted a formal DQA focused on CLTS activities in Vatovavy Fitovinany. Following the DQA debriefing in January, RANO WASH will develop an action plan to respond to identified challenges and improve data quality procedures. Additionally, an internal DQA was conducted in two districts in Alaotra Mangoro. Regional teams will begin conducting quarterly internal DQA in targeted districts.

### **3.2.3 Baseline Study Activities**

After selecting new communes, preparation and planning activities were completed for the baseline study and the WASH infrastructure inventory in Amoron'i Mania, Haute Matsiatra,

and Vakinankaratra. In collaboration with the external consultant, sampling was completed among the selected intervention communes in the three regions. This survey methodology will result in baseline values specific to the new intervention communes. The data collection tools and process for the second baseline and infrastructure inventory will be field-tested in Q2.

### **3.3 Accountability**

In FY20 Q1, 53 calls were made to the Green Line, with the largest number of calls received from Alaotra Mangoro. There was an increase in the number of calls received from Vatovavy Fitovinany compared with FY19. This is likely due to the distribution of additional Green Line posters to this region in November. However, few calls were received from Vakinankaratra, suggesting the continued need for targeted Green Line promotion in this region. The most common reasons for calling the line were information requests about the project and line use.

RANO WASH continues to consider how the Green Line can be best used as an accountability tool, besides serving as an informational hotline. In early December, the MEAL team reviewed the protocol for receiving and handling calls, particularly sensitive ones. The protocol for managing and responding to calls was revised to clarify the confidential process to be followed in the event of serious reports of fraud, abuse, and others. A separate process exists to manage urgent but non-sensitive calls related to water service issues and other complaints.

In Q2, the Green Line service will expand into new communes in Amoron'i Mania and Haute Matsiatra. Additionally, RANO WASH will consider the sustainability of the Green Line services following the end of the project. Line management does not require much time or human resources, but the service cost presents a potential challenge. The MEAL team will collaborate with SO1 to consider how the Green Line could be adapted as part of the package of sustainable commune-level accountability mechanisms and integrated into the essential services budgeted in communal development plans.

#### **Activities planned for the next quarter**

- MEAL trainings for new field agents in Alaotra Mangoro, Vatovavy Fitovinany, Amoron'i Mania, and Haute Matsiatra.
- MEAL capacity strengthening rollout for the supervision team in Atsinanana.
- Expansion of the Green Line into Haute Matsiatra and Amoron'i Mania.
- Data collection and supervision for the baseline study and WASH infrastructure inventory in new communes.
- Field visits for regional MEAL capacity building.
- ICT4D/database development:
  - Updating of project results dashboard to display real-time decision-making data for regional teams and PCT.
  - Dissemination of remaining tablets and ICT4D materials to new field agents.

## 4 MANAGEMENT AND ADMINISTRATIVE ISSUES

### Personnel

Replacement staff recruited this quarter included a regional coordinator for Vatovavy Fitovinany (December).

RANO WASH is conducting recruitment for the following positions:

- knowledge management officer
- finance manager (PCT)
- operations officer (PCT)
- entrepreneurship and marketing specialist (PCT)

### Management

Project management and coordination highlights from this quarter include the following:

- COP-CARE USA HQ Skype – Biweekly
- COP-DCOP/MEAL Programmatic and Technical Meeting – Weekly
- COP-DAF Finance/Operations Meeting – Weekly
- Project Coordination Team Meeting – Biweekly
- Steering Committee Meeting – November 2019
- Regional-PCT Meetings/Skype – Monthly
- Regional-level Team Meetings – Biweekly to Monthly
- MEAL PCT/Region/Skype – Weekly
- MEAL Review PCT/Region Meeting/Skype – Quarterly

### Coordination

RANO WASH continues to engage with USAID monthly as well as with GoM partners at the regional, communal, and national levels.

### Start-up in Amoron'i Mania and Haute Matsiatra

CARE has established offices in Amoron'i Mania, covering both Amoron'i Mania and Haute Matsiatra regions, with key personnel in place. CARE has submitted a request for approval for the two selected implementing partners, who have identified relevant staff (area supervisors, field technical agents) for both regions.

### Events and Visits

Some of the more noteworthy visits/events during this quarter (excluding those at the regional level) are summarized in the following table:

Date	Event
November 12–14, 2019	RANO WASH workshop on WASH systems approach facilitated by WaterAid
November 15, 2019	USAID HPN implementing partner meeting and consultation workshop to support USAID Madagascar's five-year strategy development
November 18–19, 2019	RANO WASH field visit of DCOP and project coordination team in Amoron'i Mania and Haute Matsiatra regions
November 20–22, 2019	MEEH concertation workshop on WASH policy development facilitated by USAID HP+

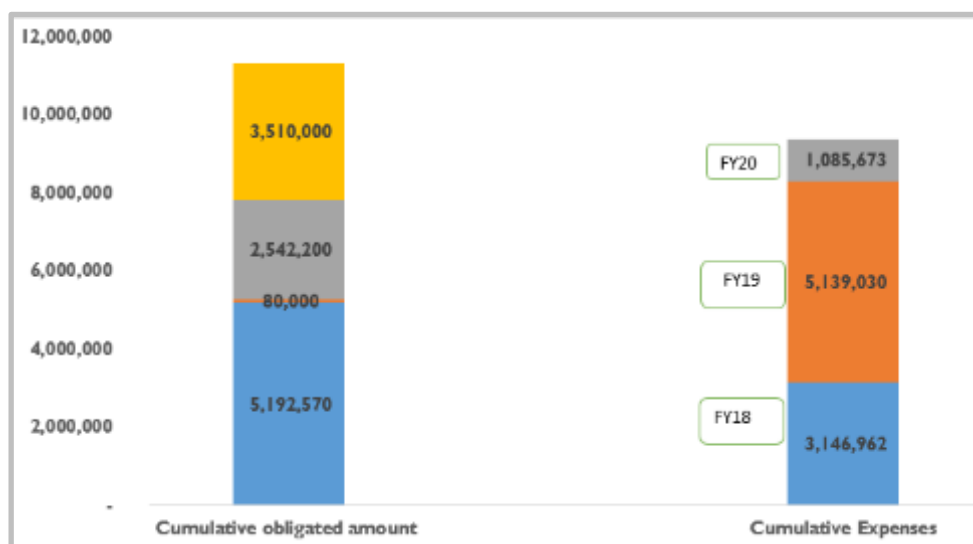
Date	Event
November 26, 2019	RANO WASH quarterly steering committee meeting
December 3–5, 2019	USAID field monitoring visit to RANO WASH and ACCESS projects and data quality assessment in Vatovivay Fitovivany region by Patricia Norolalao, maternal newborn and child health specialist; Dan Nover, WASH adviser; and Lova Ralijaona, health management information system specialist
December 14–15, 2019	RANO WASH after-action review workshop on tendering and contracting process for infrastructure/water systems
December 17, 2019	National launch of WASH-friendly institution guide by the Ministry of Education

## 5 FINANCIAL MANAGEMENT

RANO WASH's total expenditure in Q1 FY20 was \$1,085,673, representing a burn rate of 15% of the FY20 budget and 102% against the forecasted accrual of \$1,068,399 for Q1.

During this quarter, the project contributed a total of \$ 115,516 in cost share, representing 15% of the \$746,539 planned for FY20. To date, RANO WASH has achieved 49% of its cost share objectives against the project lifetime completion of 50% (see Annex 2).

The chart below presents the cumulative allocated amount of \$11,324,770 with a balance of \$1,953,106 at the end of December 2019.



Line Item Description	Total FY 2020 Budget	Q1 (Oct- Dec 2019)	Q2 (Jan - Mar 2020)	Q3 (Apr- Jun 2020)	Q4 (Jul- Sept 2020)	FY20 Expenditure to date	FY20 Burn rate to date	Total budget FY18 -FY22	Cumulative Expenditure to date FY18-FY20	Total % Spent to date
Salaries	658,886	136,264				<b>136,264</b>	21%	2,831,596	1,013,718	36%
Allowances/Benefits	175,076	45,076				<b>45,076</b>	26%	769,071	278,039	36%
Consultant Costs	12,714	-				-	0%	109,706	11,735	11%
Travel Costs	58,444	15,145				<b>15,145</b>	26%	296,032	121,282	41%
Equipment and Supplies	48,557	6,069				<b>6,069</b>	12%	346,796	299,737	86%
Program Cost	390,105	18,885				<b>18,885</b>	5%	4,804,255	999,029	21%
Construction Costs	699,510	-				-	0%	2,569,562	233,650	9%
Sub-awards	4,185,155	692,032				<b>692,032</b>	17%	16,732,658	5,077,791	30%
Other Direct Costs	189,860	55,274				<b>55,274</b>	29%	878,868	327,350	37%
<b>Total Direct Costs</b>	<b>\$ 6,418,309</b>	<b>\$ 968,745</b>				<b>\$ 968,745</b>	<b>15%</b>	<b>\$ 29,338,545</b>	<b>\$ 8,362,331</b>	<b>29%</b>
Indirect Costs	\$ 774,690	\$ 116,928				<b>\$ 116,928</b>	15%	\$ 3,231,017	\$ 1,009,334	31%
<b>Total USAID Costs</b>	<b>\$ 7,192,998</b>	<b>\$ 1,085,673</b>				<b>\$ 1,085,673</b>	<b>15%</b>	<b>\$ 32,569,562</b>	<b>\$ 9,371,665</b>	<b>29%</b>
Cost Share	\$ 746,539	\$ 115,516				<b>\$ 115,516</b>	15%	\$ 3,000,000	\$ 738,065	25%
<b>Total Project Cost</b>	<b>\$ 7,939,537</b>	<b>\$ 1,201,189</b>				<b>\$ 1,201,189</b>	<b>15%</b>	<b>\$ 35,569,562</b>	<b>\$ 10,109,730</b>	<b>28%</b>

Note: this table has been revised in May 2020 and reflects the budget modification of the project as per Modification #7.

## LIST OF ANNEXES

- Annex 1. RANO WASH Success Stories, Q1.20
- Annex 2. RANO WASH Cost Share Quarterly Update, Q1.20
- Annex 3. Detailed Implementation Plan, Q1.20 Update
- Annex 4. RANO WASH Updated PMP and FY20 Targets
- Annex 5. RANO WASH IPTT, Q1.20 Update
- Annex 6. Updated PIRS for Indicator 3.2.1
- Annex 7. WASH System Strengthening and RANO WASH
- Annex 8. Examples of WASH System Analysis Tools
- Annex 9. Maps of RANO WASH Intervention Communes
- Annex 10. Maps of Communes with APS APD and Water Systems Constructed
- Annex 11. List of Communes with APS APD and Water Systems Constructed
- Annex 12. Water System Construction, Q1.20 Update
- Annex 13. After-action Review on PPP for Water Services Provision
- Annex 14. FY20 EMMP
- Annex 15. EMMR Update, Q1.FY20
- Annex 16. Grow-up Sticker Strategy Review
- Annex 17. Grow-up Sticker Implementation Guide
- Annex 18. Research Protocol for the CLTS Sustainability Study
- Annex 19. WASH Friendly Institutions, Q1.20 Update
- Annex 20. Challenges Faced by Female Leaders in WASH
- Annex 21. List of Trainings Conducted, Q1.FY20
- Annex 22. Communication and Media Update, Q1.FY20

## ANNEX I. RANO WASH SUCCESS STORIES Q1.20



**USAID**  
FROM THE AMERICAN PEOPLE



## SUCCESS STORY

### **Vohitrindry: A very committed local mason elected mayor**



Municyen dressed in purple, helping his team to build a nozzle...

In the past, Municyen used to struggle on his own to try to produce latrines in order to sell them. He worked alone and looked for customers for his products. However, he didn't have many customers due to the quality of his latrine which did not meet customers' needs. Then, he was looking for a training to effectively supply latrines that meet customers' needs. RANO WASH provided training for local masons and Municyen decided to take part. Ranotiavina Munycien could produce better latrines adequate to customers' needs. Municyen has seen his income increase and his quality of life improve since he took the training provided by RANO WASH. He now supplies latrines for several companies such as FID (Development Intervention Fund). Creative and ambitious, Municyen is a role model for local workers in the Vohipeno district, mainly because he started as a local mason but has an entrepreneur. Now he employs a dozen families, while continuing to research and create new WASH products to meet people's needs.

Municyen has been elected as the new mayor of the commune of Vohitrindry, in the Vohipeno district. Before being elected, he promised to improve access to drinking water, to ensure good hygiene and sanitation, and to encourage people to use latrines through partnerships. Now that he is mayor, he has challenged himself to accomplish his action plans. Munycien's training strengthened his skills and enabled him to create the latrines now sold in Vohitrindry.

Municyen says, "My first challenge as a mayor of the municipality of Vohitrindry is to improve access to drinking water in the villages of my municipality."

A person like Municyen will be pursuing his profession long after the RANO WASH project reaches its end. While the project is running, RANO WASH will make sure to strengthen the local population's adoption of the best WASH habits. RANO WASH will also provide capacity-building for local promoters like Municyen. RANO WASH encourages him to keep prioritizing water sanitation hygiene in his municipality.





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## Andemaka: The cleanest municipality in Vohipeno



The students of Andemaka Primary Public School.

Located 17 km from the Vohipeno District, approximately 1 hour and 30 minutes by bush-taxi, Andemaka is one of the municipalities that has partnered with USAID's RANO WASH. Infrastructure built in close collaboration with RANO WASH is visible from the commune's entrance. This includes the Basic Health Center II (CSB II), which has RANO WASH handwashing devices in all its offices and treatment rooms. The CSB II's role to ensure that hygiene becomes both a habit and a priority for the population. To do so, the Center currently promotes and sells washable sanitary pads. There are also plans to include the pads with baby delivery kits.

Andemaka's primary public school is another good example of prioritizing hygiene. Since the students received a proper demonstration, handwashing has become a habit for them. They have memorized a short set of instructions that they repeat with pride and joy as they leave their classrooms and when they wash their hands: "Soak your hands, grab the soap, scrub the back of your hands, rub your palms, pick your nails, rinse your hands, and dry them in the air." As a result, teachers have reported that the students are healthier and there are fewer instances of sickness.

Andemaka currently has clean drinking water. Nineteen social connections and 143 individuals have been recorded since RANO WASH was established in Andemaka. Due to managerial issues, there are still around 100 requests at the end of 2019 for the installation of running water in households waiting to be validated. However, the commune has been able to resolve these issues in January 2020. Drinking water is now a real part of Andemaka's life.

The local promoters for RANO WASH are also very active as members of civil society organizations (OSC), or in local consultation structures (SLC), or in village savings and loan associations (VSLAs). They advocate for the promotion of san plat slabs to create open-defecation-free villages, according to the example set by Antanambao village in the Vohitraomby fokontany, where Akimi, a local mason, helps his neighbors build ventilated latrines.

Thanks to local promoters, and residents' enthusiasm for changing their behaviors, Andemaka has become one of the cleanest and well-organized municipalities in the Vohipeno District. In the past, Andemaka had no access to clean water because its water infrastructure was poorly maintained or damaged. Since then, residents have realized the importance of maintaining water infrastructure, and have decided to continue to follow RANO WASH's advice.



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## Mangabe Village now open-defecation-free thanks to the VSLA contest



One of the VSLA Members who was awarded by RANO WASH.

The village of Mangabe was one of the first intervention villages chosen for USAID's RANO WASH project. Mangabe is in the Sabotsy Anjiro municipality, in the Alaotra Mangoro region. It is about 2 km north of the chief town in the commune, and is made up of two small settlements, or hamlets. Open defecation was a common habit there. During the initiation of the strategic hamlet, when its accessibility, the number of inhabitants, and the possibility of introducing a private-public partner were assessed, only 20 percent of the population had latrines, and those did not meet hygiene standards. Most of the latrines were poorly ventilated or difficult to maintain. There were also people who defecated wherever they could and not in proper latrines. The strategic village was initiated in December 2018. However, it was not until October 2019 that the village reached the open-defecation-free (ODF) verification stage and all the inhabitants used latrines for their defecation needs. "The village is now clean and we do not defecate in the fields anymore since latrines were built.", added a villager in Mangabe.

USAID's RANO WASH led the implementation of numerous activities that contributed to the village's successful ODF status. These included constructing drinking-water infrastructure in July 2018, establishing the VSLA FANDRE-SENA group in March 2019, doing hygiene promotions beginning in August 2019, and a WASH contest with the VSLA MODELy in September 2019. The WASH contest proved to be a significant motivator for both communities to improve their overall hygiene situation, including their sanitation and water. The hygiene promoter strongly mobilized each VSLA to increase its chances of winning the contest. To improve their situation, VSLA members used the third box, called «Caisse RFF,» to take out loans to build latrines and toilets and obtain other materials necessary for improving their WASH situation. Village Savings and Loan Associations (VSLA) are a simple and powerful tool to support women's economic empowerment and to build social cohesion.



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VSLA contest winners.

Group members achieve near-immediate increases in access to and control over resources with only a lockbox, three keys, and some basic financial training. VSLAs also help members come together to build financial resources, create trust networks, and pursue shared ambitions. The value of the RFF box, 100Ar (0.027 USD) per member per meeting, is not always enough if a household's needs are high. In that case, the group uses the social fund to support the household.

There are currently eight basic latrines and 13 shared improved latrines in the village. Households use these to practice hygienic behaviors. Through these efforts, and the creation of these basic and improved latrines, the VSLA FANDRE-SENA group won the contest, and Mangabe was awarded ODF status. The solidarity and effort of this community now serve as a model for others. Setting up the VSLA group with the third box, which allowed members to take out loans, was key to improving the sanitation situation.



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## Accountability improves in Tsaratanana Ifanadiana



Local populations of Tsaratanana queuing for clean water.

When USAID's RANO WASH started working in Tsaratanana, much of the existing water infrastructure was broken and no longer working, or only working intermittently. Villages were dirty due to a lack of cleaning and of waste disposal measures such as litter bins or litter-holes. A lack of transparency was evident. Locals felt unable to take action, and were reluctant to pay water-use fees.

RANO WASH assisted local authorities in establishing a technical service for water, sanitation, and hygiene. The collaboration, which included the appointment of an agent to oversee this service (STEAH), significantly improved the village's infrastructure management. With the water pumps now functioning properly in Tsaratanana center, the broken infrastructure in the Ambohitsara I neighborhood has since been repaired, and monthly collective cleaning days have been established in each village on the third Friday of every month.

This "asa tanamaro" or "high labor intensity" approach to sanitation was approved during a meeting with all local stakeholders (government officials at each level, the health center, education authorities, religious leaders, traditional authorities, and RANO WASH) on September 16, 2019. RANO WASH supports this initiative by representing the WASH project during the monthly events.

The first collective cleanup, which was held on Friday, September 20, saw a huge turnout. Representatives from the different local structures created with RANO WASH support were all present: the civil society organization (OSC), the WASH technical service (STEAH), the local consultation structure (SLC), the drinking water network users' association (ASUREP), and the staff committee for sanitation and hygiene (KMFF). Women were out in force, as most local services are women-led. The cleanup included clearing the path to the health center to allow ambulance access.





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## Andefampony: A newly created model municipality that empowers women



WASH committee meet to implement WASH action plans for Tsaratanana.

Andefampony is unique in that it is both a newly created municipality and in that its mayor, Julienne Louissette Rakotoarilala and its traditional authority, Queen Jacqueline Baomiray, are women. Both are strong advocates for local development, assisting with the establishment of WASH committees in each village, developing action plans, and monitoring progress. As a result of their leadership and championing of USAID's RANO WASH Community-led Total Sanitation (CLTS) approach, the municipality's major village, Fenoarivo, quickly became open-defecation-free, with nine ventilated latrines being constructed.

As mayor and queen, Rakotoarilala and Baomiray have influenced other women in Andefampony, who now feel more empowered. One such woman is Clementine Zana-zafy, a married mother of four from Ampotsimanodina village, approximately 3 km from Fenoarivo. She was so impressed by the drastic changes she saw in Fenoarivo that she decided to act. She spoke of her village's problem: whenever it rained there, the air became unbreathable due to the stench around the coffee plantations. Clementine was then trained by RANO WASH to be a local promoter, and was instrumental in leading her fellow villagers to clean up Ampotsimanodina. Thanks to Clementine's leadership, her village has also reached open-defecation-free status in a short time.

Clementine can testify to RANO WASH's impact to date:

"Before, lots of people used to have to be carried to the hospital, whether sick from malaria or diarrhea, and there were many that died. On average, six people every month would go to the hospital due to diarrhea. But there has been a dramatic change since the arrival of RANO WASH. The number of people sick from the diarrheal disease has decreased, and it is no longer a cause of death. And air quality has improved drastically."

## ANNEX 2. RANO WASH COST SHARE QUARTERLY UPDATE Q1.20

RANO WASH project continue to monitor its three potential sources of cost sharing for this FY20:

- (1) Cash contributions,
- (2) In kind contributions, and
- (3) Donated goods and services.




The project's contribution during the first quarter of FY20 represents 15% of \$ 115,517 against budget FY20 of \$748,158. In addition, as per the proposed cost share amount for the total project life time of \$3m, RANO WASH achieved 49% compared to the project life time completed of 50%. The number of water users who continue its contribution will increase progressively and the projection will be updated after each quarterly review.

RANO WASH project will start to record some Non-USG Fundraising in the next quarter. The following table present the source of matching, ITD as of Q1.20 (amount in \$USD).

Description	Budget FY20	Actual FY18	Actual FY19	Actual Q1.20	Actual Q2.20	Actual Q3.20	Actual Q4.20	Total Actual FY20	%age Actual vs Budget FY20
<b>Cash contributions</b>	<b>353,722</b>	-	<b>125,635</b>	<b>46,626</b>	-	-	-	<b>125,635</b>	<b>13%</b>
Water Service Providers	263,896	-	104,210	12,425				104,210	5%
Water users	30,714	-	21,425	34,200				21,425	111%
Non-USG Fundraising	59,112	-	-	-				-	0%
<b>In kind contributions</b>	<b>172,548</b>	-	<b>154,723</b>	<b>26,746</b>	-	-	-	<b>154,723</b>	<b>16%</b>
Basic sanitation Users	115,206	-	111,240	13,069				111,240	11%
Unrecovered Indirect costs	57,343	-	43,483	13,677				43,483	24%
<b>Donated goods and services</b>	<b>221,887</b>	<b>154,784</b>	<b>187,407</b>	<b>42,145</b>	-	-	-	<b>187,407</b>	<b>19%</b>
Operating costs	175,872	138,040	108,612	31,390				108,612	18%
Program costs	46,015	16,744	78,794	10,755				78,794	23%
<b>Total</b>	<b>748,158</b>	<b>154,784</b>	<b>467,765</b>	<b>115,517</b>	-	-	-	<b>467,765</b>	<b>15%</b>
<b>Cumulated cost share (ITD)</b>		154,784	622,549	738,066	738,066	738,066	<b>738,066</b>		
<b>% vs \$3m cost share proposal for 5yrs</b>		5%	21%	25%	25%	25%	<b>25%</b>		
<b>Project life time completed</b>							<b>50%</b>		
<b>%age of cost share target</b>							<b>49%</b>		

### ANNEX 3. ANNEX 3. DETAILED IMPLEMENTATION PLAN QI.20 UPDATE

Status	Legend
<b>Rescheduled</b>	Deliverable rescheduled
<b>Not Started</b>	Activity not started
<b>On Track</b>	Deliverable meeting plan
<b>Potential Risks / Delays</b>	Slightly off-track requiring additional attention and/or resources
<b>Risks / Road Blocks</b>	Significantly off-track requiring substantial senior-level attention and/or resources
<b>Completed</b>	Deliverable closed, plan met
<b>On Hold</b>	Deliverable on hold, not active
<b>Canceled</b>	Deliverable canceled

	Planned Activities
	Actual Progress
	Planned Activities & Actual Progress

**PROJECT MANAGEMENT**

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>PROJECT MANAGEMENT</b>															
National	Biannual review workshop	Not Started													
National	Programmatic and Operations workshop	Not Started													
Regional	Quarterly review workshop	Completed													
Regional	Steering committee meeting	Completed													
	<b>RANO WASH staff capacity building</b>														
Regional	Training on project management	Not Started													
Regional	Training on tendering and contracting process	Completed													
Regional	Training on compliance with USAID procedures	Not Started	Planned for March												



**SOI GOVERNANCE**

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SOI. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>															
<b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b>															
Output 1.1.1.	Sector coordination and learning mechanisms operating effectively under strong national leadership														
Act 1.1.1.1	Facilitate with MEEH thematic group discussions	On Track													
Act 1.1.1.2	Mobilize and build capacity of WASH private sector groups to discuss on key needs of private sector development	Rescheduled	Activities focused on SRMO's preparation review												
Act 1.1.1.3	Mobilize and build capacity of WASH CSOs to develop advocacy plan responding to their key priorities	On Track													
Output 1.1.2.	Ministry in charge of WASH institutional capacity developed to meet strategic needs														
Act 1.1.2.1	Conduct study/workshop to refine and apply tools for regional and national planning, resource analysis and financing strategies, and sector performance monitoring	On Track													
Act 1.1.2.2	Conduct study/workshop to develop the National Investment Plan	On Track													
<b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b>															
Output 1.2.1.	SE&AM strengthened and extended														
Act 1.2.1.1	Organize / facilitate meetings with DREEH and SRMo to update SE&AM and to evaluate progress periodically at the regional level	On Track													
Act 1.2.1.2	Train and coach Communes to pilot the SE&AM ICT4D platform	On Track													

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SOI. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>															
Act 1.2.1.3	Work with the MEEH to assess the sectorial review performance	Not Started													
Act 1.2.1.4	Support the MEEH to conduct the WASH sectorial review taking into account the assessment results at national level	Rescheduled	Planned for Q2, need data compilation from DREEH												
Act 1.2.1.4	Contributing to conduct the WASH sectorial review taking in account the assessment results at regional level	On Track													
<b>Output 1.2.2</b>	Learning agenda implemented to increase and better regulate private sector engagement in WASH														
Act 1.2.2.1	Facilitate learning events for the RANO WASH project on PPP	Not Started													
Act 1.2.2.2	Work with the DREEH to feed the digital library with the PPP learning documents and events deliverables	Rescheduled	rescheduled for Q2												
<b>IRI.3 Strengthened sub-national systems</b>															
<b>Output 1.3.1</b>	Decentralized resources available for sustained WASH service delivery														
Act 1.3.1.1	Mobilize WASH actors at regional level to assess the progress achieved against BPOR/BPON and to define strategy to move forward	On Track													
Act 1.3.1.2	Coach DREEH to ensure STEAH capacity building	Rescheduled	Planned for Q2, difficulties to undertake during electoral period												
Act 1.3.1.2	Conduct capacity building of the STEAH	Not Started	Planned for Q2												
<b>Output 1.3.2</b>	Commune management capacities strengthened for WASH service delivery														

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SOI. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>															
Act: 1.3.2.1	Coach new communes to develop PCDEAH (Commune WASH plans)	Rescheduled	Planned for Q2, focus on selection and first contact with new Communes												
Act: 1.3.2.2	Coach communes already supported in FY18-19 to develop PCDEAH (Commune WASH plans)	On Track	continued on Q2												
Act: 1.3.2.3	Train communes with water supply services on their roles relating to WASH service delivery	On Track	continued on Q2												
Act: 1.3.2.4	Support communes with water services to set-up tax payment mechanism	On Track	continued on Q2												
Act: 1.3.2.5	Coach the 110 municipalities already supported by the project in FY18-19 to implement the one-year planning cycle	Rescheduled	Planned for Q2, waiting for new Mayor												
<b>IRI.4 Increased community control over WASH services</b>															
<b>Output 1.4.1</b>	Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation														
Act 1.4.1.1	Support the 140 new municipalities to reinforce / set-up CSO groups	Rescheduled	Planned for Q2, focus on selection and first contact with new Communes												
Act: 1.4.1.2	Coach CSOs groups in the 110 municipalities already supported by the project in FY18-19 to conduct advocacy, to promote accountability mechanisms	On Track	continued on Q2												
<b>Output 1.4.2</b>	110 communes with functional WASH accountability mechanisms														
Act: 1.4.2.1	Train and coach the 140 new municipalities to set-up SLCs and to use accountability mechanisms	Not Started													
Act: 1.4.2.2	Conduct a national learning event on accountability mechanisms	Not Started													

Activity Description	Status	Remarks	FY 2020											
			Q1			Q2			Q3			Q4		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO1. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>														
Act: 1.4.2.3	Provide training to private sector groups on accountability mechanisms	Not Started												

**SO2 PRIVATE SECTOR ENGAGEMENT**

Activity Description	Status	Remarks	FY 2020											
			Q1			Q2			Q3			Q4		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO2. Private sector engagement in WASH service delivery increased and improved.</b>														
<b>IR2.1 Improved WASH products, technologies, services and business models</b>														
Output 2.1.1	A comprehensive WASH market assessment (WMA) strategy developed													
ACT 2.1.1.1	Validate the WMA results for the Vakinakaratra, Haute Matsiatra and Amoron'i Mania Regions with regional stakeholders	On Track												
ACT 2.1.1.2	Elaborate a summary document of the 6 WMAs and share with partners.	On Track												
Output 2.1.2	Regional WASH market development plans drafted													
ACT 2.1.2.1	Simultaneous market development cycles: (1) workshop in each new region to develop first iteration of WMDPs and (2) evaluation and learning workshops for existing WMDPs in three other regions	On Track												
ACT 2.1.2.2	Inform regional stakeholder and launch WMDP implementation for each region													
ACT 2.1.2.3	Develop Market Based Sanitation strategy with IDE and PSI partnership	On Track												
ACT 2.1.2.4	Develop PPP+ strategy and model for promoting priority services and products	Completed												

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO2. Private sector engagement in WASH service delivery increased and improved.</b>															
ACT 2.1.2.5	Train and coach private sector actors to implement WMDP and marketing plan														
ACT 2.1.2.6	Hold National workshop to evaluate and validate region-specific PPP models;														
ACT 2.1.2.7	Hold national workshop for private actors involved in water quality analysis														
Output 2.1.3	Type and range of financial products for WASH services and products available and accessible increased														
ACT 2.1.3.1	Informational visits on project to heads of financial institutions	On Track	Will continue through Q2												
ACT 2.1.3.2	Facilitate connection between financial institutions and WASH service providers at different level	On Track	Will continue through Q2												
ACT 2.1.3.3	Support VSLA loans to initiate small business i.e. hygiene product and sanitation marketing	On Track	Will continue through Q2												
ACT 2.1.3.4	Develop communication materials related to PPP	Rescheduled	Planned for Q2												
<b>IR2.2 Improved WASH products, technologies, services and business models</b>															
Output 2.2.1	Design and construction of sustainable WASH infrastructure improved														
ACT 2.2.1.1	Carry out APS+ and APD+ studies	On Track	Will continue through Q2												
ACT 2.2.1.2	Pilot procurement process with PPP model and conduct on-the-job training for CAO (Communal tendering committee) members	Potential Risks / Delays	Planned for Q2 - 10 APD are ready for tender documents. Procurement process for infrastructure construction will be launched in Feb 2020.												

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO2. Private sector engagement in WASH service delivery increased and improved.</b>															
ACT 2.2.1.3	Develop ESF and monitor its implementation in the construction sites	On Track	Will continue through Q2												
ACT 2.2.1.4	Contract and Monitor water infrastructures construction and management	Potential Risks / Delays	Planned for Q2 - will be completed after procurement process above												
<b>IR 2.3. Strengthened technical &amp; business skills and competencies</b>															
Output 2.3.1	Capacity building for private sector in business systems and technical operations strengthened														
ACT 2.3.1.1	Train private operators in business planning with a focus on diversification of services and products and strengthening business plans;	Not Started	Planned for Q2												
ACT 2.3.1.2	Train private operators in marketing strategies for active sale promotion and collecting and responding to customer feedback;	Not Started	Planned for Q2												
ACT 2.3.1.3	Train local masons on latrine technologies, and seamstresses on marketing, and simplified administration and financial management;	On Track													
ACT 2.3.1.4	Organize study trips for Water system managers to learn from other projects														
Output 2.3.2	Professional Associations Development														
ACT 2.3.2.1	Based on the result of institutional and organizational assessment, develop and implement a capacity building plan to the AOPDEM;	Not Started	Planned for Q2												
ACT 2.3.2.2	Conduct WMA validation and WMDP elaboration workshops including AOPDEM members;	On Track													

**SO3 BEHAVIOR CHANGE**

Activity Description	Status	Remarks	FY 2020											
			Q1			Q2			Q3			Q4		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO3. Adoption of healthy behaviors and use of WASH services accelerated</b>														
<b>I.R.3.1</b>	<b>Improved hygiene and sanitation behavior change solutions through applied research</b>													
<b>Output 3.1.1</b>	Behavioral science innovations for WASH BC explored, iterated, evaluated													
Act: 3.1.1.4	Evaluate and adjust the BC strategy	On Track												
Act: 3.1.1.5	Implement CLTS sustainability research	On Track												
Act: 3.1.1.6	Design, implement and share nudge-related research	Rescheduled												
Act: 3.1.1.7	Conduct a qualitative research on MHM	Rescheduled												
<b>Output 3.1.2</b>	Studies of integrated population, health and environment (PHE) programming models stimulating cross-sectoral collaboration													
Act 3.1.2.2	Conduct an action research on PHE	On Track												
Act 3.1.2.3	Document and share the PHE research process													
Act 3.1.2.4	Participate in national networks on PHE	On Track												
<b>Output 3.1.3</b>	WASH-Nutrition linkages researched													
Act 3.1.3.2	Establish a MOU with PARN/FAFY on WASH nutrition activities in three regions	Rescheduled												
Act 3.1.3.3	Conduct an action research on WASH-Nutrition in partnership with PARN/FAFY													
Act 3.1.3.4	Coordinate WASH and nutrition activities at local/regional levels	On Track												

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO3. Adoption of healthy behaviors and use of WASH services accelerated</b>															
<b>I.R.3.2</b>	<b>Improved implementation of WASH behavior change at all levels: communities, government and private sector</b>														
<b>Output 3.2.1</b>	WASH BC program coordination improved in RANO WASH regions														
Act 3.2.1.1	Collaborate with MoWASH to coordinate WASH BC activities at the national level (quarterly meeting)	On Track													
Act 3.2.1.2	Organize and participate in regional platform meetings to ensure coordination of activities at regional level	Not Started													
<b>Output 3.2.2</b>	Innovative CLTS and WASH BC implementation														
Act 3.2.2.1	Initiate group discussions at community level on WASH rights	On Track													
Act 3.2.2.7	Identification, evaluation and training of local promoters at communal level in intervention communes	Rescheduled													
Act 3.2.2.8	Coaching for local promoters on BC activities (Households activities with Grow-Up stickers, group discussions, events)	Rescheduled													
Act 3.2.2.10	Establish and coach WASH committees to strengthen community participation and coordination	On Track													
Act 3.2.2.11	Establish new VSLA groups and coaching for previous VSLA	On Track													
Act 3.2.2.12	Encourage VSLA members to invest in WASH products/services (use and service providers)	On Track													
Act 3.2.2.13	CLTS Triggering and FUM activities at village/fokontany level	Potential Risks / Delays	Triggering will be intensely made in Quarter 2 and 3 to reach the targets												



Activity Description	Status	Remarks	FY 2020											
			Q1			Q2			Q3			Q4		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO3. Adoption of healthy behaviors and use of WASH services accelerated</b>														
Act 3.2.2.14	Train, coach and support health facilities and schools	Potential Risks / Delays	Negotiations are currently being made to allow a better involvement of regional level of both ministries											
Act 3.2.2.16	Celebrate and mobilize communities to create movements for change during world days	On Track												
Act 3.2.2.17	Training and certification of Village Agents (AV)	On Track												
Act 3.2.2.20	Organize VSLA contests at local level													
Act 3.2.2.21	Pilot a model of fund securitization for VSLA groups													
Act 3.2.2.22	Establish and use a mobile messaging mechanism for BC activities with VIAMO	Rescheduled												
<b>Output 3.2.3</b>	Communication Marketing developed for WASH products and services													
Act 3.2.3.1	Implement marketing campaign on WASH products and services in communes where products and services are available	On Track												
Act 3.2.3.2	Promote WASH products and services through local medias	Rescheduled												
Act 3.2.3.3	Design and produce marketing tools and materials for products (latrine, menstrual pads, water, soap)	Rescheduled												
<b>IR3.3</b>	<b>Evidence-based WASH BC and hygiene promotion shared to influence policy</b>													
<b>Output 3.3.1</b>	National-level networks, policies and programs engaged for sustainable WASH BC													

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>SO3. Adoption of healthy behaviors and use of WASH services accelerated</b>															
Act: 3.3.1.1	Initiate learning hub discussions within the project and setup the learning hub at national and regional level	Rescheduled													
Act: 3.3.1.2	Attend, participate, initiate workshops and meetings on national level to share experiences, expertise and to influence policies: based on action research, formative research results	Rescheduled													

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>MONITORING, EVALUATION, ACCOUNTABILITY &amp; LEARNING</b>															
	<b>SMILER workshop for new TAs and regions</b>														
Regional	SMILER workshop - Haute Matsiatra	Rescheduled	Planned for Q2												
Regional	SMILER workshop - Amoron'i Mania	Rescheduled	Planned for Q2												
Regional	SMILER workshop - Alaotra Mangoro (new TAs)	Rescheduled	Scheduled for February												
Regional	SMILER workshop - Atsinanana (new TAs)	Completed													
Regional	SMILER workshop - Vatovavy Fitovinany (new TAs)	Rescheduled	Planned for Q2												
Regional	SMILER workshop - Vakinankaratra (new TAs)	Completed	Completed in January												
	<b>MEAL system capacity building for old TAs</b>														
Regional	MEAL system "refresher" - Alaotra Mangoro	Not Started													
Regional	MEAL system "refresher" - Atsinanana	Not Started													
Regional	MEAL system "refresher" - Vatovavy Fitovinany	Not Started													
Regional	MEAL system "refresher" - Vakinankaratra	Not Started													

Activity Description	Status	Remarks	FY 2020											
			Q1			Q2			Q3			Q4		
			Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>MONITORING, EVALUATION, ACCOUNTABILITY &amp; LEARNING</b>														
	<b>Baseline survey and WASH infrastructure inventory in 3 regions (Vakinankaratra, Amoron'I Mania, Haute Matsiatra)</b>													
National	Baseline survey and WASH infrastructure inventory in FY19-FY20 regions	Potential Risks / Delays	Will continue through Q2 following completed selection of communes in Q1											
National	Workshop to promote the use of baseline survey data at the national level	Not Started												
Regional	Workshop to promote the use of baseline survey data at the regional level	Not Started												
	<b>MEAL system "roll out" workshop for supervision team</b>													
Regional	MEAL system "roll out" workshop - Alaotra Mangoro	Completed												
Regional	MEAL system "roll out" workshop - Atsinanana	Not Started												
Regional	MEAL system "roll out" workshop - Vatovavy Fitovinany	Not Started												
Regional	MEAL system "roll out" workshop - Vakinankaratra	Completed	Completed in January											
Regional	MEAL system "roll out" workshop - Haute Matsiatra	Not Started												
Regional	MEAL system "roll out" workshop - Amoron'I Mania	Not Started												
	<b>Annual beneficiary-based survey</b>													
National	Recruitment of enumerators	Not Started												
National	Training of enumerators	Not Started												
National / Regional	Field data collection	Not Started												
	<b>Data Quality Assurance</b>													

Activity Description		Status	Remarks	FY 2020											
				Q1			Q2			Q3			Q4		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
<b>MONITORING, EVALUATION, ACCOUNTABILITY &amp; LEARNING</b>															
National / Regional	Data Quality Assessment	On Track	Internal & USAID DQA completed in December												
	<b>MEAL Review</b>														
National	Annual MEAL team review	Not Started													
	<b>Field visits to support the operationalization of the MEAL system</b>														
National / Regional	Field visit supervision - Atsinanana	Rescheduled	Planned for Q2												
National / Regional	Field visit supervision - Vatovavy Fitovinany	On Track													
National / Regional	Field visit supervision - Alaotra Mangoro	On Track													
National / Regional	Field visit supervision - Vakinankaratra	Not Started													
National / Regional	Field visit supervision - Haute Matsiatra	Not Started													
National / Regional	Field visit supervision - Amoron'I Mania	Not Started													
	<b>ICT4D / Database management</b>														
National	Updating database after CommCare data extraction	On Track													
National	Revising results dashboard following programmatic and decision-making needs	On Track													
National	Participation/presentation at international ICT4D conference	Not Started													

## ANNEX 4. RANO WASH REVISED PMP Q1.20 UPDATE

#	Reference Indicator	Indicator Title	Indicator Type	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)	Year 2 (FY 19)	Year 3 (FY 20)	Year 4 (FY 21)	Year 5 (FY 22)
							Target	Target	Target	Target	Target
<p><b>Goal: Increase equitable and sustainable access to water, sanitation, and hygiene (WASH) services to maximize their impact on human health and nutrition and the preserve environment in 250 rural communes in Vatovavy Fitovinany, Atsinanana, Amoron'i Mania, Haute Matsiatra, Vakinankaratra, and Alaotra Mangoro regions in Madagascar.</b></p>											
<p><b>SO 1: Governance and monitoring of water and sanitation strengthened for delivering sustainable WASH services</b></p>											
1.1		# of intervention communes increasing WASH budget	Outcome	Annual	TBD	80 (cumulative)	NA	NA	15	45	80
1.2	HL.8.4-1	Value of new funding mobilized to the water and sanitation sectors as a result of USG assistance	Outcome	Annual	NA	\$910,710	NA	\$248,710	\$245,000	\$307,000	\$110,000
<p><b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b></p>											
1.1.1		National Sector Development Action Plan implemented	Outcome	Annual	Red	Green	NA	Red	Yellow	Yellow	Green
<p>OP 1.1.1 Sector coordination and learning mechanisms operating effectively under strong national leadership</p>											
1.1.1.1		National body for WASH sector coordination operational	Outcome	Annual	Red	Green	Red	Yellow	Yellow	Yellow	Green
<p>OP 1.1.2 MoWEH institutional capacity developed to meet strategic needs</p>											
<p><b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b></p>											
1.2.1		% of intervention communes reporting in the national WASH monitoring system (SE&AM)	Outcome	Annual	0%	86%	N/A	39%	52%	80%	86%
<p>OP 1.2.1 SE&amp;AM strengthened and extended</p>											
1.2.1.1		National WASH monitoring system (SE&AM) tracks gender-sensitive data and quality of WASH service provision	Output	Annual	Red	Green	NA	Red	Yellow	Yellow	Green
<p>OP 1.2.2 Learning agenda implemented to increase and better regulate private sector engagement in WASH</p>											
<p><b>IRI.3 Strengthened sub-national systems</b></p>											

#	Reference Indicator	Indicator Title	Indicator Type	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)	Year 2 (FY 19)	Year 3 (FY 20)	Year 4 (FY 21)	Year 5 (FY 22)
							Target	Target	Target	Target	Target
1.3.1	HL.8.3-3	# of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance	Outcome	Annual	ND	402	NA	64	90	124	124
OP 1.3.1 Decentralized resources available for sustained WASH service delivery											
OP 1.3.2 Commune management capacities strengthened for WASH service delivery											
1.3.2.1		# of intervention communes engaging with private sector to provide WASH services	Outcome	Annual	TBD	105 (cumulative)	NA	18	75	95	105
<b>IR1.4 Increased community control over WASH services</b>											
1.4.1		# of WASH users groups operational in intervention communes	Outcome	Annual	TBD	200 (cumulative)	NA	70	100	150	200
OP 1.4.1 Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation											
OP 1.4.2 Communes have functional WASH accountability mechanisms											
1.4.2.1		# of intervention communes with functional WASH accountability mechanisms	Output	Annual	TBD	200 (cumulative)	NA	70	100	150	200
<b>SO 2: Private sector engagement in WASH service delivery increased and improved</b>											
<b>IR2.1 Improved WASH products, technologies, services and business models</b>											
2.1.1		# of new/improved WASH products and technologies implemented with RANO WASH support	Outcome	Annual	NA	10	NA	4	4	2	0
2.1.2		# of new water and sanitation services provided with RANO WASH support	Outcome	Annual	NA	180	NA	20	58	82	20
OP 2.1.1 A comprehensive WASH market assessment strategy developed											
OP 2.1.2 Regional WASH market development plans drafted											
OP 2.1.3 Type and range of financial products for WASH services and products available and accessible increased											

#	Reference Indicator	Indicator Title	Indicator Type	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)	Year 2 (FY 19)	Year 3 (FY 20)	Year 4 (FY 21)	Year 5 (FY 22)
							Target	Target	Target	Target	Target
2.1.3.1		# of WSP/artisans/vendors issued loan products for investment in WASH systems	Output	Quarterly	NA	100	NA	20	30	40	10
<b>IR2.2 Improved design, construction and management of WASH infrastructure</b>											
2.2.1	HL.8.1-1	# of people gaining access to basic drinking water services as a result of USG assistance	Outcome	Quarterly	NA	210,000	22,000	60,100	52,500	82,000	15,400
2.2.2	HL.8.1-2	# of people gaining access to safely managed drinking water services as a result of USG assistance	Outcome	Quarterly	NA	90,000	16,500	18,030	20,000	40,000	11,970
2.2.3	HL.8.2-2	# of people gaining access to a basic sanitation service as a result of USG assistance	Outcome	Quarterly	NA	94,500	45,000	4,500	25,000	20,000	45,000
2.2.4		# of people gaining access to a <i>limited</i> sanitation service as a result of USG assistance	Outcome	Quarterly	NA	280,500	ND	30,000	70,000	110,000	70,500
2.2.5	HL.8.5-1	# of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance	Outcome	Annual	NA	277,970	ND	60,100	72,500	122,000	23,370
<b>OP 2.2.1 Design and construction of sustainable WASH infrastructure improved</b>											
2.2.1.1		# of infrastructure feasibility studies (APD and APDS reports) completed	Output	Quarterly	NA	APS: 200 APD: 104	APS: 50 APD: 12	APS: 30 APD: 20	APS: 40 APD: 26	APS: 80 APD: 46	APS: 0 APD: 0

#	Reference Indicator	Indicator Title	Indicator Type	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)	Year 2 (FY 19)	Year 3 (FY 20)	Year 4 (FY 21)	Year 5 (FY 22)
							Target	Target	Target	Target	Target
2.2.1.2	HL.8.1-4	# of institutional settings gaining access to basic drinking water services as a result of USG assistance	Output	Quarterly	NA	221	20	25	76	100	20
2.2.1.3	HL.8.2-4	# of basic sanitation facilities provided in institutional settings as a result of USG assistance	Output	Quarterly	NA	354	20	50	114	150	40
<b>IR2.3 Strengthened technical &amp; business skills and competencies</b>											
2.3.1		# of business plans developed for offering consumer WASH products and/or services	Output	Annual	NA	140	12	8	51	62	7
2.3.2		% increase in sales for RANO WASH-supported enterprises (average % increase in net sales for enterprises following business training)	Outcome	Annual	NA	25%	NA	NA	15%	20%	25%
<b>OP 2.3.1 Capacity building for private sector in business systems and technical operations strengthened</b>											
2.3.1.1		# of WSP/commune staff trained in improved WASH service provision	Output	Quarterly	NA	563	NA	244	153	154	12
<b>OP 2.3.2 Development of professional associations</b>											
2.3.2.1		# of national professional associations / local cooperatives developed with RANO WASH support	Output	Annual	NA	13 (cumulative)	NA	1	7	13	13
<b>SO 3 : Adoption of healthy behaviors and use of WASH services accelerated</b>											
3.1	HL.8.2-5	% of households with soap and water at a hand washing station commonly used by family members	Outcome	Annual	16% (at regional level)	35%	18%	22%	26%	30%	35%
3.2	HL.8.2-1	# of communities verified as “open defecation free” (ODF) as a result of USG assistance	Outcome	Quarterly	NA	2,500	150	600	1,050	850	0
<b>IR3.1 Improved hygiene and sanitation BC solutions through applied research</b>											
3.1.1		# knowledge products documenting learning produced and disseminated	Output	Annual	NA	20	NA	2	6	6	6



#	Reference Indicator	Indicator Title	Indicator Type	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)	Year 2 (FY 19)	Year 3 (FY 20)	Year 4 (FY 21)	Year 5 (FY 22)
							Target	Target	Target	Target	Target
3.1.2		# intended organizations reporting applying knowledge gained from a knowledge product to improve program, service delivery, training/education, or research practice	Outcome	Annual	NA	15/25	NA	NA	5/25	10/25	15/25
OP 3.1.1 Behavioral science innovations for WASH BC explored, iterated, evaluated											
OP 3.1.2 Studies of integrated population, health and environment (PHE) programming models stimulating cross-sectoral collaboration											
OP 3.1.3 WASH-Nutrition linkages researched											
<b>IR3.2 Improved implementation of WASH BC at all levels: communities, government and private sector</b>											
3.2.1		% communities verified ODF that remain ODF following verification	Outcome	Quarterly	73%	75%	NA	75%	75%	75%	75%
OP 3.2.1 WASH BC program coordination improved in RANO WASH regions											
OP 3.2.2 Innovative CLTS and WASH BC implementation											
3.2.2.1		# of VSLA members who reported investing in WASH services or products (latrine, water connection, etc.)	Output	Quarterly	0	22,400	NA	3,200	7,950	6,400	4,850
3.2.2.2		# of institutions achieving WASH-friendly status with RANO WASH support	Outcome	Quarterly	NA	HF: 120 Schools: 125	HF: 8 Schools: 12	HF: 10 Schools: 15	HF: 48 Schools: 48	HF: 62 Schools: 62	HF: 0 Schools: 0
3.2.2.3		% intervention communities triggered through CLTS which become verified ODF	Output	Quarterly	NA	90%	ND	70%	75%	80%	90%
OP 3.2.3 Marketing communications developed for WASH products and services											
<b>IR 3.3 Evidence-based WASH BC and hygiene promotion shared to influence policy and practice</b>											
OP 3.3.1 National-level networks, policies and programs engaged for sustainable WASH BC											

#	Indicator Title	Indicator Type	FY20 Compiled Target	FY20 ALM	FY20 AMR	FY20 ATS	FY20 HTM	FY20 VKN	FY20 V7V
<b>Goal: Increase equitable and sustainable access to water, sanitation, and hygiene (WASH) services to maximize their impact on human health and nutrition and the preserve environment in 250 rural communes in Alaotra Mangoro, Amoron'i Mania, Atsinanana, Haute Matsiatra, Vakinankaratra, and Vatovavy Fitovinany regions in Madagascar.</b>									
<b>SO 1: Governance and monitoring of water and sanitation strengthened for delivering sustainable WASH services</b>									
1.1	# of intervention communes increasing WASH budget	Outcome	15	5	0	5	0	0	5
1.2	Value of new funding mobilized to the water and sanitation sectors as a result of USG assistance	Outcome	245,000						
<b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b>									
1.1.1	National Sector Development Action Plan implemented	Outcome	Yellow						
OP 1.1.1 Sector coordination and learning mechanisms operating effectively under strong national leadership									
1.1.1.1	National body for WASH sector coordination operational	Output	Yellow						
OP 1.1.2 MoWEH institutional capacity developed to meet strategic needs									
<b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b>									
1.2.1	% of intervention communes reporting in the national WASH monitoring system (SE&AM)	Outcome	52%						
	Number of intervention communes using SE&AM	Process	130	36	5	36	5	12	36
OP 1.2.1 SE&AM strengthened and extended									
1.2.1.1	National WASH monitoring system (SE&AM) tracks gender-sensitive data and quality of WASH service provision	Output	Yellow						
<b>IRI.3 Strengthened sub-national systems</b>									

#	Indicator Title	Indicator Type	FY20 Compiled Target	FY20 ALM	FY20 AMR	FY20 ATS	FY20 HTM	FY20 VKN	FY20 V7V
1.3.1	# of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance	Outcome	<b>90 (2 national, 8 regional, 80 local)</b>	Regional: 2 Local: 20	Regional: 0 Local: 6	Regional: 2 Local: 22	Regional: 0 Local: 6	Regional: 2 Local: 10	Regional: 2 Local: 16
OP 1.3.1 Decentralized resources available for sustained WASH service delivery									
	<i>Number of intervention communes with trained STEAH</i>	Process	<b>30</b>	6	3	6	3	6	6
OP 1.3.2 Commune management capacities strengthened for WASH service delivery									
1.3.2.1	# of intervention communes engaging with private sector to provide WASH services	Outcome	<b>75</b>	17	5	17	5	14	17
	<i>Number of intervention communes with PCDEAH</i>	Process	<b>199</b>	34	30	34	20	33	48
<b>IRI.4 Increased community control over WASH services</b>									
OP 1.4.1 Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation									
1.4.1.1	# of WASH users groups operational in intervention communes	Output	<b>100</b>	30	0	31	0	8	31
	<i># OSC operational in intervention communes</i>	Process	<b>110</b>	34	0	34	0	8	34
OP 1.4.2 Communes have functional WASH accountability mechanisms									
1.4.2.1	# of intervention communes with functional WASH accountability mechanisms	Output	<b>100</b>	30	0	31	0	8	31
<b>SO 2: Private sector engagement in WASH service delivery increased and improved</b>									
<b>IR2.1 Improved WASH products, technologies, services and business models</b>									
2.1.1	# of new/improved WASH products and technologies implemented with RANO WASH support	Outcome	<b>4</b>						
2.1.2	# of new water and sanitation services provided with RANO WASH support	Outcome	<b>58</b>	7	10	11	9	8	13

#	Indicator Title	Indicator Type	FY20 Compiled Target	FY20 ALM	FY20 AMR	FY20 ATS	FY20 HTM	FY20 VKN	FY20 V7V
Output 2.1.3 Type and range of financial products for WASH services and products available and accessible increased									
2.1.3.1	# of WSP/artisans/vendors issued loan products for investment in WASH systems	Output	30	6	3	6	3	6	6
<b>IR2.2 Improved design, construction and management of WASH infrastructure</b>									
2.2.1	# of people gaining access to basic drinking water services as a result of USG assistance	Outcome	52,500	6,560	5,250	9,630	6,560	11,375	13,125
2.2.2	# of people gaining access to safely managed drinking water services as a result of USG assistance	Outcome	20,000	2,500	2,000	3,600	2,500	4,400	5,000
2.2.3	# of people gaining access to a basic sanitation service as a result of USG assistance	Outcome	25,000	8,000	2,250	8,000	1,800	2,250	2,700
2.2.4	# of people gaining access to a limited sanitation service as a result of USG assistance	Outcome	70,000	21,400	5,000	20,200	6,000	7,400	10,000
2.2.5	# of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance	Outcome	72,500	9,060	7,250	13,230	9,060	15,775	18,125
Output 2.2.1 Design and construction of sustainable WASH infrastructure improved									
2.2.1.1	# of infrastructure feasibility studies (APD and APDS reports) completed	Output							
	# APS		40	7	7	3	7	8	8
	# APD		26	4	4	4	4	5	5
2.2.1.2	# of institutional settings gaining access to basic drinking water services as a result of USG assistance	Output	76	10	13	13	10	15	15
2.2.1.3	# of basic sanitation facilities provided in institutional settings as a result of USG assistance	Output	114	12	20	20	12	25	25

#	Indicator Title	Indicator Type	FY20 Compiled Target	FY20 ALM	FY20 AMR	FY20 ATS	FY20 HTM	FY20 VKN	FY20 V7V
	<i>Number of intervention communes trained on PPP model</i>	Process	18	2	3	3	2	4	4
<b>IR2.3 Strengthened technical &amp; business skills and competencies</b>									
2.3.1	# of business plans developed for offering consumer WASH products and/or services	Output	51	6	9	9	8	7	12
2.3.2	% increase in sales for RANO WASH-supported enterprises (average % increase in net sales for enterprises following business training)	Outcome	15%						
Output 2.3.1 Capacity building for private sector in business systems and technical operations strengthened									
2.3.1.1	# of WSP/commune staff trained in improved WASH service provision	Output	153	18	27	27	24	21	36
Output 2.3.2 Development of professional associations									
2.3.2.1	# of national professional associations / local cooperatives developed with RANO WASH support	Output	7 (1 national + 6 local)	1	1	1	1	1	1
<b>SO 3: Adoption of healthy behaviors and use of WASH services accelerated</b>									
3.1	% of households with soap and water at a hand washing station commonly used by family members	Outcome	0						
3.2	# of communities verified as “open defecation free” (ODF) as a result of USG assistance	Outcome	1,050	255	87	255	57	96	300
<b>IR3.1 Improved hygiene and sanitation behavior change solutions through applied research</b>									
3.1.1	# knowledge products documenting learning produced and disseminated	Outcome	6						
3.1.2	# intended organizations reporting applying knowledge gained from a knowledge product to improve program, service delivery, training/education, or research practice	Outcome	5/25						
<b>IR3.2 Improved implementation of WASH behavior change at all levels: communities, government and private sector</b>									

#	Indicator Title	Indicator Type	FY20 Compiled Target	FY20 ALM	FY20 AMR	FY20 ATS	FY20 HTM	FY20 VKN	FY20 V7V
3.2.1	% communities verified ODF that remain ODF following verification	Outcome	75%	75%	75%	75%	75%	75%	75%
Output 3.2.2 Innovative CLTS and WASH BC implementation									
3.2.2.1	# of VSLA members who reported investing in WASH services or products (latrine, water connection, ...)	Output	7,950	2040	450	1890	300	990	2280
3.2.2.2	# of institutions achieving WASH-friendly status with RANO WASH support	Outcome	<b>HF: 48 Schools: 48</b>	HF: 4 Schools: 9	HF: 4 Schools: 5	HF: 9 Schools: 7	HF: 4 Schools: 5	HF: 14 Schools: 10	HF: 13 Schools: 12
	<i>Number of schools trained to become WASH-friendly</i>	Process	48	9	5	5	4	14	11
	<i>Number of health facilities trained to become WASH-friendly</i>	Process	48	12	4	7	4	10	11
3.2.2.3	% intervention communities triggered through CLTS which become verified ODF	Output	75%	75%	75%	75%	75%	75%	75%
	<i>Number of trained local promoters operational and working with RANO WASH project</i>	Process	2,119	542	180	510	120	186	581
	<i>Number of households accompanied by local promoters</i>	Process	31,022	8670	250	8160	250	2972	10720
	<i>Number of seamstresses operational</i>	Process	151	14	20	34	30	20	33
<b>IR 3.3 Evidence-based WASH BC and hygiene promotion shared to influence policy</b>									

## ANNEX 5. RANO WASH IPTT REVISED Q1.20 UPDATE

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
<b>Goal: Increase equitable and sustainable access to water, sanitation, and hygiene (WASH) services to maximize their impact on human health and nutrition and the preserve environment in 250 rural communes in Vatovavy Fitovinany, Atsinanana, Amoron'i Mania, Haute Matsiatra, Vakinankaratra, and Alaotra Mangoro regions in Madagascar.</b>															
0.1		% of people in intervention communes with access to basic drinking water services	Impact	Baseline/ Endline survey	Baseline/ Endline	10.38% (FY18 regions)	30%								30%
0.2		% of people in intervention communes with access to a basic sanitation service	Impact	Baseline/ Endline survey	Baseline/ Endline	0.23% (FY18 regions)	5%								5%
0.3		% of households in intervention communes with children under age 5 reporting an incidence of diarrhea within last two weeks	Impact	Baseline/ Endline survey	Baseline/ Endline	7.25% (FY18 regions)	5%								5%
<b>SO 1: Governance and monitoring of water and sanitation strengthened for delivering sustainable WASH services</b>															
I.1		# of intervention communes increasing WASH budget	Outcome	Communal budget	Annual	TBD	80 (cumulative)	NA	NA	NA	NA	15		45	80
I.2	HL.8.4-1	Value of new funding mobilized to the water and sanitation	Outcome	Commune-level survey/	Annual	NA	\$910,710	NA	NA	\$248,710	\$236,875	\$245,000		\$307,000	\$110,000

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
		sectors as a result of USG assistance		verification											
<b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b>															
1.1.1		National Sector Development Action Plan implemented	Outcome	MoWASH	Annual	Red	Green	NA	NA	Red	Red	Yellow		Yellow	Green
OP 1.1.1 Sector coordination and learning mechanisms operating effectively under strong national leadership															
1.1.1.1		National body for WASH sector coordination operational	Outcome	MoWASH, DREAH	Annual	Red	Green	Red	Red	Yellow	Yellow	Yellow		Yellow	Green
OP 1.1.2 MoWEH institutional capacity developed to meet strategic needs															
<b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b>															
1.2.1		% of intervention communes reporting in the national WASH monitoring system (SE&AM)	Outcome	Commune-level SE&AM report	Annual	0%	86%	NA	NA	39%	74%	52%		80%	86%
OP 1.2.1 SE&AM strengthened and extended															
1.2.1.1		National WASH monitoring system (SE&AM) tracks gender-sensitive data and quality of WASH service provision	Output	SE&AM/MEEH	Annual	Red	Green	NA	NA	Red	Red	Yellow		Yellow	Green
OP 1.2.2 Learning agenda implemented to increase and better regulate private sector engagement in WASH															
<b>IRI.3 Strengthened sub-national systems</b>															



#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
1.3.1	HL.8.3-3	# of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance	Outcome	Multi-level institutional assessment	Annual	ND	402	NA	NA	64	0	90 (2 national, 8 regional, 80 local)		124 (2 national, 12 regional, 110 local)	124 (2 national, 12 regional, 110 local)
OP 1.3.1 Decentralized resources available for sustained WASH service delivery															
OP 1.3.2 Commune management capacities strengthened for WASH service delivery															
1.3.2.1		# of intervention communes engaging with private sector to provide WASH services	Outcome	Commune-level survey/verification	Annual	TBD	105 (cumulative)	NA	NA	18	8	75		95	105
<b>IRI.4 Increased community control over WASH services</b>															
1.4.1		# of WASH users groups operational in intervention communes	Outcome	Annual survey	Annual	TBD	200 (cumulative)	NA	NA	70	92	100		150	200
OP 1.4.1 Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation															
OP 1.4.2 Communes have functional WASH accountability mechanisms															
1.4.2.1		# of intervention communes with functional WASH accountability mechanisms	Output	Annual survey / Community Scorecard	Annual	TBD	200 (cumulative)	NA	NA	70	44	100		150	200
<b>SO 2: Private sector engagement in WASH service delivery increased and improved</b>															

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
<b>IR2.1 Improved WASH products, technologies, services and business models</b>															
2.1.1		# of new/improved WASH products and technologies implemented with RANO WASH support	Outcome	Annual survey	Annual	NA	10	NA	NA	4	5	4		2	0
2.1.2		# of new water and sanitation services provided with RANO WASH support	Outcome	Annual survey	Annual	NA	180	NA	NA	20	12	58		82	20
OP 2.1.1 A comprehensive WASH market assessment strategy developed															
OP 2.1.2 Regional WASH market development plans drafted															
OP 2.1.3 Type and range of financial products for WASH services and products available and accessible increased															
2.1.3.1		# of WSP/artisans/vendors issued loan products for investment in WASH systems	Output	Bank/MFI reports, VSLA records	Quarterly	NA	100	NA	NA	20	24	30	2	40	10
<b>IR2.2 Improved design, construction and management of WASH infrastructure</b>															
2.2.1	HL.8.1-1	# of people gaining access to basic drinking water services as a result of USG assistance	Outcome	Observations of water services, direct count of beneficiaries	Quarterly	NA	210,000	22,000	0	60,100	5,363	52,500	192	82,000	15,400
2.2.2	HL.8.1-2	# of people gaining access to safely managed drinking water services as a result of USG assistance	Outcome	Observations of water services, direct count of beneficiaries	Quarterly	NA	90,000	16,500	0	18,030	2,159	20,000	601	40,000	11,970

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
2.2.3	HL.8.2-2	# of people gaining access to a basic sanitation service as a result of USG assistance	Outcome	Observations of sanitation facility, direct count of beneficiaries	Quarterly	NA	94,500	45,000	0	4,500	20,524	25,000	2,370	20,000	45,000
2.2.4		# of people gaining access to a <i>limited</i> sanitation service as a result of USG assistance	Outcome	Observations of sanitation facility, direct count of beneficiaries	Quarterly	NA	280,500	ND	NA	30,000	39,704	70,000	1,351	110,000	70,500
2.2.5	HL.8.5-1	# of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance	Outcome	Annual survey	Annual	NA	277,970	ND	NA	60,100	7,522	72,500		122,000	23,370
OP 2.2.1 Design and construction of sustainable WASH infrastructure improved															
2.2.1.1		# of infrastructure feasibility studies (APD and APDS reports) completed	Output	APS/APD studies	Quarterly	NA	APS: 200 APD: 104	APS: 50 APD: 12	APS: 17 APD: 12	APS: 30 APD: 20	APS: 49 APD: 12	APS: 40 APD: 26	APS: 7 APD: 10	APS: 80 APD: 46	APS: 0 APD: 0
2.2.1.2	HL.8.1-4	# of institutional settings gaining access to basic drinking water services as a result of USG assistance	Output	Design, tender, & reception documents	Quarterly	NA	221	20	0	25	HF: 6 Schools: 14	76	Schools: 2	100	20
2.2.1.3	HL.8.2-4	# of basic sanitation facilities provided in institutional settings	Output	Design, tender, &	Quarterly	NA	354	20	0	50	HF: 3 Schools: 17	114	0	150	40

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
		as a result of USG assistance		reception documents											
<b>IR2.3 Strengthened technical &amp; business skills and competencies</b>															
2.3.1		# of business plans developed for offering consumer WASH products and/or services	Output	Business plan validation	Annual	NA	140	12	0	8	10	51		62	7
2.3.2		% increase in sales for RANO WASH-supported enterprises (average % increase in net sales for enterprises following business training)	Outcome	Routine monitoring of enterprises reports	Annual	NA	25%	NA	NA	NA	NA	15%		20%	25%
<b>OP 2.3.1 Capacity building for private sector in business systems and technical operations strengthened</b>															
2.3.1.1		# of WSP/commune staff trained in improved WASH service provision	Output	Training reports	Quarterly	NA	563	NA	50	244	221	153	0	154	12
<b>OP 2.3.2 Development of professional associations</b>															
2.3.2.1		# of national professional associations / local cooperatives developed with RANO WASH support	Output	Training reports	Annual	NA	13 (cumulative)	NA	NA	1	1	7		13	13
<b>SO 3 : Adoption of healthy behaviors and use of WASH services accelerated</b>															

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
3.1	HL.8.2-5	% of households with soap and water at a hand washing station commonly used by family members	Outcome	Annual survey	Annual	16% (at regional level)	35%	18%	16%	22%	16%	26%		30%	35%
3.2	HL.8.2-1	# of communities verified as "open defecation free" (ODF) as a result of USG assistance	Outcome	ODF verification report	Quarterly	NA	2,500	150	56	600	624	1,050	40	850	0
<b>IR3.1 Improved hygiene and sanitation BC solutions through applied research</b>															
3.1.1		# knowledge products documenting learning produced and disseminated	Output	Knowledge products	Annual	NA	20	NA	NA	2	3	6		6	6
3.1.2		# intended organizations reporting applying knowledge gained from a knowledge product to improve program, service delivery, training/education, or research practice	Outcome	Sector review reports	Annual	NA	15/25	NA	NA	NA	NA	5/25		10/25	15/25
OP 3.1.1 Behavioral science innovations for WASH BC explored, iterated, evaluated															
OP 3.1.2 Studies of integrated population, health and environment (PHE) programming models stimulating cross-sectoral collaboration															
OP 3.1.3 WASH-Nutrition linkages researched															
<b>IR3.2 Improved implementation of WASH BC at all levels: communities, government and private sector</b>															

#	Reference Indicator	Indicator Title	Indicator Type	Data Source	Reporting Frequency	Baseline	Revised Target LoP	Year 1 (FY 18)		Year 2 (FY 19)		Year 3 (FY 20)		Year 4 (FY 21)	Year 5 (FY 22)
								Tgt	Achd	Tgt	Achd	Tgt	Achd	Tgt	Tgt
3.2.1		% communities verified ODF that remain ODF following verification	Outcome	Continuous monitoring reports/SE&AM	Quarterly	73%	75%	NA	NA	75%	100%	75%	79%	75%	75%
OP 3.2.1 WASH BC program coordination improved in RANO WASH regions															
OP 3.2.2 Innovative CLTS and WASH BC implementation															
3.2.2.1		# of VSLA members who reported investing in WASH services or products (latrine, water connection, etc.)	Output	VLSA survey	Quarterly	0	22,400	NA	NA	3,200	3,654	7,950	661	6,400	4,850
3.2.2.2		# of institutions achieving WASH-friendly status with RANO WASH support	Outcome	WASH-friendly verification report	Quarterly	NA	HF: 120 Schools: 125	HF: 8 Schools: 12	HF: 0 Schools: 0	HF: 10 Schools: 15	HF: 0 Schools: 2	HF: 48 Schools: 48	HF: 0 Schools: 6	HF: 62 Schools: 62	HF: 0 Schools: 0
3.2.2.3		% intervention communities triggered through CLTS which become verified ODF	Output	ODF verification report	Quarterly	NA	90%	ND	NA	70%	81%	75%	87%	80%	90%
OP 3.2.3 Marketing communications developed for WASH products and services															
<b>IR 3.3 Evidence-based WASH BC and hygiene promotion shared to influence policy and practice</b>															
OP 3.3.1 National-level networks, policies and programs engaged for sustainable WASH BC															

## ACHIEVEMENTS BY REGION FY20 Q1

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
<p><b>Goal: Increase equitable and sustainable access to water, sanitation, and hygiene (WASH) services to maximize their impact on human health and nutrition and the preserve environment in 250 rural communes in Vatovavy Fitovinany, Atsinanana, Amoron'i Mania, Haute Matsiatra, Vakinankaratra, and Alaotra Mangoro regions in Madagascar.</b></p>																		
<p><b>SO 1: Governance and monitoring of water and sanitation strengthened for delivering sustainable WASH services</b></p>																		
1.1	# of intervention communes increasing WASH budget	Outcome	Annual	15			5		0		5		0		0		5	
1.2	Value of new funding mobilized to the water and sanitation sectors as a result of USG assistance	Outcome	Annual	\$ 245,000														
<p><b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b></p>																		
1.1.1	National Sector Development Action Plan implemented	Outcome	Annual	Yellow														
<p>OP 1.1.1 Sector coordination and learning mechanisms operating effectively under strong national leadership</p>																		
1.1.1.1	National body for WASH sector coordination operational	Output	Annual	Yellow														
<p>OP 1.1.2 MoWEH institutional capacity developed to meet strategic needs</p>																		
<p><b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b></p>																		
1.2.1	% of intervention communes reporting in the national WASH monitoring system (SE&AM)	Outcome	Annual	52%														
	Number of intervention communes using SE&AM	Process	Quarterly	130	94	Good performance (94 of 110 FY18, FY19 communes)	36	23	5	0	36	31	5	0	12	6	36	34
<p>OP 1.2.1 SE&amp;AM strengthened and extended</p>																		

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Achd	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
1.2.1.1	National WASH monitoring system (SE&AM) tracks gender-sensitive data and quality of WASH service provision	Output	Annual	Yellow														
<b>IRI.3 Strengthened sub-national systems</b>																		
1.3.1	# of water and sanitation sector institutions strengthened to manage water resources or improve water supply and sanitation services as a result of USG assistance	Outcome	Annual	90 (2 national, 8 regional, 80 local)			Regional: 2 Local: 20		Regional: 0 Local: 6		Regional: 2 Local: 22		Regional: 0 Local: 6		Regional: 2 Local: 10		Regional: 2 Local: 16	
OP 1.3.1 Decentralized resources available for sustained WASH service delivery																		
	Number of intervention communes with trained STEAH	Process	Quarterly	30	19		6	1	3	0	6	10	3	0	6	6	6	2
OP 1.3.2 Commune management capacities strengthened for WASH service delivery																		
1.3.2.1	# of intervention communes engaging with private sector to provide WASH services	Outcome	Annual	75			17		5		17		5		14		17	
	Number of intervention communes with PCDEAH	Process	Quarterly	199	0	First results are expected for Q3, review of process completed in Q1	34	0	30	0	34	0	20	0	33	0	48	0
<b>IRI.4 Increased community control over WASH services</b>																		
OP 1.4.1 Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation																		
1.4.1.1	# of WASH users groups operational in intervention communes	Output	Annual	100			30		0		31		0		8		31	



#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
	# OSC operational in intervention communes	Process	Quarterly	110	32		34	2	0	0	34	19	0	0	8	8	34	3
OP 1.4.2 Communes have functional WASH accountability mechanisms																		
1.4.2.1	# of intervention communes with functional WASH accountability mechanisms	Output	Annual	100			30		0		31		0		8		31	
IR2.1 Improved WASH products, technologies, services and business models																		
2.1.1	# of new/improved WASH products and technologies implemented with RANO WASH support	Outcome	Annual	4														
2.1.2	# of new water and sanitation services provided with RANO WASH support	Outcome	Annual	58			7		10		11		9		8		13	
Output 2.1.3 Type and range of financial products for WASH services and products available and accessible increased																		
2.1.3.1	# of WSP/artisans/vendors issued loan products for investment in WASH systems	Output	Quarterly	30	2		6	1	3	0	6	0	3	0	6	0	6	1
IR2.2 Improved design, construction and management of WASH infrastructure																		
2.2.1	# of people gaining access to basic drinking water services as a result of USG assistance	Outcome	Quarterly	52,500	192	The start of marketing campaigns for private and social connections in Q2 FY20 will improve the	6,560	68	5,250	0	9,630	92	6,560	0	11,375	0	13,125	32
2.2.2	# of people gaining access to safely managed drinking water services as a result of USG assistance	Outcome	Quarterly	20,000	601		2,500	147	2,000	0	3,600	445	2,500	0	4,400	0	5,000	9

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
						number of water service users for the 12 operational FY19 systems; Procurement process for FY20 infrastructure construction will start in February 2020												
2.2.3	# of people gaining access to a basic sanitation service as a result of USG assistance	Outcome	Quarterly	25,000	2,370		8,000	1,601	2,250	0	8,000	751	1,800	0	2,250	9	2,700	9
2.2.4	# of people gaining access to a limited sanitation service as a result of USG assistance	Outcome	Quarterly	70,000	1,351		21,400	1,078	5,000	0	20,200	159	6,000	0	7,400	0	10,000	114
2.2.5	# of people benefiting from the adoption and implementation of measures to improve water resources management as a result of USG assistance	Outcome	Annual	72,500			9,060		7,250		13,230		9,060		15,775		18,125	
Output 2.2.1 Design and construction of sustainable WASH infrastructure improved																		
2.2.1.1	# of infrastructure feasibility studies (APD and APDS reports) completed	Output																
	# APS		Quarterly	40	7		7	6	7	0	3	0	7	0	8	0	8	0
	# APD		Quarterly	26	10	The tenderin	4	1	4	0	4	3	4	0	5	0	5	6

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Achd	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
						g process for the construction of the water systems (from 10 APD) will be launched in Q2 FY20												
2.2.1.2	# of institutional settings gaining access to basic drinking water services as a result of USG assistance	Output	Quarterly	76	Schools: 2		10	0	13	0	13	0	10	0	15	0	15	2
2.2.1.3	# of basic sanitation facilities provided in institutional settings as a result of USG assistance	Output	Quarterly	114	0		12	0	20	0	20	0	12	0	25	0	25	0
	Number of intervention communes trained on PPP model	Process	Quarterly	18	0		2	0	3	0	3	0	2	0	4	0	4	0
<b>IR2.3 Strengthened technical &amp; business skills and competencies</b>																		
2.3.1	# of business plans developed for offering consumer WASH products and/or services	Output	Annual	51			6		9		9		8		7		12	
2.3.2	% increase in sales for RANO WASH-supported enterprises (average % increase in net sales for enterprises following business training)	Outcome	Annual	15%														
Output 2.3.1 Capacity building for private sector in business systems and technical operations strengthened																		
2.3.1.1	# of WSP/commune staff trained in improved WASH service provision	Output	Quarterly	153	0		18	0	27	0	27	0	24	0	21	0	36	0

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Achd	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
Output 2.3.2 Development of professional associations																		
2.3.2.1	# of national professional associations / local cooperatives developed with RANO WASH support	Output	Annual	7 (1 national + 6 local)			1		1		1		1		1		1	
3.1	% of households with soap and water at a hand washing station commonly used by family members	Outcome	Annual	26%														
3.2	# of communities verified as "open defecation free" (ODF) as a result of USG assistance	Outcome	Quarterly	1,050	40	Period not favorable for CLTS activities because of cultural events especially in the East coast	255	20	87	0	255	5	57	0	96	6	300	9
<b>IR3.1 Improved hygiene and sanitation behavior change solutions through applied research</b>																		
3.1.1	# knowledge products documenting learning produced and disseminated	Outcome	Annual	6														
3.1.2	# intended organizations reporting applying knowledge gained from a knowledge product to improve program, service delivery, training/education, or research practice	Outcome	Annual	5/25														
<b>IR3.2 Improved implementation of WASH behavior change at all levels: communities, government and private sector</b>																		
3.2.1	% communities verified ODF that remain ODF following verification	Outcome	Quarterly	75%	79%		75%	83%	75%	NA	75%	63%	75%	NA	75%	100%	75%	71%
Output 3.2.2 Innovative CLTS and WASH BC implementation																		

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieve d	FY20 ATS Target	FY20 ATS Achieve d	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY 20 V7 V Target	FY 20 V7 V Achieved
3.2.2.1	# of VSLA members who reported investing in WASH services or products (latrine, water connection, ...)	Output	Quarterly	7,950	661		2,040	188	450	0	1,890	407	300	0	990	41	2,280	25
3.2.2.2	# of institutions achieving WASH-friendly status with RANO WASH support	Outcome	Quarterly	HF: 48 Schools: 48	HF: 0 Schools: 6	Some other schools and health centers already fulfill the WASH Friendly criteria but their certification depends on the availability of MEN and regional MPH teams who also have other responsibilities. The organization of joint RANO WASH and RDoPH and	HF: 4 Schools: 9	HF: 0 Schools: 6	HF: 4 Schools: 5	0	HF: 9 Schools: 7	0	HF: 4 Schools: 5	0	HF: 14 Schools: 10	0	HF: 13 Schools: 12	0

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieve d	FY20 ATS Target	FY20 ATS Achieve d	FY20 HTM Target	FY20 HTM Achie ved	FY20 VKN Target	FY20 VKN Achi eved	FY 20 V7 V Target	FY 20 V7 V Achie ve d
						RDoNE missions will have to reach several schools and health centers at the same time, and this has not yet been possible. This will be a priority activity for Q2.												
	Number of schools trained to become WASH-friendly	Process	Quarterly	48	0	New trainings will start in Q2, the project concentrated its efforts in supporting the already trained schools in Q1	9	0	5	0	5	0	4	0	14	0	11	0

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Achd	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
	<i>Number of health facilities trained to become WASH-friendly</i>	Process	Quarterly	48	0	New trainings will start in Q2, the project concentrated its efforts in supporting the already trained health centers in Q1	12	0	4	0	7	0	4	0	10	0	11	0
3.2.2.3	% intervention communities triggered through CLTS which become verified ODF	Output	Quarterly	75%	87%		75%	56%	75%	NA	75%	83%	75%	NA	75%	150%	75%	NA
	<i>Number of trained local promoters operational and working with RANO WASH project</i>	Process	Quarterly	2,119	15	No new trainings as the project undertook the review of the Grow-Up sticker strategy, apart from Alaotra Mangoro where a review was made	542	15	180	0	510	0	120	0	186	0	581	0

#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Achd	FY20 AMR Target	FY20 AMR Achieved	FY20 ATS Target	FY20 ATS Achieved	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
	<i>Number of households accompanied by local promoters</i>	Process	Quarterly	31,022	911	No new households as the project undertook the review of the strategy. The households accompanied here were households who did not achieve the behaviors in FY19. A new cycle for FY20 results will start in Q2	8,670	474	250	0	8,160	79	250	0	2,972	243	10,720	115
	<i>Number of seamstresses operational</i>	Process	Quarterly	151	0	New seamstresses are currently being identified in new Commu	14	0	20	0	34	0	30	0	20	0	33	0



#	Indicator Title	Indicator Type	Reporting Frequency	FY20 Compiled Target	FY20 Compiled Actual Q1	Comments	FY20 ALM Tgt	FY20 ALM Ach d	FY20 AMR Target	FY20 AMR Achieve d	FY20 ATS Target	FY20 ATS Achieve d	FY20 HTM Target	FY20 HTM Achieved	FY20 VKN Target	FY20 VKN Achieved	FY20 V7V Target	FY20 V7V Achieved
						nes. Those seamstress will be trained later in the FY.												

## ANNEX 6. UPDATED PIRS FOR INDICATOR 3.2.1

<b>PERFORMANCE INDICATOR REFERENCE SHEET</b>
<p><b>Name of Strategic Objective:</b> Adoption of healthy behaviors and use of WASH services accelerated (SO3)</p> <p><b>Name of Intermediate Result:</b> Improved implementation of WASH BC at all levels: communities, government and private sector (IR3.2)</p>
<p><b>Indicator 3.2.1: Percentage of communities verified ODF that remain ODF following verification</b></p>
<p>Is this a PPR indicator? No <input checked="" type="checkbox"/> Yes <input type="checkbox"/>, for Reporting Year(s) _____</p> <p>If yes, USAID Standard foreign assistance indicator:</p>
<b>DESCRIPTION</b>
<p><b>Precise Definition(s):</b> The percentage of communities verified ODF through RANO WASH support that remain ODF following verification. Post-verification monitoring will be conducted by an external committee made up of fokontany/commune representatives, project staff, etc. six months and 12 months (one year) following ODF verification for all communities.</p> <p>Post-verification monitoring will follow the criteria for USAID standard indicator HL.8.2-1 that 'Open defecation free status in a community requires that everyone in the community has a designated location for sanitation (regardless of whether it meets the definition of a "basic sanitation facility", is a shared facility or otherwise unimproved) and that there is no evidence of open defecation in the community'.</p> <p>Numerator: number of intervention communities previously verified ODF through RANO WASH project who meet above criteria for ODF status during post-verification monitoring</p> <p>Denominator: total number of intervention communities previously verified ODF through RANO WASH project who are reviewed during post-verification monitoring.</p>
<p><b>Unit of Measure:</b> Number</p>
<p><b>Disaggregated by:</b> None</p>
<p><b>Rationale:</b> The biggest challenge in ending open defecation is to prevent "slippage" or return to open defecation following ODF verification. After reaching the ODF status, follow-up and support activities are undertaken to support households to move up the sanitation ladder. This indicator is important for measuring the project's performance in terms of maintenance and sustainability of ODF status and to guide project CLTS strategies.</p>
<b>PLAN FOR DATA COLLECTION</b>
<p><b>Data Collection Method:</b> Post-verification monitoring will be conducted by an external committee made up of fokontany/commune representatives, project staff, etc. six months and 12 months (one year) following ODF verification for all communities, following the criteria for USAID standard indicator HL.8.2-1 that 'Open defecation free status in a community requires that everyone in the community has a designated location for sanitation (regardless of whether it meets the definition of a "basic sanitation facility", is a shared facility or otherwise unimproved) and that there is no evidence of open defecation in the community'.</p>
<p><b>Data Source:</b> Project monitoring record of intervention communities verified ODF</p>
<p><b>Reporting Frequency:</b> Quarterly</p>
<p><b>Individual(s) Responsible:</b> Regional and subgrantee teams</p>
<b>TARGETS AND BASELINE</b>

<b>Baseline Timeframe:</b> Before or within the first year from the start of intervention activities in regions as they are added, as follows - Atsinanana, Alaotra Mangoro, Vatovavy Fitovinany: 2018; Vakinankaratra, Amoron'i Mania, Haute Matsiatra: 2019
<b>DATA QUALITY ISSUES</b>
<b>Dates of Previous Data Quality Assessments and Name of Reviewer(s):</b> N/A
<b>Known Data Limitations:</b>
<b>CHANGES TO INDICATOR</b>
<p><b>Changes to Indicator:</b></p> <p>01/30/2020: Post-verification monitoring schedule changed from “<b>conducted quarterly by project staff</b>” to “conducted by an external committee made up on fokontany/commune representatives, project staff, etc. six months and 12 months (one year) following ODF verification” for all communities.</p> <p>01/30/2020: Post-verification monitoring criteria changed from “<b>following the above criteria in the National Guide for Community-Led Total Sanitation (CLTS) developed by the Madagascar Ministry in charge of WASH (not yet validated, but developed with all partners) and used by the project</b>” to following the criteria for USAID standard indicator HL.8.2-1/project indicator 3.2.</p> <p>To note: The post-verification monitoring will now be conducted by the same committees that initially verify communities as ODF. The criterion that “a handwashing system with soap/ash is available outside the latrine” was removed for this indicator (solely for post-verification ODF status monitoring) but remains a verification criterion for indicator 3.2/HL.8.2-1 “<i>Number of communities verified as open defecation free (ODF) as a result of USG assistance</i>”.</p>
<b>THIS SHEET WAS LAST UPDATED ON: January 30, 2020</b>

## ANNEX 7. WASH SYSTEM STRENGTHENING AND RANO WASH

# How do RANO WASH interventions contribute to building a strong WASH system for sustainable and inclusive services?

## Ingredients needed for a strong WASH system



**Gender and Social Inclusion**

Advocate for national, regional and communal policies, strategies, plans and sector monitoring tools that take into account specific needs of all population groups.

Citizen engagement including women and marginalized people in decision-making processes

Supplies of a variety of inclusive WASH services

Behavioural change activities that affect all social categories

Strengthening the leadership of women, girls and youth through discussion spaces and VSLA groups

Community level discussions to engage men for women's empowerment

Support model households, men and women in non-traditional occupations related to WASH services to transform social norms.

Participate in the celebration of international and national events for the promotion of gender and social inclusion.

**Institutional Arrangements**

Capacity-building of CSOs and the private sector at the national, regional and communal consultation bodies

Promote PPP and support the MEEH, municipalities, service users and private operators to implement the model.

Technical assistance to the DREEHs to train and coach communes in their roles as contracting authority

Train and coach local institutions (SLC, CSOs, ASUREP) to clarify their roles and to be operational.

Facilitate the implementation of local measures to improve/maintain healthy hygiene and sanitation conditions (e.g. Dina to maintain ODF status)

Strengthen civil society at the communal level to defend rights and discuss on the quality of WASH services.

Advocate to MEEH, MoID, MoPH, and MoNE to clarify roles and responsibilities in relation to WASH services at schools and health centers.

**Sector co-ordination and integration**

Advocate and support the MEEH to operationalize the coordination structure SNC-EAH at the national and regional levels.

Co-Lead the regional coordination structure in 4 regions and contribute as a member in 2 regions.

Participate in periodic meetings of the coordination structures at regional level to coordinate interventions, ensure synergy of actions and share achievements.

Facilitate reflection through research and evidence-based findings and foster learning to improve strategies and practices within the sector.

**Monitoring**

Advocate and support the MEEH to engage stakeholders to upgrade the SE&AM

As part of the Madagasikara Madio 2025 campaign, support the development of a standardised monitoring and evaluation system for ODF status.

Strengthen the capacity of the Communes / STEAHs in the management and monitoring of the performance of water utilities (quality of service and water, payment of fees, etc.)

Strengthen the capacities of local actors such as natural leaders, community workers, school directors and doctors in charge of health centers to correctly report WASH situations in their areas of action, in order to support the effort to update the WASH sector database.

Support the Commune and the DREEH to have the disaggregated data necessary for decision making for inclusive services.

**Strategic Planning**

Advocate and support the MEEH for the clarity and consistency of policy documents (PSEAH, BPON, BPOR, PCDEAH)

Participate in the elaboration of the framework documents, taking into account the needs of different social categories (girls, women and persons with disabilities).

Advocate for the participation of civil society and private sector in the development of WASH sector framework documents

Facilitate the elaboration and implementation of the regional WASH market development plans

Involve the private sectors in the elaboration and implementation of the PCDEAH

Support the development and implementation of local WASH action plans

Encourage the community participation, especially women, youth and persons with disabilities in local consultation bodies to discuss on public services including WASH services.

**Financing**

Advocate and support the Ministry to have plans and strategies with realistic cost estimates and a review of funding flows that can be mobilized.

Advocate for the State's financial contribution to the provision of services

Facilitate the linking of private operators wishing to invest in the provision of WASH services with financial institutions.

Develop and implement with the MEEH and the Municipalities the PPP model "Build, Co-invest, Manage" for water service provision in rural areas.

Promote VSLA to improve livelihoods of households and enhance their ability to pay WASH services provided by private operator.

Facilitate VSLA and financial institutions linkage to increase access to formal financial services

Promote local talent to provide affordable and appropriate WASH products and services for men, women and youth without discrimination.

**Service delivery & behaviour change**

Engage private operators to deliver professional and sustainable WASH services

Advocate for financial contribution from the government in the WASH service provision

Facilitate the development of different models of cost-effective, affordable and inclusive services (needs based services, services adapted to remote villages, payment modalities adapted to rural households).

Strengthen the technical, financial and commercial capacities of WASH service providers.

Conduct WASH behaviour change campaigns

Promote WASH in schools and health centers by working with relevant ministries

**Accountability and Regulation**

Encourage citizens to raise their voices in promoting rights and duties on WASH

Support communes and WASH service providers to be responsive to requests and complaints arising from accountability mechanisms

Promote the use of different accountability mechanisms adapted to different categories of people (girls, women, boys, men, people with disabilities) at the communal and local level

Evaluate the quality of services provided by WASH service providers

Train and coach Communes and water service providers to carry out periodically water quality monitoring.

**Environment and Water Resources**

Train and coach communes and water service provider to initiate mitigation measures to maintain the quality and quantity of water services.

Promote the use of the PHE approach with environmental stakeholders in the project's intervention areas to implement activities to protect water resources and the environment.

Strengthen the capacities of communes, private operators and communities and support them in the application of environmental measures for the sustainability of drinking water services and the mitigation of the negative environmental impacts of activities to be implemented at the commune level.

# ANNEX 8. EXAMPLES OF WASH SYSTEM ANALYSIS TOOLS

## Advocacy and communication tools on sustainability

**USAID** **RANO WASH** **GLAAS 2019 a Madagascar**

National WASH targets	Target value (%)	Year
Adduction d'eau urbaine (Basic + services)	100%	2030
Adduction d'eau rurale (gérée en toute sécurité)	100%	2030
Assainissement urbain (service de Base)	100%	2025
Assainissement rural (service de base)	100%	2025
Objectifs ODF (localités/villages)	100%	2025
Objectifs en Hygiène (Basic services)	100%	2019
Politics, plans, finance, monitoring	Rating	
Ressources financières suffisantes pour mettre en oeuvre les plans sectoriels	Moins de 50% du besoin	
Reconnaissance de droit humain à l'eau et assainissement dans la Constitution	Non	
Existence de plan de financement (pour l'eau et assainissement)	Validé mais pas vraiment en place	
Trouver le gap pour atteindre les objectifs nationaux	85% (US\$ 100.3 million VS. US\$23 million)	
L'organisme régulateur est accessible au public et rapporte sur la qualité de l'eau potable	Partiellement	

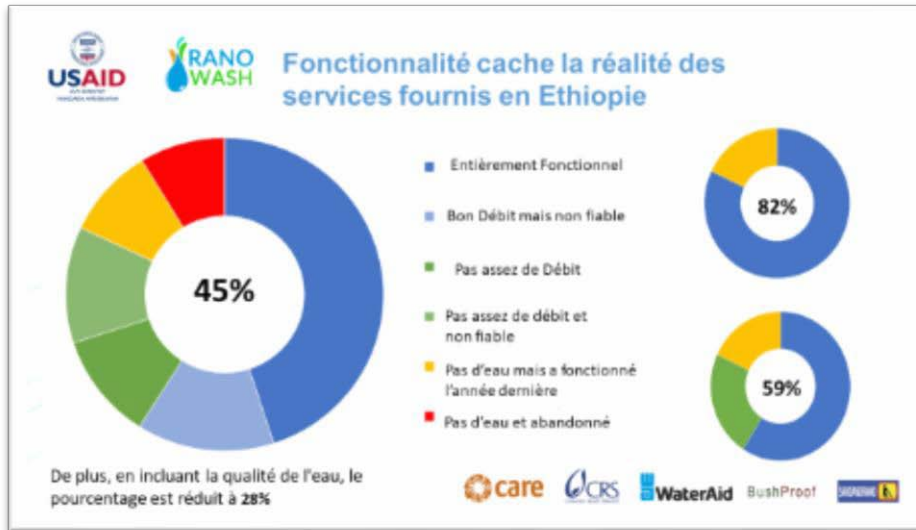
*Logos: Cdtc, CLCS, WaterAid, BushProof, WASH*

**USAID** **RANO WASH**

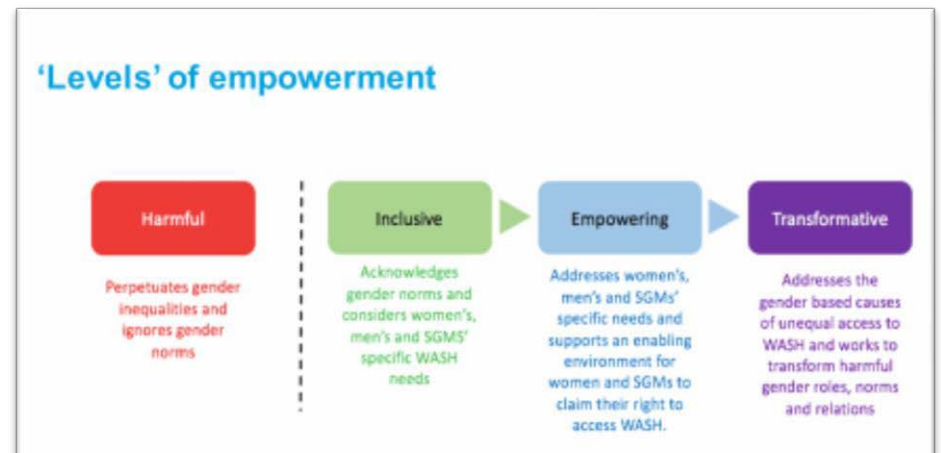
*Logos: care, CLCS, WaterAid, BushProof, WASH*



Advocacy and communication tools on equity



Gender States	Harmful	Inclusive	Empowerment	Transformative
Gender	Interventions are reinforcing gender stereotypes in WASH activities and / or putting women & girls at risk through lack of consultations with women & girls and lack of understanding on country context of gender equality	Women are physically represented in decision-making activities and sex and age disaggregated data (SAAD) is a requirement for programmatic interventions for all Institutional Arrangements	Women are actively involved in decision-making activities, and sex and age disaggregated data (SAAD) is a requirement for all institutional arrangements including analysis	Women are in leadership positions involving decision-making responsibilities for WASH services
Key Questions	<ol style="list-style-type: none"> <li>1. Have women been consulted at any stage of the program cycle?</li> <li>2. Is the country context of gender equality understood?</li> </ol>	<ol style="list-style-type: none"> <li>1. Are women physically in the room during meetings?</li> <li>2. Do service providers, government structures understand SAAD and support it through its tools and tactics?</li> </ol>	<ol style="list-style-type: none"> <li>1. Are women actively listened to during meetings?</li> <li>2. Are they actively participating during meetings?</li> </ol>	<ol style="list-style-type: none"> <li>1. Can you see women in leadership positions?</li> </ol>



### Assessment tools sustainability and

Root causes of poor WASH sustainability			
Dimension	Water	Sanitation	Hygiene
Environment & water resources			
Technical			
Financial			
Social			
Skills & know-how			
Institutional / Legal			

	Harmful	Inclusive	Empowerment	Transformative
Coordination & integration				
Strategic planning				
Financing				
Institutional arrangements				
Accountability & regulation				
Monitoring				
Service delivery & behaviour change				
Water resources & environment				
Gender & social inclusion				

	Medium	Strengthening	Desired
Plan action coordinated through WASH UNICEF – no one working on long-term integration in health / education / social services	No coordination of agencies. No limited integration of WASH into health, education, nutrition	Geographical coordination of agencies with the sector. Pilot initiatives to integrate hygiene into health, nutrition, education	Agencies aligned behind common strategy/policy, integration of hygiene, nutrition, education programmes
maintain Action Plan or government-led development plan, hygiene components, without rigorous planning	Plan responding to donor priorities – sustainability / resources to filling not assessed. Weak use of evidence based while planning for WASH components	Plan in place to extend scale but not to sustain them or build resilience. Plan included to conduct PR and creative process but partially operationalise	Create a plan to deliver sustained long-term resilience. Through for evidence process are considered to intervention
to spending directly through NGOs and UN	No fiscal decentralized spending. Donor spending on District Plan ("On Plan") – not covering lifecycle costs	Fiscal decentralization and donor spending on capital costs. "On Budget" but not covering lifecycle costs	Full fiscal decentralization, actions derive funds through District and Private sector investing in WASH, to sources of finance. Behavioural activities of behavioral products, IT systems
making link by providing access rather than financing institutions. Institutional link often not clear	Institutions exist on paper but not functional. Overlapping, unclear roles and responsibilities for WASH	Partially functional institutions with weak capacity. Roles and responsibilities not fully clear for WASH. Absorption capacity of institutions are weak	All necessary institutions and data clearly roles and responsibilities well suited for WASH up regulator, the WASH IT systems
stability mechanisms exist between service providers and users. There is no mutual liability between government and development. Civil society is non-existent	Accountability mechanisms (...) exist on paper but are not used to provide feedback to other stakeholders and users. There is no mutual liability between government and development. Civil society is non-existent. No national hygiene standards are set	Accountability mechanisms exist for user feedback. Feedback is not systematically used to improve service delivery/behaviour change. Civil society getting strength. National hygiene standards available but not used	Accountability mechanisms are in government and development are demanding mutual accountability. Feedback is used to inform and in delivery/behaviour change. Strong leaders held to account. National standards operationalised
WASH cluster and to donors	No common monitoring or review process. No plan to assess the programme effectiveness	Common sector targets and multi stakeholder monitoring but no aggregated reporting. Small scale evaluation but no national baseline	Government sector, regularly and feeding into strategic planning. Led system established and may include Partners and after assessment done and process improvement
emergency interventions. Hygiene programme emergency kit distribution and knowledge and only interventions is utilized	Programmed projects/activities interventions, multiple missions, and reporting systems. No cost implementation support. Programme only focused on activities rather than behaviour change	District authorities and agencies mainly focused on extending coverage. Weak post implementation support. Programme focus both awareness, costing and behaviour change but poor reinforcement mechanisms for sustainability	Both coverage and post implementation are fully achieved by districts. Better operationalized to continuously deliver change. Programme focused on change. A mix of on-site, district available and are applied across approaches are defined for reach and applied effectively for change
resource protection or management policies understanding of threats to water resources on a local/park level for disease control. Limited understanding on how change in context for behaviour change. Disease technology not considered	Water resource protection and management policies exist but are not implemented. Threats to water resources are poorly understood. No monitoring of water resources. Critical pathways for disease transmission understood but no focus interventions to break pathway. No focus on changing social norms and behavioural settings. Disease resistant technology often not considered	Water resource protection and management policies exist but are poorly implemented. Threats to water resources are well understood but not reported to in place. Monitoring to weak. Critical pathways for disease transmission understood and key behaviours identified but intervention poorly designed and implemented	Water resource protection and management policies exist and there is a strong evidence base. Threats to water is and inform risk based planning. All disease transmission understood and key behaviours identified but intervention focused to social environment and districts with the provision of behavioural messaging on days
revert to reinforce gender stereotypes and men & girls at risk through lack of	Women fully represented in decision making and in design/implementation data	Women actively involved in decision making, and in design/implementation data	Women hold leadership positions and responsible for WASH activities

### Barriers to inclusion

Source: Water and Sanitation for People and Other Vulnerable D

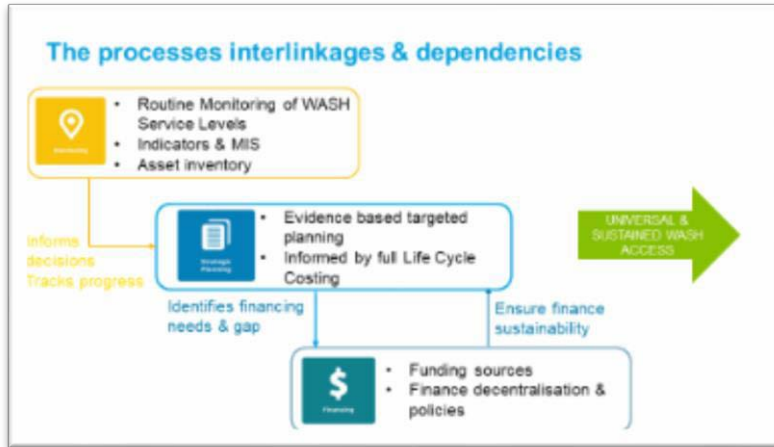
<b>Physical - natural</b>	trees and bushes	long distances to facilities	uneven slippery paths	contaminated unprotected sources	steep muddy slopes
<b>Physical - infrastructure</b>	broken uneven steps	unsafe location for women	slippery floor high well wall	dark interiors door hard to close	lack of space inside no lifting mechanism
<b>Policy/ Institutional</b>	no platform for girls' & boys' toilets close together – lack of privacy	high steps	no MHM facilities	from inside latrine difficult to clean	no door nothing to hold onto collapse
<b>Social/ cultural attitudinal</b>	poorer, lower caste, women, disabled people excluded from consultation	lack of info on accessibility options & MHM requirements	no planning to address security and privacy for women	lack of knowledge and skills of technicians about accessibility, safety or MHM	gender based violence is common



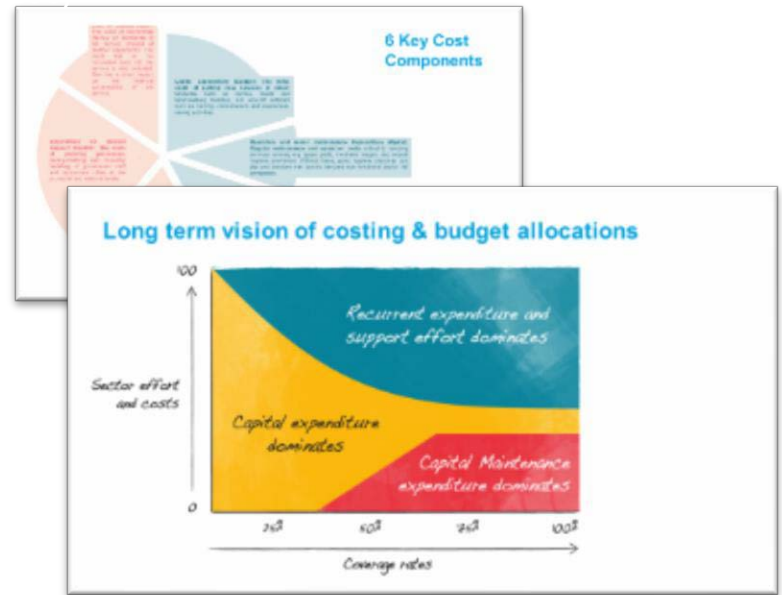
Framework to assess district situation and to prioritize strengthening of building block

Building block	Weak	Medium	Strengthening	Desired
<b>Coordination &amp; integration</b>	Humanitarian actors coordinated through WASH Cluster by UNICEF – no one working on long-term development. Integration in Health / Education/ nutrition / Social services	No coordination of agencies. No/limited integration of WASH into health, education, nutrition	Geographical coordination of agencies within the district. Pilot initiatives to integrate hygiene into health, nutrition, education	Agencies aligned behind comprehensive district level strategy/policy. Integration of hygiene into ongoing health, nutrition, education programme
<b>Strategic planning</b>	OCHA Humanitarian Action Plan or government relief plans, no development plan. Hygiene components included without rigorous planning	Plan responding to donor priorities – sustainability / resilience building not addressed. Weak use of evidence based while planning for WASH components	Plan in place to extend services but not to sustain them or build resilience. Plan included to conduct FR and creative process but partially operationalize	Credible plan to deliver sustained universal access and long term resilience. Thorough formative research and creative process are considered to plan and design
<b>Financing</b>	Emergency spending directly through NGOs and UN Agencies	No fiscal decentralized spending. Donor spending on District Plan (“On Plan”) – not covering lifecycle costs	Fiscal decentralization and donor spending on capital costs. “On Budget” but not covering lifecycle costs.	Full fiscal decentralization, external support agencies channel funds through District accounts (“On Treasury”). Private sector investing in WASH. Lifecycle costs matched to sources of finance. Mechanism to ensure regular available of
<b>Institutional arrangements</b>	Focus on saving lives by providing access rather than on building life-saving institutions. Institutional mandates are often not clear	Institutions exist on paper but not functional. Overlapping, unclear roles and responsibilities for WASH.	Partially functional institutions with weak capacity. Roles and responsibilities not fully clear for WASH. Absorption capacity of institutions are weak.	All necessary institutions and capacities are in place with clear roles and responsibilities with proper allocation of budget for WASH e.g. regulator health education nutrition HR IT
<b>Accountability &amp; regulation</b>	No accountability mechanisms exist between service authorities/providers and users. There is no mutual accountability between government and development partners. Civil society is non-existent.	Accountability mechanisms (...) exist on paper but few are used in practice. Feedback is often tokenistic and not used to improve service delivery. Civil society is weak, and there is little or no accountability of development partners. No national hygiene standards are set	Mutual accountability for sector progress is emerging, and limited mechanisms exist for user feedback. Feedback is not systematically used to improve service delivery/behavior change. Civil society gaining strength. National hygiene standards available but not used	Accountability mechanisms are institutionalized, with government and development partners demonstrating and demanding mutual accountability for sector progress. Feedback is used to inform and improve service delivery/behavior change. Strong civil society with duty bearers held to account. National
<b>Monitoring</b>	Through WASH cluster and to donors	No common monitoring or review process. No plan to assess the programme effectiveness	Common sector targets and multi-stakeholder monitoring but no aggregated reporting. Small scale evaluation but no national baseline	Government owned, regularly updated monitoring process feeding into strategic planning. Large-scale evaluation system established and key indicators incorporated. Before and after assessment done. Evidence of learning and process improvement
<b>Service delivery &amp; behavior change</b>	Ad hoc emergency interventions. Hygiene program focused on emergency kit distribution and knowledge improvement only Sanitation interventions subsidized.	Fragmented project/approach interventions, multiple missions, and reporting systems. No post implementation support. Programme only focuses on awareness raising rather than behavior change	District authorities and agencies mainly focused on extending coverage. Weak post implementation support. Programme focus both awareness raising and behavior change but poor reinforcement mechanism for sustainability .	Both coverage and post implementation support to all users fully addressed by duty bearer. Routine institutions capacitated to continuously delivered / reinforce behavior change. Programme focused on sustained behavior change. A menu of service delivery approaches are available and are applied contextually. The right approaches are defined for each context within the district and applied
<b>Water resources &amp; environment</b>	No water resource protection or management policies exist. No understanding of threats to water resources. No focus on critical pathways for diseases transmission. Limited understanding on how change in settings push/pull for behavior change. Disaster resilient technology not considered	Water resource protection and management policies exist but are not implemented. Threats to water resources are poorly understood. No monitoring of water resources. Critical pathways for diseases transmission understood but no focus intervention to break pathways. No focus on changing social norms and behavioral settings. Disaster resilient technology often not considered.	Water resource protection and management policies exist but are poorly implemented. Threats to water resources are well understood but not responded to in plans. Monitoring is weak. Critical pathways for diseases transmission understood and key behaviors identified but intervention poorly designed and implemented.	Water resource protection and management policies are implemented and there is coordinated management across sectors. Threats to water resources are monitored and inform resilience planning. All critical pathways for disease transmission addressed focusing on key behaviors. Intervention focused on changing physical and social environment and disturbing behavioral
<b>Gender &amp; social inclusion</b>	WASH interventions reinforce gender stereotypes and / or put women & girls at risk through lack of consultation with women & girls and lack of understanding of gender- related country context	Women physically represented in decision-making, and sex & age disaggregated data (SAAD) is required for all WASH interventions	Women actively involved in decision-making, and sex & age disaggregated data (SAAD) is required and used for planning	Women hold leadership positions and are actively involved and responsible for WASH services & decision-making.

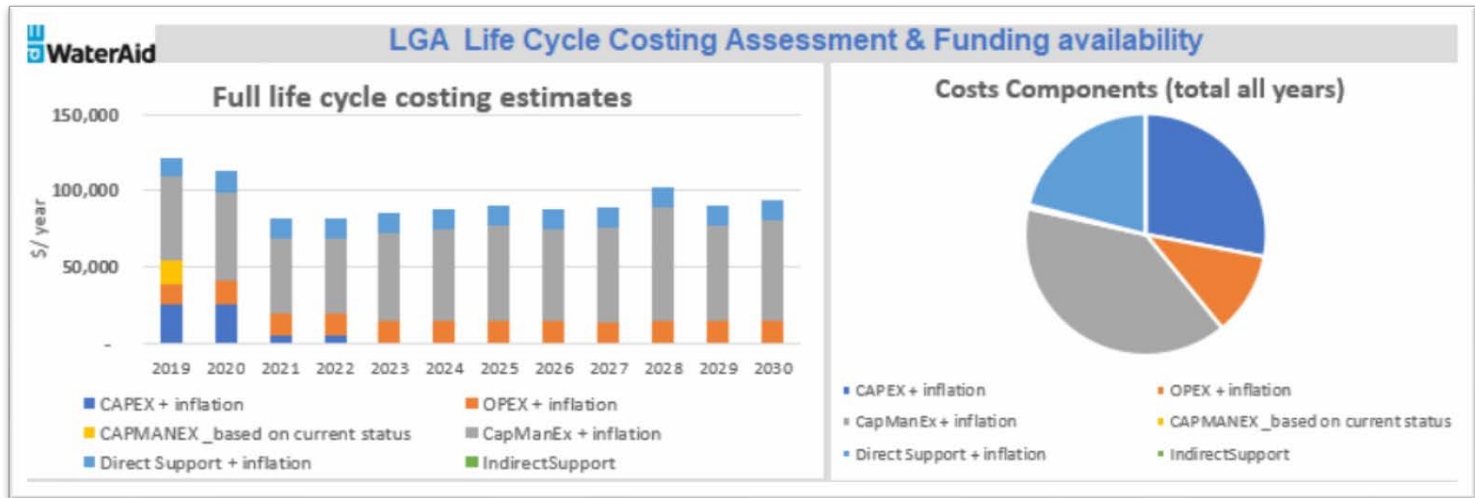
Process guideline to link planning, monitoring and



Communication tools on service Life Cycle Cost (LCC)



Excel file for LCC



Tool to assess Management models for water and sanitation

### Assess management model


- Are there any areas where it is not clear who is responsible?
- What are you doing to ensure any gaps are covered?
- How would you rate your models for gender inclusiveness?

Context

Service Options

Action

Who?



30 mins

Action

Who?

Action

Who?

Action

Who?



Tools to monitor progress in the building



SOME KEY PRIORITIES IDENTIFIED BY MEEH AND ACTORS TO BE DONE IN THE COMING MONTHS

<b>Building block</b>	<b>What's the change you'd like to see?</b>	<b>What is the current situation - What are people doing ?</b>	<b>What will you do differently to achieve this change?</b>
<b>Monitoring</b>	Quality and up-to-date data helping decision on planning and financing (SE&AM)	SE&AM operational but not updated for all regions and some data is different than data in actors' monitoring system	Systematize exchanges between DREEH and partners to discuss data inconsistencies at the DREEH level; Solve the barriers for data reporting; Involve private operators in the use of the system (data sharing and updating);
<b>Strategic Planification</b>	Coherent strategic planning at each level with private sector involvement	Private operators are called upon to participate in planning processes such as the PSEAH, WMDP but their implications are not systematized. The gender and behavioral change components are addressed at the level of the communal plan but not in a comprehensive manner.	Develop collaboration with AOPDEM/MEEH and improve their capacity; Institutionalize a guide for planning at the communal level with a focus on behavioral change; Integrate the results of gender analysis; Valuing lessons learned in planning processes; Systematize governance analysis to plan the improvement of enabling environment (at each level)
<b>Service delivery and behavior change</b>	Services and products meet the needs of different groups at the community level	Existence of WASH market assessment, Existence of gender and community analysis, Setting-up several service models by actors	Systematize the restitution to local actors of the needs identified and the characteristics of the group in order to be able to adapt the services.
<b>Accountability and regulation</b>	Functional Accountability Mechanism	Existence of suggestion box, implementation of community score card, green line but for specific projects.	Setting up accountability mechanisms of different entities at different levels for dealing with complaints
<b>Institutional arrangements</b>	Accountability of the different structures at different levels: regions, districts, municipalities, etc. National: Autonomy of the Ministry in charge of WASH Decentralized decision-making	Structures exist on paper but are not operationalized, competences are transferred but not followed up with the necessary resources. Responsibilities need to be updated to take into account all functions for the sustainability of services. Existence of capacity building at all levels but not comprehensive	Clarify roles of each actor and monitor effectiveness of their role within SRMO. Better technical and financial planning so that resources are proportional to allocations and ensure function for sustainability (performance contract).
<b>Finance</b>	Pooling of resources on WASH at the each level with consideration of costs to ensure sustainability (LCC)	Existing BPOR /BPON but does not take into account all costs to ensure sustainability	Strengthen capacity of the Ministry to be able to mobilize resources described in BPON/BPOR Develop policy documents to have a common objective with the assessment of the resources and investments required Improve financial planning to take into account LCC

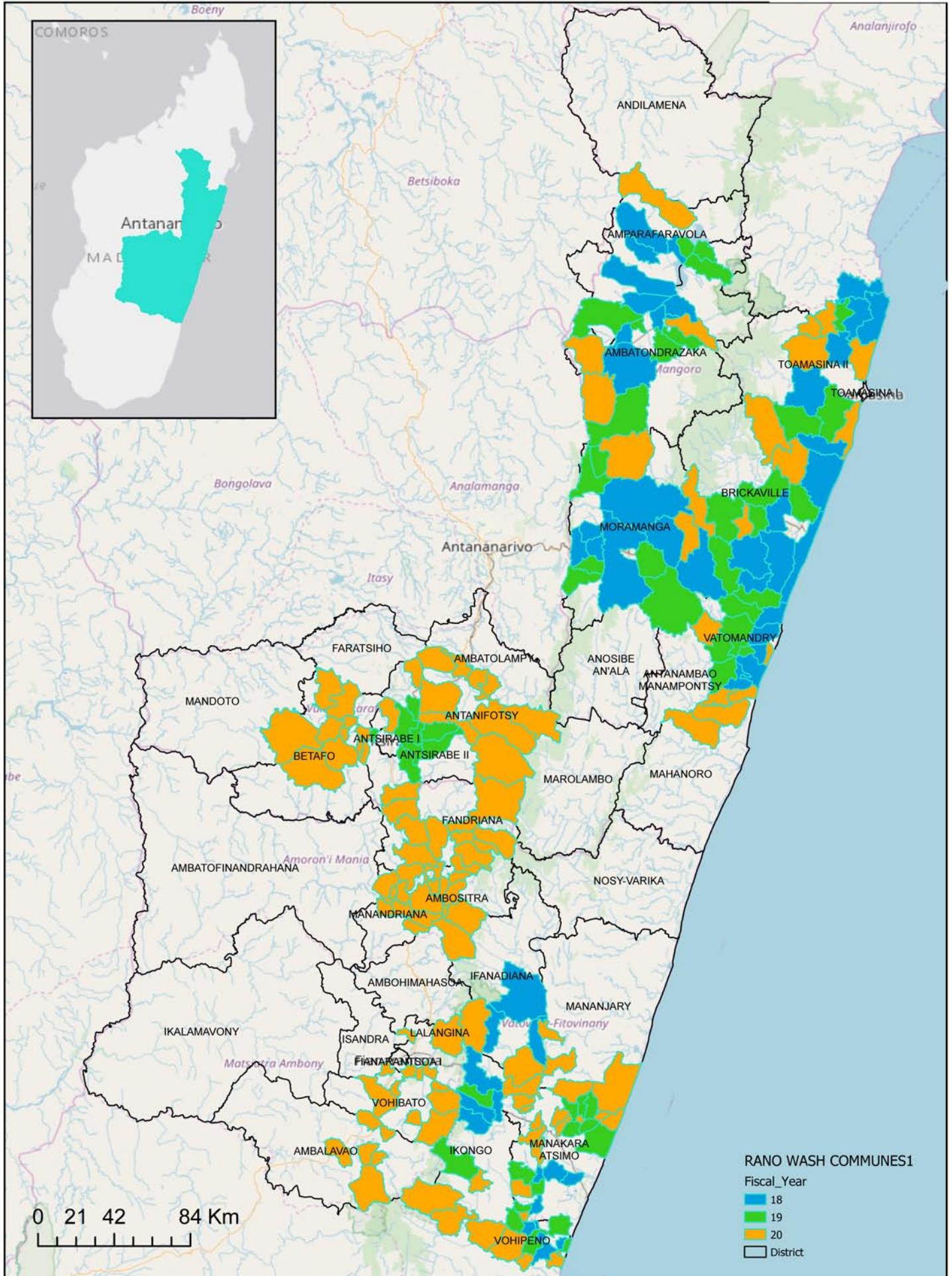
## ANNEX 9. MAPS OF RANO WASH INTERVENTIONS COMMUNES



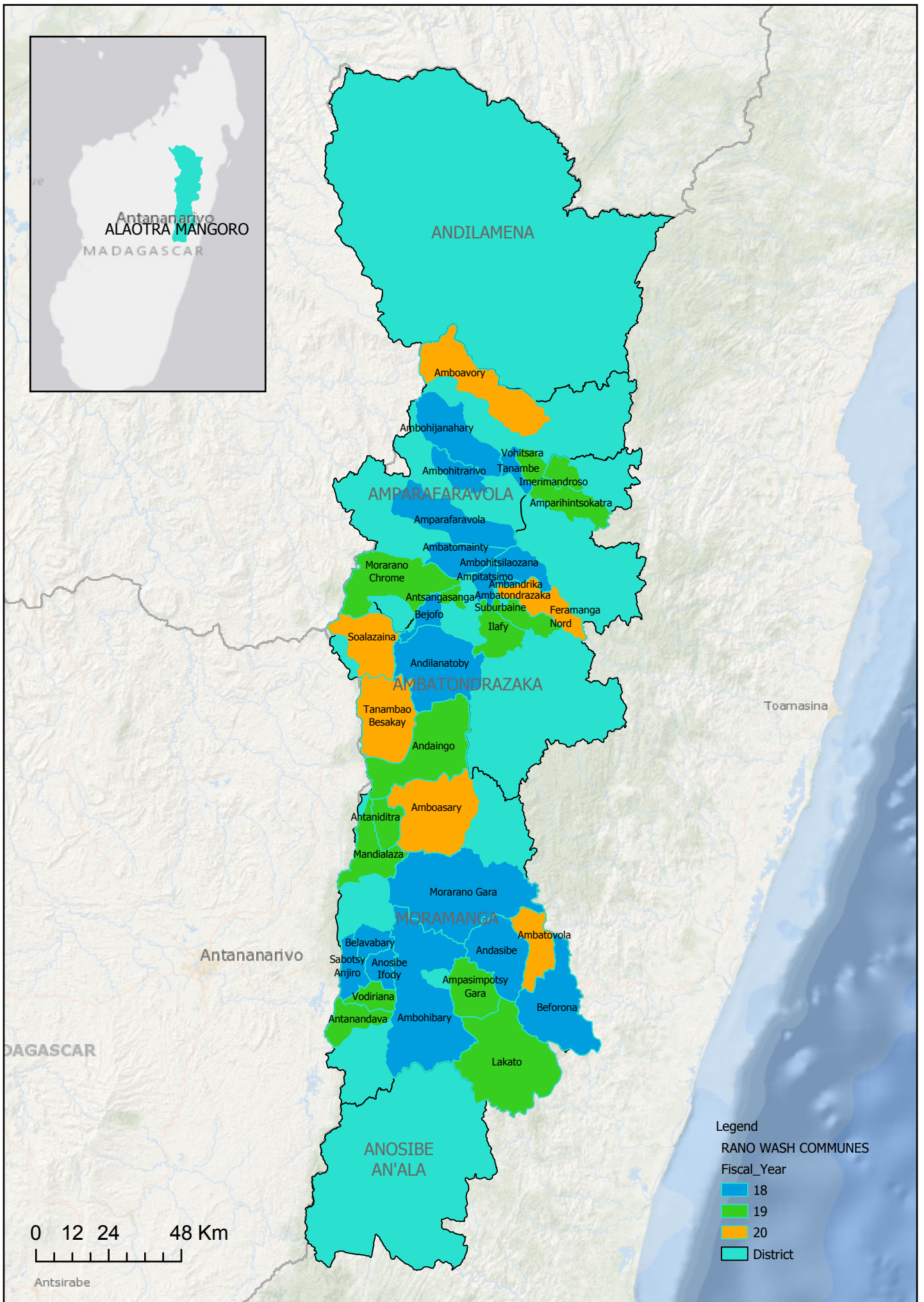


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RANO WASH INTERVENTION COMMUNES







Antsirabe

Legend

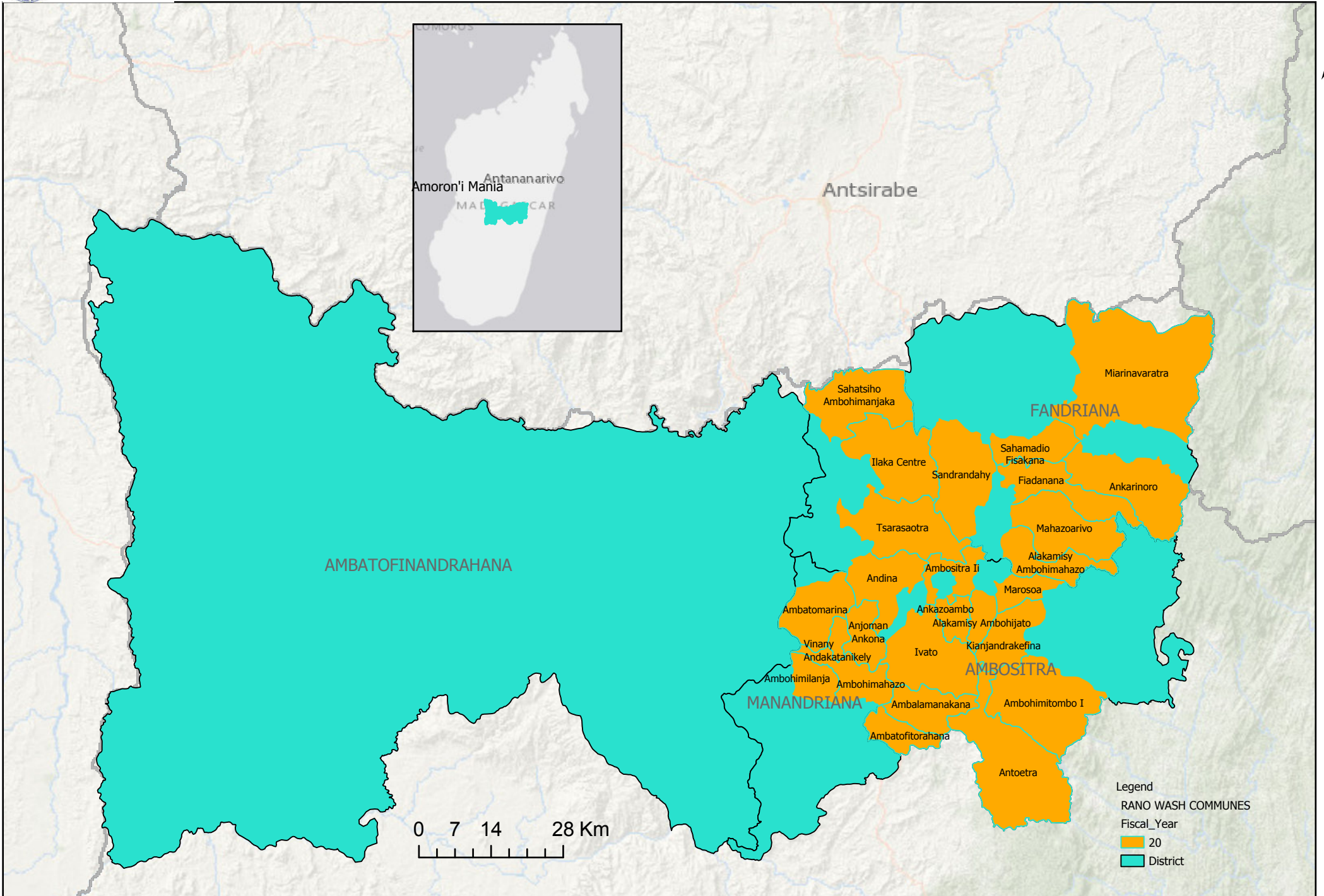
RANO WASH COMMUNES

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- 18
- 19
- 20
- District



# RANO WASH COMMUNES IN AMORON'I MANIA

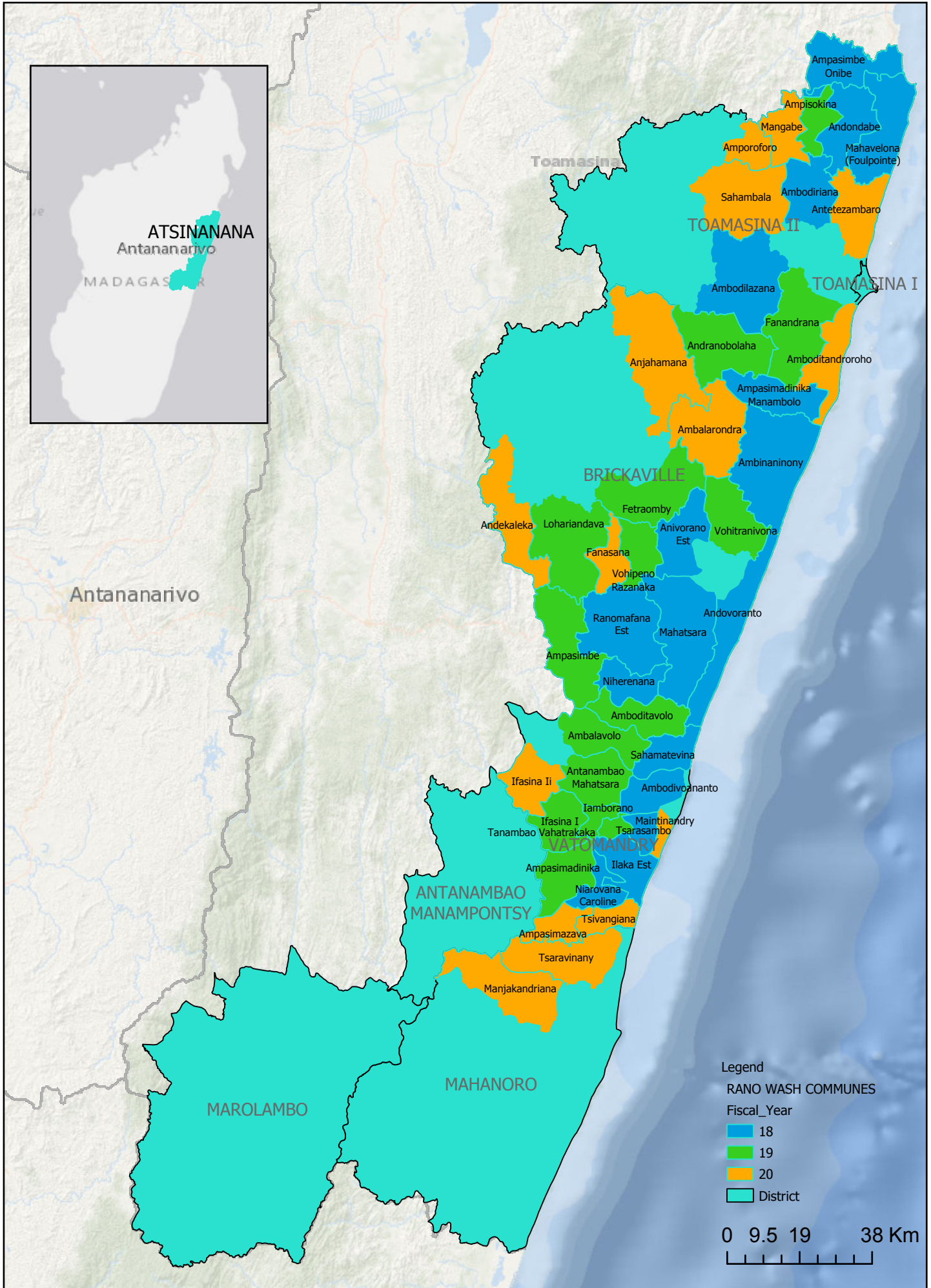






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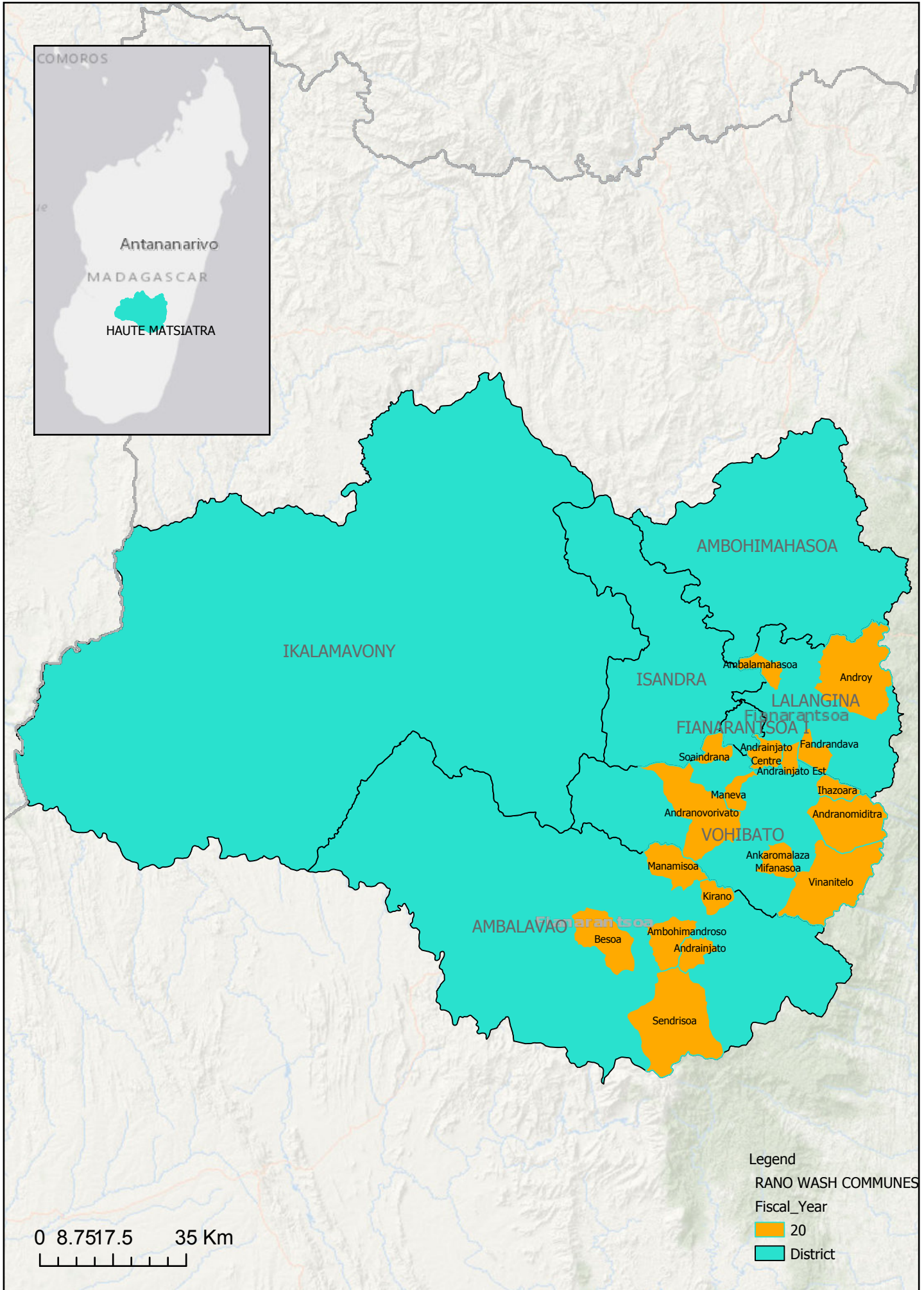
# RANO WASH INTERVENTION COMMUNES IN AT SINANANA





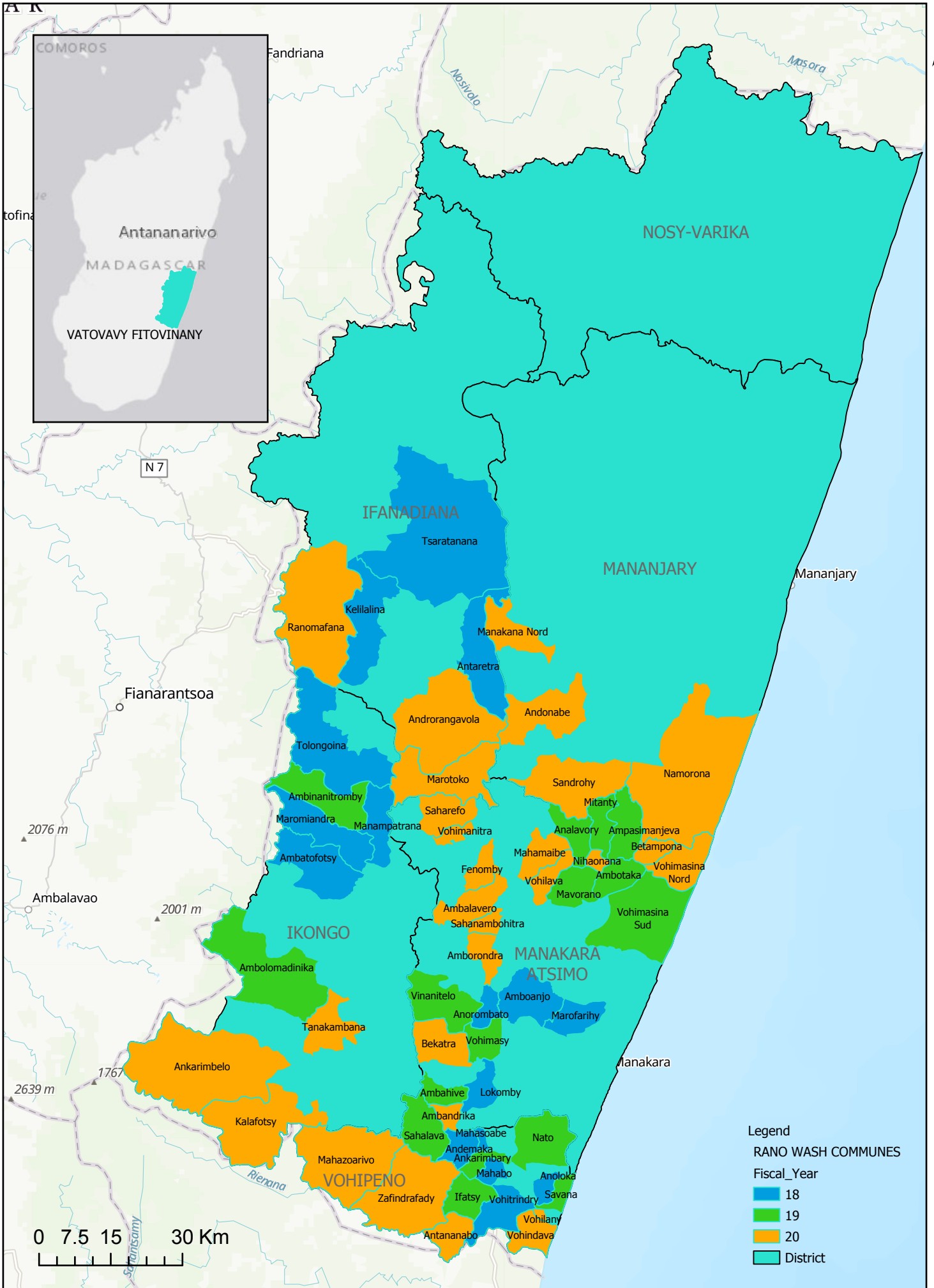
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RANO WASH INTERVENTION COMMUNES  
IN HAUTE MATSIATRA









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RANO WASH COMMUNES

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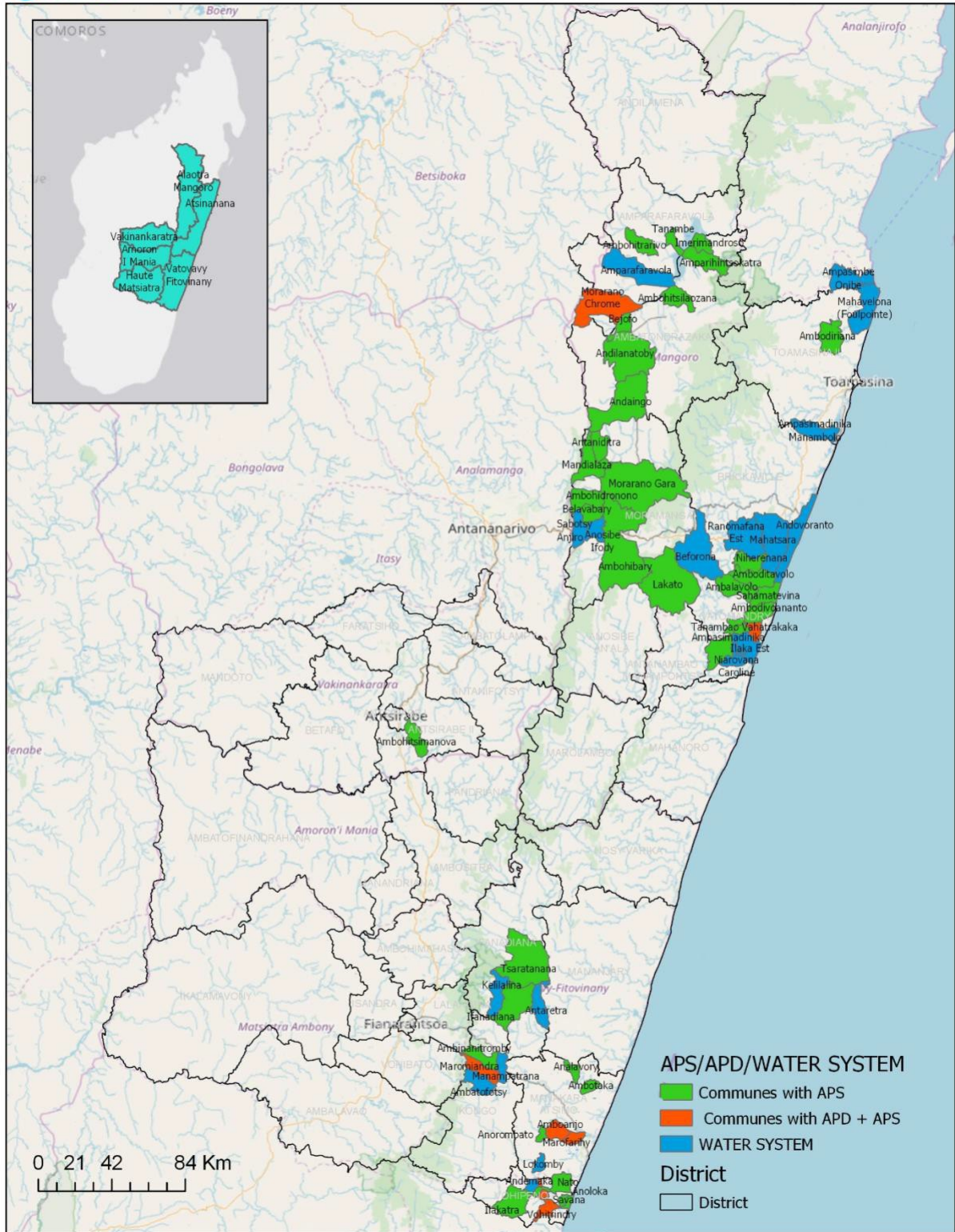
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- 19
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- District



# ANNEX 10. MAPS OF COMMUNES WITH APS – APD AND WATER SYSTEMS



## COMMUNES WITH APS/APD/CONSTRUCTION



## ANNEX II. LIST OF COMMUNES WITH APS APD AND WATER SYSTEMS CONSTRUCTED

### LIST OF TECHNICAL SCOPING STUDIES (AVANT PROJET SOMMAIRES) APS

N°	Region	District	Commune	Site	Prepared by	Period
1	Vatovavy Fitovinany	Manakara	Amboanjo	Amboanjo	BushProof	Q1
2	Atsinanana	Toamasina II	Ambodiriana	Ambodiriana	BushProof	Q1
3	Atsinanana	Vatomandry	Ambodivoananto	Ambodivoananto	BushProof	Q1
4	Atsinanana	Manambolo	Ampasimadinika	Ampasimadinika	BushProof	Q1
5	Atsinanana	Vatomandry	Ampasimadinika	Ampasimadinika	BushProof	Q1
6	Vatovavy Fitovinany	Manakara	Anorombato	Anorombato	BushProof	Q1
7	Vatovavy Fitovinany	Ifanadiana	Antaretra	Antaretra	BushProof	Q1
8	Vatovavy Fitovinany	Vohipeno	Mahabo	Mahabo	BushProof	Q1
9	Vatovavy Fitovinany	Vohipeno	Mahasoabe	Mahasoabe	BushProof	Q1
10	Atsinanana	Brickaville	Mahatsara	Mahatsara	BushProof	Q1
11	Vatovavy Fitovinany	Ikongo	Maromiandra	Maromiandra	BushProof	Q1
12	Atsinanana	Vatomandry	Niherenana	Niherenana	BushProof	Q1
13	Atsinanana	Vatomandry	Sahamatevina	Sahamatevina	BushProof	Q1
14	Vatovavy Fitovinany	Ifanadiana	Tsaratana	Tsaratana	BushProof	Q1
15	Atsinanana	Brickaville	Ranomafana Est	Antongombato	Sandandrano	Q2
16	Alaotra Mangoro	Ambatondrazaka	Ambohitsilaozana	Ambohitsilaozana	Sandandrano	Q2
17	Vatovavy Fitovinany	Ikongo	Ambinanitromby	Ambinanitromby	Sandandrano	Q2
18	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Ambatofotsy	Sandandrano	Q2
19	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Tsarakianja	Sandandrano	Q2
20	Vatovavy Fitovinany	Ikongo	Manampatrana	Manampatrana	Sandandrano	Q2
21	Atsinanana	Toamasina II	Mahavelona	Bongabe	Sandandrano	Q2
22	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Ambalatenina	Sandandrano	Q2
23	Alaotra Mangoro	Amparafaravola	Amparafaravola	Amparafaravola	Sandandrano	Q2
24	Alaotra Mangoro	Moramanga	Sabotsy Anjoro	Mahaso Miamiasa	Sandandrano	Q2
25	Alaotra Mangoro	Amparafaravola	Amparafaravola	Antsakoana	Sandandrano	Q2
26	Alaotra Mangoro	Moramanga	Ambohivary	Ampitambe	Sandandrano	Q2
27	Alaotra Mangoro	Amparafaravola	Amparafaravola	Ampilahoana	Sandandrano	Q2
28	Alaotra Mangoro	Amparafaravola	Tanambe	Amborompotsy	Sandandrano	Q2
29	Alaotra Mangoro	Moramanga	Ambohironono	Ambohironono	Sandandrano	Q2
30	Alaotra Mangoro	Moramanga	Anosibe Ifody	Ambodinifody	Sandandrano	Q2
31	Alaotra Mangoro	Moramanga	Morarano Gara	Morarano Gara	Sandandrano	Q2

N°	Region	District	Commune	Site	Prepared by	Period
32	Alaotra Mangoro	Moramanga	Belavabary	Marovitsika	Sandandrano	Q2
33	Alaotra Mangoro	Moramanga	Belavabary	Belavabary	Sandandrano	Q2
34	Alaotra Mangoro	Ambatondrazaka	Andilاناتoby	Andilاناتoby	BushProof	Q4
35	Alaotra Mangoro	Ambatondrazaka	Bejofo	Bejofo	BushProof	Q4
36	Atsinanana	Vatomandry	Ambalavolo	Ambalavolo	BushProof	Q4
37	Atsinanana	Vatomandry	Amboditavolo	Amboditavolo	BushProof	Q4
38	Atsinanana	Vatomandry	Iamborano	Iamborano	BushProof	Q4
39	Atsinanana	Vatomandry	Tanambao Vahatrankaka	Tanambao Vahatrankaka	BushProof	Q4
40	Vatovavy Fitovinany	Ifanadiana	Ambiabe	Ambiabe	BushProof	Q4
41	Vatovavy Fitovinany	Ikongo	Ambinanitromby	Ambinanitromby	BushProof	Q4
42	Vatovavy Fitovinany	Manakara	Ambotaka	Ambotaka	BushProof	Q4
43	Vatovavy Fitovinany	Manakara	Analavory	Analavory	BushProof	Q4
44	Vatovavy Fitovinany	Vohipeno	Ankarimbary	Ankarimbary	BushProof	Q4
45	Vatovavy Fitovinany	Vohipeno	Anoloka	Anoloka	BushProof	Q4
46	Vatovavy Fitovinany	Vohipeno	Ilakatra	Ilakatra	BushProof	Q4
47	Vatovavy Fitovinany	Vohipeno	Nato	Nato	BushProof	Q4
48	Vatovavy Fitovinany	Vohipeno	Savana	Savana	BushProof	Q4
49	Alaotra Mangoro	Amparafaravola	Morarano Chrome	Morarano Chrome	Sandandrano	Q4
50	Alaotra Mangoro	Moramanga	Mandialaza	Mandialaza	Sandandrano	Q4
51	Alaotra Mangoro	Moramanga	Lakato	Lakato	BushProof	Q1
52	Alaotra Mangoro	Ambatondrazaka	Amparihintsokatra	Amparihintsokatra	BushProof	Q1
53	Vakinankaratra	Antsirabell	Ambohitsimanova	Ambohitsimanova	Sandandrano	Q1
54	Alaotra Mangoro	Amparafaravola	Ambohitrarivo	Ambohitrarivo	Sandandrano	Q1
55	Alaotra Mangoro	Moramanga	Andaingo	Andaingo	Sandandrano	Q1
56	Alaotra Mangoro	Ambatondrazaka	Imerimandroso	Imerimandroso	Sandandrano	Q1
57	Alaotra Mangoro	Moramanga	Antaniditra	Antaniditra	Sandandrano	Q1

**LIST OF DETAILED PROJECT DESIGNS / AVANT-PROJET DÉTAILLÉS (APD)**

<b>N°</b>	<b>Region</b>	<b>District</b>	<b>Commune</b>	<b>Site</b>	<b>Prepared by</b>	<b>Period</b>
1	Alaotra Mangoro	Amparafaravola	Amparafaravola	Betatamo	Sandandrano	Q3
2	Alaotra Mangoro	Amparafaravola	Amparafaravola	Ambongabe	Sandandrano	Q3
3	Alaotra Mangoro	Moramanga	Anosibe Ifody	Ambodinifody	BushProof	Q3
4	Vatovavy Fitovinany	Ifanadiana	Antaretra	Antaretra	BushProof	Q3
5	Vatovavy Fitovinany	Ikongo	Manampatrana	Manampatrana	BushProof	Q3
6	Vatovavy Fitovinany	Manakara	Lokomby	Lokomby	BushProof	Q3
7	Atsinanana	Vatomandry	Niarovana Caroline	Niarovana Caroline	Sandandrano	Q3
8	Atsinanana	Brickaville	Mahatsara	Mahatsara	Sandandrano	Q3
9	Atsinanana	Toamasina II	Ampasimadinika	Ampasimadinika	Sandandrano	Q3
10	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Ambatofotsy	BushProof	Q1
11	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Ambodiara Sakorihy	BushProof	Q1
12	Vatovavy Fitovinany	Ikongo	Ambatofotsy	Ambalatenina	BushProof	Q1
13	Morarano Chrome	Morarano Chrome	Amparafaravola	Alaotra Mangoro	Sandandrano	Q1
14	Antongobato	Ranomafana Est	Brickaville	Atsinanana	Sandandrano	Q1
15	Andovoranto	Andovoranto	Brickaville	Atsinanana	Sandandrano	Q1
16	Tsarasambo	Tsarasambo	Vatomandry	Atsinanana	Sandandrano	Q1
17	Amboanjo	Amboanjo	Manakara	Vatovavy Fitovinany	BushProof	Q1
18	Mahabo	Mahabo	Vohipeno	Vatovavy Fitovinany	BushProof	Q1
19	Mahasoabe	Mahasoabe	Vohipeno	Vatovavy Fitovinany	BushProof	Q1
20	Marofarihy	Marofarihy	Manakara	Vatovavy Fitovinany	BushProof	Q1
21	Maromiandra	Maromiandra	Ikongo	Vatovavy Fitovinany	BushProof	Q1
22	Vohitrindry	Vohitrindry	Vohipeno	Vatovavy Fitovinany	BushProof	Q1



## ANNEX 12. WATER SYSTEM CONSTRUCTION Q1.20 UPDATE

Location				Technical Description					Contractor				Project Status					Remarks			
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment Amount	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion		Technical Reception	Provisional Reception	Final Reception (date)
Alaotra	Moramanga	Sabotsy	Sabotsy	Rehabilitation; extension and upgrading for PPP management	GWS	8,450	115	1.25	5.36	RPIJ	\$ 20,434.11	23%	\$ 89,164.94	71,519,377.20 MGA	390,096,622.75 MGA	Provisional Reception	100%	Completed	Completed	4-Jul-20	
Alaotra	Moramanga	Beforona	Beforona	Rehabilitation; extension; upgrading	GWS + WPS	2,800	30	1.16	1.83	ACOGEMA	\$ 10,435.51	16%	\$ 63,471.67	36,524,280.00 MGA	277,688,546.10 MGA	Provisional Reception	100%	Completed	Completed	5-Jul-20	
Atsinanana	Toamasina	Mahavelona	Foulpointe	Extension and upgrade	GWS + WPS	5,400	150	5.00	5.00	SANDAN DRANO	\$ 17,491.00	14%	\$ 127,772.77	61,218,492.00 MGA	559,005,872.00 MGA	Provisional Reception	100%	Completed	Completed	2-Apr-20	
Atsinanana	Vatomandry	Iliaka	Iliaka Est	Rehabilitation & extension	GWS + WPS	9,289	60	2.10	2.80	LOVA VELU	\$ 14,998.31	19%	\$ 79,990.98	52,494,078.00 MGA	349,960,518.00 MGA	Provisional Reception	100%	Completed	Completed	10-Apr-20	
Atsinanana	Brickaville	Ranomafana	Ranomafa	Construction/ Extension	GWS	3,250	65	4.48	2.30	LOVA VELU	\$ 8,378.11	15%	\$ 55,854.07	29,323,385.00 MGA	244,361,542.00 MGA	Provisional Reception	100%	Completed	Completed	21-Jun-20	
Atsinanana	Toamasina	Ampasimbe	Ampasim	Rehabilitation; extension and upgrading for PPP management	GWS	2,841	40	888.00	5.03	CREAT BTP	\$ 6,142.25	8%	\$ 81,896.67	21,497,876.01 MGA	358,297,933.43 MGA	Provisional Reception	100%	Completed	Completed	29-Apr-20	

Location				Technical Description					Contractor						Project Status					Remarks	
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment Amount	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion	Technical Reception	Provisional Reception		Final Reception
Atsinanana	Brickaville	Andovorant	Ambila	New construction	WPS	2,534	60	-	4.40	ATTR	\$ 15,907.19	19%	\$ 85,946.54	55,675,174.00 MGA	376,016,120.00 MGA	Provisional Reception	100%	Completed	Completed	9-Apr-20	
Vatovavy	Ikongo	Ambatofots	Ambatofo	Rehabilitation & extension of 3 water systems	GWS	6,502	70	3.60	1.50	MICKAEL	\$ 14,468.57	14%	\$ 100,300.53	50,640,000.00 MGA	438,814,815.78 MGA	Provisional Reception	100%	Completed	Completed	25-Sep-20	
Vatovavy	Ifanadiana	Kelilalina	Kianjanom	Construction	GWS	1,335	20	1.85	80.00	MICKAEL	\$ 8,582.76	21%	\$ 41,197.24	30,039,655.84 MGA	180,237,935.01 MGA	Provisional Reception	100%	Completed	Completed	23-Sep-20	
Vatovavy Fitovinany	Vohipeno	Andemaka	Andemaka	Rehabilitation & extension	WPS	4,836	69	0.43	3.48	BUSH PROOF	\$ -	0%	\$ 51,651.43	0.00 MGA	225,975,008.00 MGA	Provisional Reception	100%	Completed	Completed	27-Sep-20	VWSP still under recruitment, the procurement process for management has been relaunched.
<b>FY19 Construction Activities (WSS)</b>																					

Location				Technical Description					Contractor				Project Status					Remarks			
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion		Technical Reception	Provisional Reception	Final Reception
Alaoatra Mangoro	Amparafaravola	Amparafaravola	Ambongabe	Rehabilitation; extension; upgrading	GWS	13,800	305	2.80	18.85	SRAFI	\$50,566.16	27%	\$186,277.23	176,981,571.25 MGA	782,364,378.87 MGA	Construction	2%	Undefined		undefined	This company in charge of the work was resigned even before the start of construction due to dishonesty.
Alaoatra Mangoro	Amparafaravola	Amparafaravola	Betatano	Rehabilitation; extension; upgrading	GWS	8,600	140	6.00	4.90	SRAFI	\$39,575.69	28%	\$139,958.57	138,514,912.50 MGA	612,318,741.94 MGA	Construction	2%	Undefined		undefined	This company in charge of the work was resigned even before the start of construction due to dishonesty.

Location				Technical Description					Contractor				Project Status					Remarks			
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion		Technical Reception	Provisional Reception	Final Reception
Alaoatra Mangoro	Moramanga	Anosibe Ifody	<b>Anosibe Ifody</b>	Rehabilitation	GPS	4,300	80	0.56	8.86	Rano an'ala B	\$ 9,142.86	10 %	\$ 91,237.56	32,000,000.00 MGA	399,164,308.00 MGA	Construction	84 %	20-déc.-19	6-Jan-20	4-Jul-20	The work has been technically accepted and the system is already in operation.
Atsinanana	Vatomandry	Niarovana Caroline	<b>Niarovana Caroline</b>	New construction	GPS	5,160	68	5.62	3.45	2ADH	\$ 15,034.95	14 %	\$ 109,345.10	52,622,329.32 MGA	478,384,812.00 MGA	Construction	70 %	14-Jan-20	29-Jan-20	27-Jul-20	Construction is currently completed and acceptance is scheduled for January 2020.
Atsinanana	Brickaville	Mahatsara	<b>Mahatsara</b>	New construction	WPS	5,200	50	0.03	4.29	2ADH	\$ 15,940.57	13 %	\$ 121,589.99	55,791,996.96 MGA	531,956,211.05 MGA	Construction	62 %	20-Jan-20	2-Feb-20	31-Jul-20	Construction work is currently underway

Location				Technical Description					Contractor						Project Status					Remarks	
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion	Technical Reception	Provisional Reception		Final Reception
Atsinanana	Toamasina II	Ampasimadinika	<b>Ampasimadinika</b>	Renovation with redesign	WPS	1,500	35	0.63	3.67							Construction	44%	21-Jan-20	3-Feb-20	1-Aug-20	y. Delays have been noted in relation to the estimated planning for the supply of materials. The same applies to the acquisition of special equipment such as the delivery pump in Mahatsara.

Location				Technical Description				Contractor						Project Status					Remarks		
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion	Technical Reception		Provisional Reception	Final Reception
Vatovavy Fitovinany	Ifanadiana	Antaretra	<b>Antaretra</b>	Rehabilitation & extension	GS	2,310	38	7.91	8.64	MICKAEL	\$ 14,914.29	13%	\$113,255.85	52,200,000.00 MGA	495,494,346.00 MGA	Construction	68%	1/28/2020	12-Feb-20	10-Aug-20	The work is currently in progress, but the company has issued a request for an extension of the lead time due to its inability to comply with the material supply schedule. This request is still under analysis by the contract management team.

Location				Technical Description					Contractor						Project Status					Remarks	
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion	Technical Reception	Provisional Reception		Final Reception
Vatovavy Fitovinany	Manakara II	Lokomby	<b>Lokomby</b>	New construction	WPS	4,379	66	0.95	7.47	MICKAEL	\$ 9,771.43	7%	\$146,611.69	34,200,000.00 MGA	641,426,132.40 MGA	Construction	59%	3/31/2020	16-Apr-20	13-Oct-20	The construction work on the distribution section has been completed, but following the additional hydrogeological studies carried out in December 2019, adjustments will still have to be made with the corresponding work on the production structure (borehole).

Location				Technical Description					Contractor						Project Status					Remarks	
Region	District	Commune	Project Site	Project Description	Type of System	Number of beneficiaries	Total volume	Distance Catchment	Main water transfer	Name of Water Supply Provider	WSP Investment	% of WSP	Total Estimated costs	Investment amount Manager	Total amount	Phase	% Completion	Technical Reception	Provisional Reception		Final Reception
Vatovavy Fitovinany	Ikongo	Manampatrana	<b>Manampatrana</b>	New construction	GS	7,300	70	0.54	6.54	MICKAEL	\$ 11,485.71	13%	\$ 87,156.54	40,200,000.00 MGA	381,309,858.00 MGA	Construction	51%	1/30/2020	14-Feb-20	12-Aug-20	The work is currently in progress, but the company has issued a request for an extension of the lead time due to its inability to comply with the material supply schedule. This request is still under analysis by the contract management team.



## ANNEX 13. AFTER-ACTION REVIEW ON PPP FOR WATER SERVICES PROVISION

# After-Action Review Tendering and Contracting Process

## PPP for water services provision

### Minutes

Date: December 11, 2019

Location: IKM Antsahavola Antananarivo Participants:  
see attached attendance sheet

#### 1. **GENERAL AIM**

Following the various discussions aimed at improving the coordination of activities related to this objective IR 2.2. This workshop is intended to conduct an after action review on the procurement of works.

#### 2. **SPECIFIC OBJECTIVES**

- Adopt a common view of the works procurement process ;
- Apply the frameworks governing the roles and responsibilities of CMT during the procurement process ;
- Bring out the realities on the after action review.

#### 3. **ACTIVITIES**

##### 3.1. Introduction and Welcome

Round table introduction and welcome by the PCT Chief of Party for all Workshop participants.

##### 3.2 Introduction by the PCT Chief of Party

During his opening address, the CoP reiterated the importance of such a workshop, especially since such a meeting will allow to review what has been done and to reflect on a perspective for improvement.

### 3.3. The What, Why and How of an After-Action Review

The AAR is a simple, fast and flexible learning tool. It is a framework for discussion to determine the causes of successes, failures and lessons learned. The methodology and compare the actual outcome of a process to the desired result. AAR can be conducted at any time and at any stage of the project cycle, especially AAR is useful in emergency situations. Conducting a review can take 1 to 2 hours.

However, the conduct of an AAR must follow certain rules, namely: active participation, plain language, openness to new ideas, focus on facts, creativity, attachment to problems and not to people, critical reflection on the subject or idea, consensus-building if possible, and commitment to implementing recommendations.

### 3.4. ANO WASH procurement history (compliance and "ICG- Investor-Builder-Manager" objectives).

On this part, the Deputy Chief of Party presented the experiences of RANO WASH in relation to procurement. She first recalled the objective which defines that the households at the level of the fokontany selected for the water system use the drinking water services through the commitment and professionalization of the private operators.

To achieve this objective, she recalled that one should be inspired by a RANO WASH PPP model: Build - Co-invest - Manage / Operate either Contractors' construction contracts with WaterAid or CRS or CARE and delegated management contracts with Commune and MEEH.

Thus, to achieve the result of 12 water supply systems constructed, a harmonization of the procedures relating to the procurement and construction contract has been made.

The presentation of other results, such as the number of people with access to basic water services (5363/60100 planned), the number of people with access to safely managed water services (2159/18030 planned) and the number of systems applying water payment (1/12), generated discussion and proposals for improvement.

The Deputy Chief of Party also recalled the revisions made in FY 2019 on the PPP concept with the example of the contribution of RANO WASH which is from 80% to 90% of the investment and that of the entrepreneurs from 10% to 20%, in this process, she also recalled the main lines constituting the two stages of this PPP model (The number of inhabitants of the fokontany of intervention, contract with the water operator, types of facilities, extension of services to cover the target population, ranges of water services for remote villages, management of large systems to promote economies of scale, more extensive coverage, etc.).

At the end of his intervention, the DCoP recalled the prospects for the management of this PPP model: **(i). How to make the company liable until water services are available i.e. from construction to connections, from**

**3 construction to extension, (ii). Establishment of a Management Committee Team for the proper management of the PPP (from the preparation to the end of the system management contract), (iv). Strengthening of the Commune and the Ministry to have a management tool for the PPP contract, (v). How to support the State to contribute in investment.**

### **3.5. PPP mechanism.**

The development mechanism of the Public Private Partnership is based on strategic principles that tend to capitalize and optimize the complementarity of the Public and Private sectors, whose objective is tangible and sustainable development.

In order to achieve effective and sustainable development, specifically in the improvement of WASH access, the project initiated the new Investor-Builder-Manager concept. This concept entrusts the same company with the investment of part of the cost of the works, the construction and management of a Drinking Water Supply system. In order to guarantee the quality of service and the sustainability of the AEP systems, the project is launching an AMI to establish a short list of pre-selected companies that will be the only ones able to bid on the AOR, which covers Investment, Works and Management at the same time. One of the priority criteria in the evaluation of tenders is "co-financing", which is set at at least 10% of the total cost of the construction works.

Once the Investor-Builder-Manager PPP contract has been awarded, the contracting process phase will be carried out in two stages. On the one hand, the signature of the "financing contract" relating to the works and connections, which is conditioned by the signature of the "delegation contract" relating to the water tariff and the duration of the delegation.

3.6. The TCP Provider in compliance and contract, presented a classical procurement process on its four stages, **(i) Preparation of the DAO, (ii). Procurement, (iii) Contracting and (iv) Public service delegation.** The practices of each member of the Consortium (result of the previous meeting for the preparation of the CMT) were transposed there. The finding was that practices are different from one organization to another. Some procurement tasks were not part of the procedure in some organizations, while others were more involved. It was agreed that this process will be shared and to be updated as appropriate by each organization. Also, a RACI will be integrated into this process and will be consolidated for use by the Consortium.

3.7. Commission work on the AAR was led by the DAF of the TCP. Each commission was composed of members from each organization (CARE, CRS, WaterAid). The work of each commission was facilitated by the PCT frameworks. The reflection consisted in determining the reasons for

successes, failures and lessons to be learned on the stages of the procurement process. As a basis for answering this reflection the following questions were asked: (i) **What was the intention? (Planning, Forecasting),**

4 (ii) **What actually happened, (iii) What went right or wrong and why? (iv) What can be improved and how?**

The result of this commission work will be consolidated by the PCT and will be shared with each member of the Consortium.

4.6. For the continuation of the work on CMT, a sharing on "Continuous monitoring and performance" closed the workshop, at the end of which a model on (i) the establishment of the governance of CMT for each organization, (ii) the management of relations, (iii) the administration of the contract and (iv) performance management was adopted. This template will be shared with all members of the organization to determine the RACI and will be returned to PCT before January 10 for consolidation and will serve as a working tool for the Project.

4.7. Next Steps: The Workshop did not determine the next steps, it was agreed that each entity should, by 10 January, send to PCT their 5 priority perspectives (maximum) for the next three months.



**OS2: Increased involvement of the private sector in the provision of WASH services.**

**IR 2.1 Strategic Development and Innovation for Private Sector Participation in the Provision of WASH Services**

**IR 2.2 Improving the Design, Construction and Management of WASH Infrastructures**

**RI2.3 Technical competence and enhanced sales**



## After Action Review

- **Simple, fast** and **flexible learning tool**
- **A framework for discussion** to determine the causes of our **successes** and **failures and to learn from** them.
- **Compares the actual result of a process to the desired result**
- **Can be conducted at any time at any** stage of the project cycle
- expedient in **an emergency**
- duration **1-2 h**





## 4 Questions

- 1. What was the intention? Plan? Planned?**
- 2. What really happened?**
- 3. What went right/not right and why?**
- 4. What can be improved and how?**



# Rules

- Active **participation**
- **Equal representation** (of ideas and points of view)
- **Languages:** French, Malagasy, English
- Openness to **new ideas**
- Focus on the **facts**
- **Creativity**
- **Pointing to problems/questions...** not people.
- **Critical reflection** (on the subject or the idea)
- **Consensus** if possible
- **Commitment to** implementation recommendations



1/04/2020









# EXPERIENCE OF RANO WASH REGARDING PROCUREMENT

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BushProof







## OBJECTIVE

The households in the fokontany(s) selected for the water system use the drinking water services through the commitment and professionalism of private operators.

RANO WASH Project PPP Model: Build - Co-Invest - Manage / Operate.

- Construction contract with WaterAid or CRS or CARE
- Management delegation contract with Commune and MEEH

Expected result: **12 water supply systems** built:

- Harmonization of procurement procedures + construction contract



BushProof





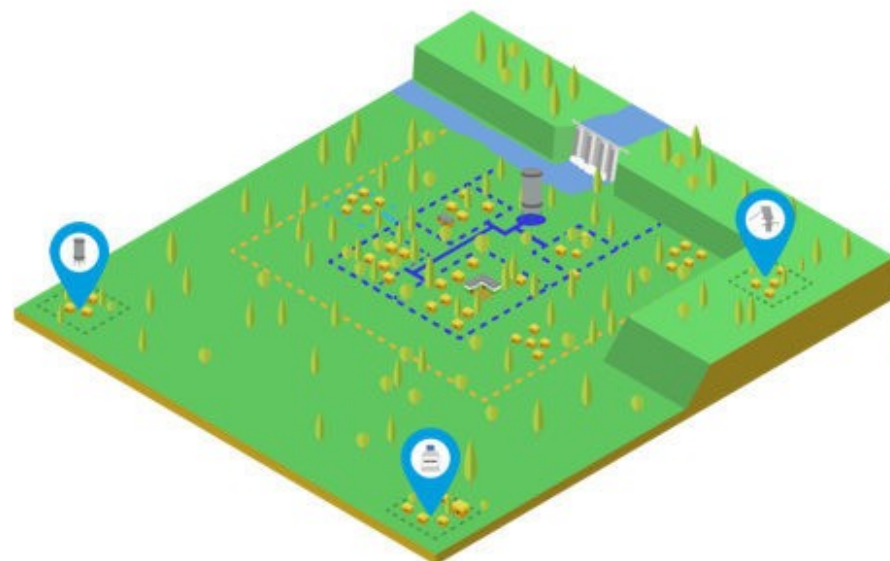
## ACHIEVED RESULTS

- 12 water systems built, but...
- People with access to basic water services: 5363/60100 planned
- Persons with access to safely managed water services: 2159/18030 foreseen
- 1/12 systems apply payment for water services



BushProof





## REVISION OF THE PPP CONCEPT TOWARDS THE END FY19

**RANO WASH with 80 to 90% of the investment**

**Water operator with 10 to 20% of the investment**

**Contract of 15 to 20 years**

**Commune / MEEH:VAT exemption??**

### FIRST STEP

- **Build – Co-invest – Operate Model**  
10-20% from operators – 80-90% from the project and the Gov (including VAT)

#### - Habitants

At least a fokontany of 3,000 inhabitants

#### - Contract of the water operator

15 – 20 years

#### - Water connections

social, private and sanitary bloc (laundry, shower, toilets, water points)

#### - Extension

Water operator will ensure the extension of its services to cover the target population

### SECOND STEP

Range of water services for remote villages provided by the water operator managing the big system to promote economy of scale.

#### - Different kinds of services

Small water system, boreholes, biosand filter, water treatment (sodium hypochlorite solution or tablets), maintenance and servicing including spare parts

#### - Greater coverage

Inclusive water services, especially for unserved villages with challenges in terms of sustainability of services





- How to make the company liable until the water services are available => building up to the connections? Extension?
- Setting up CMTs for the good management of the PPP (from the preparation to the end of the system management contract): objective: efficient management of the construction contract and especially of the management delegation contract, i.e. to strengthen the Commune / MEEH to have a PPP contract management tool.
- How to support the State to contribute in investment?





## ANNEX 14. ENVIRONMENTAL MITIGATION AND MONITORING PLAN (EMMP)

### PROJECT/ACTIVITY DATA

<b>Project/Activity Name:</b>	Rural Access to New Opportunities in Water, Sanitation, and Hygiene (RANO WASH)
<b>Geographic Location(s) (Country/Region):</b>	Madagascar
<b>Implementation Start/End Dates:</b>	June, 15th 2017 to June, 15th 2022
<b>Contract/Award Number:</b>	Cooperative Agreement N° AID-687-A-17-00002
<b>Implementing Partner(s):</b>	CARE International in consortium with CRS, WaterAid, Sanddrano and BushProof
<b>Tracking ID:</b>	
<b>Tracking ID/link of Related IEE:</b>	Program/Activity 687-005 Madagascar Health Sector Portfolio IEE 2019-2024 ECD Permalink: <a href="https://ecd.usaid.gov/document.php?doc_id=51512">https://ecd.usaid.gov/document.php?doc_id=51512</a>
<b>Tracking ID/link of Other, Related Analyses:</b>	RANO WASH FY2018 EMMP Oct 2017 to Sept 2018 RANO WASH FY2019 EMMP Oct 2018 to Sept 2019

### ORGANIZATIONAL/ADMINISTRATIVE DATA

<b>Implementing Operating Unit(s):</b> (e.g. Mission or Bureau or Office)	
<b>Lead BEO Bureau:</b>	
<b>Prepared by:</b>	RANO WASH Project Coordination Team
<b>Date Prepared:</b>	January 31, 2020
<b>Submitted by:</b>	RANO WASH Project Coordination Team
<b>Date Submitted:</b>	January 31, 2020

### ENVIRONMENTAL COMPLIANCE REVIEW DATA

<b>Analysis Type:</b>	EMMP
<b>Additional Analyses/Reporting Required:</b>	EMMR

## PURPOSE

Environmental Mitigation and Monitoring Plans (EMMPs) are required for USAID-funded projects, as specified in ADS 204, when the 22 CFR 216 documentation governing the project (e.g. the Initial Environmental Examination (IEE)) specifies mitigation measures are needed. EMMPs are an important tool for translating applicable IEE conditions and mitigation measures into specific, implementable, and verifiable actions.

An EMMP is an action plan that clearly defines:

**Mitigation measures.** Actions that reduce or eliminate potential negative environmental impacts resulting directly or indirectly from a particular project or activity, including environmental limiting factors that constrain development.

**Monitoring indicators.**<sup>5</sup> Criteria that demonstrate whether mitigation measures are suitable and implemented effectively.

**Monitoring/reporting frequency.** Timeframes for appropriately monitoring the effectiveness of each specific action.

**Responsible parties.** Appropriate, knowledgeable positions assigned to each specific action.

**Field Monitoring/Issues.** Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution. This field is primarily for documentation during implementation.

Generally, EMMPs are developed by the IP (and updated at least annually) in conjunction with the Annual Work Plan. Some IEEs include a general EMMP, in such instances it is incumbent on the IP to tailor the general EMMP once activities are fully defined. Responsibility for ensuring IPs develop appropriate EMMPs and budget for their implementation rest with USAID CORs/AORs.

An EMMP is a living document. It should be reviewed against the IEE and updated/tailored as needed over the life of implementation, e.g. when new sites are identified or changes in scope are made through award modifications and IEE Amendments.

<sup>5</sup> Note: Monitoring indicators differ from performance indicators, which are the measures that USAID uses to detect progress towards the results included in a Results Framework.

## **I.0 PROJECT/ACTIVITY SUMMARY**

This EMMP examines the activities within the Rural Access to New Opportunities in Water, Sanitation and Hygiene (RANO WASH), Project funded by USAID/MG/HPN and implemented by a consortium led by CARE Madagascar and including Catholic Relief Services (CRS) and WaterAid Madagascar. The consortium collaborates with two private sector Malagasy partners, BushProof and Sandandrano, which operate successful water and sanitation businesses in Madagascar.

RANO WASH has as global goal to increase equitable, suitable and sustainable access to improved water supply increase sanitation coverage rates, and improve household hygiene practices in 250 communes in six regions of Madagascar (Alaotra Mangoro, Atsinanana, Amoron'i Mania, Matsiatra Ambony, Vakinankaratra, and Vatovavy Fitovinany). RANO WASH aims to maximize the WASH access impact on Human Health, Nutrition and Environment. The institution members of the Consortium have their own WASH relevant experience in their respective action region: Atsinanana and Vakinankaratra for CRS; Alaotra Mangoro for WaterAid and the rest for CARE. Target areas overlap with the former and ongoing USAID-funded MIKOLO, FARARANO, and ASOTRY FFP Programs. Targeted communes represent areas with some of the lowest "safely managed water supply system" and "basic sanitation" coverage rates in Madagascar. By the end of the life of project in June 2022, the project anticipates directly affecting the communities in the 250 rural communes targeted.

This EMMP also updates the previous EMMP, of the RANO WASH Project developed for the purpose of the FY 2018 project activities, performed under the umbrella Initial Environmental Examination (IEE) for USAID/MG/HPN funded projects approved in October 2013, and now updated for a new period covering 2019 to 2024. This newly updated umbrella IEE identifies those activities that are classified as Negative determination with Conditions for each HPN Program Element, and offers a sample EMMP to mitigate and monitor the potential risks that these activities pose to the environment. Water and Sanitation is Program Element 3.1.8 of USAID Foreign Assistance Framework.

To avoid ambiguity, and ensure an environmentally sound project design in compliance with USAID regulation 22 CFR 216, this document provides threshold determinations for principal activities within the RANO WASH program per Strategic Objective. This document also outlines a series of mitigation and monitoring measures for those infrastructure related activities categorized under negative determination with conditions.

RANO WASH also possess a Water Quality Assurance Plan (WQAP) developed based on the USAID WQAP guidance and template, and taking into account the specific contexts of the regions of project implementation. Sandandrano and BushProof will continue to ensure the monitoring of the implementation of this WQAP, based on their experience of the FY2018 RANO WASH construction monitoring, and that of their previous implementation of the USAID funded project RANO HP.

Through its activities, RANO WASH will also continue to assess and address climate risk in order to facilitate resilience to both current and future climate. Indeed Water regime, Water and Sanitation infrastructure and services, as well as Hygiene facilities, are sensitive and vulnerable to climate change and natural disaster. The current Climate Risk Management (CRM) will ensure the safeguards of the

USAID development impacts. CRM will also permit the wisest today's investments for sustainable and compliant gains.

No construction works will start before the submission and the approval of the related Environmental Review Form (ERF) taking into account the conditions of the IEE retaken in this EMMP, and the WQAP and CRM Plan.

The table below shows the main framework of the RANO WASH project activities, according to the approved FY2019 AIP, and the related threshold determinations according to the Umbrella IEE and the 22 CFR 216.

References	Activity description	Threshold determinations
	<b>PROJECT MANAGEMENT</b>	
National	Biannual review workshop	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Regional	Programmatic and Operations workshop	
Regional	Quarterly review workshop	
Regional	Steering committee meeting	
	<b>RANO WASH staff capacity building</b>	
Regional	Training on project management	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Regional	Training on tendering and contracting process	
Regional	Training on compliance with USAID procedures	
	<b>MEAL</b>	
Regional	SMILER workshop for new TAs and regions	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Regional	MEAL system capacity building for old TAs	
National	Baseline survey and WASH infrastructure inventory in 3 regions (Vakinankaratra, Amoron'i Mania, Haute Matsiatra)	
National	Annual beneficiary-based survey	
National / Regional	Data Quality Assurance / Assessment	
National	Annual MEAL team review	
National / Regional	Field visits to support the operationalization of the MEAL system	
National	ICT4D / Database management: Updating database after CommCare data extraction, revising results dashboard following programmatic and decision-making needs, Participation/presentation at international ICT4D conference	
	<b>GENDER AND SOCIAL INCLUSION</b>	
National Regional Communal	Strengthen communication on the rights of all people related to WASH and citizenship	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Communal	Use and continually improve reporting mechanisms for people, promoting women, youth, the elderly and the illiterate people to share feedback	
National Regional Communal	Develop a country-level and local-level groups, where women leaders can come together to discuss challenges and solutions for WASH and leadership	
Regional Communal	Provide technical support to WASH services providers to implement accessible and suitable WASH services / infrastructures models that	

References	Activity description	Threshold determinations
	are sensitive to the needs of men, women, young people, children, and people with disability in homes, communities, schools and health centers.	
Communal	Promote local talent for making and producing WASH products and services.	
Communal	Conduct interactive using the men's engagement and grow-up sticker approaches	
<b>SOI.</b>	<b>Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>	
<b>IRI.1</b>	<b>IRI.1 Strengthened government and stakeholder commitment and accountability to sector development</b>	
Output 1.1.1.	Sector coordination and learning mechanisms operating effectively under strong national leadership	
Act 1.1.1.1	Facilitate with MEEH thematic group discussions	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act 1.1.1.2	Mobilize and build capacity of WASH private sector groups to discuss on key needs of private sector development	
Act 1.1.1.3	Mobilize and build capacity of WASH CSOs to develop advocacy plan responding to their key priorities	
Output 1.1.2.	Ministry in charge of WASH institutional capacity developed to meet strategic needs	
Act 1.1.2.1	Conduct study/workshop to refine and apply tools for regional and national planning, resource analysis and financing strategies, and sector performance monitoring	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act 1.1.2.2	Conduct study/workshop to develop the National Investment Plan	
<b>IRI.2</b>	<b>IRI.2 Improved sector monitoring, analysis and learning, influencing policy</b>	
Output 1.2.1.	SE&AM strengthened and extended	
Act 1.2.1.1	Organize / facilitate meetings with DREEH and SRMo to update SE&AM and to evaluate progress periodically at the regional level	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act 1.2.1.2	Train and coach Communes to pilot the SE&AM ICT4D platform	
Act 1.2.1.3	Work with the MEEH to assess the sectorial review performance	
Act 1.2.1.4	Support the MEEH to conduct the WASH sectorial review taking into account the assessment results at national level	
Act 1.2.1.4	Contributing to conduct the WASH sectorial review taking in account the assessment results at regional level	
Output 1.2.2	Learning agenda implemented to increase and better regulate private sector engagement in WASH	
Act 1.2.2.1	Facilitate learning events for the RANO WASH project on PPP	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act 1.2.2.2	Work with the DREEH to feed the digital library with the PPP learning documents and events deliverables	
<b>IRI.3</b>	<b>Strengthened sub-national systems</b>	
Output 1.3.1	Decentralized resources available for sustained WASH service delivery	
Act 1.3.1.1	Mobilize WASH actors at regional level to assess the progress achieved against BPOR/BPON and to define strategy to move forward	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act 1.3.1.2	Coach DREEH to ensure STEAH capacity building	
Act 1.3.1.2	Conduct capacity building of the STEAH	
Output 1.3.2	Commune management capacities strengthened for WASH service delivery	
Act: 1.3.2.1	Coach new communes to develop PCDEAH (Commune WASH plans)	

References	Activity description	Threshold determinations
Act: 1.3.2.2	Coach communes already supported in FY18-19 to develop PCDEAH (Commune WASH plans)	Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii)
Act: 1.3.2.3	Train communes with water supply services on their roles relating to WASH service delivery	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act: 1.3.2.4	Support communes with water services to set-up tax payment mechanism	
Act: 1.3.2.5	Coach the municipalities already supported by the project in FY18-19 to implement the one-year planning cycle	
<b>IRI.4</b>	<b>Increased community control over WASH services</b>	
Output 1.4.1	Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation	
Act: 1.4.1.1	Support the new municipalities to reinforce / set-up CSO groups	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act: 1.4.1.2	Coach CSOs groups in the municipalities already supported by the project in FY18-19 to conduct advocacy, to promote accountability mechanisms	
Output 1.4.2	110 communes with functional WASH accountability mechanisms	
Act: 1.4.2.1	Train and coach the new municipalities to set-up SLCs and to use accountability mechanisms	Categorical Exclusion per 22 CFR 216.2(c)(2)(viii)
Act: 1.4.2.2	Conduct a national learning event on accountability mechanisms	
Act: 1.4.2.3	Provide training to private sector groups on accountability mechanisms	
<b>SO2.</b>	<b>Private sector engagement in WASH service delivery increased and improved.</b>	
<b>IR2.1</b>	<b>Improved WASH products, technologies, services and business models</b>	
Output 2.1.1	A comprehensive WASH market assessment (WMA) strategy developed	
ACT 2.1.1.1	Validate the WMA results for the Vakinankaratra, Haute Matsiatra and Amoron'i Mania Regions with regional stakeholders	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
ACT 2.1.1.2	Elaborate a summary document of the 6 WMAs and share with partners.	
Output 2.1.2	Regional WASH market development plans drafted	
ACT 2.1.2.1	Simultaneous market development cycles: (1) workshop in each new region to develop first iteration of WMDPs and (2) evaluation and learning workshops for existing WMDPs in three other regions	Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii)
ACT 2.1.2.2	Inform regional stakeholder and launch WMDP implementation for each region	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
ACT 2.1.2.3	Develop Market Based Sanitation strategy with IDE and PSI partnership	
ACT 2.1.2.4	Develop PPP+ strategy and model for promoting priority services and products	
ACT 2.1.2.5	Train and coach private sector actors to implement WMDP and marketing plan	
ACT 2.1.2.6	Hold National workshop to evaluate and validate region-specific PPP models;	
ACT 2.1.2.7	Hold national workshop for private actors involved in water quality analysis	

References	Activity description	Threshold determinations
Output 2.1.3	Type and range of financial products for WASH services and products available and accessible increased	
ACT 2.1.3.1	Informational visits on project to heads of financial institutions	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
ACT 2.1.3.2	Facilitate connection between financial institutions and WASH service providers at different level	
ACT 2.1.3.3	Support VSLA loans to initiate small business i.e. hygiene product and sanitation marketing	
ACT 2.1.3.4	Develop communication materials related to PPP	
<b>IR2.2</b>	<b>Improved WASH products, technologies, services and business models</b>	
Output 2.2.1	Design and construction of sustainable WASH infrastructure improved	
ACT 2.2.1.1	Carry out APS+ and APD+ studies	Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii)
ACT 2.2.1.2	Pilot procurement process with PPP model and conduct on-the-job training for CAO (Communal tendering committee) members	
ACT 2.2.1.3	Develop ESF and monitor its implementation in the construction sites	
ACT 2.2.1.4	Contract and Monitor water infrastructures construction and management	
<b>IR 2.3</b>	<b>Strengthened technical &amp; business skills and competencies</b>	
Output 2.3.1	Capacity building for private sector in business systems and technical operations strengthened	
ACT 2.3.1.1	Train private operators in business planning with a focus on diversification of services and products and strengthening business plans;	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
ACT 2.3.1.2	Train private operators in marketing strategies for active sale promotion and collecting and responding to customer feedback;	
ACT 2.3.1.3	Train local masons on latrine technologies, and seamstresses on marketing, and simplified administration and financial management;	
ACT 2.3.1.4	Organize study trips for Water system managers to learn from other projects	
Output 2.3.2	Professional Associations Development	
ACT 2.3.2.1	Based on the result of institutional and organizational assessment, develop and implement a capacity building plan to the AOPDEM;	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
ACT 2.3.2.2	Conduct WMA validation and WMDP elaboration workshops including AOPDEM members;	
<b>SO3.</b>	<b>Adoption of healthy behaviors and use of WASH services accelerated</b>	
<b>I.R.3.1</b>	<b>Improved hygiene and sanitation behavior change solutions through applied research</b>	
Output 3.1.1	Behavioral science innovations for WASH BC explored, iterated, evaluated	
Act: 3.1.1.4	Evaluate and adjust the BC strategy	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act: 3.1.1.5	Implement CLTS sustainability research	
Act: 3.1.1.6	Design, implement and share nudge-related research	
Act: 3.1.1.7	Conduct a qualitative research on MHM	
Output 3.1.2	Studies of integrated population, health and environment (PHE) programming models stimulating cross-sectoral collaboration	
Act 3.1.2.2	Conduct an action research on PHE	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act 3.1.2.3	Document and share the PHE research process	
Act 3.1.2.4	Participate in national networks on PHE	
Output 3.1.3	WASH-Nutrition linkages researched	



References	Activity description	Threshold determinations
Act 3.1.3.2	Establish a MOU with PARN/FAFY on WASH nutrition activities in three regions	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act 3.1.3.3	Conduct an action research on WASH-Nutrition in partnership with PARN/FAFY	
Act 3.1.3.4	Coordinate WASH and nutrition activities at local/regional levels	
<b>I.R.3.2</b>	<b>Improved implementation of WASH behavior changes at all levels: communities, government and private sector</b>	
Output 3.2.1	WASH BC program coordination improved in RANO WASH regions	
Act 3.2.1.1	Collaborate with MoWASH to coordinate WASH BC activities at the national level (quarterly meeting)	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act 3.2.1.2	Organize and participate in regional platform meetings to ensure coordination of activities at regional level	
Output 3.2.2	Innovative CLTS and WASH BC implementation	
Act 3.2.2.1	Initiate group discussions at community level on WASH rights	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act 3.2.2.7	Identification, evaluation and training of local promoters at communal level in intervention communes	
Act 3.2.2.8	Coaching for local promoters on BC activities (Households activities with Grow-Up stickers, group discussions, events)	
Act 3.2.2.10	Establish and coach WASH committees to strengthen community participation and coordination	
Act 3.2.2.11	Establish new VSLA groups and coaching for previous VSLA	
Act 3.2.2.12	Encourage VSLA members to invest in WASH products/services (use and service providers)	
Act 3.2.2.13	CLTS Triggering and FUM activities at village/fokontany level	
Act 3.2.2.14	Train, coach and support health facilities and schools	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
Act 3.2.2.16	Celebrate and mobilize communities to create movements for change during world days	
Act 3.2.2.17	Training and certification of Village Agents (AV)	
Act 3.2.2.20	Organize VSLA contests at local level	
Act 3.2.2.21	Pilot a model of fund securing for VSLA groups	
Act 3.2.2.22	Establish and use a mobile messaging mechanism for BC activities with VIAMO	
Output 3.2.3	Communication Marketing developed for WASH products and services	
Act 3.2.3.1	Implement marketing campaign on WASH products and services in communes where products and services are available	Negative Determination with Conditions, per 22 CFR 216.3(a)(2)(iii)
Act 3.2.3.2	Promote WASH products and services through local medias	
Act 3.2.3.3	Design and produce marketing tools and materials for products (latrine, menstrual pads, water, soap)	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)
<b>IR3.3</b>	<b>Evidence-based WASH BC and hygiene promotion shared to influence policy</b>	
Output 3.3.1	National-level networks, policies and programs engaged for sustainable WASH BC	
Act: 3.3.1.1	Initiate learning hub discussions within the project and setup the learning hub at national and regional level	Categorical Exclusion per 22 CFR 216.2(c)(2)(iii)

References	Activity description	Threshold determinations
Act: 3.3.1.2	Attend, participate, initiate workshops and meetings on national level to share experiences, expertise and to influence policies: based on action research, formative research results	

## **2.0 SITE SPECIFIC INFORMATION**

According to regional environmental dashboard set by the ONE in the region of Alaotra Mangoro, the abusive, uncontrolled, and illegal exploitation of the natural resources (by logging and mining) has led to the current degradation and erosion of the soil of most of the watersheds. Moreover, the local population keeps using destructive agricultural technics that are intensifying water pollution, and depleting and drying water sources, and even accentuating climate disturbance and drought phenomenon. The region has low access to new energy and illiteracy and cultural poverty are still common amongst the masses. The food and sanitary conditions are precarious and the population still lives in insecurity. The region have a confirmed potential on tourism, but the valorization of sites of tourist, cultural and religious interest is still insufficient, and most of roads and tracks are degraded.

The same reference shows for the region of Amoron'i Mania that there is also the same issue related to the degradation of biodiversity mainly due to bush fires, slash and burn cultures, and abusive exploitation of fishing resources. Also, due to over-lumbering, it was observed a significant degradation of Tapia forests, silting and soil erosion. These latter are also intensified by the illegal and uncontrolled exploitation of mining products. Thus, most of the watersheds are degraded, and on that is added the pollution of water resources by phytosanitary products and nitrates used by farmers. It was also observed a decrease in rainfall due to the imbalance climate. Moreover, such decrease has led to the current deplete of available water quantity. In the other hand, the local population also faces the same issues about literacy, land security, poverty, precariousness of food and sanitary conditions, access to new energy, isolation and rural insecurity. The region might also have some touristic potential but is still not well valorized.

For the case of Atsinanana region, the main environmental issues turn around trafficking of precious woods and endemic wildlife, practice of bush fires, slash and burn cultures, deforestation, uncontrolled mining activities, extraction and tramping of the coral reef, overexploitation of coastal and marine resources. That leads to degradation of soils, erosion and degradation of watersheds, soil exhaustion due to its abusive use and the low quality of fertilizer used to grow cash crops, land dispute, deterioration of marine and coastal resources, siltation of lakes and rivers (especially the canal of Pangalanes and port), water pollution, and depleting of fishing resources. For the last two decades, it was also observed an increase in frequencies and intensity of natural disasters (cyclone, flood). Except for transversal issues, such as illiteracy, low access to new energy, poverty, insecurity, random food security, and isolation, the main socio-economic challenge for this region should be the alarming rate of school dropout (early dropout between 10 and 14 years old) almost at all district level.

For Matsiatra Ambony the degradation of biodiversity is mainly due to the trafficking of fauna and flora. The region also faces the proliferation of invasive species (harmful to agriculture). The Tapia Forests are

highly degraded due to forest overexploitation and common practice of slash, burn cultures, and bush fires. Because of that latter issue and accentuated by mining activities, the soil are highly eroded on plateau (presence of landslides) and silted on valleys. The region also faces strong soil exhaustion due to abusive exploitation. The water sources are highly threatened in terms of both quality and quantity. Moreover, in terms of climate change, the climatic hazards sometimes make communication difficult with the most isolated areas (media, roads ...). The listed above socio-economic issues, for the other regions, can be also applied to the region of Matsiatra Ambony, pointing out that rural insecurity (stealing of cattle) is omnipresent there.

For Vakinankaratra the observed degradation amongst biodiversity is mainly due to illegal collection of ornamental plants. The notions and principles of sustainable management are not acquired at all. There has been identified a significant decrease in fish stock and quality, as well as a loss of the ecosystem balance of the lentic environment. The practice of bush fires or any inappropriate agricultural production method are still common which accentuate the diminution of vegetal land cover, the erosion of watersheds and siltation of downstream lakes and plains. The natural resources, including the soil (e.g. for brick fabrication) and the rivers (for sand extraction) are overexploited. Besides, livestock and land-use are poorly managed, and land disputes are common. Besides, that two latter issues have had significant adverse consequences on the local agricultural production. Not to mention the increasing pollution of surface waters and the depleting of groundwater availability. Contradictorily, despite de relative availability of water sources, the local increasing population only have limited access to drinking water and basic infrastructure.

In Vatovavy Fitovinany a loss of biodiversity, as well as a progressive disappearance of animal and plant species have been observed, while harmful species especially for rice cultivation are proliferating. Alike the precedent regions, natural resources such as forest, soil, vegetal materials for houses constructions, and watersheds are overexploited and uncontrolled, and slash, burn cultures and bush fires are still common due to the lack of knowledge and financial means among peasant. It results a soil erosion, siltation of rice fields and river mouths. As a main part of the region belongs to the east coast of Madagascar, there is also some risks of marine pollution by hydrocarbons due to the aging of hydrocarbon installations in the port of Manakara. The beaches is also polluted by human wastes (low use of latrines). In the coastal area, the groundwater are commonly brackish in dry season, and the crop areas are often flooded during the rainy season. Vatovavy Fitovinany is also a tropical cyclone crossing area (Nosy Varika) which have adverse and unpredictable effects. Finally, the same socio-economic issues as for the precedent regions also applies for Vatovavy Fitovinany.

### • 3.0 ANNUAL REPORTING

Annually, the Implementing Partner will prepare an Environmental Mitigation and Monitoring Report (EMMR) to be submitted to the Activity Manager/AOR/COR and the USAID [Environmental Compliance Database](#). This report will summarize the effectiveness of mitigation measures, issues encountered, resolutions, and lessons learned. As appropriate, attachments such as site photos, verification of local inspections, product warranties, etc., should also be included.

## 4.0 EMMP TABLE FOR RANO WASH ACTIVITIES

### List of RANO WASH project activities falling under Categorical Exclusion

Threshold Determinations: Categorical Exclusion per 22 CFR 216.2(c)(2)(iii/viii)

References	Activity description
	<b>PROJECT MANAGEMENT</b>
National	Biannual review workshop
Regional	Programmatic and Operations workshop
Regional	Quarterly review workshop
Regional	Steering committee meeting
	<b>RANO WASH staff capacity building</b>
Regional	Training on project management
Regional	Training on tendering and contracting process
Regional	Training on compliance with USAID procedures
	<b>MEAL</b>
Regional	SMILER workshop for new TAs and regions
Regional	MEAL system capacity building for old TAs
National	Baseline survey and WASH infrastructure inventory in 3 regions (Vakinankaratra, Amoron'i Mania, Haute Matsiatra)
National	Annual beneficiary-based survey
National / Regional	Data Quality Assurance / Assessment
National	Annual MEAL team review
National / Regional	Field visits to support the operationalization of the MEAL system
National	ICT4D / Database management: Updating database after CommCare data extraction, revising results dashboard following programmatic and decision-making needs, Participation/presentation at international ICT4D conference
	<b>GENDER AND SOCIAL INCLUSION</b>
National Regional Communal	Strengthen communication on the rights of all people related to WASH and citizenship
Communal	Use and continually improve reporting mechanisms for people, promoting women, youth, the elderly and the illiterate people to share feedback
National Regional Communal	Develop a country-level and local-level groups, where women leaders can come together to discuss challenges and solutions for WASH and leadership
Regional Communal	Provide technical support to WASH services providers to implement accessible and suitable WASH services / infrastructures models that are sensitive to the needs of men, women, young people, children, and people with disability in homes, communities, schools and health centers.
Communal	Promote local talent for making and producing WASH products and services.
Communal	Conduct interactive using the men's engagement and grow-up sticker approaches

References	Activity description
<b>SO1.</b>	<b>Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>
IR1.1	IR1.1 Strengthened government and stakeholder commitment and accountability to sector development
Output 1.1.1.	Sector coordination and learning mechanisms operating effectively under strong national leadership
Act 1.1.1.1	Facilitate with MEEH thematic group discussions
Act 1.1.1.2	Mobilize and build capacity of WASH private sector groups to discuss on key needs of private sector development
Act 1.1.1.3	Mobilize and build capacity of WASH CSOs to develop advocacy plan responding to their key priorities
Output 1.1.2.	Ministry in charge of WASH institutional capacity developed to meet strategic needs
Act 1.1.2.1	Conduct study/workshop to refine and apply tools for regional and national planning, resource analysis and financing strategies, and sector performance monitoring
Act 1.1.2.2	Conduct study/workshop to develop the National Investment Plan
IR1.2	IR1.2 Improved sector monitoring, analysis and learning, influencing policy
Output 1.2.1.	SE&AM strengthened and extended
Act 1.2.1.1	Organize / facilitate meetings with DREEH and SRMo to update SE&AM and to evaluate progress periodically at the regional level
Act 1.2.1.2	Train and coach Communes to pilot the SE&AM ICT4D platform
Act 1.2.1.3	Work with the MEEH to assess the sectorial review performance
Act 1.2.1.4	Support the MEEH to conduct the WASH sectorial review taking into account the assessment results at national level
Act 1.2.1.4	Contributing to conduct the WASH sectorial review taking in account the assessment results at regional level
Output 1.2.2	Learning agenda implemented to increase and better regulate private sector engagement in WASH
Act 1.2.2.1	Facilitate learning events for the RANO WASH project on PPP
Act 1.2.2.2	Work with the DREEH to feed the digital library with the PPP learning documents and events deliverables
IR1.3	Strengthened sub-national systems
Output 1.3.1	Decentralized resources available for sustained WASH service delivery
Act 1.3.1.1	Mobilize WASH actors at regional level to assess the progress achieved against BPOR/BPON and to define strategy to move forward
Act 1.3.1.2	Coach DREEH to ensure STEAH capacity building
Act 1.3.1.2	Conduct capacity building of the STEAH
Output 1.3.2	Commune management capacities strengthened for WASH service delivery
Act: 1.3.2.3	Train communes with water supply services on their roles relating to WASH service delivery
Act: 1.3.2.4	Support communes with water services to set-up tax payment mechanism
Act: 1.3.2.5	Coach the 110 municipalities already supported by the project in FY18-19 to implement the one-year planning cycle
IR1.4	Increased community control over WASH services
Output 1.4.1	Communes and communities with an active civil society, aware of and organized to claim their right to water and sanitation
Act: 1.4.1.1	Support the 140 new municipalities to reinforce / set-up CSO groups
Act: 1.4.1.2	Coach CSOs groups in the 110 municipalities already supported by the project in FY18-19 to conduct advocacy, to promote accountability mechanisms
Output 1.4.2	110 communes with functional WASH accountability mechanisms

References	Activity description
Act: 1.4.2.1	Train and coach the 140 new municipalities to set-up SLCs and to use accountability mechanisms
Act: 1.4.2.2	Conduct a national learning event on accountability mechanisms
Act: 1.4.2.3	Provide training to private sector groups on accountability mechanisms
<b>SO2.</b>	<b>Private sector engagement in WASH service delivery increased and improved</b>
IR2.1	Improved WASH products, technologies, services and business models
Output 2.1.1	A comprehensive WASH market assessment (WMA) strategy developed
ACT 2.1.1.1	Validate the WMA results for the Vakinankaratra, Haute Matsiatra and Amoron'i Mania Regions with regional stakeholders
ACT 2.1.1.2	Elaborate a summary document of the 6 WMAs and share with partners.
Output 2.1.2	Regional WASH market development plans drafted
ACT 2.1.2.2	Inform regional stakeholder and launch WMDP implementation for each region
ACT 2.1.2.3	Develop Market Based Sanitation strategy with IDE and PSI partnership
ACT 2.1.2.4	Develop PPP+ strategy and model for promoting priority services and products
ACT 2.1.2.5	Train and coach private sector actors to implement WMDP and marketing plan
ACT 2.1.2.6	Hold National workshop to evaluate and validate region-specific PPP models;
ACT 2.1.2.7	Hold national workshop for private actors involved in water quality analysis
Output 2.1.3	Type and range of financial products for WASH services and products available and accessible increased
ACT 2.1.3.1	Informational visits on project to heads of financial institutions
ACT 2.1.3.2	Facilitate connection between financial institutions and WASH service providers at different level
ACT 2.1.3.3	Support VSLA loans to initiate small business i.e. hygiene product and sanitation marketing
ACT 2.1.3.4	Develop communication materials related to PPP
IR2.2	Improved WASH products, technologies, services and business models
Output 2.2.1	Design and construction of sustainable WASH infrastructure improved
ACT 2.2.1.2	Pilot procurement process with PPP model and conduct on-the-job training for CAO (Communal tendering committee) members
IR 2.3	Strengthened technical & business skills and competencies
Output 2.3.1	Capacity building for private sector in business systems and technical operations strengthened
ACT 2.3.1.1	Train private operators in business planning with a focus on diversification of services and products and strengthening business plans;
ACT 2.3.1.2	Train private operators in marketing strategies for active sale promotion and collecting and responding to customer feedback;
ACT 2.3.1.3	Train local masons on latrine technologies, and seamstresses on marketing, and simplified administration and financial management;
ACT 2.3.1.4	Organize study trips for Water system managers to learn from other projects
Output 2.3.2	Professional Associations Development
ACT 2.3.2.1	Based on the result of institutional and organizational assessment, develop and implement a capacity building plan to the AOPDEM;
ACT 2.3.2.2	Conduct WMA validation and WMDP elaboration workshops including AOPDEM members;
<b>SO3.</b>	<b>Adoption of healthy behaviors and use of WASH services accelerated</b>
I.R.3.1	Improved hygiene and sanitation behavior change solutions through applied research
Output 3.1.1	Behavioral science innovations for WASH BC explored, iterated, evaluated

References	Activity description
Act: 3.1.1.4	Evaluate and adjust the BC strategy
Act: 3.1.1.5	Implement CLTS sustainability research
Act: 3.1.1.6	Design, implement and share nudge-related research
Act: 3.1.1.7	Conduct a qualitative research on MHM
Output 3.1.2	Studies of integrated population, health and environment (PHE) programming models stimulating cross-sectoral collaboration
Act 3.1.2.2	Conduct an action research on PHE
Act 3.1.2.3	Document and share the PHE research process
Act 3.1.2.4	Participate in national networks on PHE
Output 3.1.3	WASH-Nutrition linkages researched
Act 3.1.3.2	Establish a MOU with PARN/FAFY on WASH nutrition activities in three regions
Act 3.1.3.3	Conduct an action research on WASH-Nutrition in partnership with PARN/FAFY
Act 3.1.3.4	Coordinate WASH and nutrition activities at local/regional levels
I.R.3.2	Improved implementation of WASH behavior changes at all levels: communities, government and private sector
Output 3.2.1	WASH BC program coordination improved in RANO WASH regions
Act 3.2.1.1	Collaborate with MoWASH to coordinate WASH BC activities at the national level (quarterly meeting)
Act 3.2.1.2	Organize and participate in regional platform meetings to ensure coordination of activities at regional level
Output 3.2.2	Innovative CLTS and WASH BC implementation
Act 3.2.2.1	Initiate group discussions at community level on WASH rights
Act 3.2.2.7	Identification, evaluation and training of local promoters at communal level in intervention communes
Act 3.2.2.8	Coaching for local promoters on BC activities (Households activities with Grow-Up stickers, group discussions, events)
Act 3.2.2.10	Establish and coach WASH committees to strengthen community participation and coordination
Act 3.2.2.11	Establish new VSLA groups and coaching for previous VSLA
Act 3.2.2.12	Encourage VSLA members to invest in WASH products/services (use and service providers)
Act 3.2.2.14	Train, coach and support health facilities and schools
Act 3.2.2.16	Celebrate and mobilize communities to create movements for change during world days
Act 3.2.2.17	Training and certification of Village Agents (AV)
Act 3.2.2.20	Organize VSLA contests at local level
Act 3.2.2.21	Pilot a model of fund securing for VSLA groups
Act 3.2.2.22	Establish and use a mobile messaging mechanism for BC activities with VIAMO
Output 3.2.3	Communication Marketing developed for WASH products and services
Act 3.2.3.3	Design and produce marketing tools and materials for products (latrine, menstrual pads, water, soap)
IR3.3	Evidence-based WASH BC and hygiene promotion shared to influence policy
Output 3.3.1	National-level networks, policies and programs engaged for sustainable WASH BC
Act: 3.3.1.1	Initiate learning hub discussions within the project and setup the learning hub at national and regional level



<b>References</b>	<b>Activity description</b>
Act: 3.3.1.2	Attend, participate, initiate workshops and meetings on national level to share experiences, expertise and to influence policies: based on action research, formative research results

**List of RANO WASH project activities falling under Negative Determination with conditions**

Threshold Determinations: Negative Determination with Conditions, per 22 CFR 216.3(a) (2) (iii),

Project/Activity/Sub-Activity	Identified Environmental Aspects or Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Parties	Field Monitoring/Issues/Resolution Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution
<b>SO1. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>						
<b>IRI.3 Strengthened sub-national systems</b>						
<b>Output 1.3.2 Commune management capacities strengthened for WASH service delivery</b>						
Act: 1.3.2.1: Coach new communes to develop PCDEAH (Commune WASH plans) Act: 1.3.2.2: Coach communes already supported in FY18-19 to develop PCDEAH (Commune WASH plans)	Risk related to the quality of the design of the planned WASH infrastructures inside the commune area, not taking into account environmental aspects	Employ qualified and well-trained technician(s) to implement the design of each PCDEAH. This implementation includes field works, planning, and establishment of the design document itself.	PCDEAH effectively addressing WASH issues and taking into account environmental aspects	Record of realization should be reported regularly each quarter and while relevant.	RANO WASH Project Coordination Team (RW PCT) Regional director of the ministry in charge of WASH <sup>6</sup> (Dir-WASH)	This section will be filled inside each EMMR update
Act: 1.3.2.3 (AIP FY19 but can also be applied for FY20): Training for communal CAO (tender evaluation committees)	Risk of non-sustainable water supply infrastructures and water resources	Ensure that technical notation criteria, used in bid processes to train the CAO, advantage enterprises that are having confirmed experiences and / or human resources, in order to ensure a good quality of implementation of each requested WASH infrastructure construction activity	Qualified enterprises are chosen by the CAO for any requested construction activity	Record of realization should be reported regularly each quarter and while relevant.	RW PCT Dir-WASH	Same as above
Act: 1.3.2.5 (AIP FY19 but can also be applied for FY20): <sup>7</sup> Field visit for communes benefiting water supply systems construction	Risk of environmental degradation if exploitable borrowing area (sand/ gravel carriers, wood extraction, etc.) are	Minimize river disturbance for sand sourcing, and avoid spawning area. Sand will be taken in small quantity to different points,	No spawning area will be disturbed  No wood will be taken from an unsustainable source	Record of realization should be reported regularly each quarter and while relevant.	RW PCT Dir-WASH	Same as above

<sup>6</sup> The current name of the ministry in charge of WASH is « Ministry of Energy, Water, and Hydrocarbons »

<sup>7</sup> The purpose of the site visit is to inform potential bidding companies about the construction site including the areas where local construction materials can be collected.

Project/Activity/Sub-Activity	Identified Environmental Aspects or Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Parties	Field Monitoring/Issues/Resolution Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution
	not secured or unsustainable.	Ensure that no wood is extracted from an unsustainable source.  Ensure that gravel / rock extraction do not have significant adverse impact on neighboring environment.	No uncontrolled erosion will be caused by rock / gravel extraction			

**SO2. Private sector engagement in WASH service delivery increased and improved.****IR2.1: Improved WASH products, technologies, services and business models****Output 2.1.2: Regional WASH market development plans drafted**

Act 2.1.2.1: Simultaneous market development cycles: (1) workshop in each new region to develop first iteration of WMDPs and (2) evaluation and learning workshops for existing WMDPs in three other regions	A risk of increased groundwater pollution could occur if the promotion of latrines was proposed in the absence of adequate environmental mitigation measures.	Ensure that environmental concerns (distance between the bottom of the latrine pit and the water table) are taken into account in any latrine promotion strategy that may emerge during the implementation of WMA.	Environmental measures are taken into account in any latrine promotion activity within the project.	Record of realization should be reported regularly each quarter and while relevant.	RW PCT Dir-WASH	Same as above
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**IR 2.2: Improved WASH products, technologies, services and business models****Output 2.2.1: Design and construction of sustainable WASH infrastructure improved**

Act 2.2.1.1: Carry out APS+ and APD+ studies	Inappropriate Water Supply System (WSS) Criteria: Location (Distance, proximity to vulnerable / sensitive area, land tenure,); Water security (quality, quantity, sustainability); Technology (Type, Size, Number, Standards); Climate	Ensure that appropriate design of WSS is designed for the appropriate location with regards to population that need to be served (water demand, geographical location)  Ensure that the best water resource (spring, groundwater, surface water) is used, based on accurate data related to their capacity of production in adequation with targeted	APS and APD reports should be communicated to and validated by the community and the MoWASH before any use. Those communications should include the type of potentially mobilizable water resource, their mobilization technic / method (catchment box, dam, borehole, ...).  APS / APD reports taking into account Climate Change	Record of realization should be reported regularly each quarter and while relevant.	RW PCT  RW Studies Contractors –  And particularly Sandandrano and BushProof (which belong to RANO WASH IP Consortium)	Same as above
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Project/Activity/Sub-Activity	Identified Environmental Aspects or Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Parties	Field Monitoring/Issues/Resolution Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution
	change risk (flooding, drought...); ... Inappropriate or Insufficient consideration of Climate change risk (flooding, drought...)	people water demands, for any WSS design. Ensure that both feasibility (APS) and detailed project design (APD) results are always communicated and validated by the beneficiary community and the MoWASH before any construction Identifying, Planning and Applying appropriate actions aiming to the Attenuation of or Adaptation to Climate change impact / risk	Attenuation / Adaptation			
Act 2.2.1.2: Pilot procurement process with PPP model and conduct on-the-job training for CAO (Communal tendering committee) members	Risk of non-sustainable water supply infrastructures	Ensure that technical notation criteria, used in the bid processes, advantage enterprises that are having confirmed experiences, and / or qualified human resources, and having confirmed capacity for cost-sharing, in order to ensure a good quality of implementation, and sustainability of each requested WASH infrastructure construction activity	Minimal requirement for qualification of enterprises is set-up when building the bid short-list	Record of realization should be reported regularly each quarter and while relevant.	RW PCT and consortium members	Same as above
		Train short-listed enterprises about the technical minimum requirement (established by the project) before launching any bid process	Short-listed enterprises are trained on RANO WASH technical requirements before submitting for any bid process	Record of realization should be reported regularly each quarter and while relevant.	RW PCT	Same as above
Act 2.2.1.3: Develop ESF and monitor its implementation in the construction sites	Non-compliance with environmental paper applicable to the RANO WASH	As most of RANO WASH construction activities have no significant adverse impact on environment, a detailed	No construction activity will start before the approval of the related ESF	Record of realization should be reported regularly each quarter and while relevant. A	RW PCT, BushProof, Sandandrano	Same as above

Project/Activity/Sub-Activity	Identified Environmental Aspects or Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Parties	Field Monitoring/Issues/Resolution Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution
	project: 22 CFR 216, HPN-IEE, Malagasy regulation related to environment, project issued documentation (EMMP, WQAP, CRM Plan)	environmental and climate change related concerns analysis will be provided on the Environmental Screening Form (ESF) related to each construction site		final report of Environmental Status will be done at the end of each construction activity.		
Act 2.2.1.4: Contract and Monitor water infrastructures construction and management	Risk of non-sustainable water supply infrastructures. Non-respect of the quality, norms and standards as linked to the environment and the water quality – and management sustainability.	Following the technical standards of each WSS identified and respecting water quality standards and environmental norms	Technical standards and environmental norms are respected during the construction activities and validated by the appropriate experts / engineers (at least an acknowledged by the project, and another provided by the MoWASH)  The quality of the water is verified as safe accordingly to the approved Water Quality Assurance Plan (WQAP) of RANO WASH	Record of realization should be reported regularly each quarter and while relevant. A final report of completion will be done at the end of each construction activity.	RW PCT, BushProof, Sandandrano	Same as above

**SO3. Adoption of healthy behaviors and use of WASH services accelerated****IR3.2 Improved implementation of WASH behavior change at all levels: communities, government and private sector**

## Output 3.2.2: Innovative CLTS and WASH BC implementation

Act 3.2.2.13: CLTS	Lack of environmental issue awareness & consideration Inappropriate and unsecured building risk	Include environmental measures in training programs. These measures will concern the respect of the safety distance between the bottom of the latrine pits and the water table, as well as the horizontal distance between a latrine and a well or other groundwater withdrawal point.	Preventive measures against environmental problems caused by the multiplication of latrines are considered during the follow-up phases	Record of realization should be reported regularly each quarter and while relevant.	RW PCT RW Subgrantees	Same as above
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Project/Activity/Sub-Activity	Identified Environmental Aspects or Impacts	Mitigation Measure(s)	Monitoring Indicator(s)	Monitoring and Reporting Frequency	Responsible Parties	Field Monitoring/Issues/Resolution Field monitoring needs to be adequately addressed i.e. monitoring dates, observations, issues identified and resolution
Triggering and FUM <sup>8</sup> activities at village/fokontany level						
<b>Output 3.2.3: Communication Marketing developed for WASH products and services</b>						
Act 3.2.3.1: Implement marketing campaign on WASH products and services in communes where products and services are available	A risk of increased groundwater pollution could occur if the promotion of latrines was proposed in the absence of adequate environmental mitigation measures.	Ensure that environmental concerns (distance between the bottom of the latrine pit and the water table) are taken into account in any latrine promotion strategy.	Environmental measures are taken into account in any latrine promotion activity within the project.	Record of realization should be reported regularly each quarter and while relevant.	RW PCT RW Subgrantees	Same as above
Act 3.2.3.2: Promote WASH products and services through local medias	Potential spreading of dirt due to the multiplication of waste from WASH products (soap packaging, used sanitary napkin residue, etc.)	Promote the use of recyclable/reusable products (such as washable sanitary napkins) or biodegradable products to minimize environmental impacts	WASH products and services promoted in an environmentally friendly way			

<sup>8</sup> FUM: Follow-up « Mandona » is an approach developed by GSF/FAA to encourage people triggered under the CLTS to move forward in the realization of their latrines through small, important and immediately feasible actions (PAFIL).

**USAID APPROVAL OF EMMP**

**Approval:**

\_\_\_\_\_ Date  
[NAME], Activity Manager/A/COR [**required**]

Clearance:

\_\_\_\_\_ Date  
[NAME], Mission Environmental Officer [**as appropriate**]

Clearance:

\_\_\_\_\_ Date  
[NAME], Regional Environmental Advisor [**as appropriate**]

**Concurrence:**

\_\_\_\_\_ Date  
[NAME], \_\_\_\_\_ Bureau Environmental Officer [**as appropriate**]

**DISTRIBUTION:**



## ANNEX 15. ENVIRONMENTAL MITIGATION AND MONITORING REPORT (EMMR)

### PROJECT/ACTIVITY DATA

Project/Activity Name:	Rural Access to New Opportunities in Water, Sanitation, and Hygiene (RANO WASH)
Geographic Location(s) (Country/Region):	Madagascar
Implementation Start/End Dates:	FY20 - October 1, 2019 – September 30, 2020
Contract/Award Number:	Cooperative Agreement N° AID-687-A-17-00002
Implementing Partner(s):	CARE International in consortium with CRS, WaterAid, Sanddrano and BushProof
Tracking ID:	
Tracking ID/link of Related IEE:	Program/Activity 687-005 USAID/Madagascar Health Sector Portfolio – Use of Selected Health Services and Products Increased and Practices Improved
Tracking ID/link of Other, Related Analyses:	

### ORGANIZATIONAL/ADMINISTRATIVE DATA

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)	USAID Madagascar, Africa Bureau
Lead BEO Bureau:	AFR/SD
Prepared by:	RANO WASH Project Coordination Team
Date Prepared:	January 31, 2020
Submitted by:	Sebastien FESNEAU, Chief of Party
Date Submitted:	January 31, 2020

### ENVIRONMENTAL COMPLIANCE REVIEW DATA

Analysis Type:	EMMR
Additional Analyses/Reporting Required:	

## PURPOSE

Environmental Mitigation and Monitoring Report (EMMRs) are required for USAID-funded projects when the 22CFR216 documentation governing the project impose conditions on at least one project/activity component. EMMRs ensure that the ADS 204 requirements for reporting on environmental compliance are met. EMMRs are used to report on the status of mitigation and monitoring efforts in accordance with IEE requirements over the preceding project implementation period. They are typically provided annually, but the frequency will be stipulated in the IEE or award document.

Generally, EMMRs are developed by the IP (and updated at least annually) in conjunction with the Annual Report. Responsibility for ensuring IPs submit appropriate EMMRs rest with USAID CORs/AORs. These reports are an important tool in adaptive management and are used by Mission, Regional, and Bureau Environmental officers to ensure USAID interventions are implemented in compliance with 22 CFR 216 and mitigation measures are adequate.

## SCOPE

The following EMMR documents the status of each required mitigation measure as stipulated in the associated EMMP. It provides a succinct update on progress regarding the implementation and monitoring of mitigation measures implemented as detailed in the EMMP. It summarizes field monitoring, issues encountered, actions taken to resolve identified issues, outstanding issues, and lessons learned.

This EMMR includes the following:

1. A succinct narrative description of the EMMP implementation and monitoring system, any updates to the system, any staff or beneficiary trainings conducted on environmental compliance, lessons learned, and other environmental compliance reporting details.
2. EMMR table summarizing the status of mitigation measures, any outstanding issues relating to required conditions, and general remarks.
3. Attachments such as photos of mitigation measures and activities, waste disposal logs, water quality data, etc.

## USAID REVIEW OF EMMR

Approval:

\_\_\_\_\_  
[NAME], Activity Manager/A/COR [required]

\_\_\_\_\_  
Date

Clearance:

_____	_____
[NAME], Mission Environmental Officer [as appropriate]	Date
_____	_____

Clearance:

_____	_____
[NAME], Regional Environmental Advisor [as appropriate]	Date
_____	_____

Concurrence:

_____	_____
[NAME], _____ Bureau Environmental Officer [as required]	Date
_____	_____

**DISTRIBUTION:**

## I.0 PROJECT/ACTIVITY SUMMARY

The Rural Access to New Opportunities in Water, Sanitation, and Hygiene (RANO WASH) Project aims to increase equitable and sustainable access to water, sanitation, and hygiene services; maximize the impact on human health and nutrition; and preserve the environment in 250 rural communes in six high-priority regions: Vatovavy Fitovinany, Atsinanana, Alaotra Mangoro, Amoron'i Mania, Haute Matsiatra, and Vakinankaratra.

Following the FY20 updated Environmental Mitigation and Monitoring Plan (EMMP), this Environmental Mitigation and Monitoring Report (EMMR) provides an update on environmental compliance activities classified as « Negative Determination with Conditions » that require environmental mitigation and monitoring measures.

At the beginning of the project, RANO WASH has developed a Water Quality Assurance Plan (WQAP), in close collaboration with BushProof and Sandandrano, the two private sector representatives in the RANO WASH consortium who also have prior experience with WQAPs from the USAID funded RANO HP project. The WQAP has been approved by USAID Agreement Officer Representative (AOR), the Mission Environmental Officer (MEO), and the Regional Environmental Adviser (REA). USAID has also approved all submitted ESF before the construction of each water supply system starts.

For this FY20, in Q1, trainings were conducted for project staff and local actors in the field, in order to disseminate and harmonize the understanding of the expectations and commitments of the project in terms of environmental compliance, including the monitoring of the measures provided for in the ESF for each work, water quality, and climate risk management. These parameters will be closely monitored until the completion of each construction work.

On the other hand, the monitoring of social measures is planned to be spread over a longer period beyond the technical and provisional acceptance of the work. The latter activities involve sensitization and IEC at the community level with a generally unpredictable output, hence the need for a longer period of post-construction monitoring and support. The project will be present on these sites until Q4.

We will continue to monitor and follow-up the water quality assurance based on data updates that we will get periodically from field monitoring.

Apart from this, as part of the implementation of the Community Led Total Sanitation - CLTS approach, between October and December 2020, the project has facilitated 46 village triggers, of which 40 have currently been verified as "Open Defecation Free - ODF". These ODF villages have benefited from the support and influence of local masons and local promoters.

## 2.0 ENVIRONMENTAL COMPLIANCE MONITORING AND REPORTING

In FY18 and 19, RANO WASH worked with the Ministry of Water, Sanitation and Hygiene (MoWASH)<sup>9</sup> to select intervention locations for potential water supply systems. The project conducted technical feasibility and detailed design studies (APs and APDs<sup>10</sup>), ESF development and water quality testing before the construction of water infrastructures. All technical studies were approved by the MoWASH and disseminated to the communes and communities benefiting from the water supply systems.

In addition to the 12 constructions carried out in FY19, 18 new constructions are planned to be carried out this year 2020. The first wave of construction already approved and started at the end of FY19 gathers

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<sup>9</sup> With the 2018 presidential elections in Madagascar, and the establishment of a new government in January 2019, the WASH sector is now managed by the Ministry of Energy, Water and Hydrocarbon (*Ministère de l'Énergie de l'Eau et des Hydrocarbures*, MEEH)

<sup>10</sup> Avant Projet Sommaire (APS or technical feasibility Studies) and Avant Projet Détaillé (APD or detailed design study)

09 works in the 03 initial intervention regions of RANO WASH (Atsinanana, Alaotra Mangoro, Vatovavy Fitovinany). The second wave of construction will include works for all 06 regions of current project intervention (the 03 above + Haute Matsiatra, Amoron'i Mania, Vakinankaratra). But the main expected results will be in the first 03 regions and Vakinankaratra. Works are planned to be started for Haute Matsiatra and Amoron'i Mania but towards Q4 and, therefore, will not be completed this year but will take part of FY21.

Among the first wave of works started in Q1, the construction of 07 out of 09 water systems, started in Q4 of FY19, was carried out. The remaining construction of 02 systems, in Amparafaravola commune of the Alaotra Mangoro region, could not be effectively started on site due to administrative problems with the contractor selected during the procurement process. The construction of these two systems is scheduled to start in the next quarter after the litigation has been settled. The majority of the works are still in progress and will be completed in Q2 with the social and private water connection quotas to be promoted and provided for in the construction contracts.

As in previous years, BushProof and Sandandrano are still monitoring the application of the environmental measures provided for in the ESFs for these works. The corresponding documentation is being developed as the work progresses and will be finalized with the submission of the compliance plans by the contractors.

Further to the points made in the last FY19 EMMR, regarding the 12 systems built since FY18, BushProof has been selected as the new manager of the Andemaka system, and the signing of the management delegation contract is currently under way. All these water systems are therefore currently fully operational.

With regard to water quality and the monitoring of the protocol set up in the WQAP (more details are available in Annex 4: water quality report), some work sites that have already been completed are still subject to close monitoring and support for their respective managers. In general, the water quality problems at several sites have been resolved but still require the intervention of the Institut Pasteur to confirm that the referred action plans have produced the expected changes. However, there are in the lot 03 particular cases: (i) Ampasimbe Onibe for its difficulty of access limiting the options with IPM, (ii) Ilaka Est requiring further investigation of the root causes of the problem as water quality parameters are constantly changing, and (iii) Beforona where management is not yet really effective despite the fact that it has already been delegated to ACOGEMA via a formal contract signed by all stakeholders - indeed, the agreed tariff is not yet applied, and without income, the manager cannot continue water treatment. To this end, for technical problems requiring more in-depth analysis, we plan to collaborate with confirmed expert firms such as Ny Ranontsika and BushProof to propose affordable and sustainable solutions to improve the quality of the water produced by the concerned systems. The formalization of this collaboration with Ny Ranontsika is currently underway and their services will be spread out globally to all those who need support throughout the fiscal year. And for all the support to be brought to the manager we are also in the process of recruiting a specialized service provider.

As work is still in progress for new construction started in Q1, the water quality data are still from the detailed design files. Monitoring should be pursued during the construction phase, and before any operation, of each WSS, and a final verification must be made in collaboration with IPM to certify that safe water is delivered.

With regard to CLTS and behavior change activities, the project will continue to train municipalities, and sensitize communities, in environmental compliance measures, in particular those against persistent groundwater pollution due to the construction of latrines. The next CLTS training, is planned for the next quarter for new subgrantees staffs among recently opened intervention regions (Haute Matsiatra, Amoron'i Mania, and Vakinankaratra).

With regard to climate risk management activities, best practices and lessons learned regarding

environmental compliance measures and climate risk management should be shared in the next sections of this report, as relevant, and will be shared within each RANO WASH periodic report. Particularly, a summary table of the achievements of the RANO WASH project related to the CRM plan is included in the section 4.0. The project will continue to collaborate with DGM and BNGRC.

### 3.0 LESSONS LEARNED

The RANO WASH technical team with Sandandrano and BushProof organized a sharing session in Q1 on the content of APD study reports. During this session, many issues were raised including water quality. On this topic, the insufficiency and non-representativeness of a single sample taken or withdrawable<sup>11</sup> during the study phases, for the design of treatment units, were particularly addressed. Indeed, on the basis of the previous experiences of the FY18 and 19 projects, it can be deduced that a water resource should be studied over a longer period of time in order to have a more accurate approximation of its production capacity and the quality of the water to be exploited. This period may vary according to the local environmental context, but at a minimum it is one year, taking into account seasonal variations. However, in the conduct of the APD studies and subsequent constructions, like the cases of Kianjanomby or Ilaka Est (system financed by RANO WASH in FY18), it was found that water quality might changed during exploitation. Such cases are common for wells and boreholes operated by pumping, for example by increasing the flow rate or pumping time, but are less common for spring operations. In general, it is difficult to anticipate such changes if only one measurement (one sample) is available over time. Therefore, treatment facilities must evolve adaptively if such changes in water quality occur between the design and operation of the water system. As a lesson learned from these experiences, to minimize the costs of adapting water treatment works after construction, it was agreed with BushProof and Sandandrano that in addition to what we were already doing on water quality during APD phases, we would explore the possibilities of having more representative samples for studies in time and space.

With regard to the availability of testing laboratories, closer to the water systems, and at regional level, which is a measure followed since the last EMMR, a workshop is planned to be held with the actors working on water quality in Madagascar in Q3 (according to the approved AIP FY20 of RANO WASH). The main objective will be to identify the main bottlenecks preventing these operators from operating properly recognized, mainly by the Ministry of Public Health, and closer to operators managing water systems.

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<sup>11</sup> for the study of an aquifer, if there are several available wells in the study area, several samples can be taken, but if that is not the case, the design engineer must use the closest nearby surface water as a reference.

## 4.0 EMMR TABLE FOR RANO WASH ACTIVITIES INCLUDING CRM REPORT

Period covered: FY 2020; October 2019, to September 2020.

Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
<b>SO1. Governance and monitoring of water and sanitation strengthened for sustainable and equitable WASH services</b>			
<b>IR1.3 Strengthened sub-national systems</b>			
<b>Output 1.3.2 Commune management capacities strengthened for WASH service delivery</b>			
<p>Act: 1.3.2.1: Coach new communes to develop PCDEAH (Commune WASH plans)</p> <p>Act: 1.3.2.2: Coach communes already supported in FY18-19 to develop PCDEAH (Commune WASH plans)</p>	<p>Employ qualified and well-trained technician(s) to implement the design of each PCDEAH in an inclusive and participatory way. This implementation includes field works, planning, and establishment of the design document itself.</p>	<p>For this first quarter, the team in charge of governance within the project has established a new strategy, in collaboration with the regional directorates of the ministry in charge of water, to be able to produce a model of the process for developing the PCDEAH that is useful to the communes and has the minimum technical information useful for potential donors in their decision-making. At the end of this working session between the project team and the ministry's 06 regional directorates in the 06 RANO WASH intervention regions, the process of implementing the PCDEAH was improved (more details available in Annex 3: Process of setting up the PCDEAH for the RANO WASH intervention regions). In this improved process, the STEAHs per commune are in charge of data collection and prioritization, and a consultant will finalize the drafting of the documents. To this end, the development of PCDEAH at around 20 communes have been started in Q1.</p>	
<p>Act: 1.3.2.3: (AIP FY19 but can also be applied for FY20): Training for communal CAO (tender evaluation committees)</p>	<p>Ensure that technical notation criteria, used in bid processes to train the CAO, advantage enterprises that are having confirmed experiences and / or human</p>	<p>Contracting processes for the construction of the water supply system are not scheduled to begin until the second quarter.</p>	



Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
	resources, in order to ensure a good quality of implementation of each requested WASH infrastructure construction activity		
Act: 1.3.2.5 (AIP FY19 but can also be applied for FY20): Field visit for communes benefiting water supply systems construction	<p>Minimize river disturbance for sand sourcing, and avoid spawning area. Sand will be taken in small quantity to different points,</p> <p>Ensure that no wood is extracted from an unsustainable source.</p> <p>Ensure that gravel / rock extraction do not have significant adverse impact on neighboring environment.</p>	This activity goes along with the procurement process that is planned to start only for Q2.	
<b>SO2. Private sector engagement in WASH service delivery increased and improved.</b>			
<b>IR2.1: Improved WASH products, technologies, services and business models</b>			
<b>Output 2.1.2: Regional WASH market development plans drafted</b>			
Act 2.1.2.1: Simultaneous market development cycles: (1) workshop in each new region to develop first iteration of WMDPs	Ensure that environmental concerns (distance between the bottom of the latrine pit and the water table) are taken into account in any latrine promotion strategy	Working sessions to collect information at the regional level to develop the WMDPs for Vakinankaratra and Amoron'i Mania regions started in Q1 and are still ongoing. The same sessions for the Haute Matsiatra region are scheduled to start in Q2. For the remaining regions, the first 03 regions (Alaotra Mangoro, Atsinanana, Vatovavy Fitovinany) already have their priorities for	

Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
and (2) evaluation and learning workshops for existing WMDPs in three other regions	that may emerge during the implementation of WMA.	<p>the development of their WASH market, but the drafting of the corresponding documentation has yet to be finalized (scheduled for Q2).</p> <p>At the end of the working sessions currently conducted for 05 out of 06 regions of intervention, sanitation through the promotion of latrines / related products and services / has always been one of the most important priorities of the regions. As part of the development of markets for the promotion of these products and services, RANO WASH facilitators have always ensured that environmental measures, especially the one mentioned in this section of the report, as well as the gender aspect, are taken into account and integrated in the promotion strategy.</p>	
<b>IR 2.2: Improved WASH products, technologies, services and business models</b>			
<b>Output 2.2.1: Design and construction of sustainable WASH infrastructure improved</b>			
Act 2.2.1.1: Carry out APS+ and APD+ studies	<p>Ensure that appropriate design of WSS in designed for the appropriate location with regards to population that need to be serve (water demand, geographical location)</p> <p>Ensure that the best water resource (spring, ground-water, surface water) is used, based on accurate data related to their capacity of production in adequation with targeted people water demands, for any WSS</p>	<p>APS+ and APD+ are new strategies of RANO WASH for promoting private sector engagement in the delivery of WASH products and services. The project's initial PPP model is based on the promotion of private management of constructed WSS under a contract of delegated management. The enhancement of this strategy aims at promoting access to safe drinking water for sites relatively remote from the WSS in question, or potential sites for the extension of an existing PPP in the vicinity of a site already managed by a private operator. Overall, water treatment products or low-cost water supply services will be promoted, while at the same time developing the water resources (springs to be improved or unprotected wells) and human resources (skills) that already exist at the local level.</p> <p>For this first quarter of the FY20, the project carried out 07 APS and 10 APD studies, including 02 APD+ as a pilot project of this improved PPP promotion strategy. The sites in question are those</p>	

Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
	<p>design.</p> <p>Ensure that both feasibility (APS) and detailed project design (APD) results are always communicated and validated by the beneficiary community and the MoWASH before any construction.</p> <p>Identifying, Planning and Applying appropriate actions aiming to the Attenuation of or Adaptation to Climate change impact / risk</p>	<p>of Andovoranto and Antongombato, respectively in the communes of Andovoranto and Ranomafana Est in the Atsinanana region. The list of the sites that benefited from the APS and APD studies for this quarter is provided in Annex 5 of this report. In relation to the implementation of the measures provided for in the EMMP, the best service options defined in the APS reports were developed by BushProof and Sandandrano in the corresponding APDs for the design of each of the water systems mentioned. The same is true for exploited water resources that have been subject to very detailed engineering studies to minimize the risks of change during construction. Case of the exploratory drilling carried out at Lokomby in early December 2019 to corroborate the assumptions of the primary geophysical studies. All of these APS and APD reports were returned to the communities and subject to validation by the Dir-WASH technicians concerned in each region. ESFs are currently being designed on the basis of these APD studies to detail the analyses and environmental priorities relating to the possible works following these studies. More detailed environmental measures / conditions (including risk analyses and measures for mitigation or adaptation to climate change impacts) related to the implementation of these works are included in these ESFs. These environmental compliance records are expected to be submitted to USAID for approval in the next quarter (Q2).</p>	
<p>Act 2.2.1.2: Pilot procurement process with PPP model and conduct on-the-job training for CAO</p>	<p>Train short-listed enterprises about the technical minimum requirement (established by the project) before launching any bid process.</p>	<p>Scheduled for the next quarter (Q2)</p>	

Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
(Communal tendering committee) members	Ensure that technical notation criteria, used in the bid processes, advantage enterprises that are having confirmed experiences, and / or qualified human resources, and having confirmed capacity for cost-sharing, in order to ensure a good quality of implementation, and sustainability of each requested WASH infrastructure construction activity		
Act 2.2.1.3: Develop ESF and monitor its implementation in the construction sites	As most of RANO WASH construction activities have no significant adverse impact on environment, a detailed environmental and climate change related concerns analysis will be provided on the Environmental Screening Form (ESF) related to each construction site	ESFs are currently being designed on the basis of available APD studies to detail the analyses and environmental priorities relating to the possible works following these studies. More detailed environmental measures / conditions related to the implementation of the currently planned construction works are included in these ESFs. These environmental compliance records are expected to be submitted to USAID for approval in the next quarter (Q2).	
Act 2.2.1.4: Contract and Monitor water infrastructures construction and management	Following the technical standards of each WSS identified and respecting water quality standards and environmental norms		

Project/Activity/Sub-Activity	Mitigation Measure(s)	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)	Outstanding Issues, proposed resolutions
<b>SO3. Adoption of healthy behaviors and use of WASH services accelerated</b>			
<b>IR3.2 Improved implementation of WASH behavior change at all levels: communities, government and private sector</b>			
Output 3.2.2: Innovative CLTS and WASH BC implementation			
Act 3.2.2.13: CLTS Triggering and FUM activities at village/fokontany level	<p>Include environmental measures in training programs. These measures will concern the respect of the safety distance between the bottom of the latrine pits and the water table, as well as the horizontal distance between a latrine and a well or other groundwater withdrawal point.</p> <p>Train local masons aiming to promote improved and secured latrine building after the village has been verified as ODF.</p>	<p>As for the last update of the EMMR (in Q4 of FY19), RANO WASH has continued to implement CLTS on several FY19 intervention communes in Q1. And, the communities, in these areas benefiting from CLTS, have constructed latrines in order to break the faeco-oral transmission chain. During the “Follow-Up Mandona” part, those communities have been sensitized to mind about environmental issues when building or improving their latrines (examples of environmental issues dealt with: distance between wells and latrines, not defecating in the river, etc.)</p> <p>WASH friendly health centers training has not been started yet, but the training packages remain the same that includes environmental measures, such as the distance of latrines from rivers and wells (12 to 50 meters), respect of the groundwater table (at least a pit depth of approx. 2,5 meters). And, we will continue to train Health agents and community health volunteers on our new intervention sites and on these topics, starting from Q2.</p> <p>Training for new local masons are scheduled for Q2 and Q3.</p>	
<b>Output 3.2.3: Communication Marketing developed for WASH products and services</b>			
Act 3.2.3.1: Implement marketing campaign on WASH products and services in communes where products and services are available	Ensure that environmental concerns (distance between the bottom of the latrine pit and the water table) are taken into account in any latrine promotion strategy.	<p>For the first mitigation, the achievements and issues are already reported above.</p> <p>As for FY19, in the firsts intervention regions, the local promoters have still been working closely with producers of washable sanitary pads, local masons, and other local WASH service and</p>	

<b>Project/Activity/Sub-Activity</b>	<b>Mitigation Measure(s)</b>	<b>Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)</b>	<b>Outstanding Issues, proposed resolutions</b>
Act 3.2.3.2: Promote WASH products and services through local medias	Promote the use of recyclable/reusable products (such as washable sanitary napkins) or biodegradable products to minimize environmental impacts	product providers to promote ranges of recyclable hygiene products, spot water treatment (Sur'eau), washable latrine slabs, and so on (for Q1). However, for the recently opened intervention regions (Haute Matsiatra and Amoron'I Mania), that latest activity is scheduled to be started from Q2 and Q3.	

ADDITIONAL COMMENTS

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### Climate Risk Management Updates



Project/Activity/Sub-Activity	Climate change risk addressing / Impact Mitigation	Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)
Activity 1: Study and infrastructure preparation		
<p>Technical feasibility study (APS) / Detailed design study (APD)</p>	<p>Well scheduling the field study planning, Well scoping and specifying the needed data and computation model, Cooperation with DGM and BNGRC.</p>	<p>As alike in FY18 and 19, the field studies were started by BushProof &amp; Sandandrano during this first quarter Q1 in order to take into account the minimum value of production capacity of the water resources. However, some studies might also be started from Q2 and Q3, where the flowrate measurement should give the highest possible values, but we will make sure that accurate data related to floods and low water levels are taken into account while designing the corresponding WSS.</p> <p>A pool of technicians from RANO WASH and the MoWASH was mobilized, and will still be mobilized, to verify the quality of each design and ensure that accurate data were used while modelling each water supply system.</p>
Activity 2: WASH service implementation		
<p>Infrastructure building</p>	<p>Well scheduling the field work planning and the infrastructure building, Use of adapted and suitable technical modelling, Design a ground protection system and anti-erosion structures around the infrastructure, Cooperation with DGM and BNGRC.</p>	<p>The first wave of FY20 WSS constructions, started on Q4 FY19, have been carried out on Q1. Except for two sites, where the construction works have already been completed, most of these constructions are currently scheduled to be finalized on January 2020. 07 out of 09 constructions for this FY20 have been started in Q4 FY19 and early Q1, under better conditions, and the remaining 02 for this first wave will be started on Q2. However, we will make sure to closely follow the weather forecast to avoid any danger related to climatic conditions during the implementation of those WSS.</p> <p>The second wave of FY20 construction is currently planned to be started on Q3 in dry season.</p> <p>The project will also continue to cooperate closely with the BNGRC via the WASH Cluster in crisis management and especially while a disaster touches its intervention areas.</p>
Activity 3: Gravity Water Infrastructure specific concern		



<b>Project/Activity/Sub-Activity</b>	<b>Climate change risk addressing / Impact Mitigation</b>	<b>Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)</b>
<p>Catchment: Dam, Surface water or Piped source</p>	<p>Groundwater recharge by IWRM approach, Well selecting the site location, Secured and well dimensioned spillway and decanter (sand trap), Cooperation with DGM and BNGRC.</p>	<p>IWRM activities have been promoted at the Commune level, through project management and environmental compliance training, to put in place solid watershed protection measures for the sites of the first 07 constructions started in Q1. Community mobilizations related to the “Go Green” tools will also be conducted accordingly in Q2 and Q3 on those same sites. Otherwise, each catchment facility has been designed and implanted taking into account all environmental and climatic issues (flooded area, landslides, ...)</p>
<p>Water treatment and filtering (and maybe the storage)</p>	<p>Water Quality control in WQAP Readjustment of water treatment and cleaning frequency</p>	<p>Water quality checking prior any human consumption will be conducted on Q2 for the 07 current on-going WSS construction. Relatively to the remaining water testing for FY18 and 19 WSS, the implemented measures scheduled in the Water Quality Report have been followed but the final verification with Institut Pasteur is planned for Q2.</p>
<p>Surface capture</p>		
<p>Capture: Dam, Well and Drain, Pumping</p>	<p>Well dimensioning infrastructure using Climate Change monitored model Groundwater recharge by IWRM approach Using secured and well dimensioned spillway and grit chamber Programming and organizing cleaning out Cooperation with DGM and BNGRC.</p>	<p>According to the approved ESFs and the technical feasibility studies, infrastructures constructed under RANO WASH project should be resilient to climate change effects and impacts, and water service providers should be trained on mitigation measures to cope with climate change risk. This will be verified during the validation of technical and provisional approvals for completed construction work (planned for Q2 for the 07 on-going construction)</p>
<p>Groundwater well or Drilling and Pumping system</p>		
<p>Capture: Well and Borehole</p>	<p>Well dimensioning infrastructure using Climate Change monitored model Groundwater recharge by IWRM approach Well selecting infrastructure location and characteristics using climate change monitored model Well selecting infrastructure location Researching other option for very low elevation village</p>	<p>The communes have already benefited from training on IWRM, but that still needs to be closely monitored. For those new on going constructions, these activities will be carried out for Q2 FY20.</p>
<p>Community Led Total Sanitation (CLTS)</p>		

<b>Project/Activity/Sub-Activity</b>	<b>Climate change risk addressing / Impact Mitigation</b>	<b>Summary Field Monitoring/Issues/Resolution (i.e. monitoring dates, observations, issues identified and resolved)</b>
Trigger to Open Defecation Free (ODF)	Well communicating and inciting	During triggering session and Follow-Up Mandona (FUM) activities, communities were reinforced to understand more the faeco-oral transmission chain especially during rainy season. (examples: location of latrines, protection of well, promotion of an ecosan latrine model to protect groundwater, etc.)

## 5.0 ATTACHMENTS

- Water Quality Assurance Plan
- Annex I4: Updated FY20 EMMP: Environmental Mitigation and Monitoring Plan
- Process of setting up of the PCDEAH for the RANO WASH intervention regions
- WQAP reporting sheet  
  

- Annex II: List of sites benefiting from APS and APD for Q1 FY20

## USAID REVIEW OF EMMR

- |                |   |           |
|----------------|---|-----------|
| • Approval:    | • _____   | • • _____ |
| •              | • [NAME], Activity Manager/A/COR [required]                   | • • Date  |
| •              | •   | • •       |
| •              | •   | • •       |
| • Clearance:   | • _____   | • • _____ |
| •              | • [NAME], Mission Environmental Officer [as appropriate]      | • • Date  |
| •              | •   | • •       |
| •              | •   | • •       |
| • Clearance:   | • _____   | • • _____ |
| •              | • [NAME], Regional Environmental Advisor [as appropriate]     | • • Date  |
| •              | •   | • •       |
| •              | •   | • •       |
| • Concurrence: | • _____   | • • _____ |
| •              | • [NAME], _____ Bureau Environmental Officer [as appropriate] | • • Date  |

- DISTRIBUTION:

**EMMR ANNEX I WATER QUALITY ASSURANCE PLAN**

## **RANO WASH**

Rural Access to New Opportunities  
in Water, Sanitation, And Hygiene, Madagascar

# Water Quality Assurance Plan (WQAP)

Submitted by  
the RANO WASH Project Coordination Team (PCT)  
on behalf of the RANO WASH Consortium members composed by  
CARE, CRS, WaterAid, Sandandrano and BushProof  
in December 2017

and resubmitted in March 2018



## DISCLAIMER

This document is made possible by the generous support of the American people through the United States Agency for International Development (USAID).

The contents are the responsibility of the RANO WASH PCT and the consortium of CARE, CRS, WaterAid, Sandandrano and BushProof led by CARE International and do not necessarily reflect the views of USAID or the United States government

**A. PROJECT/ACTIVITY DATA**



Project/ Activity Name:	Rural Access to New Opportunities in Water, Sanitation, and Hygiene (RANO WASH-I) program
Implementation Start/End:	June, 15th 2017 to June, 15th 2022
Solicitation/Contract/Award Number:	Cooperative Agreement N° AID-687-A-17-00002
Implementing Partner(s):	CARE International in consortium with CRS, WaterAid, Sanddrano and BushProof
Geographic Location(s):	Region of Atsinanana, Vatovavy Fitovinany, Alaotra Mangoro, Vakinankaratra, Amoron'i Mania, Matsiatra Ambony- Madagascar
Tracking ID/link:	
Tracking ID/link of Related RCE/IEE (if any):	Program/Activity 687-005 USAID/Madagascar Health Sector Portfolio – Use of Selected Health Services and Products Increased and Practices Improved
Tracking ID/link of Other, Related Analyses:	

**B. ORGANIZATIONAL/ADMINISTRATIVE DATA**

Implementing Operating Unit(s): (e.g. Mission or Bureau or Office)		CARE International, in consortium with CRS, WaterAid, BushProof and Sanddrano	
Funding Operating Unit(s): (e.g. Mission or Bureau or Office)		USAID Technical Office, Health, Population and Nutrition (HPN)	
Funding Account(s):			
Funding Amount:		\$ 30,000,000	
Amendment Funding Amount:	\$ 30,000,000	Amendment Funding Date:	September 29 <sup>th</sup> , 2017
Other Affected Unit(s):			
Lead BEO Bureau:		CARE International in Madagascar	
Prepared by:		RANOWASH Project Coordination Team	
Date Prepared:		December, 30 <sup>th</sup> 2017	



Certification:

I, the undersigned, certify that:

1. The information on this form and accompanying WQAP is correct and complete.
2. Implementation of these activities will not go forward until specific approval is received from the AOR.
3. All mitigation and monitoring measures specified in the WQAP will be implemented in their entirety, and that staff charged with this implementation will have the authority, capacity and knowledge for successful implementation.



(Signature)

(Date) 2/9/2018

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PROJECT/ACTIVITY NAME: RANOWASH—Rural Access to New Opportunities in Water Sanitation and Hygiene

Notes:

1. For clearance to be granted, the activity **MUST** be within the scope of the activities for which use of the VQAP is authorized in the governing IEE. Review IEE before signature. If activities are outside this scope, deny clearance and provide explanation in comments section. The Partner, C/AOR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

2. Clearing a VQAP containing one or more findings that significant adverse impacts are possible indicates agreement with the analysis and findings. It does **NOT** authorize activities for which “significant adverse impacts are possible” to go forward. It **DOES** authorize other activities to go forward. The Partner, C/AOR, MEO and REA must then confer regarding next steps: activity re-design, an IEE or EA.

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## LIST OF ACRONYMS

APS	Avant-Projet Sommaire (Technical Scoping)
APD	Avant-projet Détaillé (Feasibility Study)
AOR	Agreement Officer Representative
BPOR	Budget Programme par Objectif et par Région
CARE	Cooperative for Assistance and Relief Everywhere Inc.
CFR	Code of Federal Regulation
CLTS	Community Led Total Sanitation
COP	Chief Of Party
CSO	Civil Society Organization
CRS	Catholic Relief Service
DCOP	Deputy Chief of Party
Dir WASH	Regional Direction of Ministry in charge of WASH
DMEAL	Director of Monitoring, Evaluation, Accountability and Learning
EC	Electrical Conductivity
EMMP	Environmental Mitigation and Monitoring Plan
ENSOMD	Enquête Nationale sur le Suivi des Objectifs du Millénaire pour le Développement
ERF	Environmental Review Form
ERR	Environmental Review Report
HPN	Health Population Nutrition
IEE	Initial Environmental Examination
IP	Implementing Partner
MEO	Mission Environmental Officer
MLSB	Macrolide-Lincosamide-Streptogramin B
MoPH	Ministry of public Health
MoWASH	Ministry in charge of WASH
NGO	Non-Government Organization
NTU	Nephelometric Turbidity Unit
ODF	Open Defecation Free
ONN	Office National de Nutrition
PCT	Project Coordination Team
RANO WASH	Rural Access to New Opportunities in Water, Sanitation, and Hygiene
SARL	Société à Responsabilité Limitée
TDS	Total Dissolves Solid
TTC	Total Thermotolerant Coliforms
USAID	United States Agency for International Development
USG	United States Government
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WQAP	Water Quality Assurance Plan
WSP	WASH Service Provider

## I. INTRODUCTION

CARE in consortium with Catholic Relief Services (CRS), WaterAid and in partnership with private sector represented by Sandandrano SARL and BushProof SARL are implementing the RANO WASH or Rural Access to New Opportunity in Water, Sanitation and Hygiene through a national and regional Project Coordination Teams.

The project cooperates with one national NGOs as implementing partners in each intervention region. The project is funded by the Government of United States of America (USG) through the United States Agency for International Development (USAID). RANO WASH's goal is to improve an equitable and sustainable access to rural professional WASH services maximizing the WASH impacts on population Health and Nutrition and on Environment conservation. RANO WASH targets to cover 250 communes in the six regions of Atsinanana, Alaotra Mangoro, Vatovavy Fitovinany, Vakinankaratra, Amoron'i Mania and Matsiatra Ambony. The prioritization of these regions are partly linked with their WASH and Nutrition status like illustrated in the following table of data from ONN (Office National de la Nutrition) and MoWEH database called BPOR (Budget Programme par Objectif Régional).

Region	Safe water drinking rate	Functional water points	Use of latrines	Access to improved latrines	Self-declared ODF villages	Chronic malnutrition rate
Alaotra Mangoro	9,00%	55,20%	26,44%	2,76%	9,08%	56,50%
Atsinanana	13,01%	48,90%	28,87%	6,24%	5,05%	44,60%
Vatovavy Fitovinany	10,81%	43,70%	3,25%	0,39%	4,34%	57,10%
Vakinankaratra	21,80%	69,70%	57,27%	7,56%	17,84%	65,20%
Amoron'i Mania	18,30%	87,40%	47,69%	0,00%	17,95%	64,00%
Matsiatra Ambony	20,53%	73,10%	36,52%	3,66%	13,84%	65,20%
Source	BPOR	BPOR	BPOR	BPOR	BPOR	ENSOMD 2012-13

Groundwater and surface water are the main sources of water in the targeted regions. Abstraction is generally done from rivers, traditional wells or spring catchments. If regions of the east coast (Atsinanana, Vatovavy-Fitovinany) have a humid climate and do not show any problem in terms of quantity of exploitable water, areas further west (Alaotra-Mangoro, Vakinankaratra, Amoron'i Mania, Matsiatra Ambony) have less rainfall and then less year-round water availability. The known water qualities are generally good in these areas, the water being generally young and never have a long transit. On the other hand, some characteristics of the water of main aquifers can have a direct or indirect impact on health.

Information of general hydrogeological context of Madagascar are provided in the two documents presented in annex:

- Upton, K., Ó Dochartaigh, B.É. and Monteleone, M. 2017. Africa Groundwater Atlas: Hydrogeology of Madagascar. British Geological Survey. Accessed [January 2018]. [http://earthwise.bgs.ac.uk/index.php/Hydrogeology\\_of\\_Madagascar](http://earthwise.bgs.ac.uk/index.php/Hydrogeology_of_Madagascar)
- BRITISH GEOLOGICAL SURVEY (BGS). 2002. Groundwater Quality: Madagascar. British Geological Survey, WaterAid, NERC. 5 pp.

Apart from small-scale water use (surface water, traditional wells), many villages have water distribution systems. These are fed either by pumping or by spring catchment and gravity feed. Unfortunately, a large part of these systems are today partially functional or non-functional at all.

RANO WASH seeks to provide drinking water for 300 000 habitants through 140 construction or rehabilitation of gravity or pumping systems from surface or ground water. For sanitation and hygiene, RANO WASH plans, in addition to behavior change activities, to provide improved sanitation infrastructures for 350 000 people and to reach 2 500 Open Defecation Free villages.

RANO WASH is a USAID program that works with HPN Department and is integrated into the WASH Sector led by the Ministry in charge of WASH (MoWASH) and into the Health and Nutrition sector through its collaboration with the Ministry of Public Health (MoPH).

To achieve all of its expected results, RANO WASH will develop a systematic partnership with national and regional government, water and sanitation institutions, communities, private sector actors, civil society organizations (CSO), and beneficiaries in order to implement a strategic set of mutually supporting activities that contribute to three (3) components:

Strategic objective 1: Strengthening governance and monitoring of water and sanitation for influencing decision for sustainable and equitable water services

Strategic objective 2: Increasing engagement of the private sector in delivering professional and sustainable WASH services

Strategic objective 3: Accelerating adoption of health behaviors and use of WASH services

The innovative approach introduction concerns the use of new technology of WASH service delivery and the behavior change. Research and training centers will bring support to the project on different themes linked to water supply sustainability, behavior change, governance through new curricula of simplified training for the technical office in charge of WASH at communal level.

Within the Strategic Objective 2, as part of its WASH improvement activities, RANO WASH will set up several types of drinking water points and water services and facilities in its intervening zones and their link with sanitation and hygiene infrastructure, these includes: boreholes, shallow improved wells, Gravity Flow Water Supply Systems, public multiple use block facility, including: toilets, showers, washing basins, hand washing and water points.

The following table shows the projected implementation of WASH Infrastructures in all the targeted regions during the project.



System's size <sup>12</sup>	Total per system	Year 1	Year 2	Year 3	Year 4
System 1	30	2	10	10	8
System 2	60	6	20	20	14
System 3	50	4	18	18	10
Total	140	12	48	48	32

Since the project seeks to exploit groundwater for the supply of drinking water, it is essential to set clear rules from the beginning of the project regarding the observation of the waters to be exploited.

The purpose of this WQAP is to set the rules that will be applied by all parties implicated in the project during the various stages of implementation and operation of the water supply systems.

1. Observations of different hydrochemical features, describing the quality and the identity of the water available (source, wells, etc.), will be made during the first visits to the selected sites.
2. Then, extensive and varied analysis will be carried out during the design study of the chosen systems.
3. Finally, a monitoring strategy will be put in place, which will make it possible to follow the selected parameters and to quickly take corrective measures of this quality in the event of a change, in order to ensure the distribution of a quality water.

This WQAP becomes a key document for the implementation of the RANO WASH project and will be shared as a mandated policy for each project partners who intend, or is mandated, to carry construction work. On the other hand, BushProof and Sandandrano, private sectors' partners of this project, will also be assigned the monitoring of the completion of all requirements agreed in this documents in the field.

The RANO WASH PCT has already completed and submitted to USAID fundamental documents and tools. All of them have received the USAID approval. One of them, the EMMP, specifies the importance of Water Quality and quantity impacts on the relevance and the efficiency of Water,

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<sup>12</sup> Here a "system" refers to a water supply system (globally including many water points that belong to one pipes' network served by a catchment or a system of catchments), or a system of water points (catchment, treatment, and distribution belong to a unique facility), as per the current Malagasy regulations, 193-2003 decree of application of the water code.

Otherwise, a "System 1" refers to a level one "water supply system" (that might be a Gravity Flow Water Supply System - GFWSS, or a Pumping based Water Supply System - PWSS) that can serve up to 4,000 beneficiaries.

A "system 2" refers to a level two "water supply system" (GFWSS or PWSS) that can serve between 2,000 to 4,000 beneficiaries.

A "system 3" refers to a level three "water supply system" (GFWSS or PWSS) that can serve between 600 to 2,000 beneficiaries; Or a group of "system of water points" which is potentially manageable by a unique water service provider and can serve between 600 to 2,000 beneficiaries.

Hygiene and Sanitation infrastructures and their equitable and sustainable access and use for the rural population. Therefore, the current document treats the RANO WASH Water Quality Assurance Plan (WQAP).

## II. ASSESSMENT OF APPLICABLE WATER QUALITY STANDARDS AND CRITERIA

### A. RESEARCH OF REGULATORY REQUIREMENTS

The drinking water quality parameters presented in following tables are the basis for any hydrochemical observation. The RANO WASH project will focus on few parameters that:

- allows to define the identity of water;
- have a direct influence on health of users.

Note that samples of water will be collected and analyzed before allowing any consumer's use and on a determined monitoring rhythm that will be defined during the survey according to the site and the production of the water source, after work is accomplished, to insure continuous distribution of clean water.

1) BASIC PARAMETERS (ID OF WATER)
WATER QUALITY PARAMETER
Electro-conductivity
Total Dissolved Solids (TDS)
pH
Temperature
Turbidity
2) MAJOR IONS
WATER QUALITY PARAMETER
Calcium ( $\text{Ca}^{2+}$ )
Magnesium ( $\text{Mg}^{2+}$ )
Sodium ( $\text{Na}^+$ )
Potassium ( $\text{K}^+$ )
Carbonates ( $\text{CO}_3^{2-}$ )
Bicarbonate ( $\text{HCO}_3^-$ )
Chloride ( $\text{Cl}^-$ )
Sulphate ( $\text{SO}_4^{2-}$ )

<b>3) HEALTH RELATED PARAMETERS</b>
<b>WATER QUALITY PARAMETER</b>
Nitrate (NO <sub>3</sub> <sup>-</sup> ) and Nitrite (NO <sub>2</sub> <sup>-</sup> )
Total Iron (Fe <sup>2+</sup> , Fe <sup>3+</sup> )
Manganese (Mn <sup>2+</sup> )
Fluoride (F <sup>-</sup> )
Arsenic (As)
<b>4) BACTERIOLOGICAL QUALITY</b>
<b>WATER QUALITY PARAMETER</b>
Fecal coliform

## B. HOST COUNTRY REGULATIONS

The host country's regulation requirement is described in the following legal texts:

- Law 98 – 029 of January 20<sup>th</sup>, 1999 called Water Code: The Article 38 of the Code states that "Any water delivered for human consumption must be potable. Drinking water is defined as water intended for human consumption, which, by treatment or naturally, meets organoleptic, physico-chemical, bacteriological, and biological standards set by decree."
- Decree 2003-941 amended by Decree 2004-635 of 15 June 2004 on water monitoring, control of water intended for human consumption and priorities for access to water resources: the Annex 2 "Norme Eau" provides details on the parameters and applicable policies. It considers the following limit values for the stated parameters.

Organoleptic and physical parameters

WATER QUALITY PARAMETER	MADAGASCAR ACCEPTABLE LIMIT
Smell	No
Color	No
Unpleasant Taste	No
Temperature	Do not exceed ≤ 25°C
Turbidity	≤ 5 NTU
Conductivity	≤ 3000 μS/cm at 20°C
pH	From 6.5 to 9

## Chemical parameters – normal elements

WATER QUALITY PARAMETER	MADAGASCAR ACCEPTABLE LIMIT
Calcium	≤ 200 mg/l
Magnesium	≤ 50
Chloride	≤ 250 mg/l
Sulfate	≤ 250 mg/l

## Chemical parameters – Abnormal elements

WATER QUALITY PARAMETER	MADAGASCAR ACCEPTABLE LIMIT
Chlorine (Cl <sub>2</sub> )	≤ 2 mg/l
Nitrite (NO <sub>2</sub> )	≤ 0.1 mg/l
Manganese (Mn <sup>2+</sup> )	≤ 0.05 mg/l
Iron (Fe)	≤ 0.5 mg/l
Nitrates (NO <sub>3</sub> <sup>-</sup> )	≤ 50 mg/l
Fluoride (F)	≤ 1.5 mg/l

## Chemical parameters – Toxic elements

WATER QUALITY PARAMETER	MADAGASCAR ACCEPTABLE LIMIT
Arsenic	< 0.05 mg/l

## Microbiological parameters

WATER QUALITY PARAMETER	MADAGASCAR ACCEPTABLE LIMIT
Thermo-tolerant Coliforms (Escherichia coli)	0/100ml

## C. WHO GUIDANCE

The WHO guidance values and limits are selected from the WHO Guidelines for Drinking-Water Quality (WHO, 2011). This document provides the overall framework for ensuring safe drinking water management with a focus on health-based targets and water safety plans. WHO provides specific guideline values for many essential water quality parameters (e.g., arsenic), and many other important parameters (e.g., fecal coliform).

WATER QUALITY PARAMETER	STANDARD WHO
Potassium (K <sup>+</sup> )	12.00 mg/l
Total Iron (Fe <sup>2+</sup> , Fe <sup>3+</sup> )	0.30 mg/l
Manganese (Mn <sup>2+</sup> )	0.05 mg/l
Chloride (Cl <sup>-</sup> )	250.00 mg/l
Sulphate (SO <sub>4</sub> <sup>2-</sup> )	250.00 mg/l

Nitrate (NO <sub>3</sub> <sup>-</sup> ) and Nitrite (NO <sub>2</sub> <sup>-</sup> )	50.00 & 0.20 mg/l
Fluoride (F <sup>-</sup> )	1.50 mg/l
Arsenic (As)	0.01 mg/l
Electro-conductivity	2000 µS/cm
Total Dissolves Solids (TDS)	1.5 ppt.
pH	6.5 < pH < 9
Temperature	15°C
Turbidity	< 5 NTU
Residual Chlorine	0.50 mg/l
Fecal coliform	0 E.coli / 100 ml

#### D. INVENTORY OF SELECTED WATER QUALITY STANDARDS AND CRITERIA

The assessment begins by testing general water chemistry (major cations: Ca<sup>2+</sup>, Mg<sup>2+</sup>, Na<sup>+</sup>, K<sup>+</sup> and anions: NO<sub>2</sub><sup>-</sup>, NO<sub>3</sub><sup>-</sup>, CO<sub>3</sub><sup>2-</sup>, HCO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, SO<sub>4</sub><sup>2-</sup>), and testing few parameters showing eventual contamination. The conductivity, Total Dissolved Solids (TDS), pH, Temperature, turbidity, Arsenic, Nitrate, Nitrite, Fluoride and Iron will be analyzed. Depending the case, assessment for some heavy metals might be made.

For assessment of the bacteriological quality of the water, an indicator bacteria methodology will be followed. The chosen indicator is the Total Thermotolerant Coliforms (TTC). They will be grow using MLSB and an incubator.

The main idea of this strategy is to get information on the history of the water and the local risk of exploiting this water. With these parameters, it is possible to estimate the origin of water. The purpose is to get adequate and detailed hydrogeological data of the region. Besides that, the earliest these parameters and contaminants are assessed, the easiest it will be to manage them and ensure effective control measures. During further survey (conception survey), the same parameters are recorded systematically in wells or springs to understand if the hydrochemistry, and in consequence the water quality, change with weather conditions. This phase is important to know if water ID has changed and, if yes, to assess the reason. Over the system's exploitation a systematical monitoring of sampling is made and send to our laboratories to maintain the best quality water and react in case of water quality deterioration.

Water testing is conducted by RANO WASH technical partners during the Technical reconnaissance (APS) and the Feasibility study (APD) and all study phase before beginning the construction and/or rehabilitation of infrastructure. Samples are brought by the technical partners and construction firms to an accredited lab for testing, depending the parameter or contaminant tests. If the water flow and characteristics are well understood, and parameters are meeting

WHO standards or at least Madagascar standards, the study is approved for execution. Approval from USAID Mission Environmental Officer will condition the startup work.

For the monitoring of water quality, a complete analysis of the water, including bacteriological analysis, will be done systematically each semester, using local laboratories facilities and service. Some parameters, influencing directly human health will be followed as described in Table II-A.

TABLE II-A: APPLICABLE HUMAN HEALTH-RELATED DRINKING WATER QUALITY PARAMETERS OF CONCERN

RANOWASH ADOPTED STANDARDS			HOST COUNTRY REGULATIONS		WHO GUIDANCE	
Parameter	Limit	Frequency	Limit	Frequency	Limit	Frequency
Arsenic	0.01 mg/l	Every 6 months	0.05 mg/l	N.S.	0.01 mg/l	N.S.
Fecal Coliform*	0/100 ml	Every 6 months	0/100 ml	N.S.	0/100ml	N.S.
Fluoride	1.5 mg/l	Every 6 months	1.5 mg/l	N.S.	1.5 mg/l	N.S.
Nitrate (as NO <sub>3</sub> )	50 mg/l	Every 6 months	50 mg/l	N.S.	50 mg/l	N.S.
Nitrite (as NO <sub>2</sub> )	0.1 mg/l	Every 6 months	0.1 mg/l	N.S.	0.2 mg/l	N.S.
Iron	0.3 mg/l	Every 6 months	0.5 mg/l	N.S.	0.3 mg/l	N.S.

Notes: \*Analysis for Thermo-Tolerant Coliforms (TTC) bacteria, or Escherichia coli.

N.S.: Not specified in the guidance

Changes in basic parameters (describing the identity of the water) are indicating chemical changes of the water and possible contamination. A strict and regular follow-up will be set-up using digital multi-meter.

TABLE II-B: APPLICABLE OPERATIONAL-BASED DRINKING WATER QUALITY PARAMETERS OF CONCERN

RANOWASH GUIDANCE			HOST COUNTRY REGULATIONS		WHO GUIDANCE	
Parameter	Limit	Frequency	Limit	Frequency	Limit	Frequency
Electrical Conductivity (EC)	1600 $\mu$ S/cm	Daily	3000 $\mu$ S/cm	N.S.	2000 $\mu$ S/cm	N.S.
TDS	500 mg/l	Daily	N. A.	N.S.	1000 mg/l	N.S.
pH	6.5 - 8.5 S.U.	Daily	6.5 - 9 S.U.	N.S.	6.5 - 9 S.U.	N.S.
Turbidity	5 NTU	Daily	5 NTU	N.S.	< 5 NTU	N.S.
Temperature	15°C	Daily	25 °C	N.S.	15 °C	N.S.

N.A.: Not Applicable

N.S.: Not specified in the guidance

The RANO WASH Project wants to monitor the selected parameters according to the following planning.

	PARAMETERS	PHASE OF DESIGN OF THE WATER SUPPLY SYSTEM	PHASE OF THE END OF THE CONSTRUCTION	PHASE OF OPERATION
Water Identity (ID) related parameters	Electrical Conductivity (EC)	Once during APS, and monitoring during APD	Systematic control	Daily
	TDS			
	pH			
	Turbidity			
	Temperature			
Water facies related parameters	Calcium - Ca <sup>++</sup>	Once during APS, and once during APD	--	To check in case of major changes related to the ID of the water
	Sodium - Na <sup>+</sup>			
	Magnesium - Mg <sup>+</sup>			
	Potassium - K <sup>+</sup>			
	Carbonate - CO <sub>3</sub> <sup>-</sup>			
	Bicarbonate - HCCO <sub>3</sub> <sup>2-</sup>			
	Chlorine - Cl <sup>-</sup>			
	Sulfate - SO <sub>4</sub> <sup>2-</sup>			
Health related parameters	Total Iron Fe <sup>2+</sup> & Fe <sup>3+</sup>		Systematic control	Every 06 months
	Fluoride - F <sup>-</sup>			
	Nitrite and Nitrate			
	Arsenic			
	TT Coliforms			

### E. RATIONALE FOR SELECTION OF SITE SPECIFIC WATER QUALITY PARAMETERS

Madagascar Geology and climate and its insularly status are the origin of its water resources and their quality diversity. The surface waters in the highland upstream regions are generally clean and of good quality.

However, the turbidity becomes worst and worst according to be downstream in sedimentary areas until being at the coast. There are various qualities of the groundwater according to the soil and the geological characteristics. They are commonly ferruginous in the highland and mineralized or salted in the littoral; but can be well treated to be drinkable in general. Conductivity is linked to salinity, but may also show other characteristics of the water. It is also linked to mineralization because it is proportional for low rate. The pH of some groundwater in the area can be more acidic than ideal, but is the only reliable source. The Temperature has an effect on the stability of some dissolved features and on the development of microorganisms.



Turbidity is important if water must be chlorinated, in this case the limitation is located at 1 NTU. Total Thermo-Tolerant coliforms are important for some water sources because it is judged more effective to allow limited contamination than to request protection measures or treatment. For water wells, the preference is given to well that produce higher volume water with significantly lower contamination than digging a new well that may be low volume and with uncertain contamination level. According to the recent revision of WHO, the concentration of Arsenic changed to be 50 to 10 µg/l, due to this, it is difficult to analyze it. Alkalinity, measuring Iron and pH, could be a useful indicator. Nitrate may cause a health risk in the body and can be very dangerous to infant. The highest risks are in an environment where latrines are installed less than 30m above water table, and where intensive use of chemical fertilizers for agriculture is occurring nearby. Nitrate is very dangerous for young children. Fluoride is highest in occurrence of volcanic area. Iron is high in basement area and east coast alluvial deposit, but it is not problematic for health, at low rate. At higher rate it could influence aesthetic of water, pushing user to use alternative contaminated sources.

A systematic assessment of the facies (ID) of the water, and then of different targeted health influenced parameters and water contaminants, increases confidence in the safety of drinking water and allows to manage the risk. This approach involves a holistic risk assessment across the entire drinking water supply system from water source to the consumer.

In addition, all of the regions targeted by the RANO WASH project are part of Madagascar eastern coast and contiguous high land, which are frequently affected by tropical cyclones and usually sites of forest cutting followed by fire cleaning and consequently soil erosion. As part of insular country, they are as well sensitive to climate change.

Water is essential to sustain life, and a satisfactory (adequate, safe and accessible) supply must be available to all. Improving access to safe drinking-water can result in tangible benefits to health. Every effort should be made to achieve a drinking-water quality as safe as practicable. Safe drinking-water is suitable for all usual domestic purposes, including personal hygiene. It is essential in the development and implementation of standards to refer to the country water, health and local government related laws.

The purpose of this WQAP, in accordance with 22CFR216<sup>13</sup> and Madagascar water law 98-029 and its decree n° 2003-941 09/09/2003 amended by Decree 2004-635 of 15 June 2004, which governs water monitoring, control of water destined for human consumption, and access priorities for water resources; is to provide an initial Water Quality Testing and Monitoring Response Protocol in case of contamination, as well as standards for Reporting and

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<sup>13</sup>[http://www.usaid.gov/our\\_work/environment/compliance/22cfr216](http://www.usaid.gov/our_work/environment/compliance/22cfr216)

Recordkeeping of regular water quality assessments as a condition for the establishment of new or rehabilitation water access points.

The Water Quality Assurance Plan (WQAP) is an important part of WASH project environmental compliance. This WQAP will ensure that all new and rehabilitated water infrastructure provides safe drinking water, defined as meeting local and WHO water quality standards. This Plan must be approved by the MEO, AOR, REA and BEO prior to initiation of these activities.

### III. RESOURCES FOR SAMPLE COLLECTION AND LABORATORY ANALYSIS

#### A. SAMPLE COLLECTION AND FIELD MEASUREMENT

##### **AVAILABILITY OF TRAINED PERSONNEL**

The technical partner, who are used to sample routinely and have trained staff doing that every day will be in charge of sampling and carrying any interested water sample during the project. Any sample coming from other part will be accepted.

##### **AVAILABILITY OF APPROPRIATE EQUIPMENT**

For primary measurements (conductivity, pH, TDC, water depth), water dipper and conductivity meter will be used.

The material used for sampling will be PE disinfected sampling bottles (0.5 l), cooling boxes, syringes (50 mL), micro-filters (0.2 µm), labels, sterile gloves, GPS, batteries, Nitric acid (HNO<sub>3</sub>), test kit, pumps, alcohol to disinfect, permanent marker.

For fieldwork it is used notebook, pencil, spare parts, paper towels, toolbox, waterproof jacket, work shoes, cap, and eventually safety glasses.

Technical partners will be required to obtain all the described equipment.

##### **PROCEDURES AND PROTOCOLS FOR COLLECTION, MEASUREMENT, SAMPLE PRESERVATION AND TRANSPORT TO LABORATORIES.**

Water quality sampling will be necessary in order to carry out the initial testing and periodic monitoring required for all of the parameters listed previously.

Water is sampled using disinfected PE bottle with a volume of 0.5 l. The analysis for the whole parameters (cited above), 1.5 l of water is needed. All bottles are labeled with project name, sampling name site, and date. In notebook will noted the weather conditions at the moment of sampling. Before well sampling, if it is possible, a pump will purge water for few minutes, in a way to pump at least three times the water volume in the column. If not, a surge or a recipient attached to a rope will be used to collect water sample in the well.

Conductivity, Total Dissolved Solids (TDS), pH and Temperature (always linked together) will be measured with a conductivity meter and thermometer at the water source and noted.

Turbidity will be measured with a turbidity tube or photometer at the source.

Total Thermo-Tolerant Coliforms will be sampled making sure not to contaminate the sample (the use of sterile gloves is compulsory). The analysis will be made in a laboratory within 6 hours after sampling. In laboratory it will use a membrane filtration and growing in MLSB at 44°C overnight. If sampling transport exceeds 6 hours, portable “Delagua” test kit will be used, in a clean and closed space in findable near the water source site.

All anions will be sampled at the water source and analyzed in laboratory by visible spectrometry. Cations will be acidified with acid nitric (HNO<sub>3</sub>) to avoid precipitation and consequently diluted before analysis in a lab by visible spectrometry.

All water samples will be stocked in a cooler, at 20°C maximum to maintain their properties, until laboratories processing.

All these protocols will be integrated in the whole area of RANO WASH project.

## B. LABORATORY ANALYSIS

### LOCATION OF NEAREST QUALIFIED LABORATORY

The RANO WASH project will work with experienced firms using quality equipment to test water quality and to ensure water quality monitoring

Main laboratory:

- Institute Pasteur of Madagascar LHAE<sup>14</sup> laboratory, BP 1274 Ambatofotsikely Avaradoha, 101 Antananarivo. This lab is accredited by the NF-norms applicable in Madagascar for the analysis of all of the water quality parameters. Distance of 200 to 600 km from the targeted regions.

Alternates<sup>15</sup> laboratories under reserve of getting approved certification:

- Ranontsika Water Quality Lab, Lot 45B plle 14/33 Morafeno, Madagascar 501. Distance of 100 km of almost all targeted sites in the Atsinanana region.
- BushProof BP 182, Ivato Aéroport, Madagascar 105. Distance of 200 to 600 km from the targeted regions.

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<sup>14</sup> LHAE – « Laboratoire pour l’Hygiène des Aliments et de l’Eau » of the Institute Pasteur of Madagascar.

<sup>15</sup> The project wills to collaborate with qualified laboratories that are close to rural interventions areas in order to make the process of water quality analysis more affordable for the beneficiaries during the operation phase of the supply.

## AVAILABILITY OF PROPER ANALYTICAL EQUIPMENT

The Institute Pasteur of Madagascar (IPM) is qualified to perform water testing under several standards. The IPM has a central lab in Antananarivo and a professional mobile lab that can easily be deployed in the field to avoid long and problematic transports of samples.

Institute Pasteur of Madagascar (IPM), Antananarivo		
Parameter to be measured	Analytical method	Instrument Make and Model
Water quality - pH	NF EN ISO 10153 Phenolred 6.8 – 8.4	Photometer 7500 Palintest
Water quality - EC	NF EN 27 888	N/A
Water quality - Turbidity	NF EN ISO7027-1	Photometer 7500 Palintest
TDS	NF T 90-111	Conductometer 3210
Escherichia coli and coliforms bacteria	ISO 9308-02	UV observation chamber
Nitrate, Fluoride, Chlorine,	Spectrometry	Photometer 7500 Palintest
Arsenic	Microfiltration	N/A

N/A means information not available

## AVAILABILITY OF TRAINED PERSONNEL

### LHAE – Institut Pasteur de Madagascar

LHAE is headed by Mme Alexandra Bastaraud, engineer who has more than 20 years of experience with the Institut Pasteur network and 10 years of experience as laboratory manager. Has assured and ensures the responsibility of all sectors of activities, physicochemical, micro pollutants, samples, and microbiology as well as service quality.

Technicians are responsible of the analysis under the supervision of senior technical staff:

- Vero Ramiandrasoa – Water quality, relation with partners and final report
- Jackson Mahazosaotra – Technical validation, Microbiological analysis
- Andrianina Rabenoro – Technical validation, Physicochemical methods

The RANO WASH project, through its technical partners and local laboratories will monitor water quality at water points established or rehabilitated by the project. The project aims to develop activity of laboratory for the monitoring part, recognizing that equipping local water supply manager doesn't give convincing results. But the local water supply manager will be trained to follow basic parameters, to identify relevant changes in water quality (using basic parameters), to collect and carry sample correctly. They will be put in contact with selected laboratories that are able to give reliable water quality results and advice water supply manager on quality of water production. Water quality results must be shared by water supply manager to regional water authorities to set-up mitigation measure.

## REPORTING AND QA/QC OF DATA

All reports are made by the RANO WASH team; the data are recorded via notes. GPS coordinates are market through “degrees, minutes, seconds” format. Once the data fields are noted, they will be transcribed to computer to exploit them.

After sampling water analysis, the results are incorporated in GIS maps and graphics.

Per commune, any water quality results, at any stage of the project, will be shared to any local stakeholder implicated in the set-up and operation of a water supply system. At the end of the project, water quality records gotten during the project will be shared with the concerned communes, health care facilities and water service provider; and, on a more global scale, to the Ministries in charge of WASH and Public Health.

### C. FIELD ANALYSIS USING PORTABLE TEST KITS

Measuring conductivity, mineralization, pH and temperature of water cannot be done long time after sampling operation because environment in the sample is changing rapidly making these parameters varying. These must have been measured in the field.

The fact that some cations are not stable in the type of water know on the east coast, it appears interesting to check certain value in the field. This will be applied to measure the quantity of iron (dissolved or not) in the water, using a field colorimeter. Despite the fact that this equipment is less professional, it can be accepted for monitoring purpose on some remote sites.

Due to the remoteness of a part of water infrastructure sites targeted by RANO WASH and the impossibility to reach a proper laboratory within 6 hours after sampling, the presence of bacteria will be sometime checked in the field

Technical partners will use the followings kits to measure the parameters discussed above.

Targeted parameter	Field test kits	Process by which the accuracy of the test kits has been verified	Field staffs have been trained in the use of the test kits	USAID approved
EC, TDS, pH, T°C	Multi meter	Calibration done every month	Yes	Yes
Total Iron (Fe <sup>2+</sup> & Fe <sup>3+</sup> )	Palintest comparator (colorimeter)	Check dates of reagents	Yes	Yes
Total Thermotolerant coliforms	Delagua	Calibration done every four analysis	Yes	Yes

## D. DOCUMENTATION OF AVAILABILITY OF RESOURCES

TABLE III-A: AVAILABILITY OF RESOURCES FOR SAMPLE COLLECTION AND LABORATORY ANALYSIS							
Parameter	Collection and Field Measurement			Laboratory Analysis and Reporting			
	Field Team	Equipment	Protocol	Lab Location	Equipment	Methodology , Uncertainty	Personnel
Calcium (Ca <sup>2+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Magnesium (Mg <sup>2+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Sodium (Na <sup>+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Potassium (K <sup>+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Total Iron (Fe <sup>2+</sup> , Fe <sup>3+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Manganese (Mn <sup>2+</sup> )	Technical partners	SPB, HNO <sub>3</sub>	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Carbonates (CO <sub>3</sub> <sup>2-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Bicarbonate (HCO <sub>3</sub> <sup>-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Chloride (Cl <sup>-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Sulphate (SO <sub>4</sub> <sup>2-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Nitrate (NO <sub>3</sub> <sup>-</sup> ) and Nitrite (NO <sub>2</sub> <sup>-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs
Fluoride (F <sup>-</sup> )	Technical partners	SPB	Keep cool or at same temperature, transport to labs	Antananarivo or Toamasina	Palintest – Comparator	Visible spectrometry	Technical partners and mandated labs
Arsenic (As)	Technical partners	SPB	Keep cool or at same	Antananarivo or Toamasina	Palintest – Visu Pass	Visible spectrometry	Technical partners and mandated labs

TABLE III-A: AVAILABILITY OF RESOURCES FOR SAMPLE COLLECTION AND LABORATORY ANALYSIS

			temperature, transport to labs				
Fecal coliform	Technical partners	SPB	Keep cool or at same temperature, transport to labs within 6 hours	Antananarivo or Toamasina	MLSB	Selected by filtration & MLSB, indicative only	Technical partners and mandated labs
Conductivity	Technical partners	Digital multimeter	Measured on site, at water source	On Site	HANNA HI 98311 / 98312	EC $\pm 2\%$ F.S.	Technical partners and mandated labs
Mineralization, Total Dissolved Solids (TDS)	Technical partners	Digital multimeter	Measured on site, at water source	On Site	HANNA HI 98311 / 98312	TDS $\pm 2\%$ F.S.	Technical partners and mandated labs
pH	Technical partners	Digital multimeter	Measured on site, at water source	On Site	HANNA HI 98311 / 98312	/	Technical partners and mandated labs
Temperature	Technical partners	Digital multimeter	Measured on site, at water source	On Site	HANNA HI 98311 / 98312	Temperature $\pm 0.5^\circ\text{C}$ / $\pm 1^\circ\text{F}$	Technical partners and mandated labs
Turbidity	Technical partners	Turbidity tube	Measured on site, at water source	On Site	Turbidity Tube	/	Technical partners and mandated labs
Residual Chlorine	Technical partners	SPB, DPD, comparator	Measured on site using DPD	Antananarivo or Toamasina	Palintest – Photometer 7100	Visible spectrometry	Technical partners and mandated labs



## IV. IMPLEMENTATION OF THE WATER QUALITY ASSURANCE PLAN

### DESIGN AND CONSTRUCTION

During the RANO WASH project, every infrastructure will be built by the technical partner (or by other qualified firm, chosen by and under the supervision of the technical partner and consortium), which will follow rule of the art of the domain and construction rules accepted in Madagascar.

For civil engineering work the rules in force in Madagascar will be followed strictly, and USAID will be fully aware of the planned construction (including review of the water work designs) in the WQAP. For the specific domain of groundwater engineering, rules of the art and specific methodology of the domain will be followed.

At each stage of the project, the RANO WASH staff will make sure every point described in this WQAP and water quality standards are followed adequately.

1. During first phase of the survey (APS): observations of different hydrochemical features, describing the quality and the identity of the water available (source, wells, etc.). Teams will make sure that raw water is of good quality and if not that it can be adjusted easily.
2. During the design study of the chosen systems (APD), extensive and varied analysis will be carried out. If necessary, treatment plant will be sized according to what should be adjusted.
3. During exploitation of the systems, a monitoring strategy will be put in place, which will make possible to follow the selected parameters and to quickly take corrective measures of this quality in the event of a change, in order to ensure the distribution of a quality water.

### WATER SOURCE PROTECTION

Two type of protection will be applied. The first one is a qualitative protection, which mean that it is forbidden to let substances to infiltrate into the wells or spring catchment. For this purpose, a protection area will be created around the well to not allow contaminants infiltration. An enclosure will be built around the well.

The second one is a quantitative protection, which means that the pumping will not exceed the quantity of available groundwater.

For each study case the best source protection will be considered.

#### A. OPERATIONAL SUSTAINABILITY

### STAKEHOLDER PARTICIPATION

The following individuals/named positions are responsible for overseeing implementation of the RANO WASH WQAP:

- a. Project Chief of Party (COP)—The COP has overall responsibility for ensuring that the project implements the WQAP and that the project complies with all IEE conditions and environmental mitigation and monitoring requirements.
- b. Project Deputy Chief of Party (DCOP)—The DCOP has overall responsibility for ensuring that all the project partners implement the WQAP at the field level and comply with all requirements and norms and standard for each water infrastructure rehabilitated or newly implanted by the project. He is responsible to make that IEE conditions and environmental mitigation and monitoring requirements related to these infrastructures are apply.
- c. Consortium member in charge of the region – The Head of Program of CRS, WaterAid, CARE has the supervision responsibility for ensuring that their Implementing Partners implement the WQAP in all systems in their region respective and comply with all requirements and norms and standard for each water infrastructure rehabilitated or newly implanted by the project.
- d. Implementing / technical partners Project Coordinators—They will have primary responsibility for ensuring that this WQAP is implemented as it relates to project activities under their direct supervision. Project Coordinators may delegate certain WQAP-related tasks (e.g., monitoring), but will retain responsibility for their completion.
- e. Project Environmental Specialist — will support the day-to-day fulfillment of environmental management activities, including compliance efforts such as implementation of the WQAP. This position also supports project reporting and facilitates coordination of environment related duties.
- f. Environmental / climate risk Compliance Consultant —will provides guidance on USAID Environmental Procedures and assists with the design of specific Project interventions, helping to identify environmentally sound alternatives and recommending specific mitigation and risk management approaches.
- g. Any communal or community representatives implicated in the life of the water-supply (water committees, water user’s association, health care facilities, etc.)

### **ROUTINE OPERATION AND MAINTENANCE (O&M)**

Operations and maintenance of the water supply systems build by the project will be done by selected and trained manager. Strict specifications of the O&M work will be prepared during the project. This will consider every operation to be done on every part of the system.

Particular attention will be paid to the policy considering the protection of the resource, the maintenance of well and catchment and the disinfection of the system. The O&M routine should guarantee continuous distribution of clean and potable water.

## **ROUTINE MONITORING AND TESTING**

During exploitation of the systems, a monitoring strategy will be put in place, which will make possible to follow the selected parameters and to quickly take corrective measures of this quality in the event of a change, in order to ensure the distribution of a quality water.

Water test will be carried out as described above in this document, at the adequate frequency for the site. The project wants to implement a collaboration with local lab who have developed an expertise on the type of water that will be exploited

## **LONG TERM OPERATION AND MAINTENANCE AND MONITORING**

In long term, the GOM representatives, especially the ministry in charge of WASH, and the communal authorities will have the responsibility of the monitoring of all constructed infrastructures and the quality of delivered water for each of them. Therefore, they should have a clear action plan that are budgeted and taken into account in their annual portfolio, in order to support and monitor the water services providers toward the completion of their roles related to operations & maintenance (O&M) of the supply services. They also should report and solved any dysfunction that might affect the sustainability of the service that includes any abnormal changes among the water quality parameters. The project will assess their capacity and provide adequate support, through its First Strategic Objective (SOI) aiming to reinforce the Governance and the Monitoring of the Water Supply System. Furthermore, the fees collected from Water Service will provide some provision for the commune through local tax collection.

Otherwise, operations and maintenance of the water supply systems build by the project will be done by selected and trained manager. Strict specifications of the O&M work will be prepared during the project.

All construction which are in contact with the water to be delivered will be disinfected at least once a year using chlorine. The use of chlorine must be evaluated via a 22 CFR 216.3 (b) analysis and must be approved by the BEO. A plan will then be shared with USAID representative during the project regarding the routine disinfection of water supply systems.

### Note related to chlorination – mitigation measures

Chlorination consists of mixing sufficient chlorine-based chemical reagent HTH-70 (pellet form of calcium hypochlorite) with water to create a solution containing a certain quantity of active chlorine per liter (mg/l), or parts per million (ppm). This is used to disinfect any component of water supply systems (wells, catchment, pipes, storage tanks, distribution network and water point). Whenever its relevant, if an electro chlorinator is available, we might use sodium hypochlorite in liquid form resulting from the electrolyze of salt in water. We will note that only liquid reagents (sodium or calcium hypochlorite) will be used for disinfection activities in RANO WASH.

For the storage of these reagents, both pellets and aqueous solutions are stored inside sealed opaque containers, closed by screwed lids, and branded with clear indications about the contained products. These products will never be stored with fuels. And while handling these reagents, each qualified operator must use adequate individual protection equipment (mask, glove, apron, etc.) to avoid any accidents.

## **TRAINING**

Staff of RANO WASH engaged on any operation related to water quality investigation will be trained adequately during the project. Staff of technical partners are trained within their organization and have developed expertise in the domain.

## **V. CORRECTIVE MEASURES**

Approach to Resolution of Water Quality Contamination.

The selection of the corrective measures to implement when the water quality guidance levels are exceeded depends on a variety of factors, most of which depend on potentially unique site characteristics.

The two most important issues to consider prior to implementing a corrective response are:

- Does the exceedance present an immediate health risk to consumers?
- Are there alternative water sources which are accessible and safe?

If there is no immediate danger to the life and health of the beneficiaries, the IP will follow the following corrective measures.

Corrective Measures.

If the water quality testing completed following the commissioning of the water point indicates that contaminant levels exceed the thresholds established in this WQAP, the Implementing Partner (IP) will take the following actions:

- a. If any of the levels are exceeded, the following will be performed (if there is no immediate danger to life and health):
  - i. an additional round of sampling and analysis for the given parameters will be performed to confirm the initial results;
  - ii. if the second round of sampling/analysis confirms the exceedance, an investigation of the potential source of contamination (see guidance in Annex 2 on key issues to investigate, which can be accessed here: <http://www.usaidgems.org/wqap.htm>.)

## A. HUMAN HEALTH-RELATED DRINKING WATER QUALITY PARAMETERS OF CONCERN

- a. If arsenic, mercury, lead, zinc, nickel, chromium, cadmium and cyanides levels are exceeded, the IP will notify the appropriate authorities, and investigate alternative safe water sources. If alternative sources are available, then:
  - i. Access to the alternative source will be provided; and,
  - ii. The water point with the exceedance, shall be disassembled, or equipped to otherwise prevent groundwater withdrawal.
- b. If fecal coliform is detected, the IP will work with the appropriate authorities as well as the water service provider (water supply manager) to ensure that the following measures are implemented:
  - i. An investigation of potential sources of contamination, and removal of the contamination, if possible;
  - ii. Examination of the well construction will be conducted to ensure that the concrete apron and casing are sealed and in good condition and the well head is elevated such that runoff flows away from the concrete pad;
  - iii. The sampled well will be disinfected via the shock chlorination technique. NOTE: REQUIRES ADDITIONAL USAID AUTHORIZATION;<sup>16</sup>
  - iv. Outreach to community members will be completed (through radio announcements, community meetings, etc.) to boil water;
  - v. Access to the water point may be restricted, if possible, to non-drinking water, non-domestic uses only (e.g., that water is used for irrigation purposes only, or livestock watering).
- c. If fluoride levels are exceeded, the IP will complete the following measures:
  - i. An investigation of the presence of health effects (i.e. dental or skeletal fluorosis), additional sources of fluoride (e.g. brick tea consumption), will be performed, if possible;
  - ii. Alternative low-fluoride sources of water will be used; if possible, and, blending of the two sources will be executed; or,
  - iii. Fluoride treatment will be installed that is available and acceptable to the community, such as bone charcoal, contact precipitation, clay, activated alumina, calcium chloride, monosodium phosphate, or,
  - iv. Access to the water point will be restricted to non-drinking water, non-domestic uses only (i.e., that water is used for irrigation purposes only).
- d. If nitrate levels are exceeded, the IP will complete the following measures:
  - i. An investigation of potential sources of contamination, such as nearby agricultural

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<sup>16</sup> The use of chlorine must be evaluated via a 22 CFR 216.3 (b) analysis and must be approved by the BEO.

fertilizer application, or leaking septic tanks, will be performed, and removal of the contamination will be completed, if possible; or,

- ii. Access to the water point will be restricted to non-drinking water, non-domestic uses only (i.e., that water is used for irrigation purposes only).

## **B. OPERATIONAL-BASED DRINKING WATER QUALITY PARAMETERS OF CONCERN**

- a.** If electrical conductivity or TDS levels are exceeded, the IP will complete the following measures:

- i. The IP will perform additional testing for individual constituents of conductivity including, chloride, sodium, nitrate, calcium, magnesium, and sulfate, to ensure these constituents are not present at levels above the host country regulatory limits.
- ii. An investigation of potential sources of contamination will be performed, and removal of the contamination will be completed, if possible; or,
- iii. Access to the water point will be restricted to non-drinking water uses only (confirm that elevated conductivity does not preclude use for irrigation or for livestock watering).

- b.** If pH levels are outside of the range (i.e. below 6.5 or above 8.5), the IP will complete the following measures:

- i. An investigation of potential anthropogenic sources of contamination, such as nearby industrial activities including mining, will be performed, and an investigation of alternative sources of water supply will be completed, if possible;
- ii. An investigation of potential natural sources, such as subsurface geology, will be performed, to confirm that the low or high pH is a result of natural conditions;
- iii. If the pH exceedance is due to natural conditions, such as local geology, an investigation of the potential of corrosion of the existing or proposed water supply extraction and distribution infrastructure (e.g. corrosive metal piping and pumping equipment) will be performed;
- iv. If pH exceedances, could result in corrosion, and leaching of metals from water supply equipment, then testing will be conducted for metals appropriate water treatment (e.g. neutralizing filter) will be installed, at the water point, or at the point of use (e.g. in the residence); or,
- v. Access to the water point will be restricted to non-drinking water, non-domestic uses only (i.e., that water is used for irrigation purposes only).

- c.** If turbidity levels are exceeded, the IP will complete the following measures:

- i. An investigation of potential sources of contamination, and removal of the contamination, if possible;
- ii. Water treatment that is available and acceptable to the community, such as fiber,

cloth or membrane filters, granular media filters, sedimentation systems, moringa flocculation, sand filters, will be installed (or provided for household use) to remove turbidity; or,

- iii. Access to the water point will be restricted to non-drinking water, non-domestic uses only (i.e., that water is used for irrigation purposes only).



### C. SUMMARY EMPP MATRIX

The RANOWASH Project already has its approved EMPP. The water quality concerns 140 planned safe water supplies to be built or rehabilitated by the project. Specific mitigation measures for each region will be given in specific Environmental Screening Forms. Measures will be reported then in the Environmental Status Report which will include result of the water testing conducted prior the commissioning of the rehabilitated water point.

During the construction phase, RANOWASH staff will be responsible of the control of contractor works. During each step of the construction and rehabilitation will be documented and a water quality assurance plan will be followed.

RANOWASH will report to the USAID Mission on each step of the construction and rehabilitation and will guarantee quality of the water in accordance with USAID, WHO and GOM before commissioning the infrastructure.

The manager of the constructed or rehabilitated infrastructure (VSP) will be trained on proper management of the water supply system and will be part of the process from the beginning.

**RANO WASH PROJECT**  
**SITE: 6 regions**  
 Environmental Mitigation/ Enhancement Plans for Established WASH Projects

**WATER QUALITY ASSURANCE PLAN**

Activity: Water Supply

Adverse Impact: Inadequate Water Quality

Type of infrastructure: Gravity water supply system (new or rehabilitated and extended), including spring catchment, or surface water catchment.  
 Pumped water supply system (new or rehabilitated and extended), including shallow well or borehole as catchment.

SOURCE TYPE	MITIGATION PLAN	EVIDENCE OF MITIGATION MEASURE	FOLLOW UP/ FREQUENCY	RESPONSIBLE PERSONS/ ORGANIZATIONS
	<b>CONSTRUCTION STAGE</b>			
Spring catchment	a) Construction work must avoid any change of water quantity and quality b) Protection area around the catchment c) Fence around the catchment (closer protection) d) Set-up of local regulations to control activities within and around the catchment area	Installation, completion reports, photos, water quality reports, design drawings for treatment units	During construction, after construction	Contractors, IP, community, relevant ministries

SOURCE TYPE	MITIGATION PLAN	EVIDENCE OF MITIGATION MEASURE	FOLLOW UP/FREQUENCY	RESPONSIBLE PERSONS/ ORGANIZATIONS
	<ul style="list-style-type: none"> <li>e) Take water samples for water quality analysis according to the WQAP</li> <li>f) Provide appropriate treatment system to remove identified physical and chemical impurities</li> </ul>			
Surface water catchment	<ul style="list-style-type: none"> <li>a) Catchment design must consider variation in runoff yield along year, and related change in water charge (turbidity, suspended matter)</li> <li>b) Protection area around the catchment</li> <li>c) Fence around the catchment (closer protection)</li> <li>d) Set-up of local regulations to control activities within and around the catchment area</li> <li>e) Take water samples for water quality analysis according to the WQAP</li> <li>f) Provide appropriate treatment system to remove identified physical and chemical impurities</li> </ul>	Installation, completion reports, photos, water quality reports, design drawings for treatment units	During construction, after construction	Contractors, IP, community, relevant ministries
Boreholes	<ul style="list-style-type: none"> <li>g) Install durable pipe casings (use PVC with enough strength for the purpose)</li> <li>h) Ensure proper disposal of waste materials from the drillings pit to prevent any seepage to the ground water</li> </ul>	Installation, completion reports, photos water quality reports, photos, design drawings for treatment units	During construction, after construction	Contractors, IP, community, relevant ministries

SOURCE TYPE	MITIGATION PLAN	EVIDENCE OF MITIGATION MEASURE	FOLLOW UP/FREQUENCY	RESPONSIBLE PERSONS/ ORGANIZATIONS
	<ul style="list-style-type: none"> <li>i) Cementation done according to usual norms (density of 1.4 to 1.8 t/cu)</li> <li>j) Proper development of the pit to remove any unwanted material occurring during drilling process</li> <li>k) Take water samples for water quality analysis according to the WQAP.</li> <li>l) Protection area and fence around the borehole and pump house sites</li> <li>m) Ensure all spilled oils and fuels are properly disposed by removing affected soil</li> <li>n) Provide appropriate treatment system to remove identified physical and chemical impurities</li> </ul>			
Pipeline Extension	<ul style="list-style-type: none"> <li>a) Avoid swampy areas in installation of the pipes or else use galvanized iron (GI) pipes in swampy areas to prevent any cracks of pipes and an eventual pipe water contamination</li> <li>b) Trenches must be at least 0.70 m deep</li> <li>c) Cover all the installed pipes / refilling the excavated trenches with soil</li> <li>d) Take water samples for water quality analysis according to the WQAP.</li> </ul>	Installation, completion reports, photos, water quality reports	During construction, after construction	Contractors, IP, community, relevant ministries

SOURCE TYPE	MITIGATION PLAN	EVIDENCE OF MITIGATION MEASURE	FOLLOW UP/FREQUENCY	RESPONSIBLE PERSONS/ ORGANIZATIONS
	e) Provide appropriate water treatment system, if necessary			
Shallow wells	a) Fence round the shallow well b) Provide proper drainage of spilled water c) Take water samples for water quality analysis according to the WQAP. d) Provide appropriate treatment system to remove identified physical and chemical impurities	Installation, completion reports, photos, water quality reports, design drawings for treatment units	During construction, after construction	Contractors, IP, community, relevant ministries
<b>OPERATION STAGE</b>				
Spring catchment	a) Undertake water quality tests (physiochemical and bacteriological) according to WQAP b) Maintenance of the catchment equipment and treatment unit c) Community sensitization on proper handling of water after drawing it	Visual inspection of works, review water quality reports	Continuous	Water supply manager, community
Surface water catchment	a) Undertake water quality tests (physiochemical and bacteriological) according to WQAP b) Maintenance of the catchment equipment and treatment unit c) Community sensitization on proper handling of water after drawing it	Visual inspection of works, review water quality reports	Continuous	Water supply manager, community

SOURCE TYPE	MITIGATION PLAN	EVIDENCE OF MITIGATION MEASURE	FOLLOW UP/FREQUENCY	RESPONSIBLE PERSONS/ ORGANIZATIONS
Boreholes	<ul style="list-style-type: none"> <li>a) Undertake water quality tests (physiochemical and bacteriological) according to WQAP</li> <li>b) Maintenance of the borehole equipment and treatment unit</li> <li>c) Community sensitization on proper handling of water after drawing it</li> </ul>	Visual inspection of works, review water quality reports	Continuous	Water supply manager, community
Pipeline Extension	<ul style="list-style-type: none"> <li>a) Undertake water quality tests (physiochemical and bacteriological) according to WQAP</li> <li>b) Ensure immediate repairs of leakages to prevent any contamination of pipe water</li> </ul>	Visual inspection of works, review water quality reports	Continuous	Water supply manager, community
Shallow wells	<ul style="list-style-type: none"> <li>a) Undertake immediate repairs of any cracks on the well cap</li> <li>b) Undertake water quality tests (physiochemical and bacteriological) according to WQAP</li> <li>c) Provide a diversion trench for any storm water to protect the well cap</li> <li>d) Maintenance of the well and treatment unit</li> <li>e) Community sensitization on proper handling of water after drawing it</li> </ul>	Visual inspection of works, review water quality reports	Continuous	Water supply manager, community

NB: Indicate if a consultant has conducted a water quality feasibility study and design plans are being developed for the recommended treatment units for all water sources. Installation of the treatment systems will be undertaken in the year.

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## ANNEX I: DESCRIPTION OF TESTED PARAMETERS

WATER QUALITY PARAMETER	JUSTIFICATION FOR INCLUSION	METHOD OF ANALYSIS
Calcium ( $\text{Ca}^{2+}$ )	Calcium is an indicator of the presence of fertilizer	Visible spectrometry
Magnesium ( $\text{Mg}^{2+}$ )	Natural feature in basement area	Visible spectrometry
Sodium ( $\text{Na}^{+}$ )	Sodium is an indicator for the presence of fertilizer, wastewater and saline intrusion near the coast.	Visible spectrometry
Potassium ( $\text{K}^{+}$ )	Potassium is an indicator of the presence of fertilizer	Visible spectrometry
Total Iron ( $\text{Fe}^{2+}$ , $\text{Fe}^{3+}$ )	Other potential water contaminants of concern include heavy metals including iron, which can be found in drinking water sources, and can lead to a variety of health risks. Heavy metals are often present in drinking water sources as a result of mining operations or other industrial activities. It is also important for redox process	Visible spectrometry
Manganese ( $\text{Mn}^{2+}$ )	It can be found in large concentration in wastewater and sewage sludge and is a remarkable parameter for redox process	Visible spectrometry
Carbonates ( $\text{CO}_3^{2-}$ )	Bicarbonate is an important factor that indicates the presence of degradation of organic contaminants.	Visible spectrometry
Bicarbonate ( $\text{HCO}_3^{-}$ )	Bicarbonate is an important factor that indicates the presence of degradation of organic contaminants.	Visible spectrometry
Chloride ( $\text{Cl}^{-}$ )	This major anion could indicate an anthropogenic source of contamination. For example, fertilizer or wastewater.	Visible spectrometry
Sulphate ( $\text{SO}_4^{2-}$ )	Natural feature	Visible spectrometry
Nitrate ( $\text{NO}_3^{-}$ ) and Nitrite ( $\text{NO}_2^{-}$ )	According to the Madagascar Water Law 98-029, the project will monitor these contaminants (in a lab or in	Visible spectrometry

WATER QUALITY PARAMETER	JUSTIFICATION FOR INCLUSION	METHOD OF ANALYSIS
	<p>the field using colorimeter) to test their presence in the water body. Monitoring will be done each semester after work is accomplished. Also, as mitigation measures, a sensitization at the community level is conducted to inform that a water point has to be far from a contamination source (latrine, livestock shed). It should be noted that latrine and livestock sheds have to be at least 30 meters away from a water point.</p>	
<p>Fluoride (F)</p>	<p>Fluoride is a naturally occurring anion of fluorine and occurs in minerals and fluoride salts. In small quantities fluoride can be helpful to human health and protect from tooth decay, however, in higher concentrations (above several parts per million) fluorides can cause pitting of teeth and skeletal problems including crippling fluorosis, anemia and stiff joints. Heavy concentrations of fluoride can be found naturally throughout northern Africa, the Middle East and central Asia.</p>	<p>Visible spectrometry</p>
<p>Arsenic (As)</p>	<p>In compliance with Guidance Cable State 98 108651, and the Madagascar water law 98-029, RANOWASH will monitor groundwater-sourced water access points for inorganic arsenic at a level not to exceed 10 ppb (10 µg/l or 0.01 mg/l). Following the initial water quality test, the Project will sample groundwater for inorganic arsenic not less than once per quarter for a minimum of four (4) quarters.</p>	<p>Visible spectrometry</p>

WATER QUALITY PARAMETER	JUSTIFICATION FOR INCLUSION	METHOD OF ANALYSIS
	<p>Arsenic monitoring will be completed using the same technology and sampling method as the initial water quality test. Nevertheless, due to a new reference from the WHO value, it is acceptable at the highest 50 ppb given the difficulty of on-the-ground analyses.</p>	
<p>Electro-conductivity</p>	<p>This will provide information on the salinity of the water for consumption and will be monitored by the project and the water manager entity on the ground using a conductivity meter. The test will be done every semester after work is accomplished. For some areas (especially in the southwest) near the coastal areas, where salinity is found, a higher conductivity is allowed but does not exceed the 3400 <math>\mu\text{S}/\text{cm}</math> limit.</p>	<p>Digital multimeter</p>
<p>Total Dissolved Solids (TDS)</p>	<p>The TDS is closely related to conductivity, is a measure of all ion particles smaller than 2 microns (0.0002 cm), and is a close approximation of salinity (although dissolved organic matter and other compounds may be included in the TDS measurement). High TDS can also indicate high alkalinity or hardness. Sharp changes to the TDS indicate changes to the overall water quality.</p>	<p>Digital Multimeter</p>

WATER QUALITY PARAMETER	JUSTIFICATION FOR INCLUSION	METHOD OF ANALYSIS
pH	The project and the water management entity will be responsible for underground monitoring of the water acidity using a pH-meter. After the first test, pH will be monitored each semester after the work is accomplished. It is noted that groundwater often has a more acidic pH than ideal. If the pH is so high that it corrodes, the project will identify an alternative water source that meets the standard.	Digital multimeter
Residual Chlorine	If chlorine is used in a treatment	Visible spectrometry
Temperature	It is a parameter that is necessary to determinate the chemical equilibrium between the water component. It could give the depth of groundwater flow, the residence time, its origin, and the eventual contaminations	Digital Multimeter
Turbidity	Water with a turbidity of 5 NTU or less appears clear to consumers. At a higher level, the water becomes colored. A maximum level of 20 NTU is suggested for the case of a small system where the consumers and the contracting authority grant it and where the reduction of the turbidity is no longer feasible. For chlorination-treated systems, the limit is more severe (1 NTU) because particles suspended in water can prevent the action of chlorine on pathogens attached to it.	Turbidity tube
Fecal coliform	The project will monitor all new or rehabilitated water access points (groundwater- and surface water-sourced) for no detectable fecal coliform in any 100	Selected by filtration & MLSB

WATER QUALITY PARAMETER	JUSTIFICATION FOR INCLUSION	METHOD OF ANALYSIS
	<p>ml sample using a comparable technology and sampling method as the initial water quality test. Total coliform monitoring will be completed at least once every six months as long as the water point remains the source of drinking water or for domestic purposes. However, for some types of sources, it is more effective to allow limited contamination than requesting protection measures or treatment.</p>	

**EMR ANNEX 2 PROCESS OF SETTING UP OF THE PCDEAH FOR THE RANOWASH INTERVENTION REGIONS**

<b>Key activities</b>	<b>Activities</b>	<b>facilitator</b>	<b>Affected</b>	<b>Informed</b>	<b>Deliverables</b>
	<b>Map of new communes</b>				
	<b>Former communes</b>				Maps
	<b>Tools finalization</b>				Files
	<b>Translation of tools</b>				
<b>Induction of RANOWASH team (TA, SZ, Coordo, technical team) and the DREEH team</b>	Team training on processes, tools, task distribution	Steering team (SO1, Coordo, DREEH technician)	TA, SZ, Coordo, SO1, SO2, SO3, MEAL, Techn DREEH	DREEH, Coordo Reg	Planning, Appropriate tools (including Summary/PCDEAH template, Map of Communes, standard Solution and Costs)
<b>Preparation/start-up of the PCDEAH process</b>	Mobilization of communes on the PCDEAH in collaboration with DREEH and District	TA, DREEH, District SO1 (HM et AM)	Mayor, STEAH, CC, SLC	MI, CISCO, ORN	Meeting minutes, Attendance sheet

Key activities	Activities	facilitator	Affected	Informed	Deliverables
	Decision of the communal authorities on the commitment	Mayor, TA (Monitoring/Support	Communal councilors (CC) Mayor	District	CC Deliberation and communal decree
	Meeting with communal authorities	Mayor, Supported by TA	SLC and PCDEAH committee		Commitment of the actors, Shared secondary documents Shared PCDEAH tools
	Information meeting at commune level	Mayor, Supported by TA			Planning, minutes of meeting, attendance sheet
	Analysis of secondary data at commune level (existing data)	STEAH, Mayor (Supported by TA)	SLC and PCDEAH committee	DREEH, Regional Coordinator, SOI, MEAL	have the data available at the commune level, identify data that still need to be collected
<b>Diagnosis</b>	Training of local investigators, key stakeholders	STEAH supported by SZ, TA	investigators and key stakeholders		
	Data collection and field validation		investigators		
	Data analysis and compilation	STEAH, Mayor (supported by TA)		DREEH, Regional Coordinator, SOI, MEAL	Have the final data, Diagnostic results presentation sheet

Key activities	Activities	facilitator	Affected	Informed	Deliverables
	Meeting - restitution of the diagnosis and idea of objectives	STEAH, Mayor (supported by TA)	SLC and key stakeholders	TA, SZ	Diagnosis validated, PV and attendance sheet
<b>Strategy and defined objectives</b>	Definition of vision/objectives and proposition of local solutions	STEAH, Mayor (supported by TA)	SLC and PCDEAH committee	DREEH, Regional Coordinator, SOI, MEAL	1st version Vision, Objective, local solutions
	Local solution writing		STEAH, supported by TA and SZ	DREEH, Regional Coordinator, SOI, MEAL	Draft Vision, Objective, Local Solutions
	Review of solutions and establishment of prioritization elements	STEAH, supported by SZ,	technician of DREEH, regional SOI in support, subgrantee's coordinator	Coordo, DREEH	Solution and facilitation tools for prioritization (Costs), Pre-document without APTS (lite version APS) Pre-ranking
<b>Validated solutions and project pack</b>	Solution sharing prioritization	Mayor, STEAH, supported by TA, SZ	SLC, Key stakeholders	District	Pre-Final Document without APTS
	APTSSWorkshop	technician of DREEH supported by regional SOI officer	STEAH, TA		
	Editing of APTS		STEAH, supported by SZ, (DREEH	Coordo, DREEH	Pre-document with APTS



<b>Key activities</b>	<b>Activities</b>	<b>facilitator</b>	<b>Affected</b>	<b>Informed</b>	<b>Deliverables</b>
			technician in support)		
	Presentation of the pre-document and validation	Mayor, STEAH, supported by TA	Community, key stakeholders	District	Validated document PCDEAH validation report, attendance sheet
<b>Document</b>	Proofreading Translation	RW regional	PCT, RW regional, DREEH, MEEH		Version français, anglais, malagasy
	Sharing	PCT, RW regional, DREEH, MEEH	USAID, other partners, Digital Library		sharing reports

**EMRANNEX 3 WATER QUALITY TESTING Q1.20 UPDATE**

Phase of construction of the Water		Phase of detailed project design (APD)		Testing phases	
Atsinanana		Atsinanana		Region	
Toamasina II		Toamasina II		District	
Ampasimbe Onibe		Ampasimbe Onibe		Commune	
5/16/2019	5/16/2019	3/9/2018	3/21/2018	Test date	
BS (social)	30m3 water tank	Water spring in	Water stream in	Sampling location	
n.c	n.c	49.38122	49.35467	Longitude E	
n.c	n.c	17.63308	17.63561	Latitude S	
n.p	n.p	54	65	Altitude	
n.p	N/A	20	30	Debit lps	
6	7	4	8	pH	
43	44	70	70	Electrical	
22	22	36	35	TDS (Total	
10	10	26	20	Temperature	
20	20	5	5	Turbidity	
38	38	10	45	*Bicarbonate	
30	30	50	20	Carbonate –	
50	50	13	13	Potassium –	
60	60	32	-	Calcium –	
n.p	n.p	1	2	*Sodium –	
22	31	9	8	Chloride –	
1	1	8	6	Sulfate –	
42	48	24	28	Magnesium –	
50	50	20	50	Total Iron	
60	70	-	-	Fluoride – F-	
90	90	9	9	Arsenic	
95	95	n.p	n.p	Nitrite –	
21	31	n.p	n.p	Nitrate –	
002V	002V	n.p	n.p	Coliform	
84	64	n.p	n.p	Escherichia	
Institut Pasteur	Institut Pasteur	BushProof	BushProof	Tested by	
Safety validation	Safety validation	Design	Design	Checking phase	
Not Safe	Not Safe	Not Safe	Not Safe	Safety Check according to	
Safety validation is done at the end of		The objective of water quality analyses		Comments /	
Q3 Update: For the Ampasimbe Onibe system to be fully usable, it		The structures in the detailed design file (APD) are a filter and disinfection unit		FY 19 : Action taken / Mitigation measures /	
Difficulties of access throughout the quarter and up to now have interfered		N/A		FY 20: Action taken / Mitigation measures /	
Marcelin RANDRIATSIHOAINA - Regional Private Sector Manager (RPSM) of RANO WASH in		Serge RANAIVOJAONA, Director of BushProof		Individual responsible for the mitigation follow-up	



Phase of construction of the WSS			Phase of detailed project		Testing phases	
Atsinanana			Atsinanana		Region	
Toamasina II			Toamasina II		District	
Mahavelona (Foulpointe)			Mahavelona (Foulpointe)		Commune	
5/16/2019	3/4/2019	3/4/2019	3/4/2019	4/10/2018	Test date	
Reservoir	Monobloc	Foulpointe	Ranomainty	Barrage Ranomainty	Sampling location	
					Longitude E TND	
					Latitude S	
					Altitude	
					Debit lps	
6.8	7.1	6.6	6.5	7.2	Between	pH
13.9	15.0	15.0	60	37	≤ 1600	Electrical
71	c.p.	10.4	39	37	≤ 500 mg/l	TDS (Total
10	c.p.	32	35	27	≤ 15°C	Temperature
02.0	c.p.	5.5	0 - 8		≤ 5 NTU	Turbidity
12	c.p.	c.p.	c.p.		Between 10	*Bicarbonate
15.0	c.p.	8.0	8.0		≤ 500 mg/l	Carbonate –
1.9	c.p.	c.p.	c.p.		≤ 12 mg/l	Potassium –
20.8	c.p.	c.p.	c.p.		≤ 200 mg/l	Calcium –
c.p.	c.p.	c.p.	c.p.		< 20 mg/l	*Sodium –
17.5	c.p.	c.p.	c.p.		≤ 250 mg/l	Chloride –
36	c.p.	c.p.	c.p.		≤ 250 mg/l	Sulfate –
4.2	c.p.	c.p.	c.p.		≤ 50	Magnesium –
1.0	c.p.	c.p.	c.p.		≤ 0.3 mg/l	Total Iron
7.0	c.p.	c.p.	c.p.		≤ 1.5 mg/l	Fluoride – F-
0.0	c.p.	c.p.	c.p.		≤ 0.01 mg/l	Arsenic
0.0	c.p.	c.p.	0.0		≤ 0.1 mg/l	Nitrite –
4.1	c.p.	0.0	0.3		≤ 50 mg/l	Nitrate –
1.5	c.p.	c.p.	c.p.		0/100ml	Coliform
1.5	c.p.	c.p.	c.p.		0/100ml	Escherichia
Institut	Villanova	Villanova	Villanova	Sandandrano	Tested by	
Safety	Monitoring	Monitoring	Monitoring	Design	Checking phase	
Safe	Not Safe	Not Safe	Not Safe	Not Safe	Safety Check according to	
In general,	The water quality monitoring activities			Comments /		
Q3 Update:	The results were shared with the manager so that he could improve the quality of his			FY 19 : Action taken / Mitigation measures /		
The water quality issue has been addressed and a planning is currently underway between the project field team and the				FY 20: Action taken / Mitigation measures /		
Marcelin RANDRIATSITOHAINA -	Marcelin RANDRIATSITOHAINA -	Marcelin RANDRIATSITOHAINA -	Marcelin RANDRIATSITOHAINA -	Individual responsible for the mitigation follow-up		
RANDRIATSITOHAINA -	of RANO WASH in Atsinanana					





Testing phases		
Region	District	Commune
Test date	Sampling location	Longitude E
	Latitude S	Altitude
Debit (lps)		
Between	pH	
≤ 1600	Electrical	
≤ 500 mg/l	TDS (Total	
≤ 15°C	Temperature	
≤ 5 NTU	Turbidity	
Between 10	*Bicarbonate	
≤ 500 mg/l	Carbonate –	
≤ 12 mg/l	Potassium –	
≤ 200 mg/l	Calcium –	
< 20 mg/l	*Sodium –	
≤ 250 mg/l	Chloride –	
≤ 250 mg/l	Sulfate –	
≤ 50	Magnesium –	
≤ 0.3 mg/l	Total Iron	
≤ 1.5 mg/l	Fluoride – F-	
≤ 0.01 mg/l	Arsenic	
≤ 0.1 mg/l	Nitrite –	
≤ 50 mg/l	Nitrate –	
0/100ml	Coliform	
0/100ml	Escherichia	
Tested by		
Checking phase		
Safety Check according to		
Comments /		
FY 19 : Action taken / Mitigation measures /		
FY 20: Action taken / Mitigation measures /		
Individual responsible for the mitigation follow-up		
5/15/2019	5/15/2019	5/15/2019
Social connection in	Social connection	Private connection
6.9	6.7	7.0
72	70	68
36	34	34
10	10	10
4.0	0.0	8.0
13	6.1	6.1
15.0	5.0	5.0
2.5	0.1	1.7
3.2	3.2	4.8
0.0	0.0	0.0
14.0	13.5	12.0
9	6	13
0.05	0.05	0.05
0.05	0.05	0.05
0.0	0.0	0.0
0.05	0.05	0.05
0.0	4.1	6.1
2	4	9
1	1	1
Institut Pasteur de	Institut Pasteur de	Institut Pasteur de
Safety validation	Safety validation	Safety validation
Not Safe	Not Safe	Not Safe
presence of coliform	High turbidity and presence of coliform bacteria	presence of coliform bacteria

Phase of construction of the WSS				Testing phases	
Atsinanana				Region	
Brickaville				District	
Andovoranto (Ambila Lemaitso)				Commune	
5/13/2019	3/5/2019	3/5/2019	3/5/2019	Test date	
Private	water head	Multibec.in	Water Tank	Sampling location	Water
				Longitude E	
				Latitude S	
				Altitude	
				Debit.lps	
				Between	pH
7.1	7.2	c.p.	6.8	≤ 1600	Electrical
20.4	17.9	37.0	40.2	≤ 500 mg/l	TDS (Total
10.2	9.0	24.7	27.2	≤ 15°C	Temperature
10.1	10.1	31	30	≤ 5 NTU	Turbidity
12.0	12.0	c.p.	5.1	Between 10	*Bicarbonate
13.0	13.0	c.p.	c.p.	≤ 500 mg/l	Carbonate –
15.0	15.0	c.p.	c.p.	≤ 12 mg/l	Potassium –
18.0	18.0	c.p.	c.p.	≤ 200 mg/l	Calcium –
19.0	19.0	c.p.	c.p.	< 20 mg/l	*Sodium –
20.0	20.0	c.p.	c.p.	≤ 250 mg/l	Chloride –
24.0	24.0	c.p.	c.p.	≤ 250 mg/l	Sulfate –
26.0	26.0	c.p.	c.p.	≤ 50	Magnesium –
28.0	28.0	c.p.	c.p.	≤ 0.3 mg/l	Total Iron
30.0	30.0	c.p.	c.p.	≤ 1.5 mg/l	Fluoride – F-
32.0	32.0	c.p.	c.p.	≤ 0.01 mg/l	Arsenic
34.0	34.0	c.p.	c.p.	≤ 0.1 mg/l	Nitrite –
36.0	36.0	c.p.	c.p.	≤ 50 mg/l	Nitrate –
38.0	38.0	c.p.	c.p.	0/100ml	Coliform
40.0	40.0	c.p.	c.p.	0/100ml	Escherichia
42.0	42.0	Villanova	Villanova	Tested by	
44.0	44.0	Villanova	Villanova	Checked by	
46.0	46.0	Monitoring	Monitoring	Safety Check according to	
48.0	48.0	Not Safe	Not Safe	Comments /	
50.0	50.0	The water quality monitoring activities		FY 19 : Action taken / Mitigation measures /	
52.0	52.0	The recommendations issued by the students were taken into account and		FY 20: Action taken / Mitigation measures /	
54.0	54.0	The water quality issue has been addressed and a planning is currently underway between the project field team and the IPM for the counter		Individual responsible for the mitigation follow-up	
56.0	56.0	Monitoring	Monitoring	RPSM of RANO WASH in	
58.0	58.0	Safety	Safety	RPSM of RANO WASH in	
60.0	60.0	Safe	Safe	RPSM of RANO WASH in	
62.0	62.0	Not Safe	Not Safe	RPSM of RANO WASH in	
64.0	64.0	Monitoring	Monitoring	RPSM of RANO WASH in	
66.0	66.0	Monitoring	Monitoring	RPSM of RANO WASH in	
68.0	68.0	Monitoring	Monitoring	RPSM of RANO WASH in	
70.0	70.0	Monitoring	Monitoring	RPSM of RANO WASH in	
72.0	72.0	Monitoring	Monitoring	RPSM of RANO WASH in	
74.0	74.0	Monitoring	Monitoring	RPSM of RANO WASH in	
76.0	76.0	Monitoring	Monitoring	RPSM of RANO WASH in	
78.0	78.0	Monitoring	Monitoring	RPSM of RANO WASH in	
80.0	80.0	Monitoring	Monitoring	RPSM of RANO WASH in	
82.0	82.0	Monitoring	Monitoring	RPSM of RANO WASH in	
84.0	84.0	Monitoring	Monitoring	RPSM of RANO WASH in	
86.0	86.0	Monitoring	Monitoring	RPSM of RANO WASH in	
88.0	88.0	Monitoring	Monitoring	RPSM of RANO WASH in	
90.0	90.0	Monitoring	Monitoring	RPSM of RANO WASH in	
92.0	92.0	Monitoring	Monitoring	RPSM of RANO WASH in	
94.0	94.0	Monitoring	Monitoring	RPSM of RANO WASH in	
96.0	96.0	Monitoring	Monitoring	RPSM of RANO WASH in	
98.0	98.0	Monitoring	Monitoring	RPSM of RANO WASH in	
100.0	100.0	Monitoring	Monitoring	RPSM of RANO WASH in	



Phase of construction of		Testing phases		
Atsinanana		Region		
Brickaville		District		
Ranomafana-Est		Commune		
3/3/2019	3/3/2019	Test date	5/13/2019	5/13/2019
Main water	Monobloc	Sampling location	Social water	
		Longitude E		
		Latitude S		
		Altitude		
		Debit lps		
6.9	7.6	Between	7.1	7.0
27	24	pH	7.1	7.0
17	17	Electrical	22.0	21.5
30	29	TDS (Total	11.0	10.8
0 - ^	5 ^	Temperature	10 ^	10 ^
c p	c p	Turbidity	02.9 ^	2.0
c p	c p	*Bicarbonate	36.6	18.3
c p	c p	Carbonate -	30.0	15.0
c p	c p	Potassium -	3.4	1.5
c p	c p	Calcium -	7.6	3.2
c p	c p	*Sodium -	c p	c p
c p	c p	Chloride -	16.0	28.0
c p	c p	Sulfate -	58	47
c p	c p	Magnesium -	4.2	8.4
c p	c p	Total Iron	0.1	0.1
c p	c p	Fluoride - F-	0.8	0.8
c p	c p	Arsenic	0.0 ^	0.0 ^
c p	c p	Nitrite -	0.0 ^	0.0 ^
c p	c p	Nitrate -	1.7	0.9
c p	c p	Coliform	8	- ^
c p	c p	Escherichia	- ^	- ^
Villanova	Villanova	Tested by	Institut	Institut
Monitoring	Monitoring	Checking phase	Safety	Safety
Not Safe	Not Safe	Safety Check according to	Not Safe	Safe
Apart from the similar		Comments /		
Tests for the validation of potability are done once		FY 19 : Action taken / Mitigation measures /		
The water quality issue has been addressed and a		FY 20: Action taken / Mitigation measures /		
Marcelin RANDRIATSIHOAINA - RPSM of RANO WASH in		Individual responsible for the mitigation follow-up		



Phase of detailed project design (APD)			Testing phases																					
Yatovavy Fitovinany			Region																					
Vohibeno			District																					
Andemaka			Commune																					
3/9/2018	4/1/2018	4/1/2018	Test date	5/14/2019																				
Water	Well 05	Well 01	Sampling location	MultiPEC																				
47.75830			Longitude E																					
22.27844			Latitude S																					
16			Altitude																					
			Debit (lps)																					
6.7	6.7	5.1	Between	pH	Between 10	Electrical	Temperature	Turbidity	*Bicarbonate	Carbonate –	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia	
53.2	c.p.c	c.p.c	≤ 1600	7.5	≤ 500 mg/l	21	≤ 15°C	02.0 ^	6.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
26.7	c.p.c	c.p.c	≤ 500 mg/l	10	≤ 500 mg/l	10	≤ 15°C	10 ^	5.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
26	22	22	≤ 15°C	10 ^	≤ 500 mg/l	10 ^	≤ 15°C	02.0 ^	6.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
7.5	c.p.c	c.p.c	≤ 5 NTU	02.0 ^	Between 10	6.1	≤ 5 NTU	02.0 ^	6.1	*Bicarbonate	Carbonate –	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia
40.0	95.0	40.0	Between 10	6.1	≤ 500 mg/l	5.0	Between 10	6.1	6.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20.0	45.0	20.0	≤ 500 mg/l	5.0	≤ 500 mg/l	5.0	≤ 500 mg/l	5.0	5.0	Carbonate –	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia	
3.0	3.2	3.0	≤ 12 mg/l	1.6	≤ 12 mg/l	1.6	≤ 12 mg/l	1.6	1.6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12.0	7.0	14.0	≤ 200 mg/l	5.6	≤ 200 mg/l	5.6	≤ 200 mg/l	5.6	5.6	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia		
7	6	7	< 20 mg/l	c.p.c	< 20 mg/l	c.p.c	< 20 mg/l	c.p.c	c.p.c	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
10.5	9.4	10.5	≤ 250 mg/l	1.7	≤ 250 mg/l	1.7	≤ 250 mg/l	1.7	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
25	24	25	≤ 250 mg/l	05	≤ 250 mg/l	05	≤ 250 mg/l	05	05	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
50.0	90.0	50.0	≤ 50	05 ^	≤ 50	05 ^	≤ 50	05 ^	05 ^	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia							
0.4	0.1	0.4	≤ 0.3 mg/l	05.0 ^	≤ 0.3 mg/l	05.0 ^	≤ 0.3 mg/l	05.0 ^	05.0 ^	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
.	.	.	≤ 1.5 mg/l	4.0	≤ 1.5 mg/l	4.0	≤ 1.5 mg/l	4.0	4.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
.	c.p.c	c.p.c	≤ 0.01 mg/l	0.0 ^	≤ 0.01 mg/l	0.0 ^	≤ 0.01 mg/l	0.0 ^	0.0 ^	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
c.p.c	c.p.c	c.p.c	≤ 0.1 mg/l	05	≤ 0.1 mg/l	05	≤ 0.1 mg/l	05	05	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
c.p.c	c.p.c	c.p.c	≤ 50 mg/l	6.0	≤ 50 mg/l	6.0	≤ 50 mg/l	6.0	6.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
c.p.c	c.p.c	c.p.c	0/100ml	0.0 ^ y	0/100ml	0.0 ^ y	0/100ml	0.0 ^ y	0.0 ^ y	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
c.p.c	c.p.c	c.p.c	0/100ml	2	0/100ml	2	0/100ml	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
BushProof	BushProof	BushProof	Tested by	Institut Pasteur de																				
Design	Design	Design	Checking phase	Safety validation																				
Not Safe	Not Safe	Not Safe	Safety Check according to	Not Safe																				
The objective of water quality analyses																								
The structures in the detailed design file (APD) are a filter and disinfection unit																								
N/A																								
Serge RANAIVOJAONA, Director of BushProof																								
Individual responsible for the mitigation follow-up																								

Phase of construction of the WSS				Testing phases	
Vatovavy Fitovinany		Region		Region	
Vohipeno		District		District	
Andemaka		Commune		Commune	
9/21/2019	2/14/2019	2/14/2019	3/7/2018	3/9/2018	Test date
New water catchment S04 47.75833	Secondment 47.75834	New water 47.75833	Matitanana	Capitane	Sampling location
22.27835	22.27842	22.27835			Longitude E RANO
10	10	10			Latitude S
c.p.	2.2	4.2			Altitude
8.6	7.2	7.0			Debit.lps
92	96	92			Between
46	66	66			pH
26	25	25			Electrical
0.6	5.5	5.5			TDS (Total
36.6	95.0	110.0			Temperature
30.0	45.0	55.0			Turbidity
3.0	2.3	2.3			*Bicarbonate
4.0	2.0	3.0			Carbonate –
c.p.	6	7			Potassium –
95.0	9.0	10.0			Calcium –
6	11	6			*Sodium –
5.0	12.0	12.0			Chloride –
1.0	2.0	2.0			Sulfate –
4.0	3.0	3.0			Magnesium –
0.0	0.0	0.0			Total Iron
2.9	c.p.	c.p.			Fluoride – F-
8.3	c.p.	c.p.			Arsenic
1.8	c.p.	c.p.			Nitrite –
1.8	c.p.	c.p.			Nitrate –
	c.p.	c.p.			Coliform
	c.p.	c.p.			Escherichia
Institut Pasteur de	BushProof	BushProof	BushProof	BushProof	Tested by
Monitoring	Monitoring	Monitoring	Design	Design	Checking phase
Not Safe	Not Safe	Not Safe	Not Safe	Not Safe	Safety Check according to
The borehole or	Those borehole are not				Comments /
The connections are still cut until the problem is	As the rehabilitation of the water tank and distribution				FY 19 : Action taken / Mitigation measures /
In Q1, BushProof was notified by the CAO as the new manager of this system. The measures mentioned beside					FY 20: Action taken / Mitigation measures /
Serge RANAIVOJONA, Director of BushProof	Ranto RABEMANANTSOA - Regional Private Sector Officer (RPSO) of RANO				Individual responsible for the mitigation follow-up



Phase of construction of the WSS			Phase of detailed project design			Testing phases	
Yatovavy Fitovinany			Yatovavy Fitovinany			Region	
Vohipeno			Ifanadiana			District	
Kelilalina			Kelilalina			Commune	
9/14/2019	9/14/2019	9/14/2019	3/23/2018			Test date	
Filtration basin	Water kiosk in	Water tank in	Source Kianianomby			Sampling location	
47.57100	47.57567	47.57073	47.57073			Longitude E	
21.22742	21.23814	21.22831	21.22831			Latitude S	
724	637	69	61			Altitude	
66	69	69	62			Debit lps	
27	31	49	26			pH	
13	15	27	13			Electrical	
27	27	26	22			TDS (Total	
40	20	20	5			Temperature	
1	6	1	45			Turbidity	
0	0	0	20			*Bicarbonate	
1	0	0	0			Carbonate –	
2	3	1	14			Potassium –	
0	0	0				Calcium –	
2	0	8				*Sodium –	
0	0	0				Chloride –	
5	0	0	13			Sulfate –	
0	0	0	0			Magnesium –	
5	0	2	0			Total Iron	
2	0	2				Fluoride – F-	
0	0	0				Arsenic	
0	0	0	0			Nitrite –	
9	1	0	0			Nitrate –	
1	1	1	0			Coliform	
1	1	1	0			Escherichia	
Institut	Institut	Institut	BushProof			Tested by	
Monitoring	Safety	Safety	Design			Checking phase	
Not Safe	Safe	Safe	Not Safe			Safety Check according to	
The first 02 samples of the distribution and treated							
The main concern raised from							
N/A	Those data has already been taken into account in the						
N/A	N/A						
N/A	Ranto RABEMANANTSOA - Regional Private Sector Officer (RPSO) of RANO WASH in						
Individual responsible for the mitigation follow-up							

Phase of detailed project design (APD)				Testing phases	
Vatovavy Fitovinany				Region	
Ikongo				District	
Ambatofotsy				Commune	
6/20/2018	6/19/2018	6/19/2018	6/20/2018	Test date	
Source	Source	Source	Source	Sampling location	
47.49578	47.49936	47.49617	47.47533	Longitude E	
21.79108	21.76917	21.77244	21.80022	Latitude S	
379	389	393	390	Altitude	
9	3	5	5	Debit lps	
5.3	5.1	5.2	5.3	Between	pH
70	30	80	50	≤ 1600	Electrical
35	15	40	30	≤ 500 mg/l	TDS (Total
19	19	20	18	≤ 15°C	Temperature
5	5	5	5	≤ 5 NTU	Turbidity
40	30	20	50	Between 10	*Bicarbonate
20	15	20	25	≤ 500 mg/l	Carbonate –
14	12	20	0	≤ 12 mg/l	Potassium –
26	10	20	13	≤ 200 mg/l	Calcium –
6	6	20	7	< 20 mg/l	*Sodium –
86	93	20	11	≤ 250 mg/l	Chloride –
21	13	23	23	≤ 250 mg/l	Sulfate –
40	40	20	10	≤ 50	Magnesium –
01	01	20	07	≤ 0.3 mg/l	Total Iron
02	01	20	01	≤ 1.5 mg/l	Fluoride – F-
1	1	20	1	≤ 0.01 mg/l	Arsenic
20	20	20	20	≤ 0.1 mg/l	Nitrite –
20	20	20	20	≤ 50 mg/l	Nitrate –
20	20	20	20	0/100ml	Coliform
20	20	20	20	0/100ml	Escherichia
BushProof	BushProof	BushProof	BushProof	Tested by	
Design	Design	Design	Design	Checking phase	
Not Safe	Not Safe	Not Safe	Not Safe	Safety Check according to	
Those results belongs to the 03 systems of Ambatofotsy				Comments /	
Those works have almost been achieved in Q3, and the in the left data have all been taken into account for their				FY 19 : Action taken / Mitigation measures /	
N/A				FY 20: Action taken / Mitigation measures /	
Ranto RABEMANANTSOA - Regional Private Sector Officer (RPSO) of RANO WASH in Vatovavy Fitovinany				Individual responsible for the mitigation follow-up	

Phase of construction of the WSS				Testing phases	
Yatovavy Fitovinany				Region	
Ikongo				District	
Ambatofotsy				Commune	
9/17/2019	9/17/2019	9/17/2019	9/17/2019	Test date	
Social water	Water tank	Social water	Water Tank in	Sampling location	
	47.48708		47.49369	Longitude E	
	21.78900		21.76389	Latitude S	
	263		278	Altitude	
				Debit lps	
				Between	pH
40	44	30	22	≤ 1600	Electrical
20	22	15	11	≤ 500 mg/l	TDS (Total
25	25	27	25	≤ 15°C	Temperature
02.0.0.0	02.0.0.0	06.0.0.0	02.0.0.0	≤ 5 NTU	Turbidity
0.0.0.0	02.0.0.0	02.0.0.0	0.0.0.0	Between 10	*Bicarbonate
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 500 mg/l	Carbonate –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 12 mg/l	Potassium –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 200 mg/l	Calcium –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	< 20 mg/l	*Sodium –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 250 mg/l	Chloride –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 250 mg/l	Sulfate –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 50	Magnesium –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 0.3 mg/l	Total Iron
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 1.5 mg/l	Fluoride – F-
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 0.01 mg/l	Arsenic
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 0.1 mg/l	Nitrite –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	≤ 50 mg/l	Nitrate –
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0/100ml	Coliform
0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	0/100ml	Escherichia
Institut	Institut	Institut.Pasteur.de	Institut.Pasteur.de	Tested by	
Safety	Safety	Safety validation	Safety validation	Checking phase	
Safe	Safe	Not-Safe	Not-Safe	Safety Check according to	
Apart from temperature				Comments /	
N/A	N/A	Presence of coliform despite the fact that the		FY 19 : Action taken / Mitigation measures /	
N/A	N/A	Arrêter la distribution d'eau jusqu'à ce que le gestionnaire soit effectivement en place pour		FY 20: Action taken / Mitigation measures /	
		The measures mentioned beside have been carried out and the IPM interventions are		Individual responsible for the mitigation follow-up	
		Ranto RABEMANANTSOA - Regional Private Sector Officer (RPSO) of RANO WASH in Yatovavy Fitovinany			



Phase of construction of		Testing phases	
Alaoira Mangoro		Region	
Moramanga		District	
Beforona		Commune	
6/12/2019		9/17/2019	9/17/2019
Beforona, Terrain baolina		Social water	Water tank
		47.47667	47.47667
		21.80319	21.80319
		527	527
		6.9	6.9
7.7		6.9	pH
65		41	Electrical
65		21	TDS (Total
19		26	Temperature
5.2		0.02	Turbidity
3.7		24.4	*Bicarbonate
3.0		20.0	Carbonate –
2.4		1.3	Potassium –
9.6		8.0	Calcium –
0.0		0.0	*Sodium –
3.5		0.05	Chloride –
0.0		2	Sulfate –
4.2		0.05	Magnesium –
0.0		0.05	Total Iron
4.0		0.05	Fluoride – F-
0.0		0.01	Arsenic
5.0		0.0	Nitrite –
0.0		0.0	Nitrate –
1.0		0/100ml	Coliform
1.0		0/100ml	Escherichia
Institut Pasteur de		Institut	Tested by
Safety validation		Safety	Checking phase
<b>Not Safe</b>		<b>Safe</b>	Safety Check according to
The water is		Apart from temperature	Comments /
<b>Q3 Update:</b> As the main water tank fed by the two		N/A	<b>FY 19 : Action taken / Mitigation measures /</b>
The manager has always shared his difficulties in		N/A	<b>FY 20: Action taken / Mitigation measures /</b>
Stephane RALAINONY - Regional Private Sector Officer (RPSO) of RANO			<b>Individual responsible for the mitigation follow-up</b>

Testing phases			Region	District	Commune	Test date	Sampling location	Longitude E	Latitude S	Altitude	Debit lps	pH	Electrical	TDS (Total)	Temperature	Turbidity	*Bicarbonate	Carbonate –	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia	Tested by	Checking phase	Safety Check according to	Comments /	FY 19 : Action taken / Mitigation measures /	FY 20: Action taken / Mitigation measures /	Individual responsible for the mitigation follow-up
Between	≤ 1600	≤ 500 mg/l	≤ 15°C	≤ 5 NTU	Between 10	≤ 500 mg/l	≤ 12 mg/l	≤ 200 mg/l	< 20 mg/l	≤ 250 mg/l	≤ 250 mg/l	≤ 50	≤ 0.3 mg/l	≤ 1.5 mg/l	≤ 0.01 mg/l	≤ 0.1 mg/l	≤ 50 mg/l	0/100ml	0/100ml																			
8/28/2019	Water	8/28/2019	6/12/2019	6/12/2019	6/12/2019	6/12/2019	CSB II. Beforona (sampling tank)					7.8	57	57	20	1.7	6.1	5.0	0.2	6.8	n.c	4.3	0.05	16.8	0.05	0.4	0.01	0.05	6.0	1	1	Institut Pasteur de Madagascar	Safety validation	Safe	The temperature exceeds the			
												7.8	55	55	21	1.1	12.2	10.0	0.5	4.8	n.c	4.3	1	25.2	0.05	0.4	0.01	0.05	3.0	1	1	Institut Pasteur de Madagascar	Safety	Safe	Same point			
												7.3	50	50	20	1.2	6.1	5.0	0.8	7.6	n.c	5.7	0.05	33.6	0.05	0.3	0.01	0	0.2	1	1	Institut Pasteur de Madagascar	Safety	Safe	The rate of			
												7.5	80	72	21	1.0	48.8	0.05	0.3	10.8	n.c	13.8	4	15.0	0.1	0.1	0.01	0.05	0.4	1	1	Institut Pasteur de Madagascar	Follow-up	Safe	Between the June 12, 2019			
												7.4	78	70	21	1.0	36.6	0.05	0.1	11.2	n.c	13.1	1	11.0	0.3	0.2	0.01	0.05	0.5	1	1	Institut Pasteur de Madagascar	Follow-up	Safe	Between the June 12, 2019			



Testing phases		Region	District	Commune	Test date	Sampling location	Longitude E RANO	Latitude S	Altitude	Debit.lps	pH	Electrical	TDS (Total	Temperature	Turbidity	*Bicarbonate	Carbonate –	Potassium –	Calcium –	*Sodium –	Chloride –	Sulfate –	Magnesium –	Total Iron	Fluoride – F-	Arsenic	Nitrite –	Nitrate –	Coliform	Escherichia	Tested by	Checking phase	Safety Check according to	Comments /	FY 19 : Action taken / Mitigation measures /	FY 20: Action taken / Mitigation measures /	Individual responsible for the mitigation follow-up
6/3/2019	Social				3/7/2019	Water tank					6.4	51	37	23	0.1	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	Villanova	Monitoring	Not Safe					
					3/7/2019	Social					6.9	35	16	27	0.1	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	c.p.	Villanova	Monitoring	Not Safe					
					4/11/2019	Water tank					7.5	34	34	9	5.1	12.2	c.p.	1.8	6.4	c.p.	5.0	6	21.0	0.1	0.5	0.0	0.0	0.0	0.0	Institut	Monitoring	Not Safe					
					4/11/2019	Social					7.4	34	34	9	2.3	12.2	c.p.	1.2	6.4	c.p.	5.3	3	16.8	0.1	0.5	0.0	0.0	0.0	0.0	Institut	Monitoring	Not Safe					
					6/3/2019	Water tank					7.5	66	66	10	4.8	3.7	3.0	1.3	21.2	c.p.	12.1	3	40.5	0.1	0.3	0.0	0.0	0.0	Institut	Safety	Safe						
					6/3/2019	Water tank					7.5	66	66	10	4.8	3.7	3.0	1.3	21.2	c.p.	12.1	3	40.5	0.1	0.3	0.0	0.0	0.0	Institut	Safety	Safe						
					6/3/2019	Water tank					7.5	66	66	10	4.8	3.7	3.0	1.3	21.2	c.p.	12.1	3	40.5	0.1	0.3	0.0	0.0	0.0	Institut	Safety	Safe						
					6/3/2019	Water tank					7.5	66	66	10	4.8	3.7	3.0	1.3	21.2	c.p.	12.1	3	40.5	0.1	0.3	0.0	0.0	0.0	Institut	Safety	Safe						
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					6/3/2019	Water tank					7.5	66	66	10	4.8	3.7	3.0	1.3	21.2	c.p.	12.1	3	40.5	0.1	0.3	0.0	0.0	0.0	Institut	Safety	Safe						
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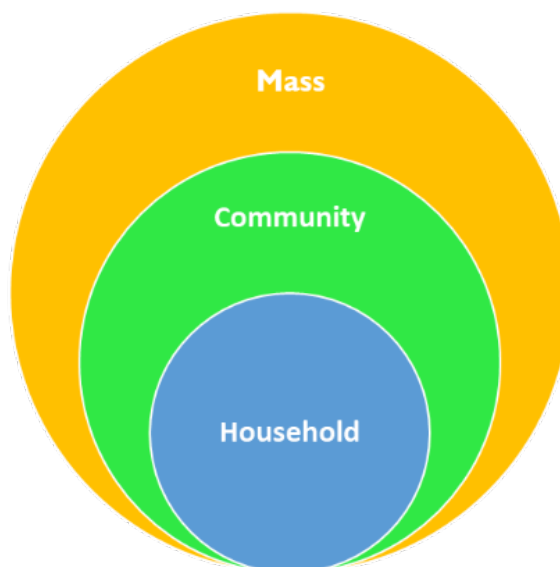
## ANNEX 16: GROW-UP STICKER STRATEGY REVIEW

### BACKGROUND

RANO WASH updated its behavior change strategy in 2019 based on research conducted by the London School of Tropical Medicine and Hygiene, and best practice, tools and methodologies from behavior change strategies implemented by the various previous WASH projects in Madagascar. After the first implementation cycle, from April to October 2019, the project conducted a review in order to identify successes for further scaling up, specifically the Grow-up sticker concept that touched the household level, as well as limiting factors to implementing the strategy successfully.

### RANO WASH BEHAVIOR CHANGE STRATEGY

RANO WASH's behavior change strategy is implemented at three levels: household contact points, community contact points and mass contact points that influence the cognitive, emotional, reactive and habitual factors of the six key behaviors. Activities are conducted in an interactive and participatory manner, with the aim of moving away from one-sided message delivery.



The main activities include:

Level	Key activities
Mass	Local radio campaigns Service and product advertisements in the mass media Messaging using mobile platforms  <b>Total Sanitation Community Driven and Follow up Mandona</b>
Community	Participatory Community Theatre Progressive Progress Contests and Awards for Village Savings and Credit Groups and Households (AVEC) Community marketing campaigns for targeted WASH products  <b>Community Mobilization Events</b>
Household	Home visit to target households

## MODE OF INTERVENTION

Activities and monthly household monitoring and troubleshooting are carried out by community health volunteers and local promoters who are trained to ensure the representation and participation of different groups in the community, especially women, girls and other vulnerable populations. The use of local promoters aims to reduce the workload of Community Agents and to explore the possibility of using local promoters and natural leaders as community sales agents for WASH products and services.

## GROW-UP STICKER

In order to capitalize on the positive motivating factors of pride, status and self-esteem among women and households, the project developed the concept of a "Leading Household" award. Households earn a sticker when they practice and maintain one of the six key RANO-WASH behaviors. Local promoters and CHWs verify the behavioral practices across six household visits. Households seek to earn all six stickers to complete the Household "Flower", which is displayed outside their home.



## REVIEW PURPOSE AND OBJECTIVES

The main purpose of this review is to improve the implementation of behavior change activities. It was conducted as a process review, whose objectives were to:

1. **Assessing implementation fidelity to understand the reasons for any discrepancies:** the original design is based on research findings and evidence on which strategies work and which do not. If it is not respected, the project risks not achieving the expected results in terms of change. This review therefore tries to understand and address the difficulties encountered in implementation that created the possible gaps. Aspects related to duration and frequency of visits were considered.
2. **Identifying methods and tools that are more efficient and cost-effective:** local promoters and local implementation teams often have the creativity to modify the implementation according to the realities they encounter and achieve positive results more quickly. While it is important to respect the initial assumptions, the team is given the opportunity to also learn from the process and see what tips are interesting and how to replicate them.
3. **Assess quality of delivery by identifying challenges encountered by the implementation team in finding solutions:** the implementation is carried out at the moment by community volunteers who are local promoters, who will later become promoters/agents for selling products. It is important to see specifically whether the collaboration with local promoters is going as planned and whether there are any

particular difficulties to be taken into account, especially related to their training and motivation.

4. **Measure participant responsiveness to the strategy to ensure that the project is addressing the right drivers to trigger changes by integrating feedback from households.** Even if it is not yet an impact evaluation, it is important to have the feedback from the households on the project activities and to appreciate if the activities are heading towards the expected results, i.e. the change of behavior within the households.

## METHODOLOGY

This evaluation used qualitative research methods and a purposive sampling strategy.

It was carried out on a sample of 11 communes (one commune per intervention district) that received RANO WASH's BC activities.

At the level of each commune, a focus group with eight to twelve promoters was conducted as well as observations and interviews with three households.

This totaled in 11 focus groups and 33 semi-structured interviews.

The project implementation team also participated in the review through the field agents and their supervisors in charge of each district.

## RESULTS AND KEY FINDINGS

The main findings of the evaluation:

- **Households visits seem to be more effective in accelerating behavior change, compared to group discussions and mass campaigns.** According to local promoters, consistent visits to households empowers households to change rapidly, as household members are able to ask questions and interact with their promoter, as well as troubleshoot any barriers to a particular change in behavior. However, the sustainability of these changes has not been assessed. More evidence and evaluation will be needed to explore this question.
- **The approach using small, feasible and important actions seem also to be very productive.** Small actions are very easy solutions that the household can undertake immediately to improve its behavior or generate better habits. These ranges from designing and building handwashing stations made from bamboo, light and resistant toilet cover, shelves for water and kitchen items to keep them off ground and clean.





- **One strong driver for change is the fact that the local promoters themselves are the first to practice the desired behaviors.** As they are recognized as leaders within the community, they have good influence especially among the households that they are responsible for. This validates the project's assumptions on selecting community members with strong leadership skills as the project's local promoters.
- **Children's role in behavior change has also been proven to be effective, as they have the ability to influence their parents in a positive manner.** However, at this point, it is not sure if this will have long-lasting effects, and if those influences will have counter-effects to those children.
- **Implementing the Grow-Up sticker process is quick when it is done in an ODF community, because two behaviors are already practiced: use of toilet and handwashing with soap.** However, it is also noted that conducting the process in a non ODF community can also facilitate the achievement of ODF status, maybe not as quickly as with CLTS. However, this is a potential solution that can be explored further in larger villages where the project has encountered difficulties to implement CLTS, and could be combined with market-based approaches (sanitation and water).
- **The existence of community ground rules is also effective,** as those rules defined by community members themselves are enforced and respected, and are based on the strong sense of belonging that is really important in the rural communities. Institutional involvement is also a key driver, especially at the Commune and Fokontany level.
- **Self-esteem and pride are indeed effective to promote changes.** For households who obtained the six petals, they proudly considered themselves as "certified" or "graduated", and the neighboring households envy those who have the petals and ask to be given the same petals.
- **Conducting the process with non-volunteer households was not effective.** The households should demonstrate a willingness to change before any activity can be done. Cases where local promoters decided to accompany non-volunteer households were met by failures. This does not mean that these households will never change. This only means that they were not in the right mindset to change when approached during these visits. These non-adopters households will be targeted through pure marketing activities and also through community ground rules and governance activities that will ultimately influence them to change.
- While the project did not plan to use one-sided delivery of sensitization and education as a mean to promote changes, the evaluation reveals that it is still difficult to remove this habit of educating people from local promoters, as some of them still use education and simple messaging to promote changes. This affects adherence to the project's prescribed strategy.



- **The tracking sheets used by local promoters were deemed to be too complicated and difficult to fill.** The project will improve these sheets to make them easier to fill.
- **Menstrual hygiene is one of the most difficult behavior to address,** due to taboos surrounding menstruation.
- **Linking households with WASH service providers such as local masons, water service providers or local seamstresses remains a challenge even if good progress is made towards this model,** especially linking households to local masons. However, the project still needs to improve its geographical coordination and make sure that activities are consistent and complementary within an area to make it possible to facilitate

## RECOMMENDATIONS AND NEXT STEPS

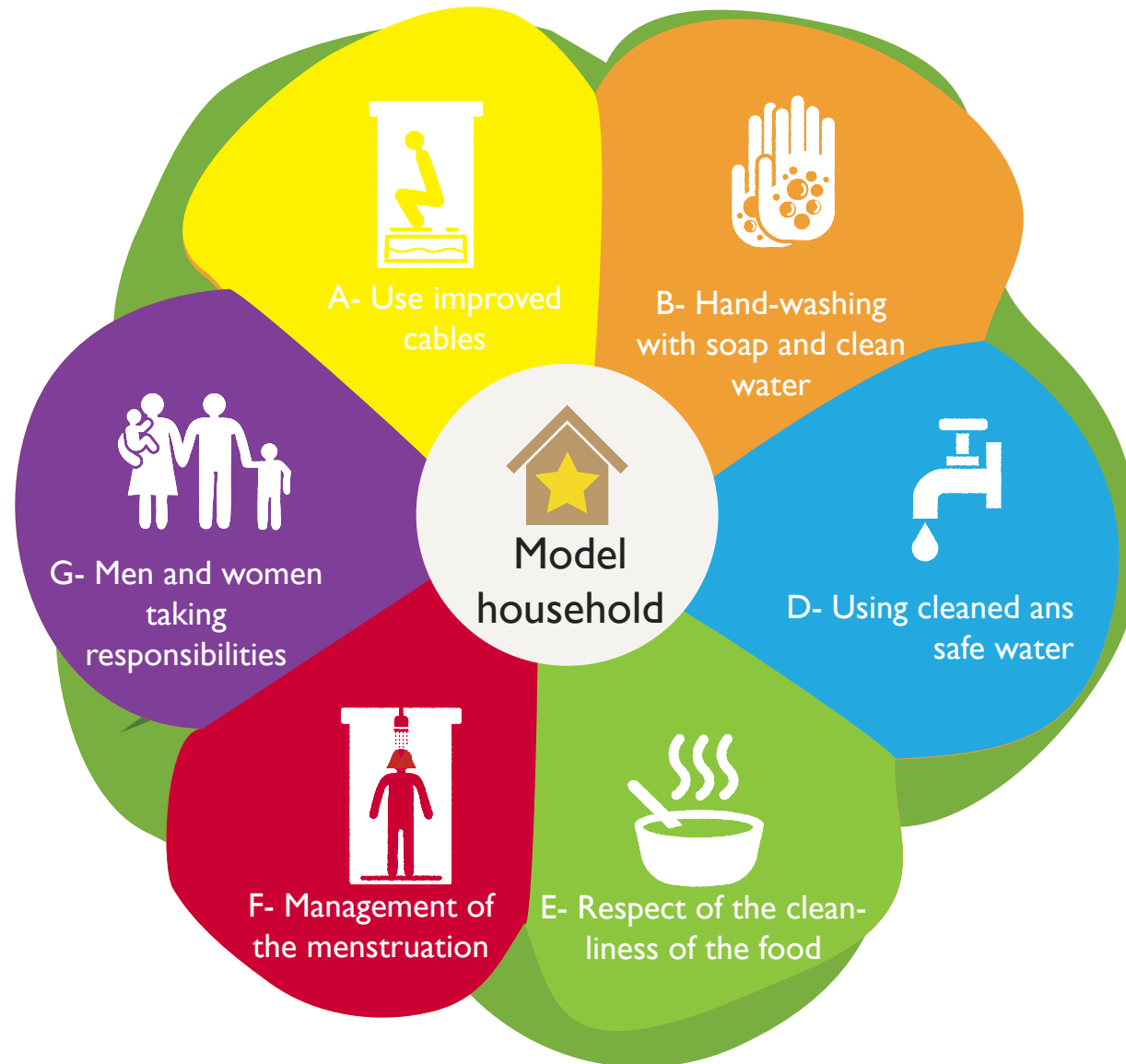
This review has helped us to assess its progress towards sustainable change. The following improvements will be taken into consideration:

1. **Improve training and motivation for local promoters** including the following readjustments:
  - Increase duration of training to allow local promoters to master the different techniques used during the household visits: this includes duration and frequency of visits
  - Focus the training in helping local promoters to identify small actions and small means that the households will be able to follow easily to develop habits: this can range from modification of the environment to find solutions to financial issues or to connect with appropriate persons in the community to help solve their issues
  - Design and give recognition certificates for local promoters to motivate them
2. **Only choose households that express a desire to participate** as households to benefit from household level support
3. **Conduct the intervention in ODF and non ODF communities.** Moreover, the process will be prioritized in Communes where RANO WASH is implementing the Water PPP Model
4. **Tracking sheets will be improved to make it simpler,** while a handbook will be designed and given to local promoter to help them facilitate the discussions with households
5. **Make sure how the other activities in the whole BC strategy such as local radio campaigns, community campaigns, VSLA contests...align and complement with the household activities and Grow-Up sticker concept.**

As next steps, the following activities and timeline will be undertaken:

<b>Activities</b>	<b>Timeline</b>
With LSHTM's insights, develop improved sets of activities to be conducted at household levels	Early quarter
With MEAL's team, update and improve the tracking sheets to be used by local promoters	Early quarter
Finalize the handbook for local promoters	Quarter 2
Design and finalize the new tracking sheets	Quarter 2
Organize new trainings for local promoters	Quarter 2
Implement a new cycle of activities within households	Quarter 3 and 4

## ANNEX 17. GROW UP STICKER IMPLEMENTATION GUIDE MG & EN



## BOOK PROMOTING BEHAVIOR CHANGES OF HOUSEHOLDS

## BOOK GUIDELINES

### ABOUT THE BOOK

The purpose of the book is to facilitate the mobilization of the households during home and group interviews, making the household a GUIDEer and will receive the six Flower petals in accordance with the requirements of RANO WASH. The Community Agents can ask any questions he or she thinks will facilitate the conversion related to behavior changes beyond the questions in the book.

Book pages are of two types:

-Pages with PICTURES: These page are intended for the households to visualize the steps, the goals they want to achieve, the steps they will take to reach that goal, and the flower arrangement associated with the behavior is discussed.

-Pages Questions and Instructions: These pages are dedicated to questions that local Community agents can ask to facilitate the household triggering. The answers do not need to be recorded but these questions are intended to facilitate the expression, participation of the household during the discussion, decision-making and movement.

### THESE 6 BASIC BEHAVIORS CHANGES PROMOTED BY RANO WASH

- 1- Uses a 'refurbished' bathroom - that is, clean - covered - with hand washing, so that it is "not shared with other households"; and toddlers who can't use the toilet use a pot that doesn't eat.
- 2- Wash hands with soap: (i) before cooking, (ii) before eating, (iii) before feeding or breastfeeding, (iv) after fertilization, (v) after feeding a child
- 3- Uses clean and safe water to: (where water works WASH facilities) to limit the supply of drinking water by water management companies; (in unincorporated municipalities) boiling water before use, or, use any means to purify and secure the water, and to keep the water in a clean and sanitary place

4- Respect for food hygiene, so home-care providers, before eating it, will: (i) wash fruits and vegetables in safe, clean water, (ii) cook well, (iii) cover the food

5- Managing the menstrual cycle, so that women and girls in the household: (i) regularly clean and replace hair during menstruation, (ii) wash the soap and soak it in the sun; instead, the household is (iii) - openly discussing menstrual problems as needed

6- Men and women play a role in keeping the Water- Sanitation-Hygiene services safe; and men and boys are responsible for improving health/nutrition and WASH at home.

### NOTES TO THE COMMUNITY AGENTS

Whenever you first meet a household or a group, it is always best to say:

-About the:Volunteers working with the municipality and the RANO WASH Project, co-ordinating and mobilizing the households to become a GUIDEing household in the Water - Sanitation and Hygiene environment.

- RANOWASH Project: Supported by the American people for the purpose of improving Water - Sanitation and Hygiene in rural areas.

- Targeted households:Whichever are receptive, households with children under the age of 5 are given priority. Change according to the attitude being talked about:

-The time for the interview to be held, that is, during or close to the time the household is performing the behavior referred to

-The place in the home for a conversation or a visit, the place where the behavior take place

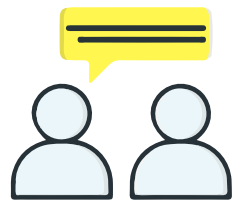
- The householder should consult, i.e., those involved in the first behavior and all decision makers

# Which of these pictures is the closest to your current situation?



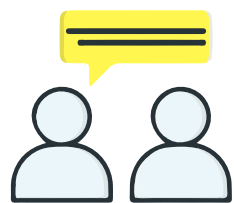
# Action A: Use a 'safe' latrine and do not share it with other households

## DISCUSSION GUIDE



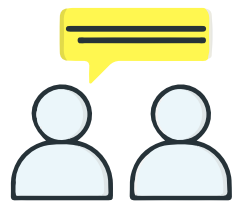
What is your latrine like (walls, doors, floors, pits, etc.)? Why?

*(If they use latrine, the interview is conducted near the latrine, whether the latrine is clean or not)*



What are the challenges when using this defecation point:

- Does it smell?
- Is the pit easily filled?
- Is it narrow?
- Is it easy to clean?
- Is it easy to collapse?
- Are there many users?



What effect does it have on you?

# What are some of the solutions you could work on? Is there another solution?



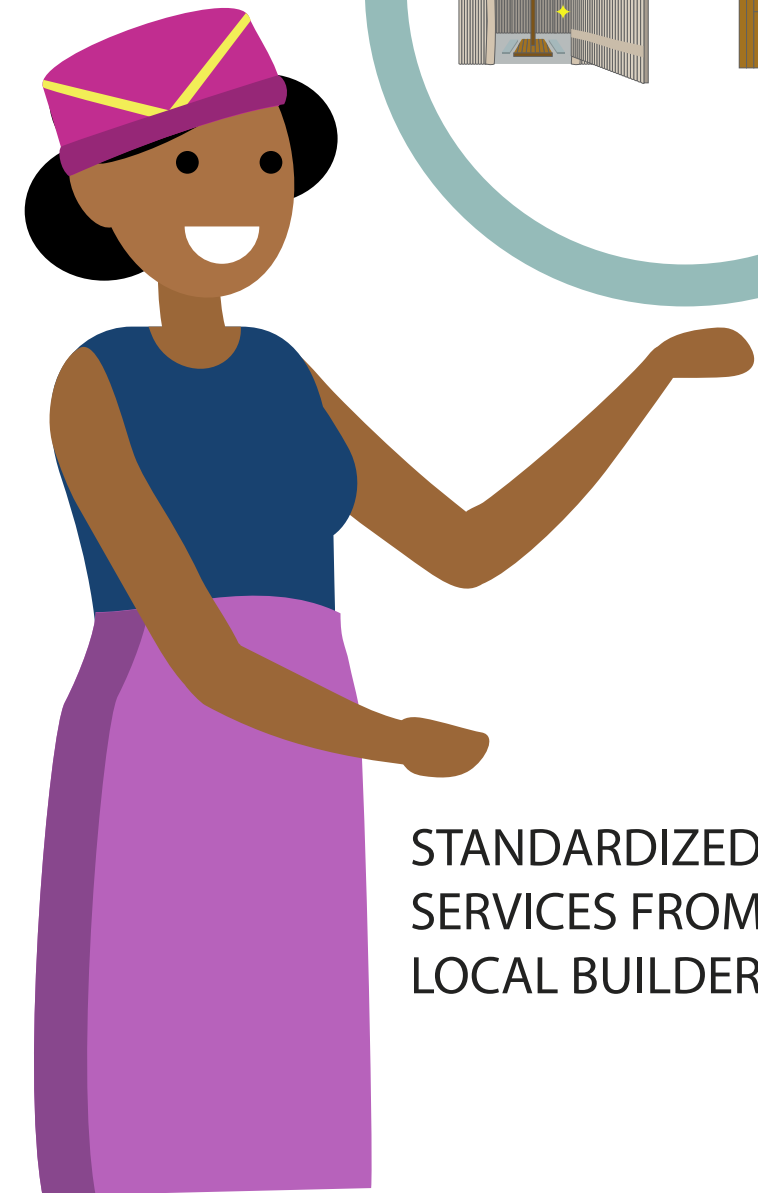
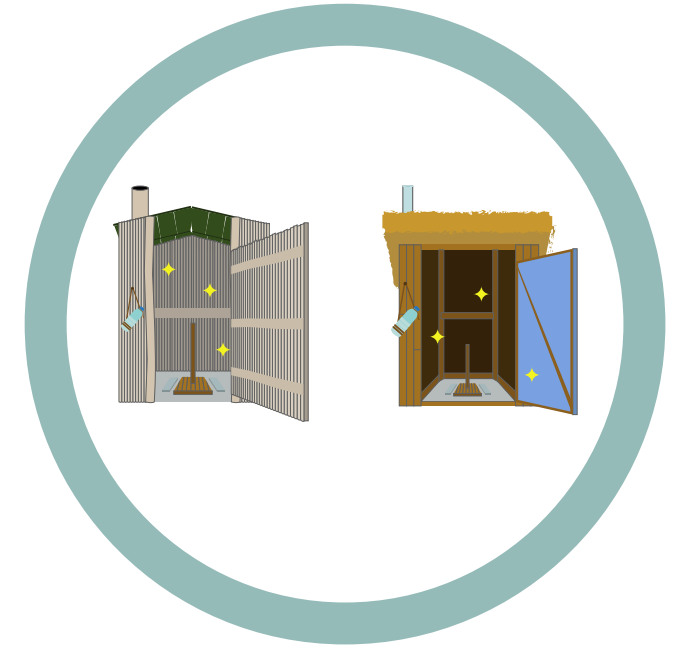
Sing up for VSLA membership



Hire a standardized latrine builder



Men and women building latrines together



STANDARDIZED LATRINE SERVICES FROM THE LOCAL BUILDER



# Scenario A: Use Non-invasive and non-shared latrines

## DISCUSSION GUIDE (Continued)

 What is your solution to solve these problems?

 If you have any ideas, here are some solutions that I can share with you, would you be interested in?

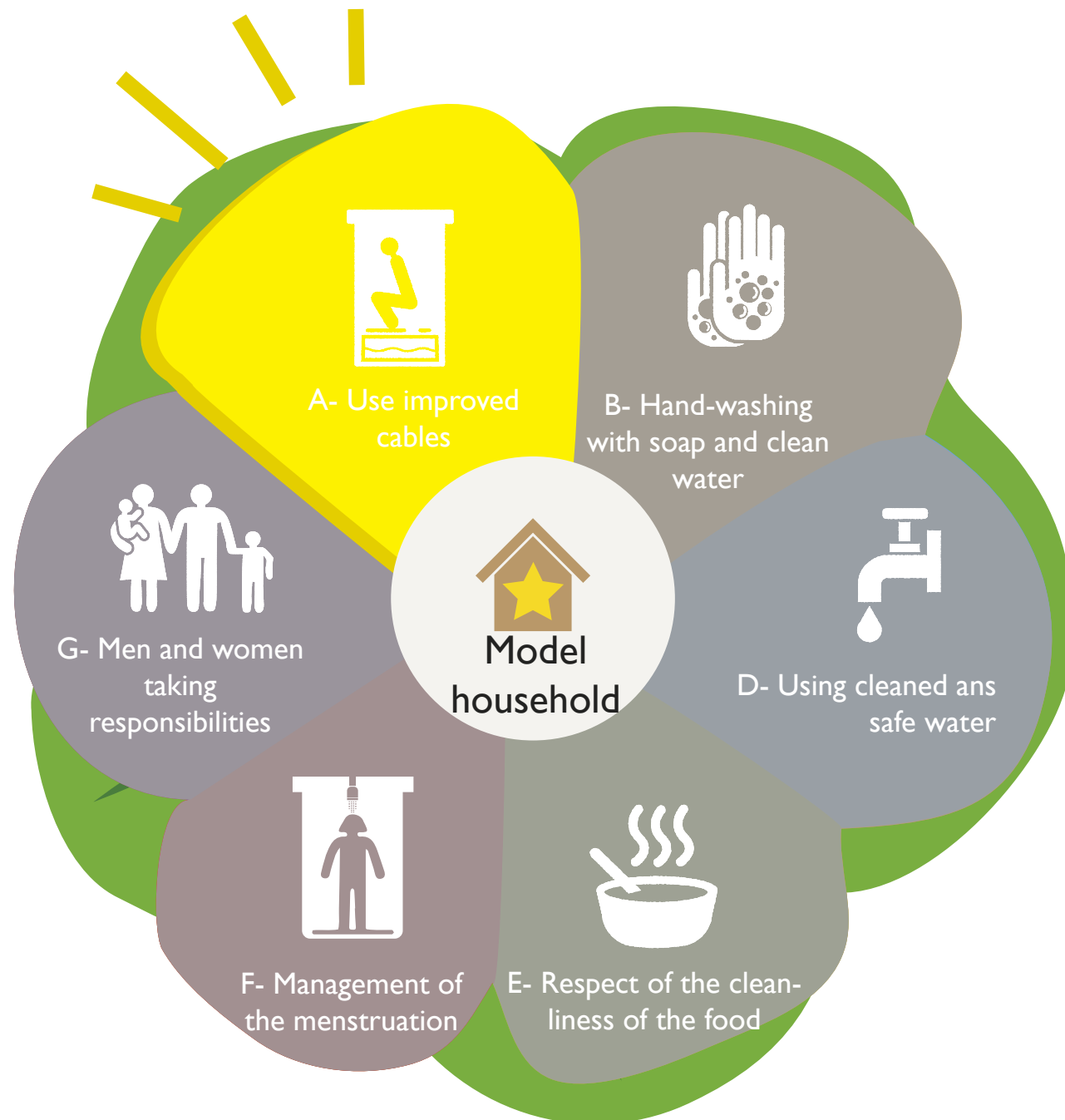
*if the household is interested, it can be decorated according to the pictures in the background (VSLA – Local builder, etc.)*

 To be in touch with the nearest "local builder" .....

 To contact the Community Agent / PSP can be contacted to talk about VSLA:  
.....

 What is the best solution for you to get the latrine you want?

# Symbol of the Model household - Yellow Petal if using a "safe" latrine



Congratulations on getting the yellow flower!  
You already look like a real Model household!!



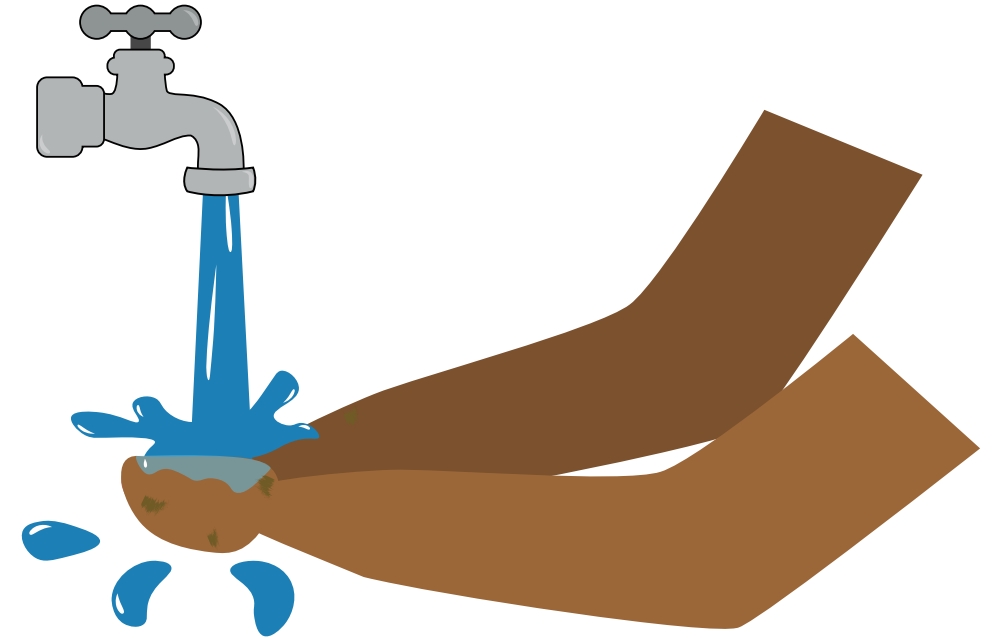
# **Activity A: Use non-invasive (washable - covered – with hand-washing device) and not shared latrine**

**When using a non-invasive (washable - covered – with hand-washing device) and not shared latrine in your household, we will decorate the household with **YELLOW** petal.** The goal is to complete all the flower petals to testify the household is truly a thriving one:

## **MODEL HOUSEHOLD**

*When giving the petal, the household will be asked about its satisfaction and the changes it has made.*

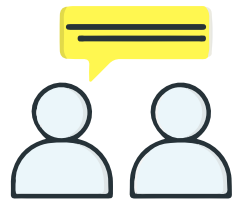
**Which of these pictures is the closest to your current situation?**



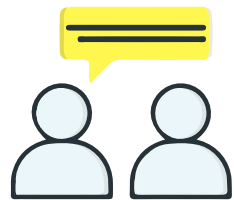
# Action B: Wash hands with soap

## DISCUSSION GUIDE

*Interviews are held near the washroom, if any*

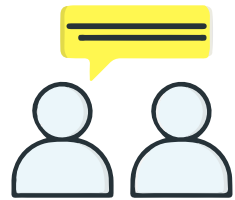


How do you wash your hands?  
What do you use?



*(If washing your hands without soap)* What's the problem with this hand wash? :

- How long does it take to wash hands?
- Is it easy to remove dirt from the hands?
- Does it remove invisible pollutants such as germs that can irritate the stomach?

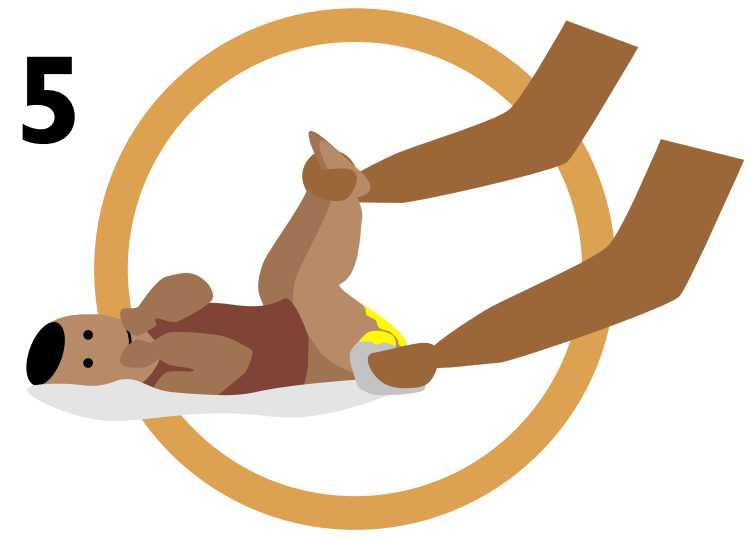
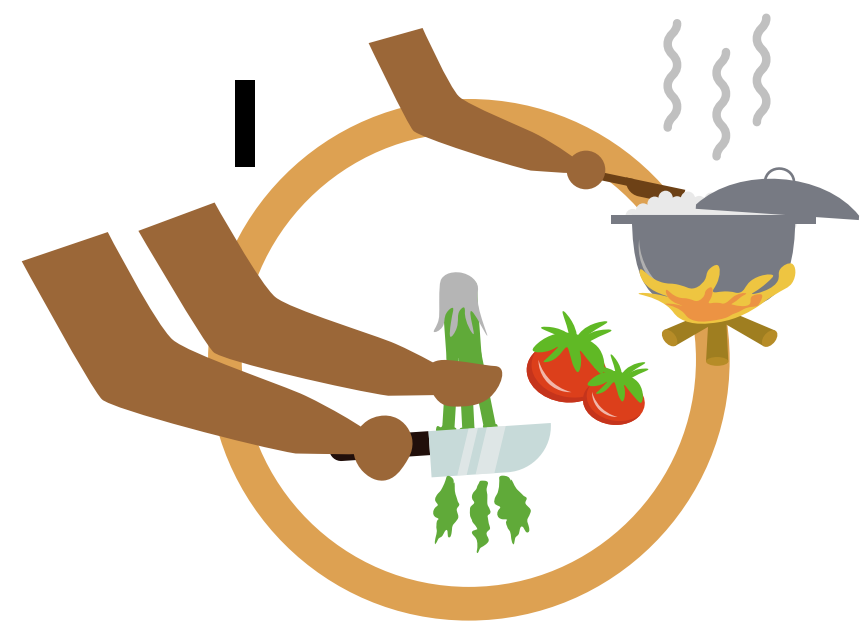


What is the solution?

I have a suggestion for you **Use soap: just a little less than a minute and remove all impurities (both visible and invisible), at a reasonable price.** To facilitate this, there are hand washing devices and soaps that may interest you.

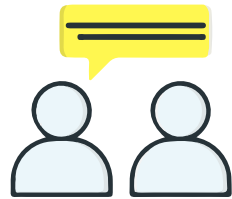
Look at this! You can make it or even buy!

# Which circumstance in these pictures do you really wash your hands for?

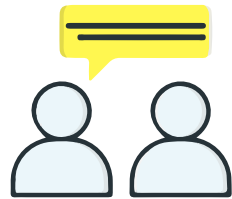


# Action B: Wash hands with soap

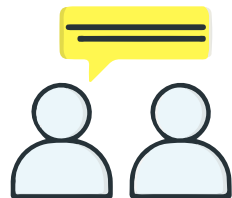
## DISCUSSION GUIDE



How often do you wash your hands? Why?



What other times are we supposed to wash our hands that has not been mentioned?



... You are right, to sum up these are the 5 basic times to wash your hands (*background pictures to show to the household*)

**Let's both of us a hand wash with soap and do it properly (demonstration)**

*(Check out hand washing and help remedy for hand hygiene techniques)*

# Model Household – Orange petal if washing hands with soap



Congratulations on getting the orange petal! It already looks like to be a model household!





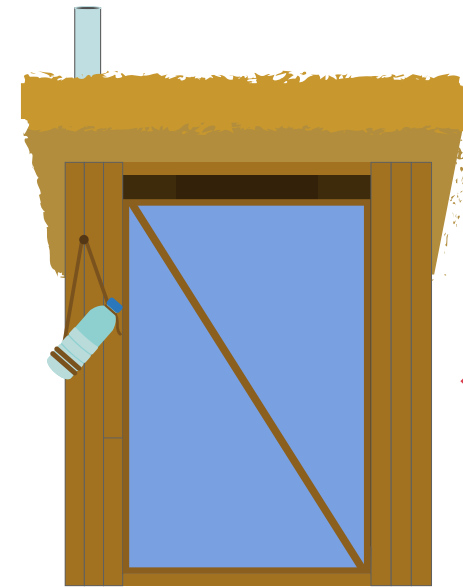
## **Action B: Handwashing with soap**

When your household is **washing hands with soap at the 5 basic times**, we will label it with an ORANGE petal. The goal is to have all the petals to certify that the household is truly a thriving home:

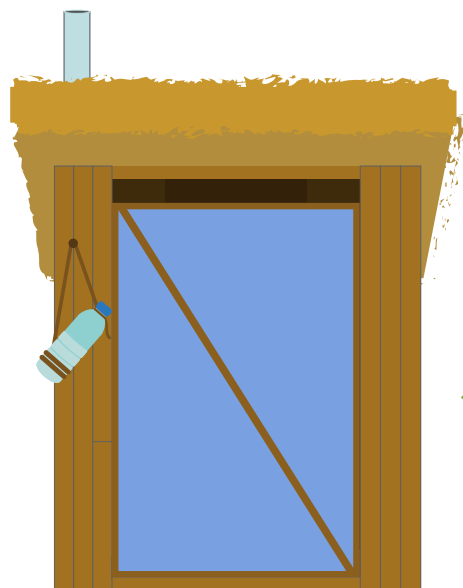
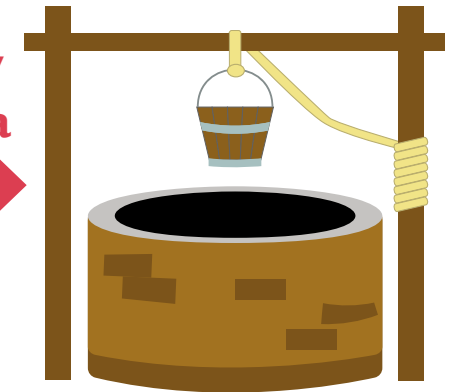
**MODEL HOUSEHOLD.**

*When giving the petal, the home will be asked about its satisfaction and the changes it has made.*

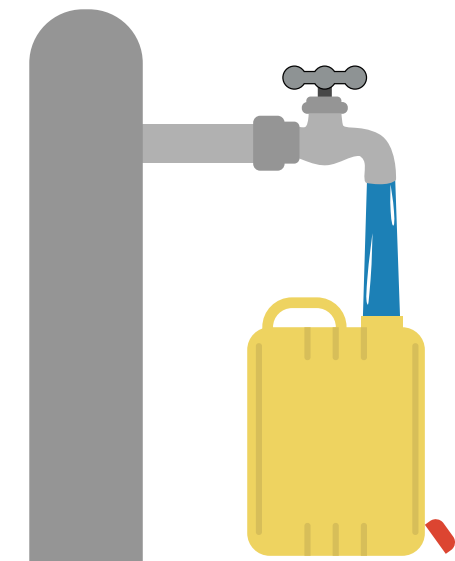
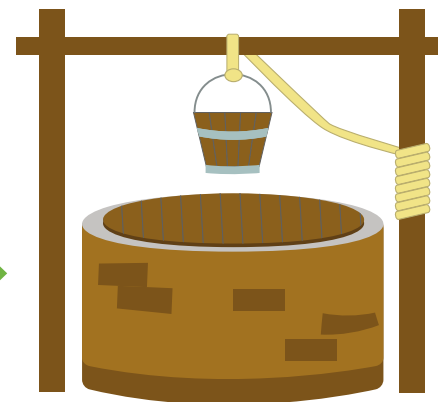
# Which of these pictures is the closest to your current situation?



Latsaky ny  
20 metatra

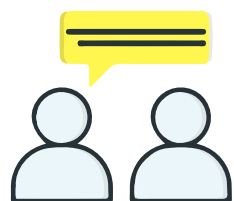


20 metatra

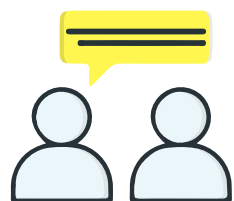


# Action D: Use safe water

## DISCUSSION GUIDE

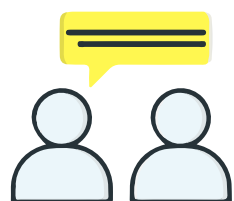


How much water do you take?  
*(if possible visit the water fountain together)*



*(if not a protected well)* What is the problem with this drainage system?

- Is it dirty?
- Is it far?
- Is it difficult to remove?

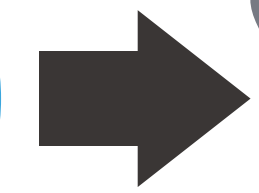
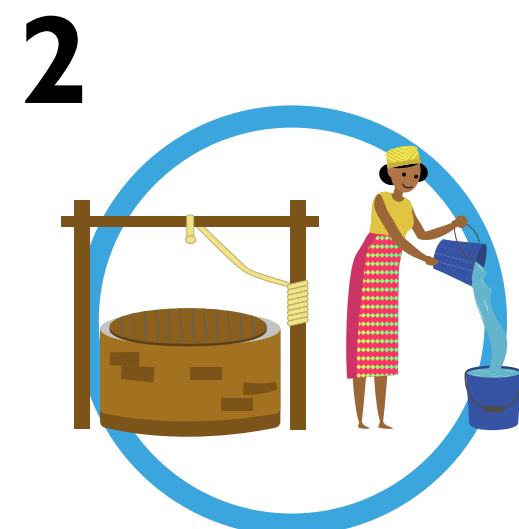
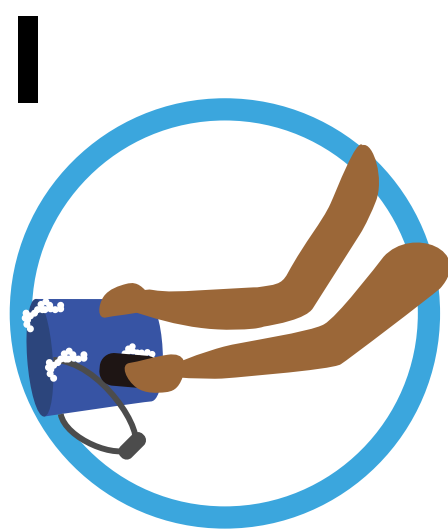
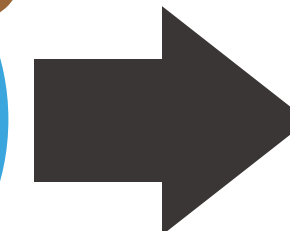
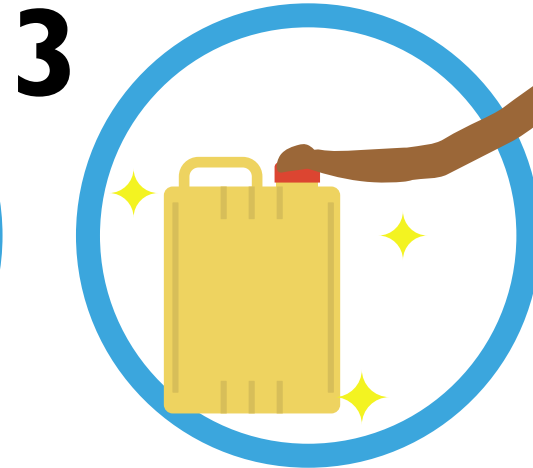
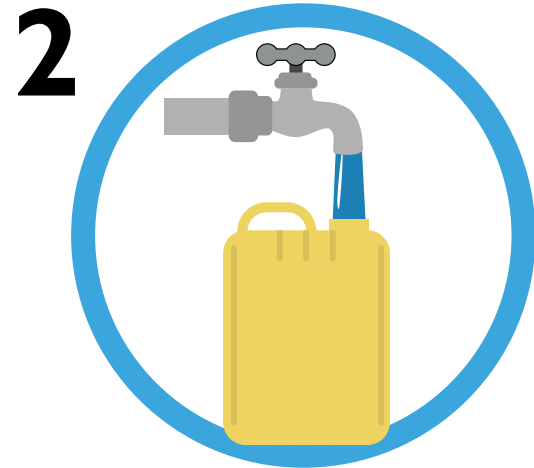
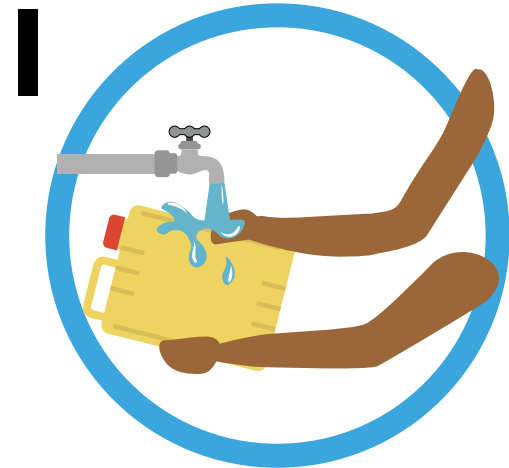


How does it affect you? What is the best solution to solve this problem? *(If there is a RANOWASH system)* If you are interested, RANO WASH can facilitates access to water for your household, at a cost.....Ar



What is the best solution for you to get your household safe and cleaned water?

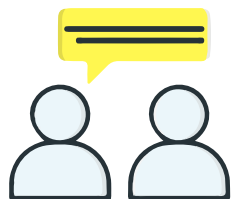
# How do you handle drinking water?



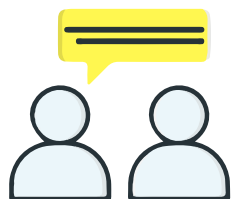
# Action D: Use safe water

## DISCUSSION GUIDE

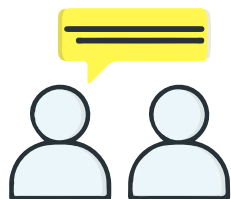
*(Interviews should be held in the water storage area of the household (e.g., kitchen, etc.)*



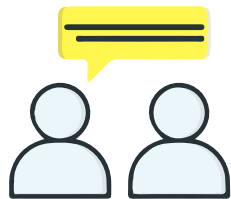
What to do with the water tank (bucket / jerrycan...) before putting water in it?



What to do with the reservoir (bucket / jerrycan ...) after putting water into it?



What do you do with the water before you drink it?



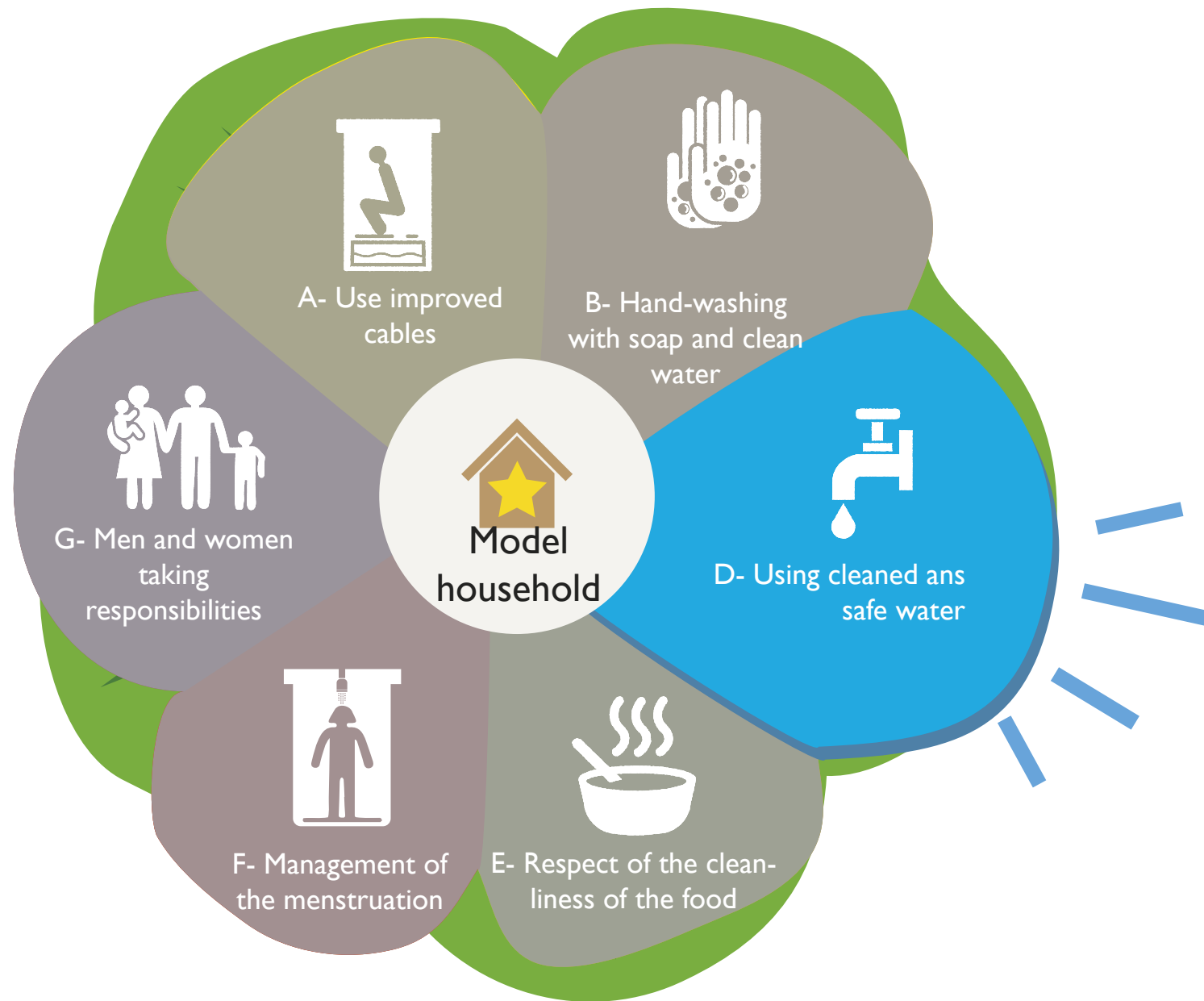
To summarize and add to what you have said, here is a picture of how drinking water is used and its containers.

*(Shown in the background)*

**Now let's do these actions together as long as we don't know (performance)**

*(check to see if the water is clean, check if the water is clean and covered)*

# Symbol of Model Household - Blue petal when using safe water



Congratulations on getting the blue petal! It already looks like a real model household!



## **Action D: Use cleaned and safe water**

When **your household uses safe, cleaned water (clean drinking water - clean and covered the shelves)**, we will give it a blue petal. The goal is to have all the petals to indicate that this household is truly a thriving home:

### **MODEL HOUSEHOLD.**

*When giving the petal, the household will be asked about its satisfaction and the changes it has made.*

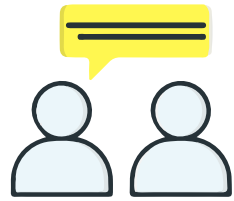
**Which of the following pictures is the closest you have ever come to the practice of food hygiene and food utensils?**





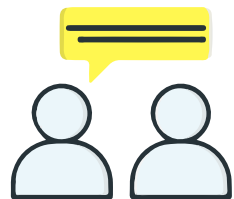
# Action E: Maintain food hygiene

## DISCUSSION GUIDE



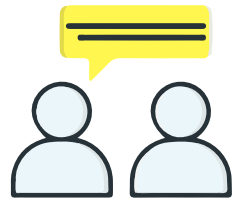
What about the sink for dish and food washing ?

*(Next, go to the dishwashing area and catering area; this visit should be in line with the dish washing or cooking time)*

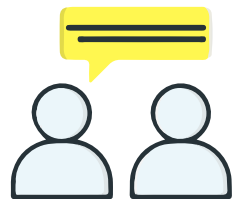


What problems might be encountered when using it?

- Are food and dishes safe from contamination?



If a problem arises, what do you plan to do to sort it out?

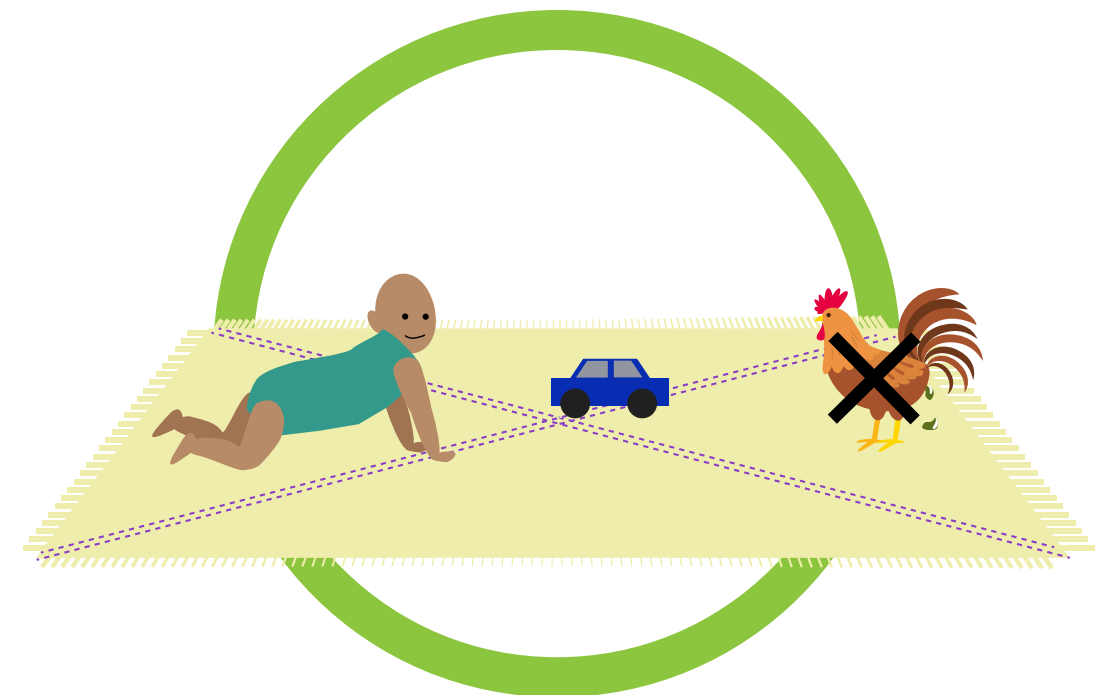
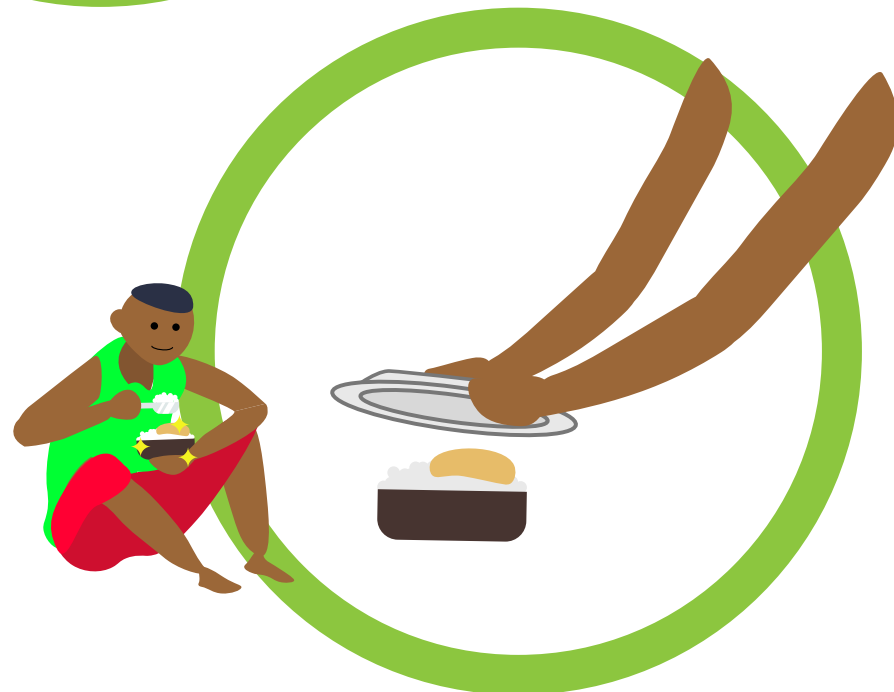
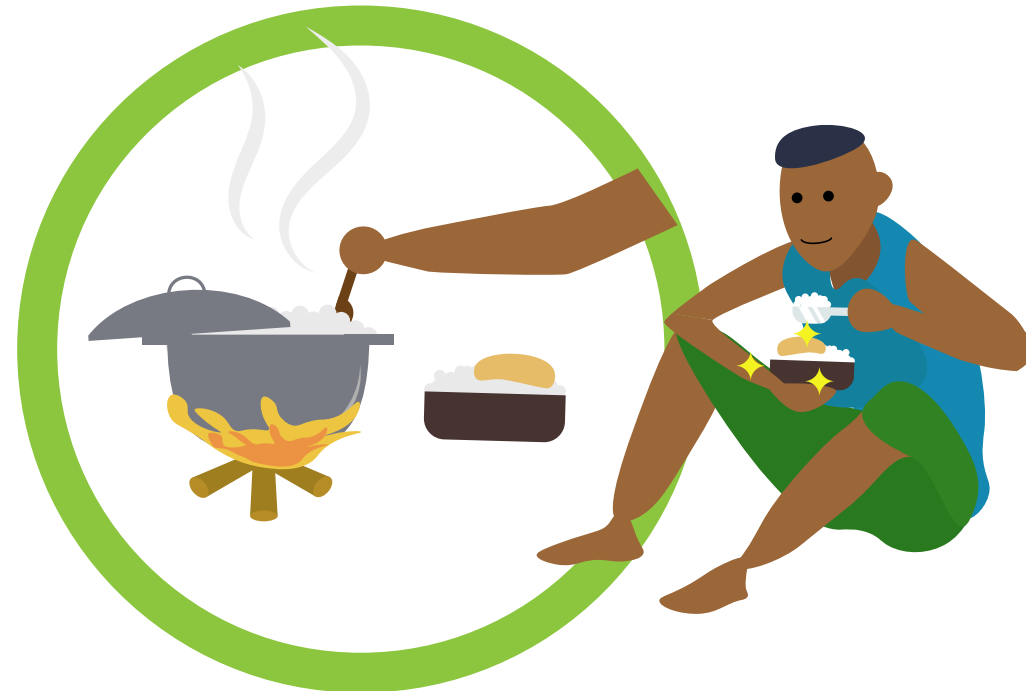


... Well, I would add, if you will, these pictures propose a solution (someone washing dish with a recipient near the house, or on the ice). The goal is to protect the food and the utensils from dirt



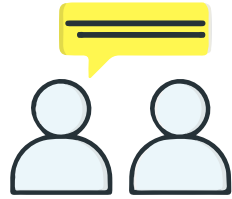
What is the best solution for your household to have safe food and dishwashing area?

# What do you do to maintain the cleanliness of the food and the hygiene of the toddler and toddler's playing areas?

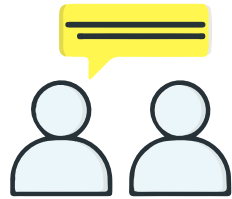


# Action E: Maintain food hygiene

## DISCUSSION GUIDE



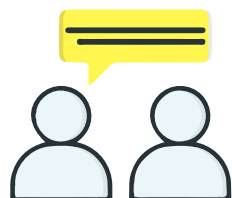
How do you feel before eating fruits and vegetables?



Can you tell me your home-cooked meals?  
*(Examine her method and listen to her story ..)*

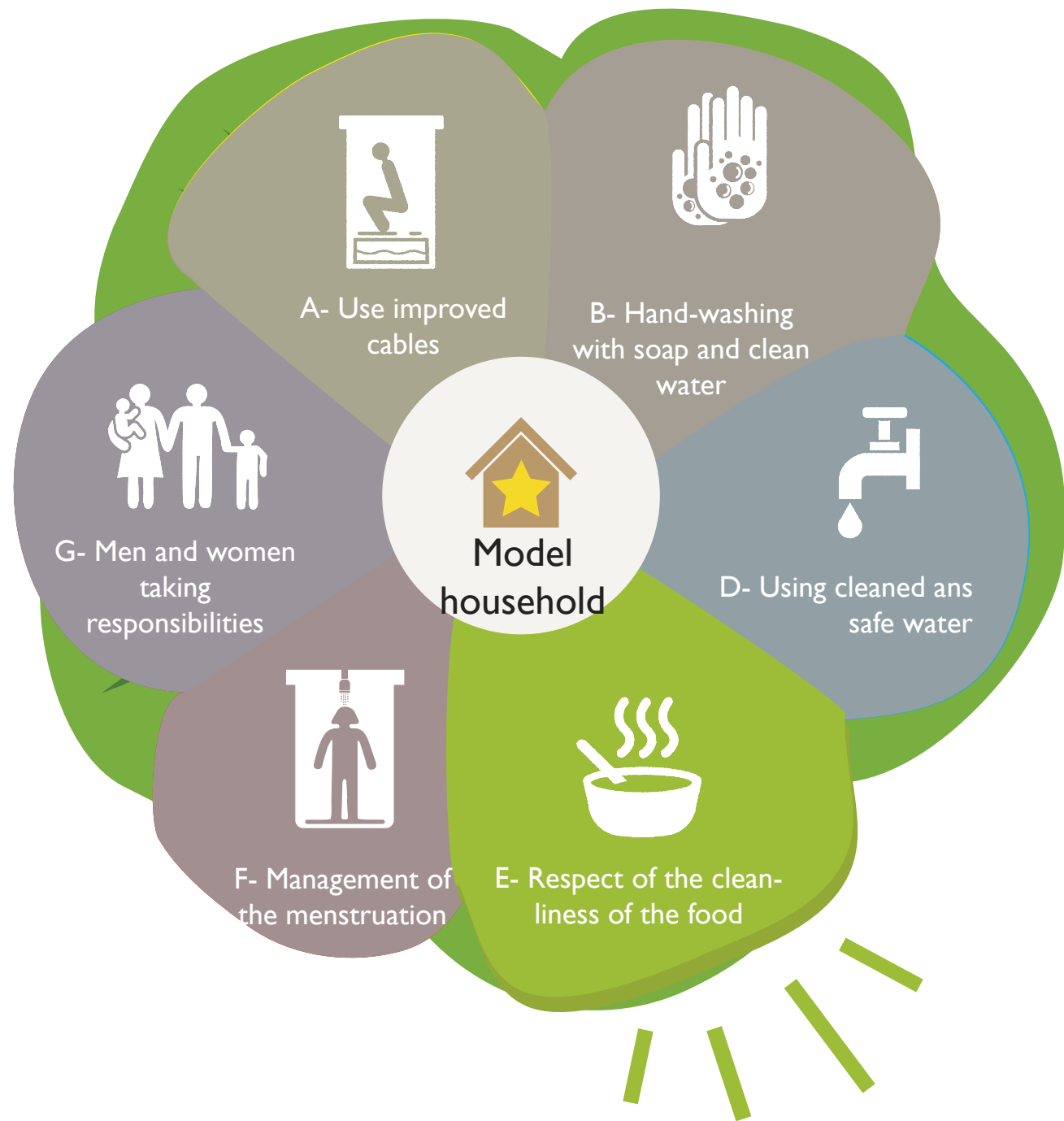
*Your food preparation is really interesting, thanks for sharing. I would also like to share with you the basic steps that a nutritionist should take in order to provide the household with a safe food (refer to the picture on the back).*

**Now let's do these actions together if they are unfamiliar (demonstration)**  
*(check if fruits and vegetables have been washed, if food has been cooked and covered)*



Where do the baby and the toddler play?

# Model Household's Guide - Green petal when respecting food hygiene



Congratulations on getting the green petal! It looks like it is already a model household.



## **Action E: Maintain food hygiene**

When your household respects food hygiene (clean dishes and foods in a clean environment - eating fruits and vegetables washed in clean water - eating well cooked and covered foods), we will give the household a green petal .The goal is to have all the petal bloom to indicate that this home is truly a thriving home:

**MODEL HOUSEHOLD.**

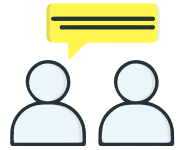
*When giving the petal, the household will be asked about its satisfaction and the changes it has made.*

**Which of the following pictures is the closest you can do when washing?**

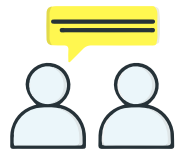


# Activity F: Maintains menstrual hygiene

## DISCUSSION GUIDE

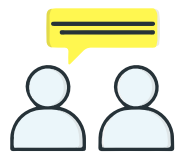


Where do you wash (both men and women)?  
*(local and domestic community agent visit the place together)*



What are the problems that are encountered when washing in this place? How does a woman's feel when she is washing during her menstruation?

- Is the body well protected from water contamination when washing?
- Is the place far to go? Is it accessible for frequent visit?
- Do women feel comfortable when washing?
- Can you wash for a long time? And is it always, in the morning, or in the evening?



What impact does this have on women and the household?

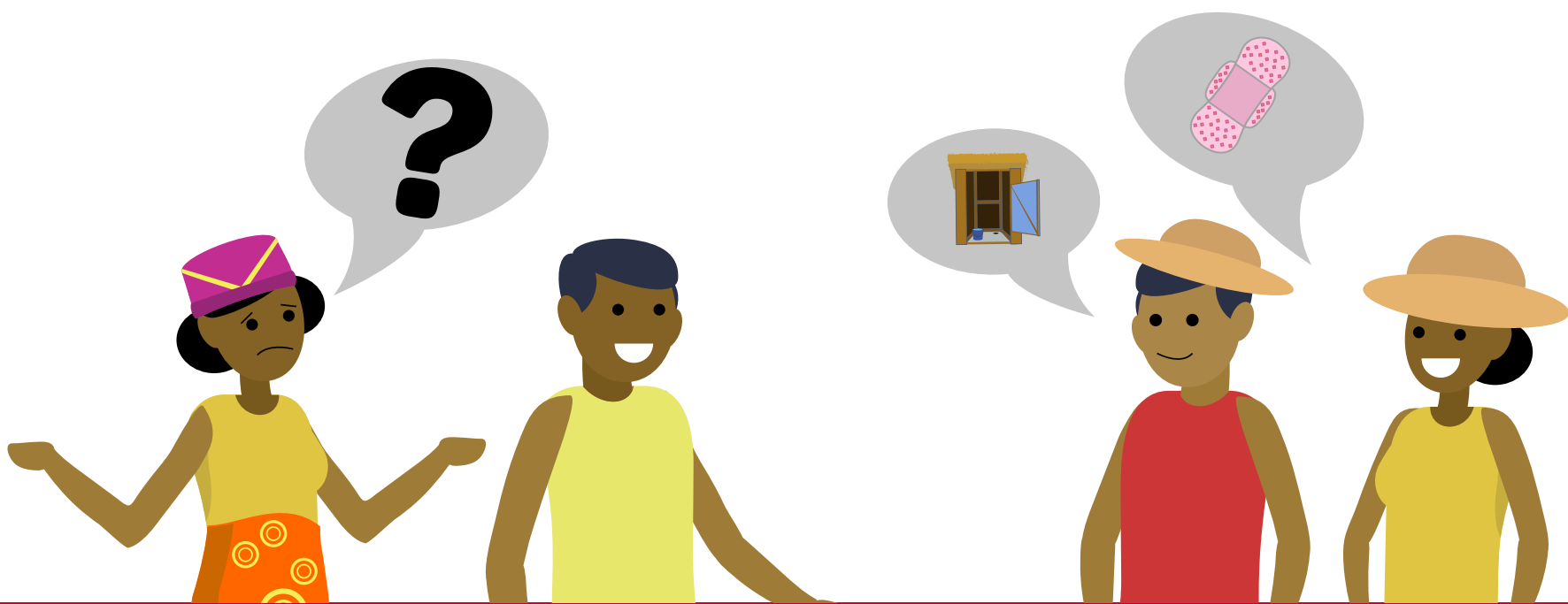


What solution do you think? What measures have you taken?



What kind of bathroom do you want to build?

# You may be interested:

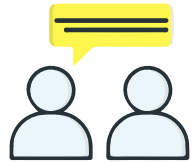


It is easier to deal with menstruation when supported at home.

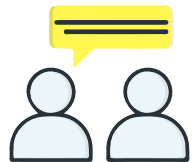


# Activity F: Maintains menstrual hygiene

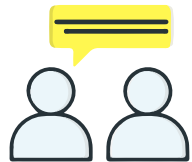
## DISCUSSION GUIDE



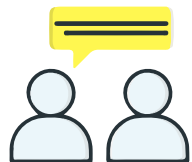
Apart from the bathroom, what does the woman feel during the menstruation?



Have you discussed how to facilitate women's menstruation? (If not) Why?  
(If yes) What problem has been solved by this discussion?



What is the average cost? What about maintenance?



If you are interested, we work with a salable, easy-to-use and repeatable salon seller....



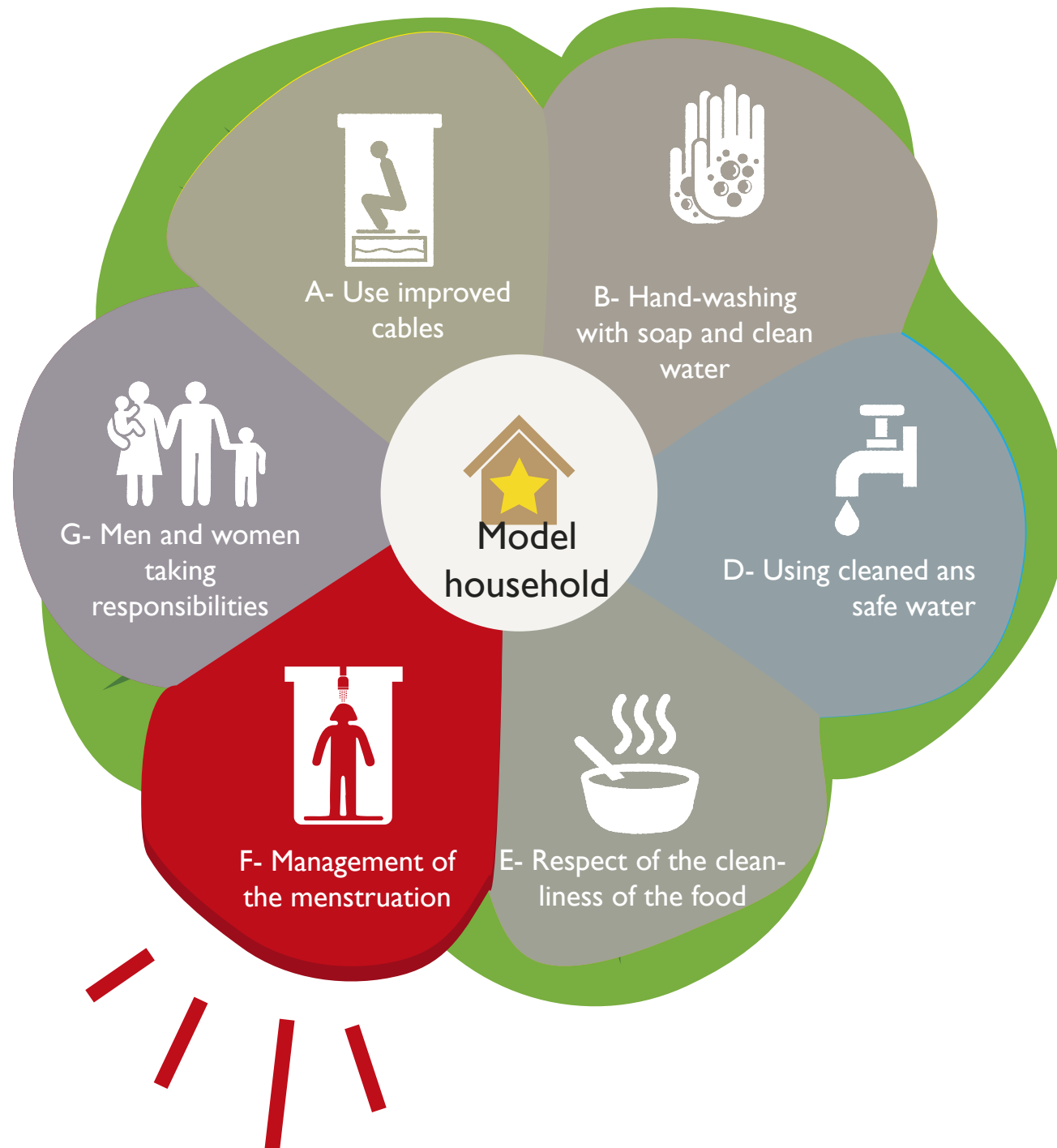
If you are also interested in working with our builder who can design a bathroom for you .....



To conclude the discussion, in short, during menstruation, as in the following pictures, it is necessary to promote hygiene during menstruation *(photo suggested)*

**So let's take these actions together as long as we are unfamiliar (performances)**  
*(see where the silver wash and the washing machine are, where the silver is used in the sun)*

# Model Household - Red petal when it comes to maintaining proper hygiene during menstruation



Congratulations on getting the red petal!  
It already looks like a real Model Household!



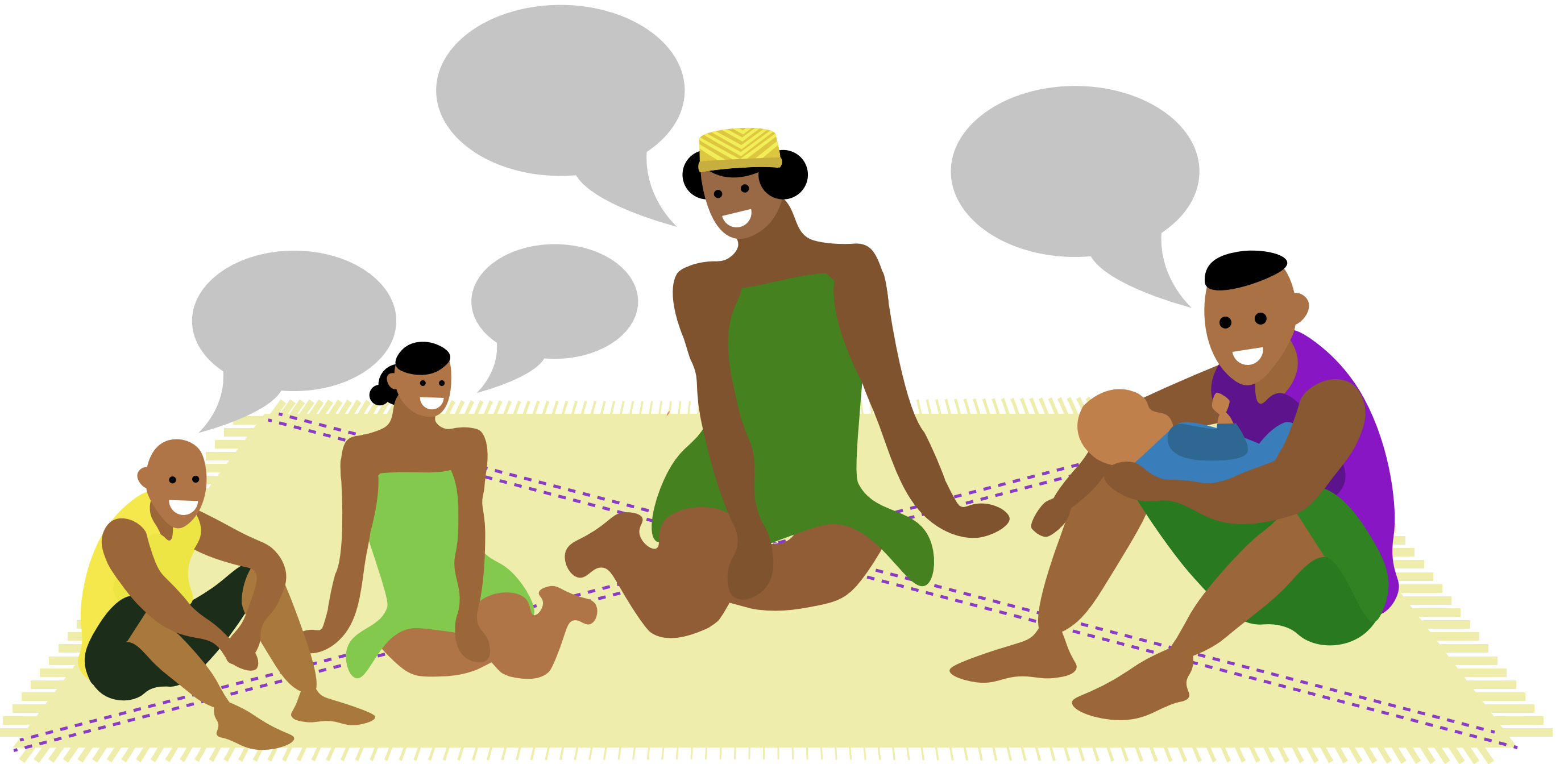
## **Activity F: Maintains menstrual hygiene**

When planning your menstrual hygiene (women and girls often wash and clean their sanitation towel during menstruation - they clean the the towel and dry it in the sun - discuss your home routine) we will certify the household with RED petal. The goal is to have all petals to certify that this home is truly a thriving home:

### **MODEL HOUSEHOLD.**

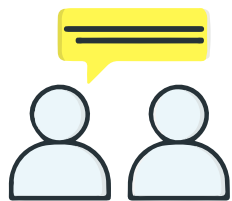
*When giving the petal, the home will be asked about its satisfaction and the changes it has made.*

# What is the distribution of household duties with regard to Clean Water?

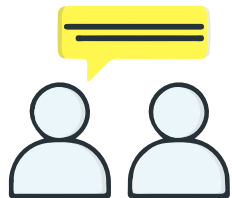


# Activity G: Gender and responsibilities

## DISCUSSION GUIDE



What about home conversations?



Is there a discussion? Is there a conversation? If so about what? If not, what are the obstacles or problems?

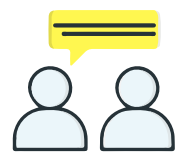
# Who are working together in the household to keep the household clean?



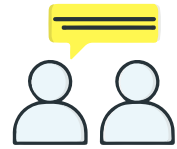
# Activity G: Gender and responsibility

## DISCUSSION LEAD

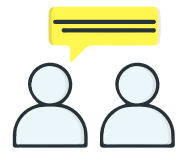
What is the collaboration like to keep the house clean:



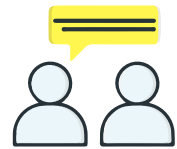
Latrine maintenance? Using the latrine? Maintaining and cleaning of the latrine?  
Discussions and assignments? And the "latrine" for the little ones? And it's about women's sanitation towel for menstruation



Buying soap? Using soap?



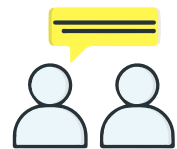
Access to water at home? Cleaning equipment for storage and storage?



Cleaning dishes and food? Food preparation?



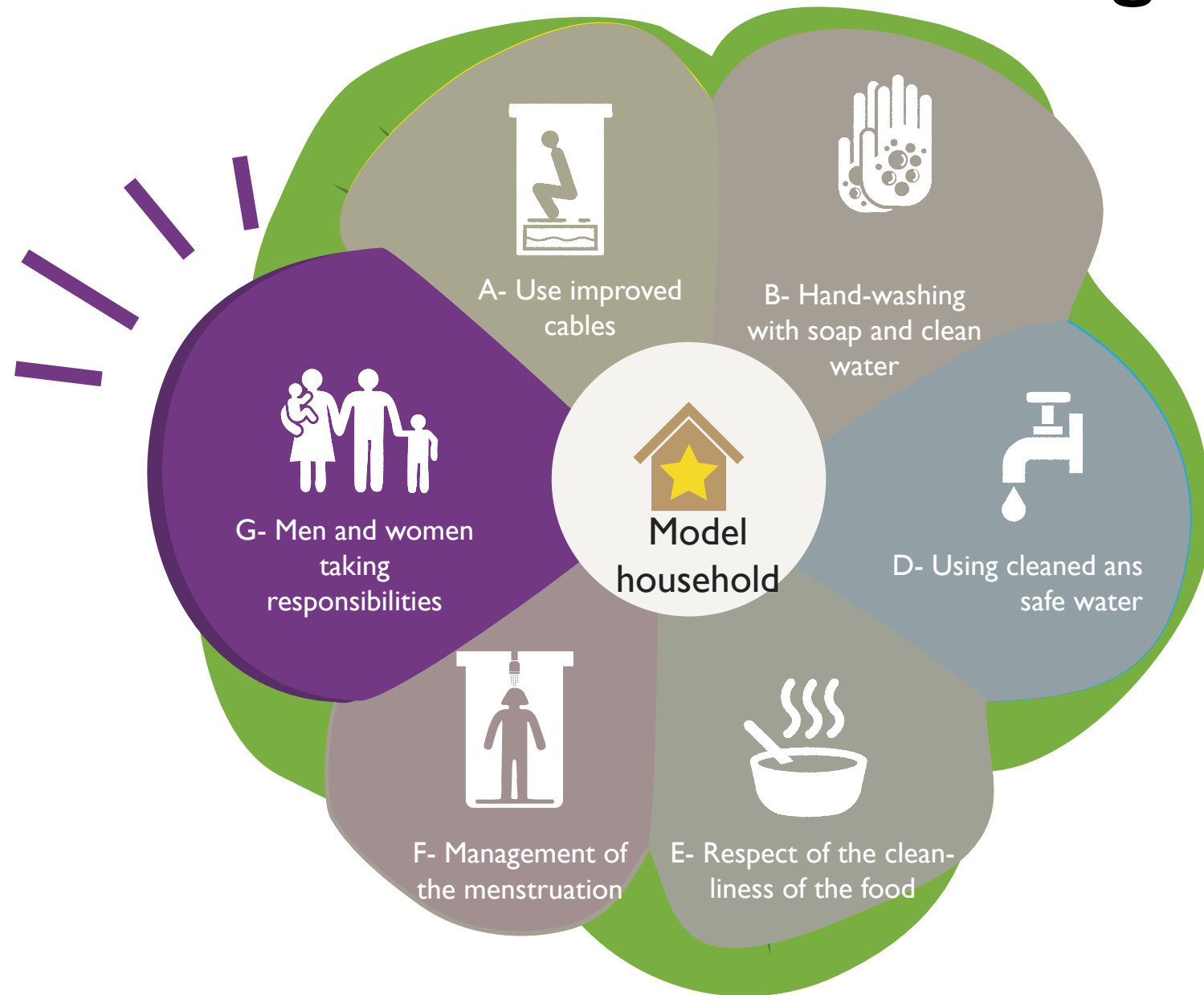
Bathroom remodeling? Use, maintenance, and cleaning?



And what other work is being done to clean the home?

**So let's take these actions together if we are unfamiliar with it: How can sharing responsibilities be improved to keep the home clean?**

# Symbol of Model household- Purple Petal when Men and Women are sharing responsibilities



Congratulations on getting the purple petal. It already looks like a real Model household!





# Activity G: Gender and responsibilities

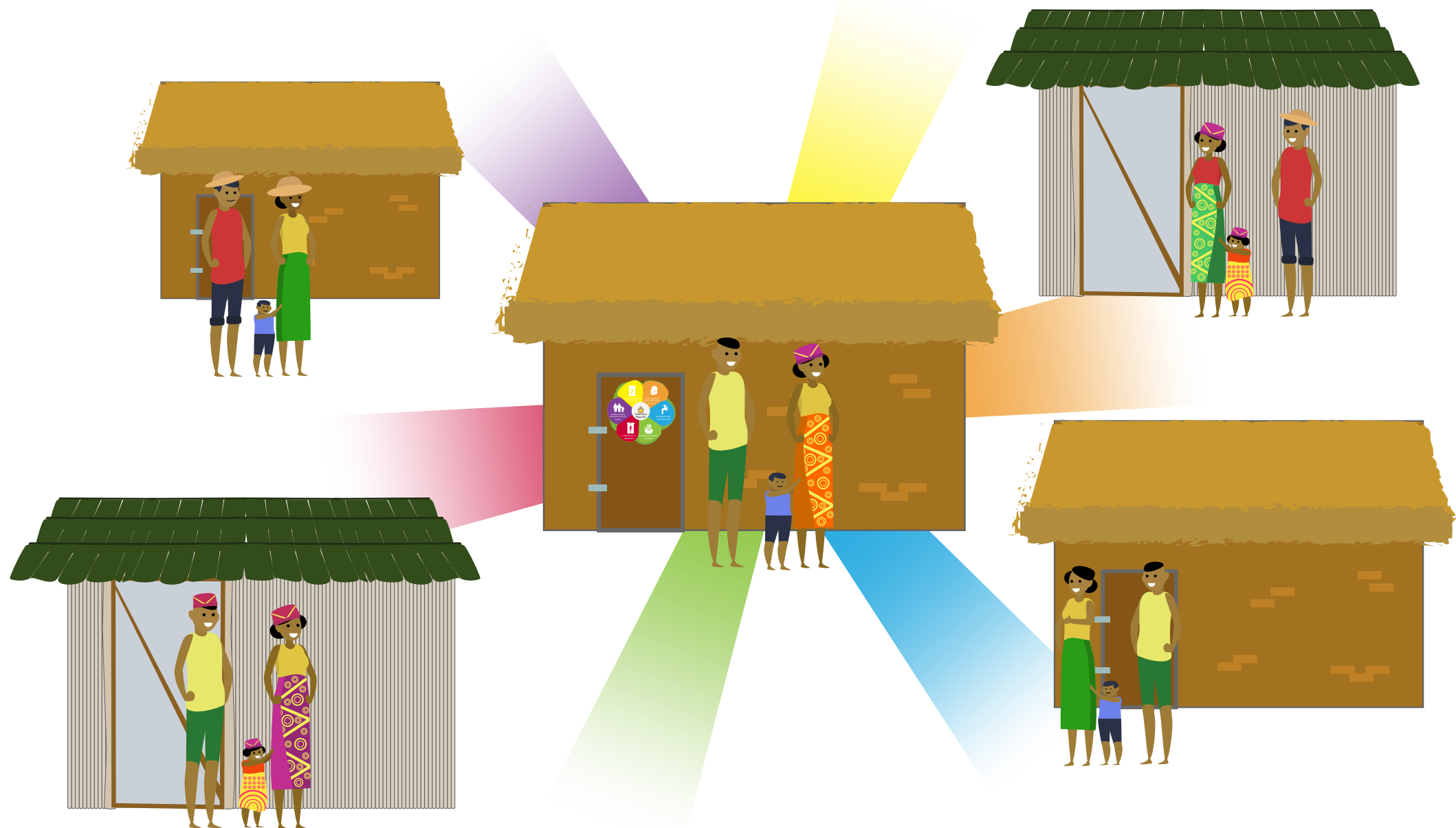
If each of the spouses is taking his/her responsibilities, we will give it  
YOU the PURPLE petal. The goal is to complete  
all the petals to certify that this household is truly thriving one:

**MODEL HOUSEHOLD.**

*When giving the petal, the household will be asked about its satisfaction and the changes it has made.*

**Good luck to all the Community Agents in behavior change activities! Do not forget that every action described in this book encourages the household you visit!**

**So, change and leadership starts with you.**





# USAID

AVY AMIN'NY  
VAHOAKA AMERIKANA



## BOKY FANAMORANA NY FIOVAM-PIHETSIK'IREO TOKANTRANO



BushProof



## TOROLALANA MOMBA NY FAMPIASANA NY BOKY

### NY MOMBA NY BOKY AMIN'NY ANKAPOBENY

Ny tanjon'ny boky dia ny hanamora ny fanetsehana ny tokantrano mandritra ny vangivangy arahin-dinika any an-tokantrano sy ny dinika anaty vondron'olona, hahatonga azy ho **Tokantrano Mpitarika** ka hahazo ireo **Felam-boninkazo ENINA** mifanaraka amin'ireo fihetsika voizin'ny RANO WASH. Ny mpanetsika ifotony dia afaka mametraka izay fanontaniana heveriny fa hanamora ny fiovam-pihetsiky ny tokantrano ankoatry ny fanontaniana anatin'ny boky.

Misy karazany roa ny pejy'ny boky, ka:

- **Ny pejy misy SARY** : io pejy io no natao ho hitan'ny tokantrano mba hahazoany sary an-tsaina ny dingana misy azy, ny tanjona tiany ho tratrarina, ny dingana hiakarany hahatratrarany izany tanjona izany, ary ilay felam-boninkazo mifandray amin'ilay fihetsika resahina.

- **Ny pejy misy FANONTANIANA sy TOROMARIKA**: io pejy io dia natokana ho an'ireo fanontaniana azon'ny mpanetsika ifotony apetraka mba hanamorana ny fanetsehana ny tokantrano. Tsy voatery raisina an-tsoratra ny valiny fa natao ireo fanontaniana ireo mba hanamora ny fanehoan-kevitra, ny fandraisana anjaran'ny tokantrano mandritra ny dinika, ny fanapaha-keviny sy ny firosoany amin'ny fiovam-pihetsika.

### IREO FIHETSIKA 6 FOTOTRA VOIZIN'NY RANO WASH

1- **Mampiasa kabone « nohatsaraina »** izany hoe azo diovina – misarona – misy fanasana tanana , ka « **tsy ifampizarana amin'ny tokantrano hafa** » ; ary ny zaza izay tsy afaka mampiasa kabone dia mampiasa « pot tsy mampihinan-tay »

2- **Manasa tanana amin'ny savony**: (i) mialohan'ny hikarakarana sakafo, (ii) mialohan'ny hisakafo, (iii) mialohan'ny hamahanana na hampinonoana zaza, (iv) rehefa avy nangery, (v) rehefa avy namitra zaza

3- **Mampiasa rano vadio sy azo antoka ka**: (any amin'ny toerana misy fotodrafitr'asa RANO WASH) manjifa ny famatsiana rano fisotro madio ataon'ny orinasa mpitantana rano; (any amin'ireo kaominina tsy misy fotodrafitr'asa) mampangotraka ny rano mialohan'ny ampiasàna azy ,na, mampiasa izay fomba hampadio sy azo antoka ny rano, ary mitahiry izany rano izany anaty fitoerana madio sy misarona

4- **Manaja ny fahadiovan'ny sakafo**, ka ireo mpikarakara ny sakafo ao an-tokantrano, mialohan'ny hihinanan'ny ao an-tokantrano azy, dia: (i) manasa ny voankazo sy ny legioma manta amin'ny rano vadio azo antoka, (ii) mahandro tsara ny sakafo mba ho masaka tsara, (iii) manarona ny sakafo

5- **Mahay mandrindra ny fadimbolana**, ka ny vehivavy sy ny tovovavy ao an-tokantrano dia: (i) midio sy misolo salaka matetika mandritra ny fadimbolana, (ii) manasa ny salaka amin'ny savony ary manapy izany amin'ny masoandro; ny ao an-tokantrano kosa dia (iii) – miresaka malalaka momba ireo olana manodidina ny fadimbolana raha ilaina izany.

6- **Miara-mandray andraikira ny lahy sy ny vavy** mba hisitrahan'ny tokantrano ireo tolotra Rano – Fanadiovana – Fidiovana (RFF); ary ny lehilahy sy ny tovolahy dia mandray andraikitra amin'ny fanatsarana ny toe-pahasalamana/fanjarian-tsakafo sy ny RFF ao an-tokantrano

### FANAMARIHANA HO AN'NY MPANETSIKA IFOTONY

Isaky ny fihaonana voalohany amin'ny tokantrano na amin'ny vondron'olona, dia tsara hatrany raha milaza :

- ny momba azy: Mpilatsaka an-tsitrapo miara-miasa amin'ny kaominina sy ny tetik'asa RANO WASH, miara-dalana sy manetsika ny tokantrano hanjary **tokantrano mpitarika** eo amin'ny tontolon'ny Rano - Fanadiovana sy Fidiovana.

- Ny tetik'asa RANO WASH: tetik'asa tohanan'ny vahoaka amerikanina entina hanatsarana ny tontolon'ny rano – fanadiovana sy fidiovana ety ambanivohitra.

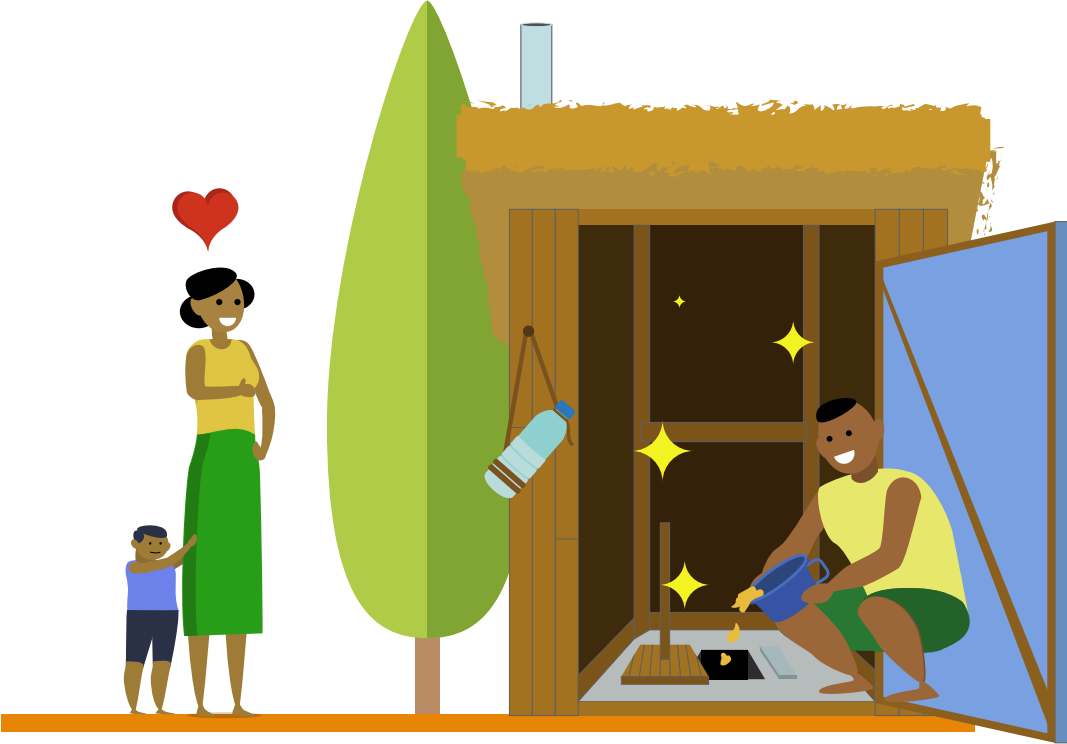
- Ireo tokantrano voakasika: izay **VONONA** , ka **omena laharam-pahamehana ireo tokantrano manan-janaka latsaky ny 5 taona. Miova araka ilay fihetsika resahina:**

- Ny **fotoana** anaovana ny vangivangy arahin-dinika, izany hoe mandritra na manakaiky ilay ora hanatanterahan'ny tokantrano ilay fihetsika resahina

- ny **toerana** ao an-tranon'ilay tokantrano anaovana ny resaka na anaovana fitsidihana, izany hoe ilay toerana hanatanterahana ilay fihetsika

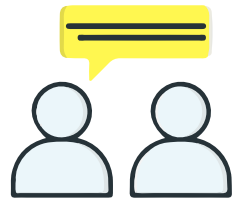
- ny **olona ao an-tokantrano tokony hiaraha-midinika**, izany hoe, ireo voakasik'ilay fihetsika voalohany sy ireo mpanapan-kevitra rehetra.

# Iza amin'ireto sary ireto no manakaiky indrindra ny zavatra iainanareo amin'izao fotoana izao?



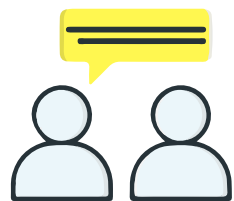
# Fihetsika A : Mampiasa kabone « azo antoka » sy tsy ifampizarana amin'ny tokantrano hafa

## TARI-DRESAKA



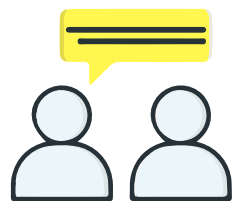
Ohatry ny ahoana ny toerana fangerenareo (rindrina, varavarana, gorodona, lavaka, sns....)? Fa maninona?

*(Raha mampiasa kabone ilay tokantrano, dia tanterahana eo akaikin'ny kabone ny tohin'ny dinidinika, na madio na tsy madio ilay kabone)*



Inona no olana atrehina rehefa mampiasa io toeram-pangerena io:

- Maimbo ve?
- Mora feno ve ny lavaka?
- Tery ve?
- Mora diovina ve?
- Mora mirodana ve?
- Be mpampiasa ve?



Inona ny fiantraikan'izany aminareo?

# Inona amin'ireto vahaolana ireto no mety azonareo tanterahana? Misy vahaolana hafa ve?



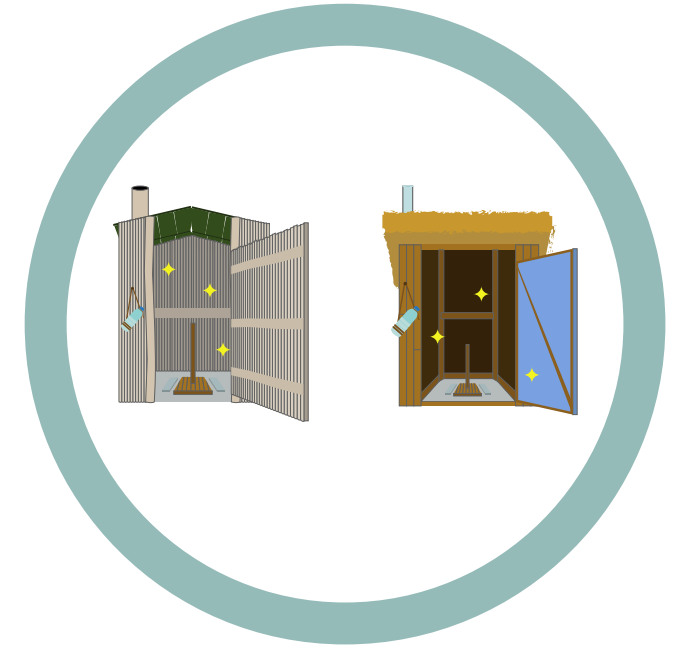
Miditra ho mpikambana VOAMAMI



Manakarama mpanamboatra kabone manara-penitra



Miara-misalahy ny lahy sy ny vavy manamboatra kabone

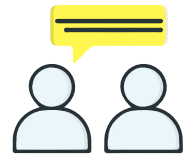


TOLOTRA KABONE  
MANARA-PENITRA  
AMIDIN'NY MPANDRAFITRA  
ENY AN-TOERANA



# Fihetsika A : Mampiasa kabone tsy mampihinan-tay sy tsy ifampizarany amin'ny tokantrano hafa

## TARI-DRESAKA (Tohiny)

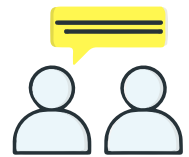


Inona ary ny vahaolana avy aminareo hamahana ireo olana ireo?

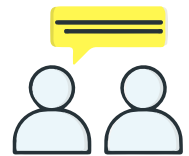


Raha mety aminareo, dia misy vahaolana maromaro afaka zaraiko aminareo, mety hahaliana anareo ve?

*raha mahaliana ny tokantrano dia azavaina azy araka ireo sary ao ambadika (Voamami – Maçon local sns.)*



Raha te-hifandray @ "Maçon local " akaiky indrindra dia .....

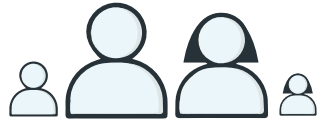


Raha te-hifandray @ Agent villageois/PSP azo iresahana momba ny VOAMAMI:

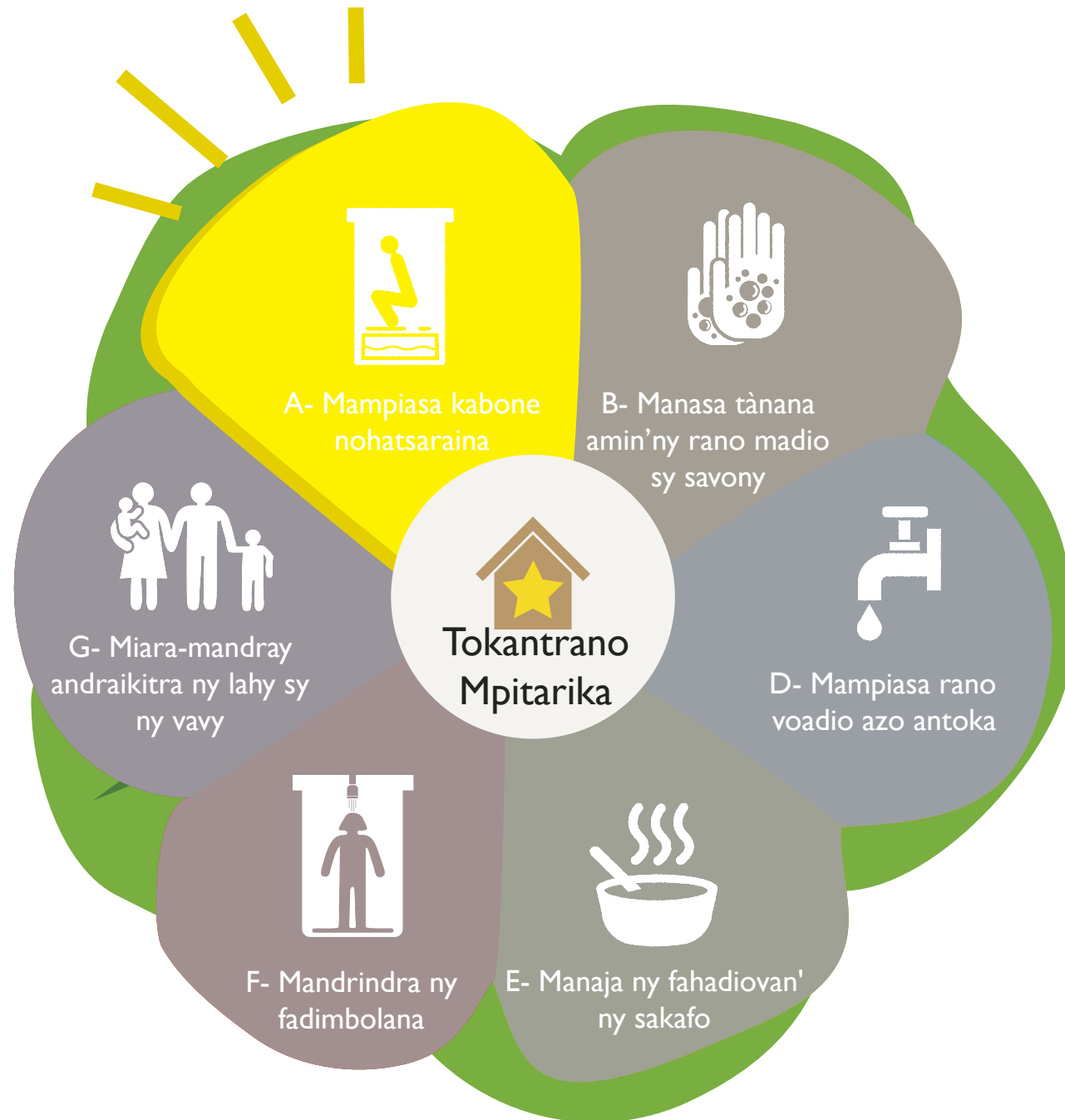
.....



Inona ary ny vahaolana mety aminareo hahazoanareo ilay kabone irinareo?



# Mariky ny tokantrano Mpitarika – Felana Mavo raha mampiasa kabone « azo antoka »



Arahabaina ianareo nahazo ny felam-boninkazo mavo! Hita taratra sahady fa tena ho tokantrano mpitarika!



**Fihetsika A : Mampiasa kabone tsy mampihinan-tay  
(azo diovina – misarona – misy fanasana t`anana ) sy tsy  
ifampizarana amin'ny tokantrano hafa**

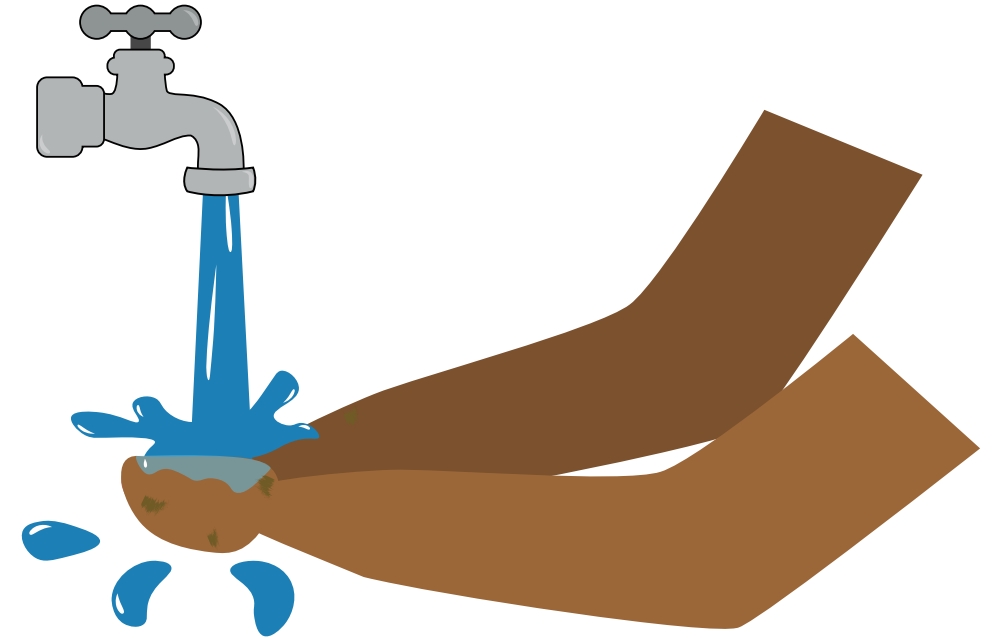
Rehefa **Mampiasa kabone tsy mampihinan-tay (azo diovina –  
misarona – misy fanasana tanana ) sy tsy  
ifampizarana amin'ny tokantrano hafa** ny  
tokantranonareo dia homarihintsika amin'ny Felam-boninkazo MAVO  
izany. Ny tanjona dia feno ny felam-boninkazo rehetra hanamarihana  
fa ity

tokantrano ity dia tena tokantrano mivoatra:

**TOKANTRANO MPITARIKA**

*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony  
mikasika ny ezaka vitany sy ny fiovana nentin'izany ezaka izany.*

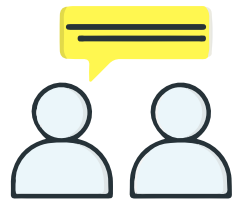
**Iza amin'ireto sary ireto no manakaiky indrindra ny zavatra iainanareo amin'izao fotoana izao?**



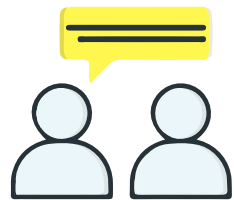
# Fihetsika B : Manasa tònana amin'ny savony

## TARI-DRESAKA

*Tanterahina eo akaikin'ny toeram-panasana tanana ny dinidinika, raha misy izany*

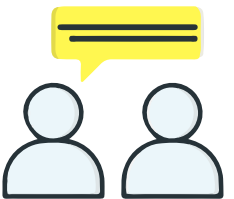


Ahoana ny fomba fanasanareo tanana?  
Inona no ampiasainareo?



*(raha tsy manasa tanana amin'ny savony)* ) Inona no manahirana amin'io fomba fanasana tònana io?:

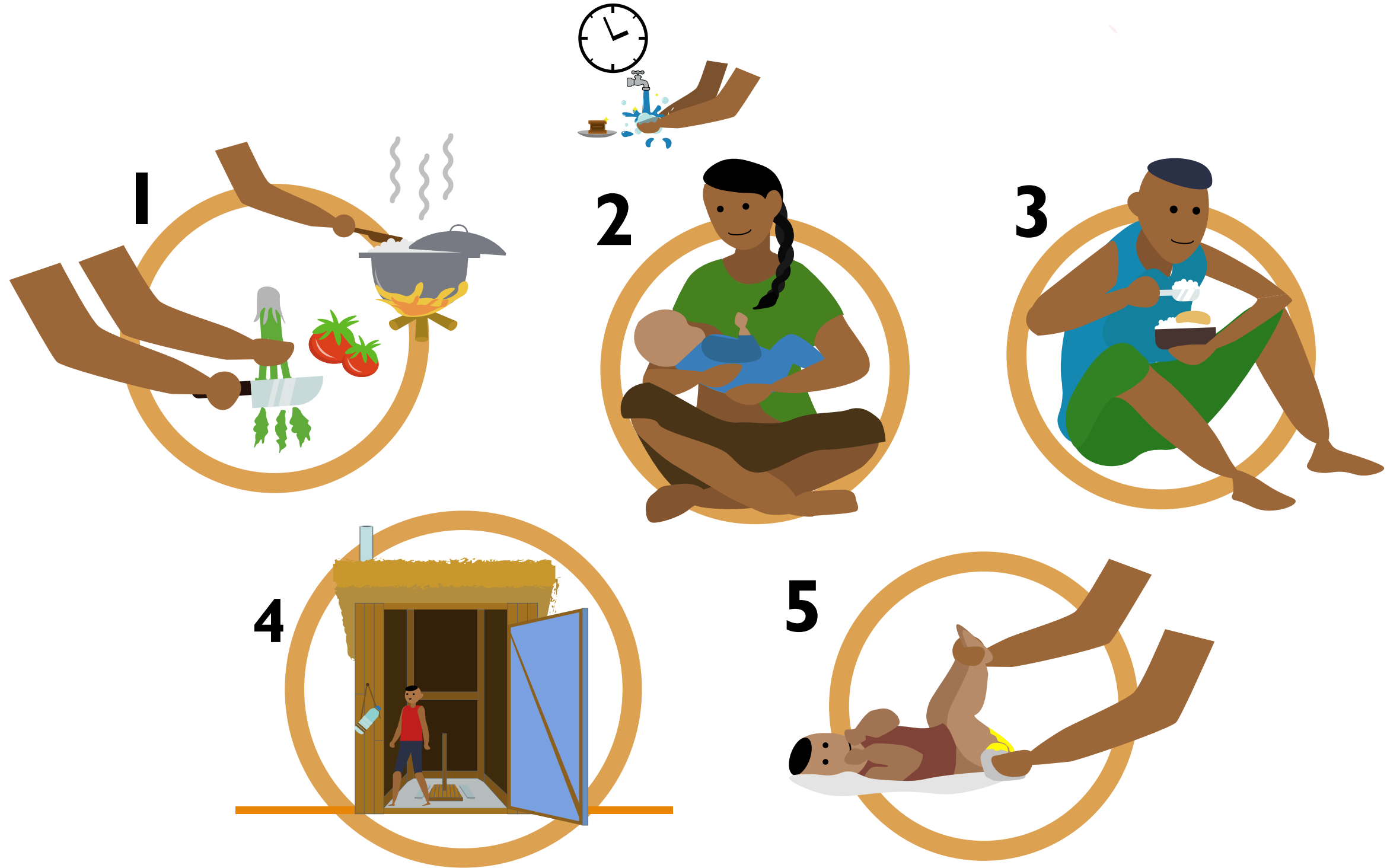
- Adiny firy vao madio ny tanàna?
- Mora manala ny loto amin'ny tanana ve?
- Manala ny loto tsy hita maso toy ny mikraoba mety hankarary ny kibo ve?



Inona ny vahaolana?

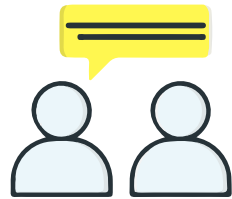
Manana sosokevitra aminareo aho raha mety aminareo: **Mampiasa savony : hosotra kely tsy ampy iray minitra monja dia miala ny loto rehetra ( na ny hita maso na ny tsy hita maso), amin'ny vidiny mirary.** Hanamorana izany dia misy ny fitaovana fanasana tònana sy savony izay mety mahaliana anao. Jereo ange ito e! Azonao atao ny manamboatra na koa ny mividy!

# Fotoana inona amin'ireto amin'ny sary ireto no tena hanasanareo tanana?

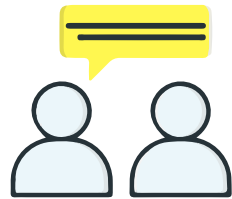


# Fihetsika B : Manasa tònana amin'ny savony

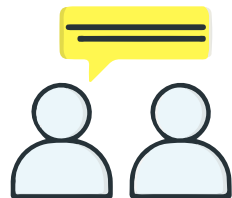
## TARI-DRESAKA



Isaky ny inona no manasa tanana ianareo? Maninona?



Inona ihany koa ny fotoana tokony hanasantsika tanana kanefa tsy voalaza teo?

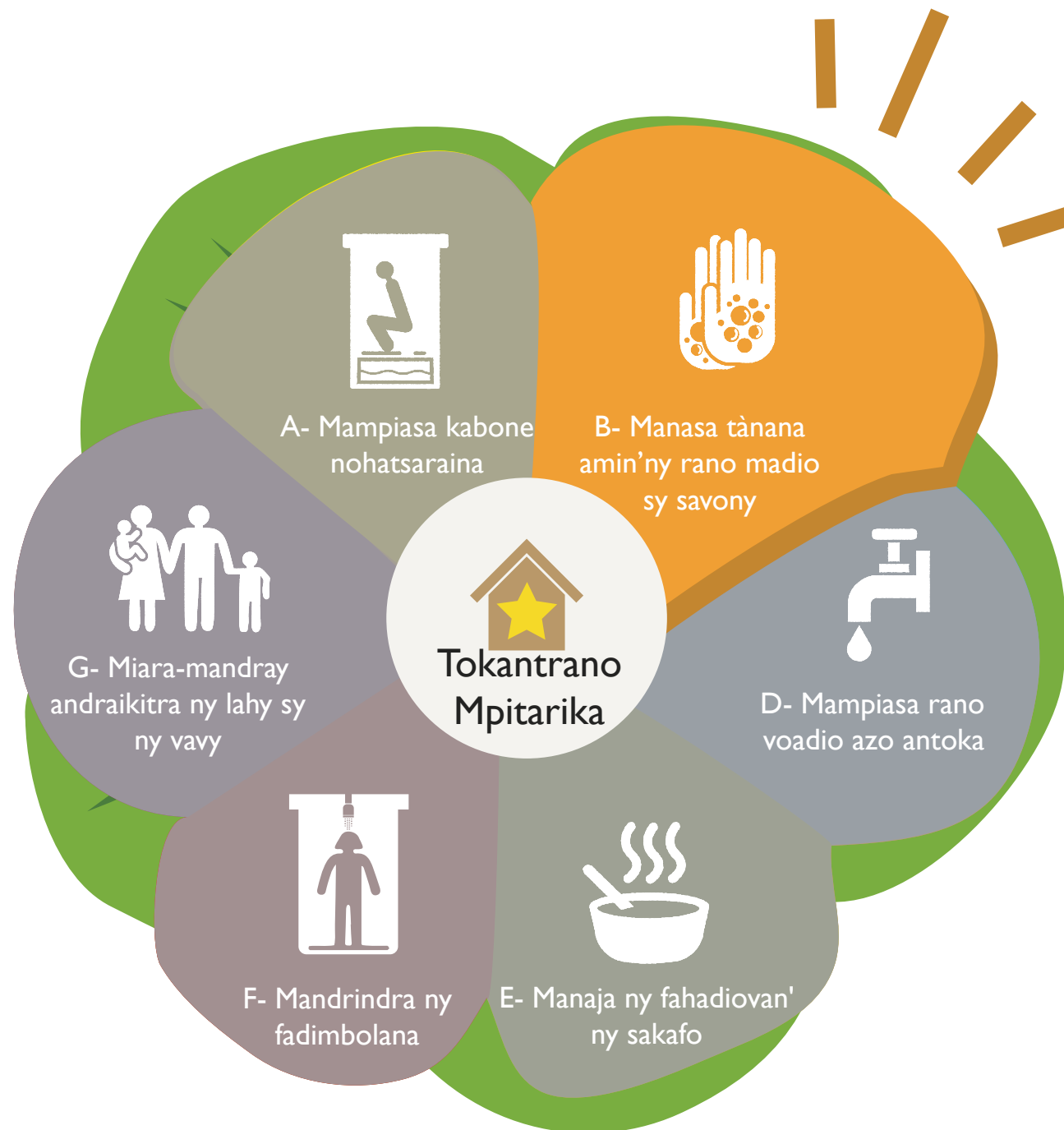


...Marina izany lazainareo izany, ho fanampiny sy ho famintinana ny efa nolazainareo dia ireto ary ny fotoana 5 fototra hanasana tanana (*atoro ny tokantrano ireo sary ao ambadika*)

**Ndao ary hoe isika sy ianao hiara-hanasa tònana amin'ny savony hanatanterahantsika izany araka ny tokony ho izy (fampisehoana)**

*(Jerena ny fomba fanasany tònana ary mifanoro amin'ny tokantrano ny amin'ireo teknika mampadio tsara ny tanana)*

# Mariky ny tokantrano Mpitarika – Felana Volomboasary raha manasa tanana amin'ny savony



Arahabaina ianareo nahazo ny felam-boninkazo volom-boasary! Hita taratra sahady fa tena ho tokantrano mpitarika!





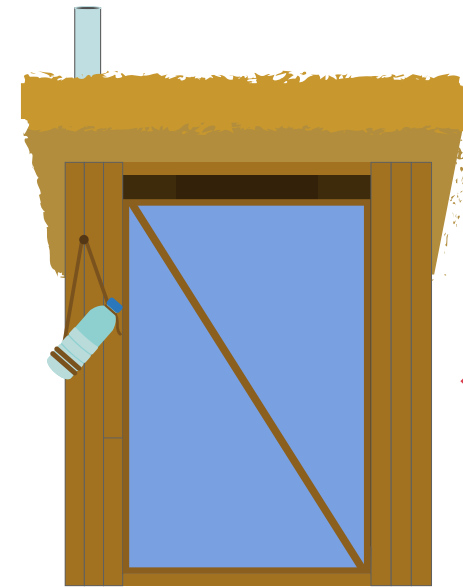
## **Fihetsika B : Manasa t`anana amin'ny savony**

Rehefa **Manasa tanana amin'ny savony mandritra ireo fotoana fototra 5** ny tokantranonareo dia homarihantsika amin'ny Felam-boninkazo VOLOMBOASARY izany. Ny tanjona dia ho feno ny felam-boninkazo rehetra hanamarihana fa ity tokantrano ity dia tena tokantrano mivoatra:

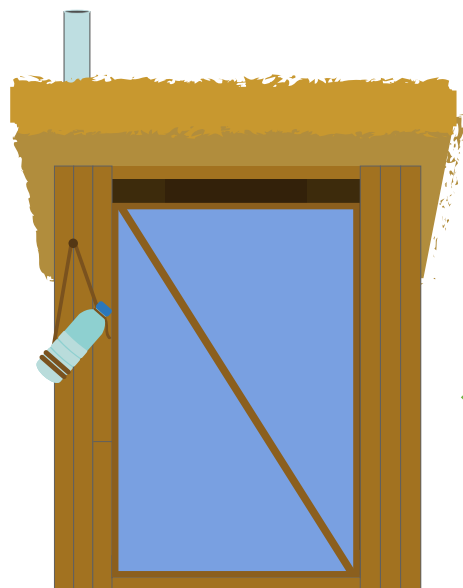
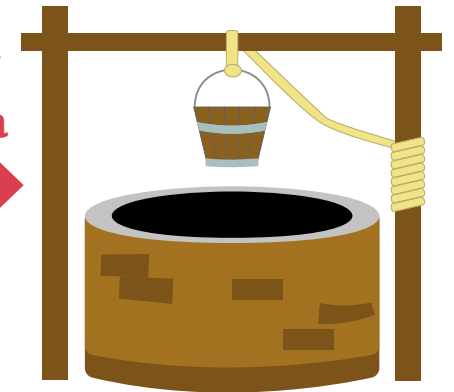
**TOKANTRANO MPITARIKA.**

*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony mikasika ny ezaka vitany sy ny fiovana nentin'izany ezaka izany.*

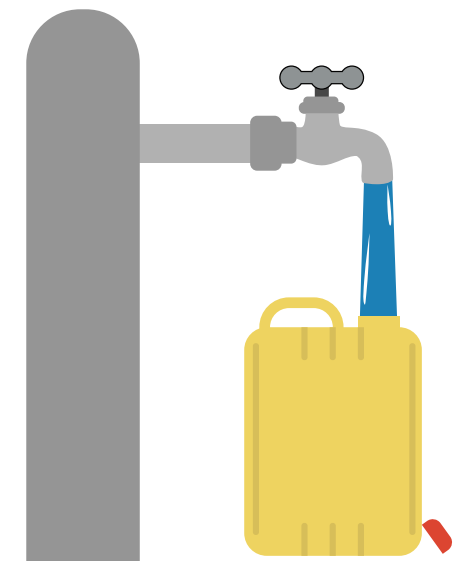
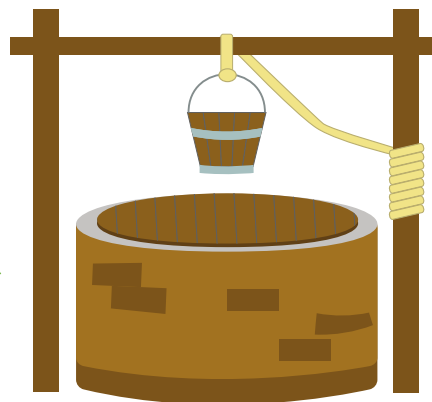
# Iza amin'ireto sary ireto no manakaiky indrindra ny zavatra iainanareo amin'izao fotoana izao?



Latsaky ny  
20 metatra

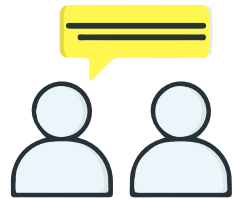


20 metatra

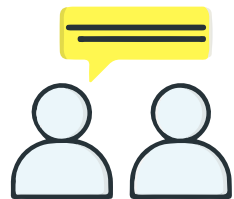


# Fihetsika D : Mampiasa rano voadio azo antoka

## TARI-DRESAKA

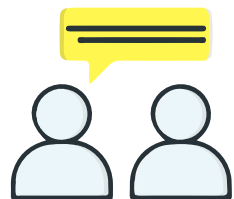


Ohatry ny ahoana ny toerana fakanareo rano?  
( *raha azo tsidihina dia miara-mitsidika ilay toeram-patsakana rano* )



(*raha toeram-patsakana tsy voaaro*) Inona ny olana mahakasika io fakanareo rano io?

- Maloto ve?
- Lavitra ve?
- Sarotra hatsakana ve?



Inona ny fiatraikan'izany aminareo? Inona no mety vahaolana azo raisina afahana miatrika izany olana izany? (*raha misy fotodrafitr'asa RANO WASH*) Raha mahaliana anareo, ny RANO WASH dia manamora ny fahazoan'ny tokantrano rano, amin'ny vidiny.....Ar

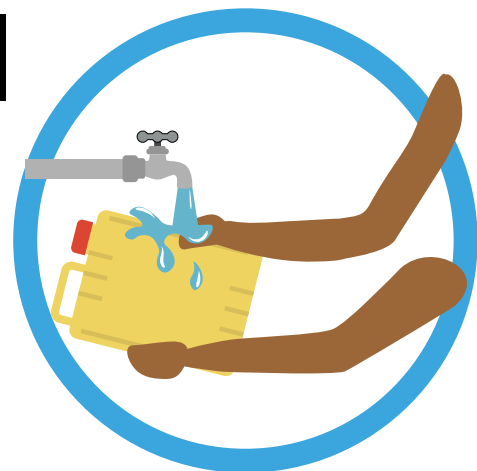


Inona ary ny vahaolana mety aminareo ahazoan'ny tokantranonareo rano voadio azo antoka?

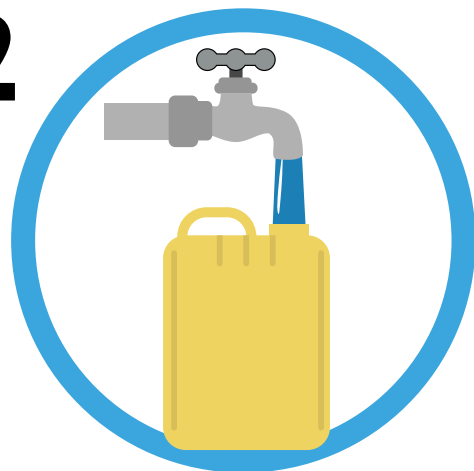
# Manao ahoana ny fomba fikarakaranareo ny rano fisotro?



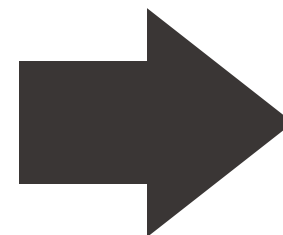
1



2



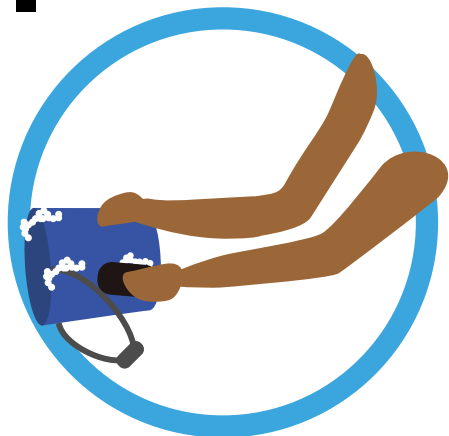
3



4



1



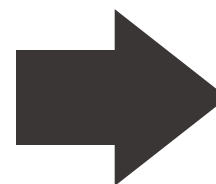
2



3



4



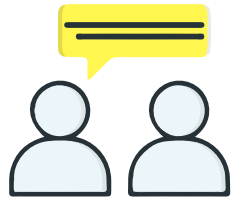
5



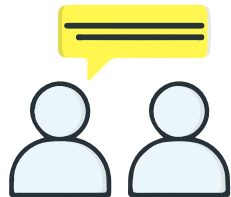
# Fihetsika D : Mampiasa rano voadio azo antoka

## TARI-DRESAKA

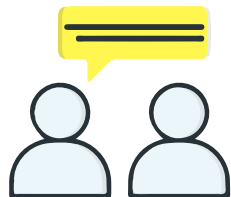
*(Tohizina any amin'ny toerana fitehirizan'ny tokantrano ny rano ny resadresaka (oh: lakozia, sns.))*



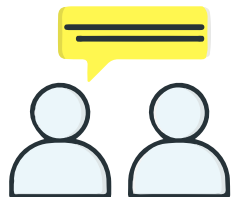
Inona ny atao amin'ny fitoeran-drano (seau/bidon ...) mialohan'ny hanisy rano ao anatiny?



Inona ny atao amin'ny fitoeran-drano (seau/bidon ...) aorian'ny manisy rano ao anatiny?



Inona no ataonareo amin'ny rano mialohan'ny hisotroana azy?



Hamintinana sy hanampiana izay efa nolazainareo dia indreto ary aseho an-tsary ny fomba fikarakarana ny rano fisotro sy ny fitoerany.

*(atoro araka ny sary ao ambadika)*

**Ndao ary hoe isika hiara-hanao ireo fihetsika ireo raha mbola misy tsy mahazatra antsika (fampisehoana)**

*(jerena raha efa voadio ny rano hosotroina, jerena raha madio sy misarona ny fitoeran-drano)*

# Mariky ny tokantrano Mpitarika – Felana Manga raha mampiasa rano voadio azo antoka



Arahabaina ianareo nahazo ny felam-boninkazo manga! Hita taratra sahady fa tena ho tokantrano mpitarika!



# **Fihetsika D : Mampiasa rano voadio azo antoka**

Rehefa **Mampiasa rano voadio azo antoka (voadio ny rano sotroina – madio sy misarona ny fitoerany)** ny tokantranonareo dia homarihantsika amin'ny Felam-boninkazo **MANGA** izany. Ny tanjona dia ho feno ny felam-boninkazo rehetra hanamarihana fa ity tokantrano ity dia tena tokantrano mivoatra:  
**TOKANTRANO MPITARIKA.**

*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony mikasika ny ezaka vitany sy ny fiovana nentin'izany ezaka izany.*

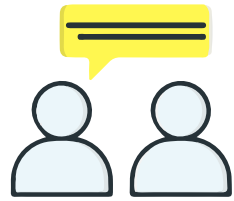
**Iza amin'ireto sary ireto no manakaiky indrindra ny fomba fanaonareo mikasika ny fahadiovan'ny sakafo sy ny fitaovam-piasakafoanana?**





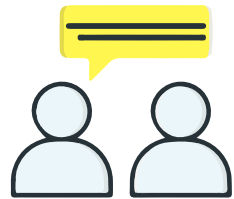
# Fihetsika E : Manaja ny fahadiovan'ny sakafo

## TARI-DRESAKA



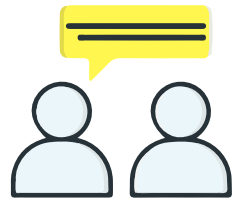
Manao ahoana ny toerana fanasana lovia sy fanasana sakafo?

*(Avy eo, mankany amin'ilay toeram-panasana lovia sy fikarakarana sakafo; tsara raha mifanindry amin'ny fotoana fanasana lovia na fikarakarana sakafo ity fitsidihana ity)*

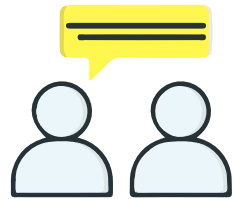


Inona no mety olana sedraina rehefa mampiasa azy io?

- Miaro tsara ny sakafo sy ny lovia amin'ny loto ve ?



Raha misy ny olana, Inona no kasainareo atao mba hamahana izany olana izany?

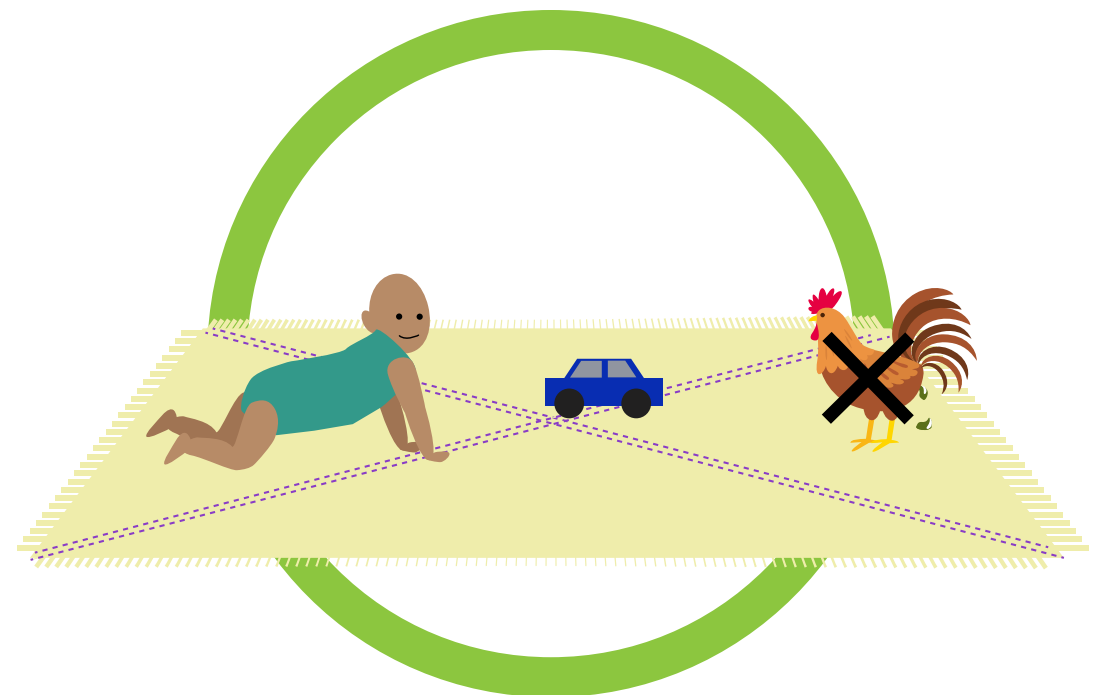
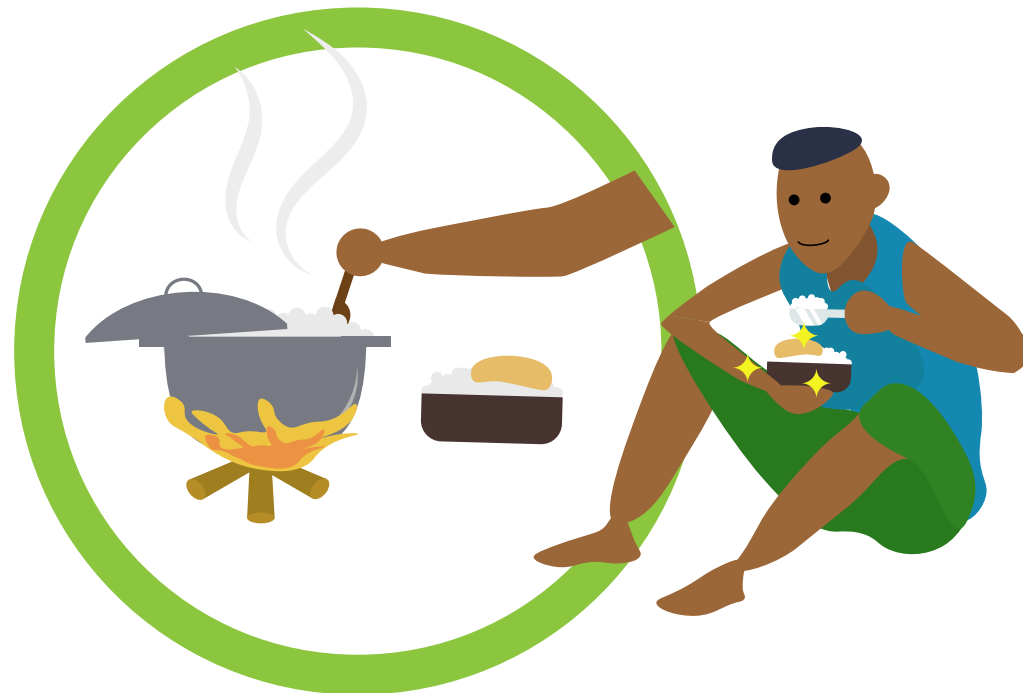


...Marina tokoa izany, hanampiano ny teninareo, raha mety aminareo, dia ireto amin'ny sary ireto misy vahaolana (olona manasa lovia @koveta akaikin'ny trano, na amin'ny « évier ») . Ny tanjona dia ny mba hiarovana ny sakafo sy ny fitaovam-pihinana amin'ny loto



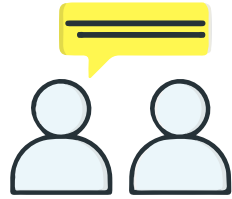
Inona ary ny vahaolana mety aminareo ahazoan'ny tokentranonareo toeram-panadiovana sakafo sy lovia voaaro amin'ny loto?

**Inona no ataonareo mba hikajiana ny fahadiovan'ny sakafo sy ny fahadiovan'ny toeram-pilalaoan'ny zaza mandady sy miana-mandeha**

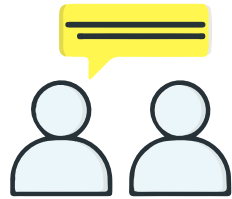


# Fihetsika E : Manaja ny fahadiovan'ny sakafo

## TARI-DRESAKA



Ahoana ny fanaonareo mialohan'ny hihinana voankazo sy legioma?

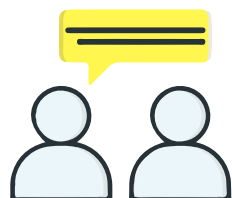


Mba atoroy ahy hoe ny fikarakaranareo sakafo mahafa-po ny ato tokantrano?  
*(dinihina tsara ny fomba fanaony ary henoina ny fitantarany izany..)*

*Tena mahaliana tokoa ny fikarakaranareo sakafo, misaotra amin'ny fifampizarana. Izaho koa te-hizara aminareo ireo fihetsika fototra tokony hananan'ny mpikarakara sakafo mba hihinan'ny tokantrano sakafo azo antoka (atoro ny sary ao ambadika).*

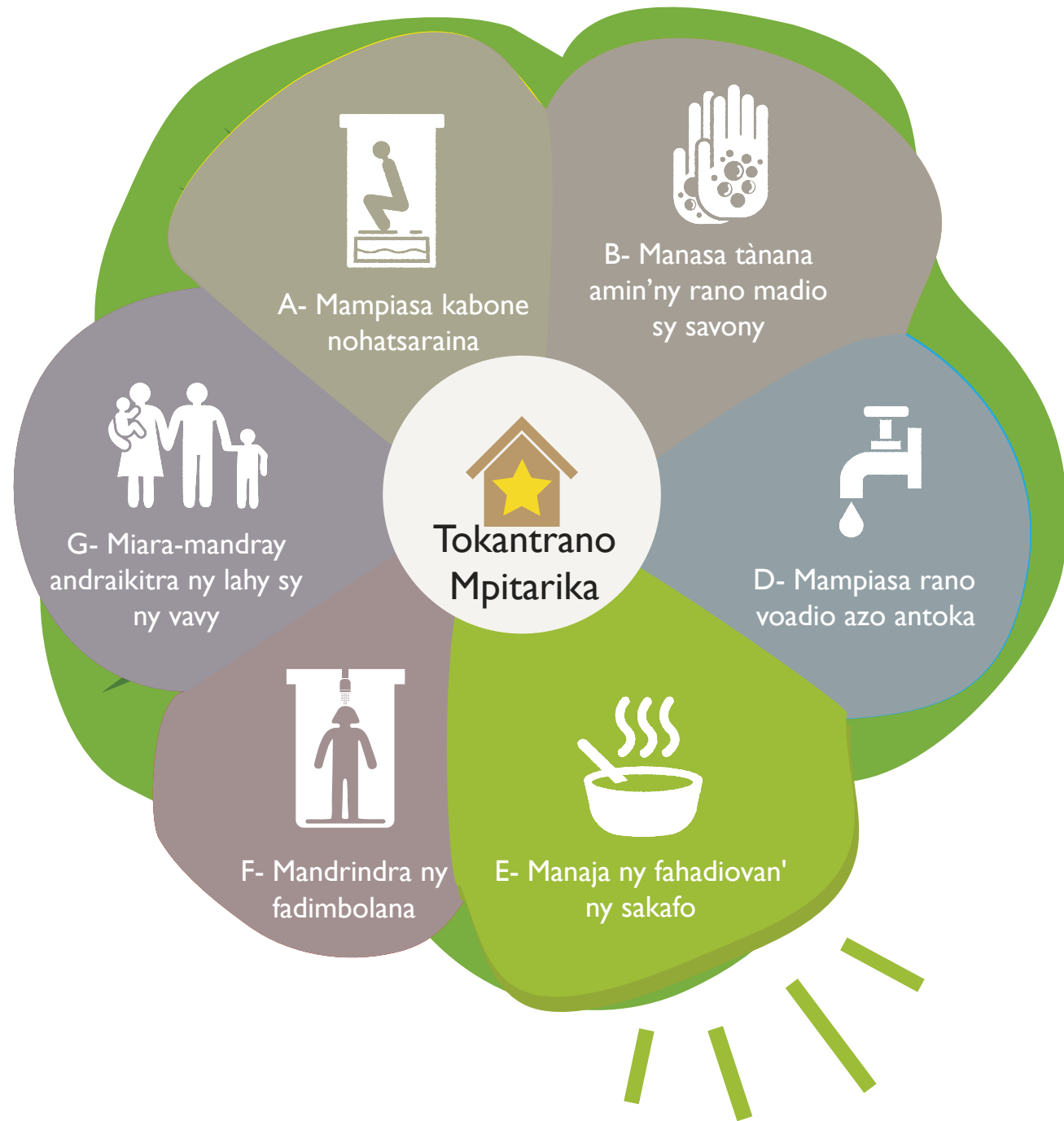
**Ndao ary hoe isika hiara-hanao ireo fihetsika ireo raha mbola misy tsy mahazatra antsika (fampisehoana)**

*(jerena raha efa voasasa ny voankazo sy legioma, raha efa nandrahoina sy nosaromana ny sakafo)*



Aiza no milalao ny zaza mandady sy miana-mandeha ?

# Mariky ny tokantrano Mpitarika – Felana Maitso raha manaja ny fahadiovan'ny sakafo



Arahabaina ianareo nahazo ny felam-boninkazo maitso! Hita taratra sahady fa tena ho tokantrano mpitarika!



## **Fihetsika E : Manaja ny fahadiovan'ny sakafo**

**Rehefa Manaja ny fahadiovan'ny sakafo (manadio lovia sy sakafo anaty toerana voaaro amin'ny loto – mihinana voankazo sy legioma voasasa amin'ny rano madio – mihinana sakafo masaka tsara ary misarona) ny tokantranonareo dia homarihantsika amin'ny Felam-boninkazo MAITSO izany. Ny tanjona dia ho feno ny felam-boninkazo rehetra hanamarihana fa ity tokantrano ity dia tena tokantrano mivoatra:**

**TOKANTRANO MPITARIKA.**

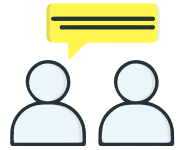
*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony mikasika ny ezaka vitany sy ny fiovana nentin'izany ezaka izany.*

**Iza amin'ireto sary ireto no manakaiky indrindra ny fomba fanaonareo rehefa midio: misasa?**

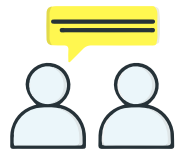


# Fihetsika F: Mandrindra ny fahadiovana mandritra ny fadimbolana

## TARI-DRESAKA

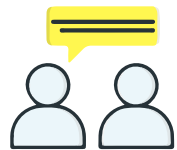


Aiza ianareo no misasa (na lahy na vavy)?  
*(miara-mitsidika ilay toerana ny mpanetsika ifotony sy ny tokantrano)*



Inona ny olana sedraina rehefa misasa any amin'io toerana io? Manao ahoana ny iainan'ny vehivavy ny fisasana any rehefa fadimbolana?

- Voaro tsara amin'ny loton'ny rano ve ny vatany rehefa misasa ?
- Lavitra ve ilay toerana tokony isasany? Afaka ivezivezeny matetika ve?
- Takona ve ilay toerana sa mety ahitan'ny lehilahy, na ny olon-drehetra azy?
- Mahazo aina tsara ve ny vehivavy rehefa misasa ao?
- Afaka misasa ao fotoana maharitra tsara ve? Sy amin'ny fotoana rehetra ve izy, na maraina be, na hariva be?



Inona ny fiatraikan'izany olana izany amin'ny vehivavy sy ny ato an-tokantrano?

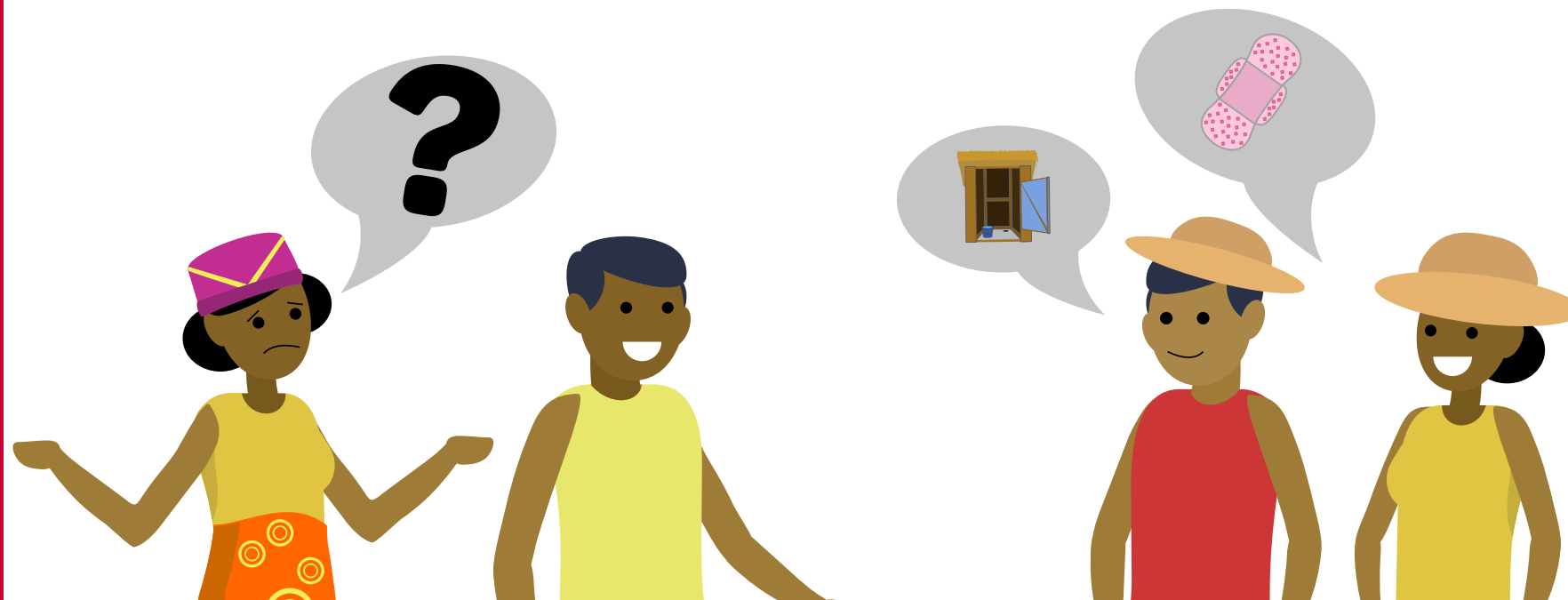
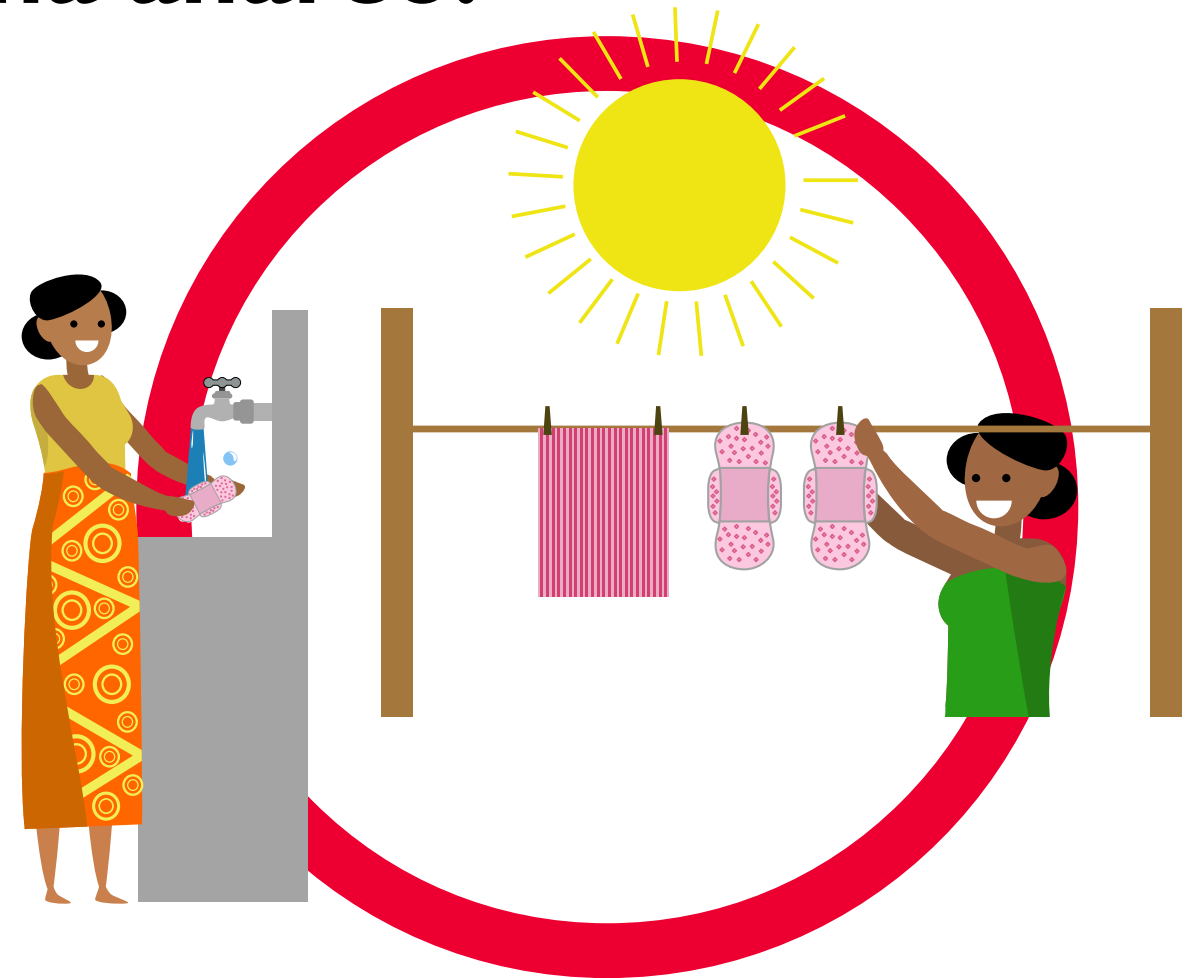


Inona no vahaolana noeritreretinareo? Ny fepetra efa noraisinareo ?



Trano fidiovana toy ny ahoana no tianareo amboarina ?

# Sao mahaliana anareo:

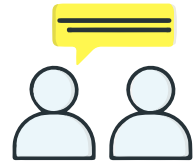


Mora kokoa ny miatrika fadimbolana rehefa tohanan'ny ao an-tokantrano.

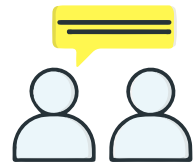


# Fihetsika F: Mandrindra ny fahadiovana mandritra ny fadimbolana

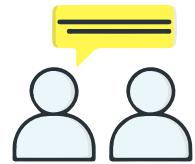
## TARI-DRESAKA



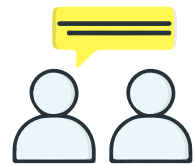
Ankoatry ny momba ny trano fidiovana, Manao ahoana ihany koa ny iainan'ny vehivavy rehefa fadimbolana?



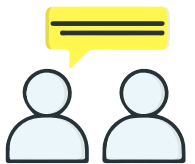
Efa nifanakalo hevitra ve ianareo momba ny fanamorana ny fiatrehan'ny vehivavy ny fadimbolana? (*Raha tsia*) Nahoana? (*Raha eny*) Inona ilay olana efa voavaha noho io fifanankalozan-kevitra io?



Inona ny salaka fampiasa? Manao ahoana ny fikojana azy?



Raha mahaliana anareo dia miara-miasa amin'ny mpivarotra salaka azo sasaina izahay, mora ampiasaina sady azo averina ampiasaina foana....



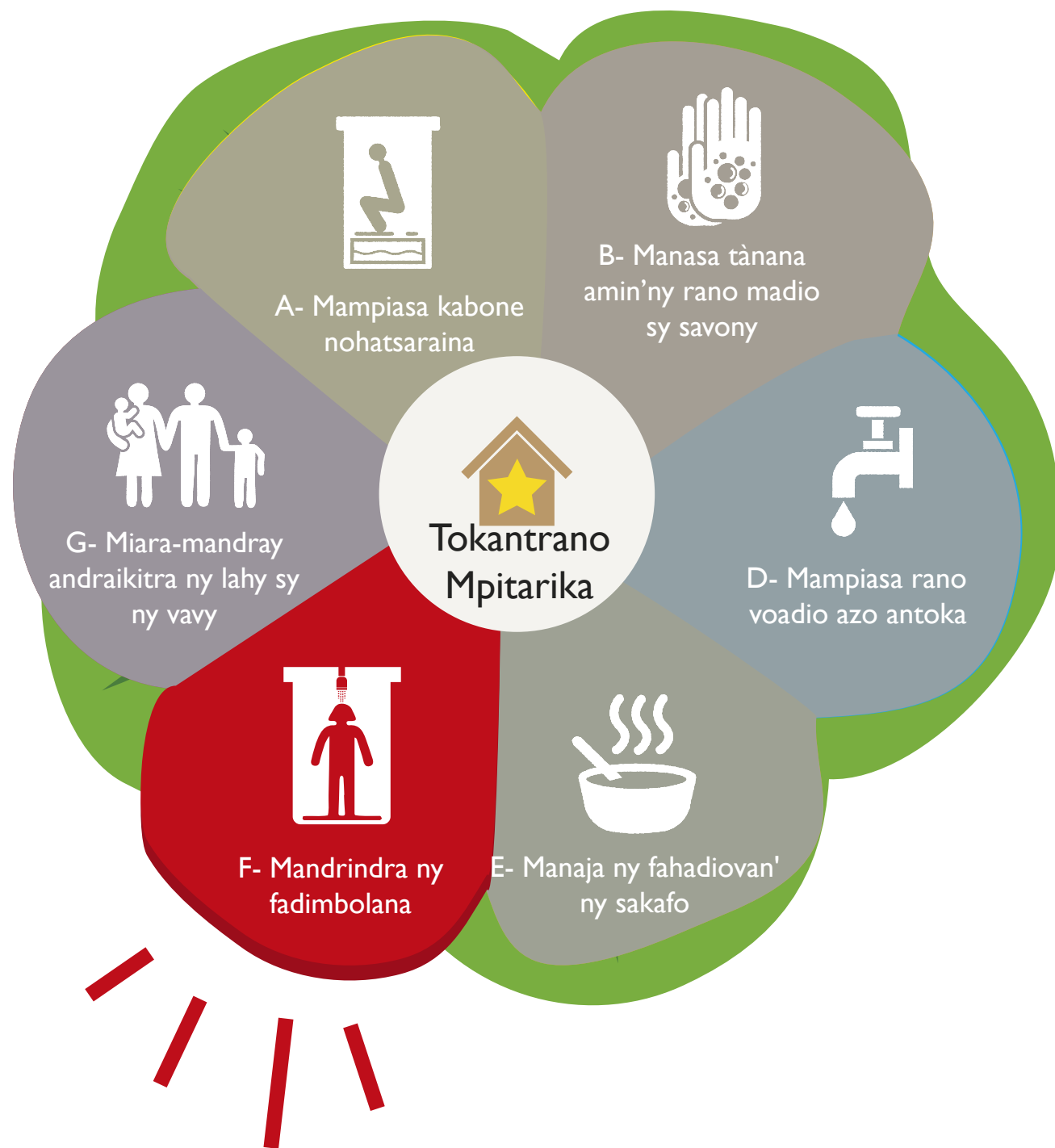
Raha toa ka mahaliana anareo koa dia miara-miasa @mpandrafitra izahay, afaka manamboatra efitrano fidiovana ho anareo.....



Hamaranantsika ny dinika dia raha fintinina dia rehefa fadimbolana dia toy ireto amin'ny sary ireto no ilaina atao mba hampirindra ny fahadiovana mandritra ny fadimbolana (*atoro ny sary*)

**Ndao ary hoe isika hiara-hanao ireo fihetsika ireo raha mbola misy tsy mahazatra antsika (fampisehoana)**  
(*jerena ny toerana fanasana ny salaka sy ny fitaovana fanasana izany, ny toerana fanazana ny salaka raha azon'ny masoandro*)

# Mariky ny tokantrano Mpitarika – Felana Mena raha mahay mandrindra fahadiovana mandritra ny fadimbolana



Arahabaina ianareo nahazo ny felam-boninkazo mena! Hita taratra sahady fa tena ho tokantrano mpitarika!



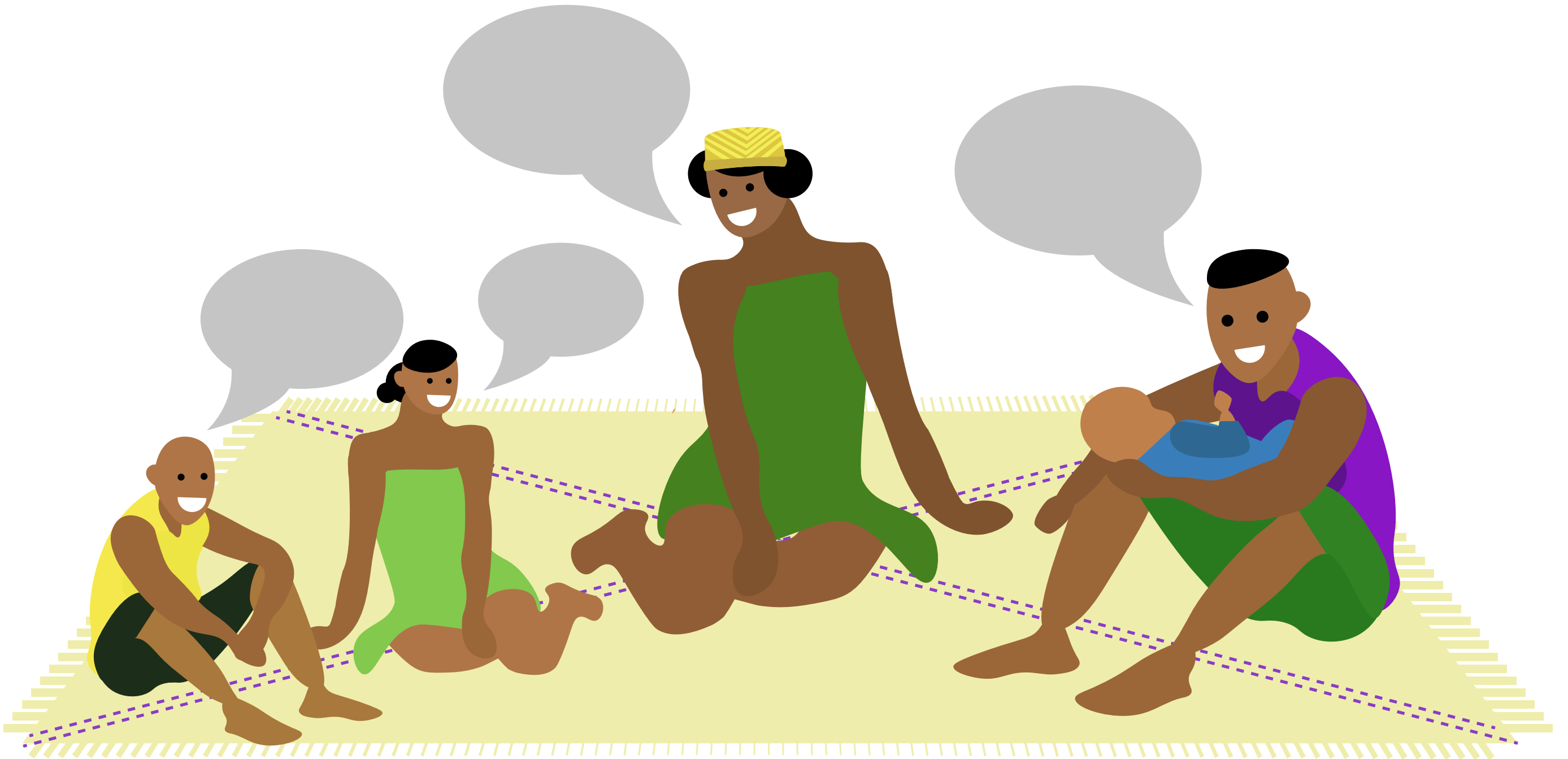
# **Fihetsika F: Mandrindra ny fahadiovana mandritra ny fadimbolana**

Rehefa **Mandrindra ny fahadiovana mandritra ny fadimbolana fadimbolana ( misasa sy misolo salaka matetika ny vehivavy sy ny tovovavy rehefa fadimbolana – manadio ny salaka sy manapy izany amin’ny masoandro izy ireo – mifanakalo hevitra momba ny fadimbolana ny ao an-tokantrano)** ny tokantranonareo dia homarihantsika amin’ny Felam-boninkazo MENA izany. Ny tanjona dia ho feno ny felam-boninkazo rehetra hanamarihana fa ity tokantrano ity dia tena tokantrano mivoatra:

**TOKANTRANO MPITARIKA.**

*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony mikasika ny ezaka vitany sy ny fiovana nentin’izany ezaka izany.*

# Manao ahoana ny fitsinjarana andraikitra ao anaty tokantrano mahakasika ny Rano Fidiovana Fanadiovana?

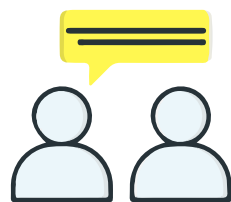


# Fihetsika G : Miara-mandray andraikitra ny lahy sy ny vavy

## TARI-DRESAKA



Manao ahoana ny fifanakalozan-kevitra ato an-tokantrano?



Misy ve ny fifandinihana? Misy ve ny fifampiresahana? Raha misy dia momba ny inona? Raha tsy misy dia inona no sakana na olana?

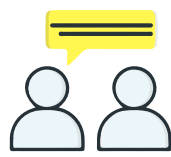
Iza avy ao antokantrano no miara-miasalahy fa afahan'ny tokantrano mitandro ny fahadiovana?



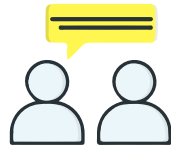
# Fihetsika G : Miara-mandray andraikitra ny lahy sy ny vavy

## TARI-DRESAKA

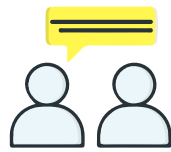
Manao ahoana ny fitsinjarana andraikitra mba HADIO ny ato an-tokantrano:



Fanamboarana ny kabone ? Fampiasana ny kabone? Fikojakojana sy fanadiovana ny kabone?  
Fifanakalozan-kevitra sy fitsinjarana andraikitra? Ary ny “pot” ho an’ny ankizy madinika? Ary ny momba ny salaka ho an’ny vehivavy rehefa fadimbolana



Fividianana savony? Fampiasana ny savony?



Fahazoana ny rano ao an-tokantrano? Fanadiovana ireo fitaovana fakàna sy fitehirizan-drano?



Fanadiovana ny lovia sy ny sakafo? Fikarakarana ny sakafo?



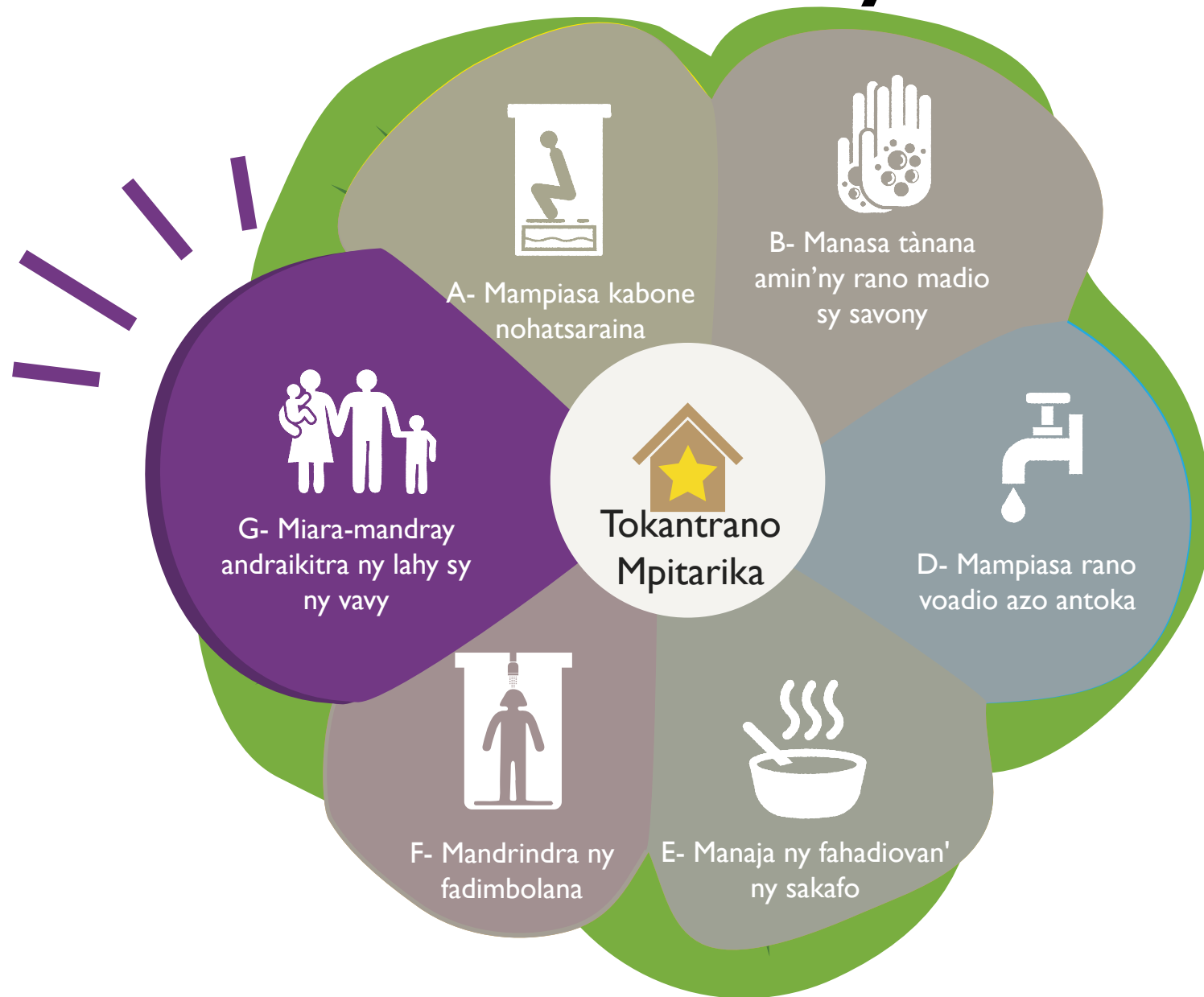
Fanamboarana ny efitrano fidiovana (douche)? Fampiasana sy fikojakojana ary fanadiovana azy?



Ary inona ihany koa ny asa hafa ifampitsinjarana hampadio ny tokantrano?

**Ndao ary hoe isika hiara-hanao ireo fihetsika ireo raha mbola misy tsy mahazatra antsika:  
Ahoana no hanatsarana ny fifampizarana andraikitra mba HADIO ny tokantrano?**

# Mariky ny tokantrano Mpitarika – Felana Volomparasy raha miara-mandray andraikitra ny lahy sy ny vavy



Arahabaina ianareo nahazo ny felam-boninkazo volomparasy! Hita taratra sahady fa tena ho tokantrano mpitarika!





# **Fihetsika G : Miara-mandray andraikitra ny lahy sy ny vavy**

Rehefa **Miara-mandray andraikitra ny lahy sy ny vavy ao anaty** ny tokantranonareo dia homarihantsika amin'ny Felam-boninkazo MENA izany. Ny tanjona dia ho feno ny felam-boninkazo rehetra hanamarihana fa ity tokantrano ity dia tena tokantrano mivoatra:

**TOKANTRANO MPITARIKA.**

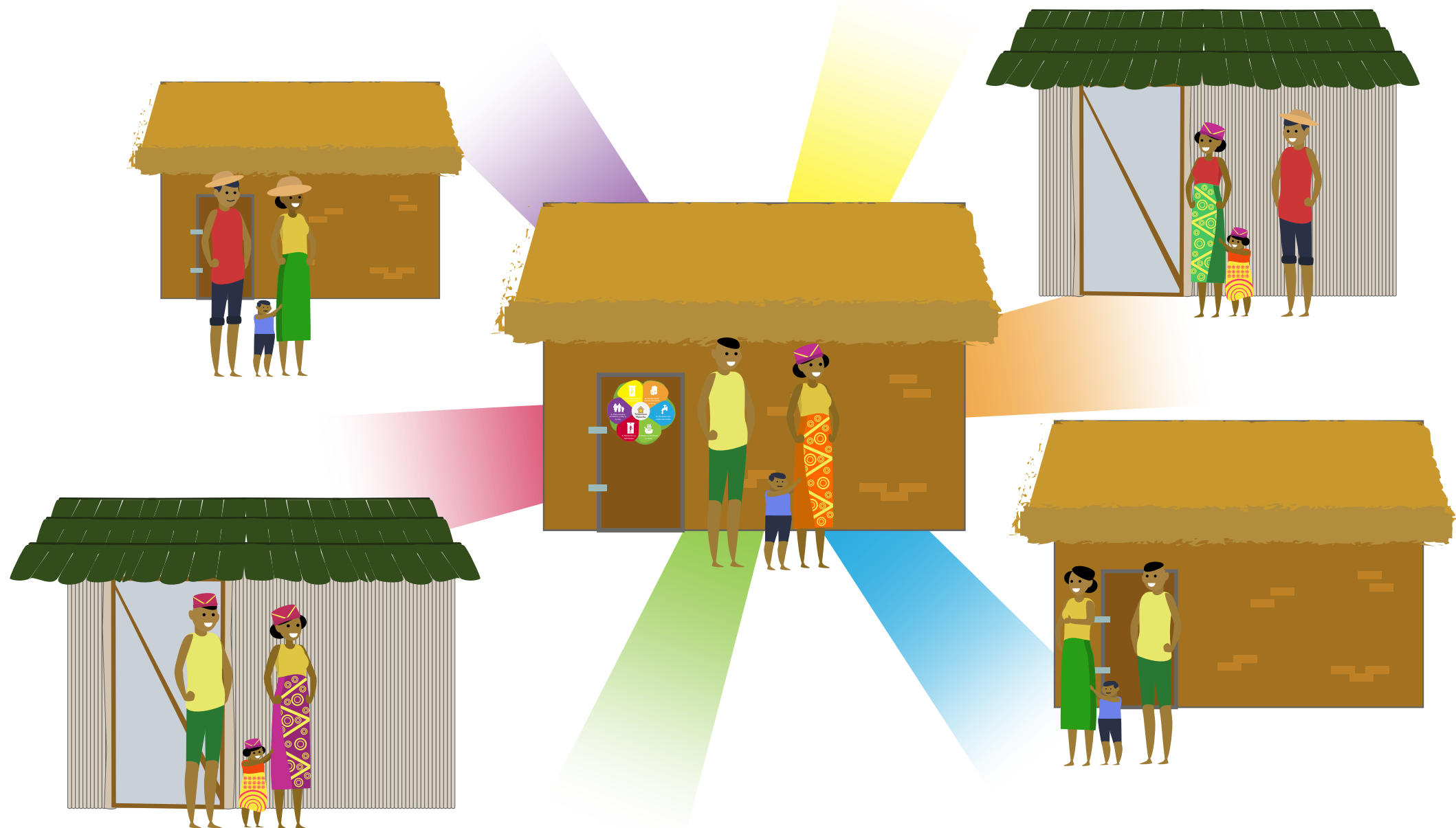
*Rehefa hanome ilay felam-boninkazo dia hanontaniana ny tokantrano momba ny fahafa-pony mikasika ny ezaka vitany sy ny fiovana nentin'izany ezaka izany.*

**Mirary soa ho an'ny mpanetsika ifotony rehetra amin'ny fanovana ny fihetsiky ny tokantrano! Aza adino fa mampirisika ny tokantrano tsidihinao ny fanatanterahanao ireo fihetsika rehetra voalaza ato anatin'ito boky ito! Noho izany, manomboka aminao ny fiovana sy ny fitarihana.**



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## ANNEX 18. CLTS RESEARCH PROTOCOL

### **Understanding Community Led Total Sanitation (CLTS) sustainability in Madagascar**

**Principal Investigator:**

**Robert Dreibelbis, PhD**

**Disease Control Department**

London School of Hygiene and Tropical Medicine (LSHTM) support for RANO WASH (Rural Access to New Opportunities in Water, Sanitation, and Hygiene), Madagascar.

**DRAFT RESEARCH PROTOCOL**

**V5 30.01.2020**

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## I BACKGROUND

### I.1 Introduction

There has been an increasing worldwide recognition of the importance of adequate sanitation to health, social and economic development of populations. Despite progress in recent years, global estimates show that about 2.4 billion people do not have access to improved sanitation and 946 million people still practice open defecation (3-5). Poor sanitation disproportionately affects poor populations and has been linked to a range of negative health outcomes, such as increased diarrhea (6) poor nutrition outcomes (7-10), reduced cognitive development (11), social and mental health risks due to sanitation insecurity among women (12, 13) and high economic costs (14, 15).

The United Nations Sustainable Development Goals (SDGs) have targeted universal access to adequate and equitable sanitation and elimination of open defecation by 2030. Community led total sanitation (CLTS) is one of those most common behavior change approach to increasing sanitation coverage and use and has been implemented in over 50 countries (16, 17). CLTS relies on triggering emotions to generate a collective demand for the adoption of clean, healthy and hygienic sanitation behavior and to ensure that all households in the community have access to safe sanitation facilities. CLTS is founded on basic principles of no toilet subsidy and no financial reward when the community reaches 100% Open Defecation Free (ODF)(19).

CLTS has been found to be effective in increasing private and shared latrine ownership/coverage and decreasing open defecation in a number of countries (16, 17, 20-22). Integrated CLTS interventions have also been associated with a positive change in handwashing behavior, increased awareness of health consequences of open defecation, and increased satisfaction with latrine (17). Factors identified to influence the initial adoption of these behaviors included improved health, dignity/pride, shame/embarrassment, feeling of safety, privacy, empowerment, convenience and upgraded social status.

However, peer reviewed published studies measuring *sustained* adoption of CLTS behavior and/or investigating the factors affecting or influencing sustained adoption are limited. Different methodologies and approaches to measuring sustained adoption and use make comparison between studies challenging (17, 23, 24). Efforts to identify and understand barriers and drivers to sustained behavior change around sanitation practices are essential for the sustainability of CLTS. Identifying and responding to these various influences on individual hygiene behaviors is critical for effective and sustainable intervention planning and implementation.

A rapid scoping literature review was carried out in July 2019 to establish the available knowledge on CLTS sustainability. A majority of sustainability reports lie in grey literature and have many methodological limitations (1, 17). However, reports reported slippage rates – declines in a community after it has been declared ODF - between 13 – 23.5%, with some happening as early as 6 months after CLTS was completed (25-27).

Only 3 published studies were identified that explored CLTS sustainability, all of which applied varying definitions and measurements of sustained behavior change. 4 countries are represented across the 3 papers in this review – 2 from Sub-Saharan Africa (Ethiopia and Ghana) and 2 from South Asia (Indonesia and Nepal). The papers apply various study designs – 1 qualitative, 1 quantitative and 1 mixed method. A detailed summary of the characteristics of these studies are presented in **Appendix A**.

A summary of these studies findings is presented below:

### **Summary of the three study findings**

- 1) A cross-sectional study looking at sustained latrine use, quality and condition at household level one year after the end of implementation of four CLTS interventions in Ghana and Ethiopia found no reversion to ODF in 3 out of 4 interventions with an 8 percentage point increase in the fourth intervention (1).
- 2) A mixed methods study exploring sustainability of CLTS outcomes in Indonesia across 6 ODF villages (587 HH), two years after ODF verification, found slippage rates of 14.5%, with 5 out of 6 villages having low slippage rates (8.8% average) and one village with a significantly higher slippage (51.9%) (2). This study also measured the impact of strength of social norms on slippage and found that weaker social norms in a village are significantly associated with slippage occurrence.
- 3) In Nepal, a qualitative sustainability evaluation study carried out 2.5 years after ODF verification found the key drivers of sustained latrine use to be habit

The reviews found that CLTS outcomes were reported to be more sustainable where there was a supportive enabling environment and/or social cohesiveness (e.g. proxied by presence of support mechanisms such as community savings groups, mutual self-support latrine building groups, funding support systems). Additionally, strong engagement of natural leaders for regular follow-up visits and to continuously reinforce normative expectations among the community members was associated with sustained use of latrines across all three papers

Other community level factors included communities that had easy market-access to latrine products and materials and communities where new social/community norms had been developed and established around toilet ownership and use.

The establishment of ODF regulations during the implementation followed by public declaration and celebration of achieving ODF status resulted in the respondents' sense of collective efficacy and civic pride in achieving ODF status sustained even 2 years after. Emotional drivers particularly disgust, comfort, shame/stigma around defecation continued to play a role for respondents long after the triggering process suggesting that these drivers become internalized motivators for behavior change.

Habit formation, particularly facilitated by the ease of use and access to water and sanitation facilities, as well as perceived loss of social status if found open defecating were individual level motivations for sustained adoptions of latrines.

Conversely issues such as the unavailability and unreliability of water sources, poor latrine durability, low socio-economic status, weak social norms (as measured by lower perception of latrine ownership coverage in their community) and the perceived cost of latrine construction were important barriers to sustained latrine use.

A review looking at behavioral factors influencing sustained adoption of WASH technologies additionally found that sustained sanitation adoption and/or use was influenced by shared values and collective efficacy to keep facilities by shared latrine owners, perceived benefits (reducing smells and reducing the presence of flies, privacy, safety, cleanliness) and the knowledge of disease transmission (23). Presence of existing habits such as previous open defecation, as well as foul smells and flies in the latrine was a barrier for sustained toilet use (23, 24).

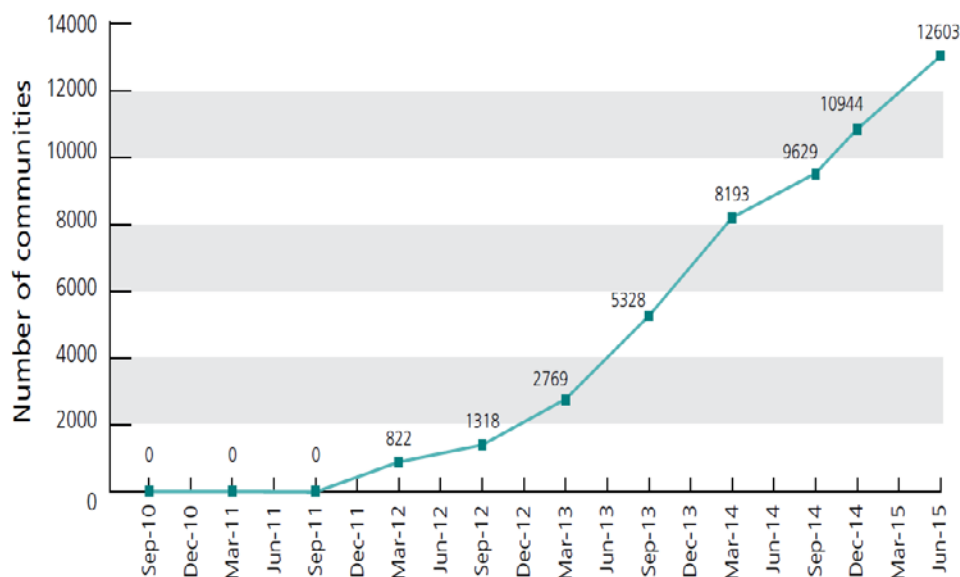
## 1.2 Background of CLTS in Madagascar

Community Led Total Sanitation (CLTS) was introduced in Madagascar in 2008 by UNICEF, scaled up in 2012 and incorporated into Madagascar's national strategy in 2014. By 2015, CLTS became incorporated into the national roadmap with an aim to achieve national ODF status by 2025. The MEEH's national "Madagascar Madio 2025" road map outlines five goals:

1. Eradicate open defecation
2. Improve solid waste and sludge management and access to basic sanitation services, especially in urban areas
3. Increase access to sanitation services in institutional settings, such as schools and health facilities
4. Install infrastructure to manage wastewater and stormwater
5. Promote good hygiene practices

The national programme, Fonds d'Appui pour L'Assainissement (FAA) is currently supported by a number of major technical and financial organisations which then work through sub - grantees to implement community-led total sanitation (CLTS) activities in local communities. The FAA has so far reported 1.45 million people in 12,600 communities in having achieved ODF status (see Figure one).

Figure 1: Number of ODF communities – Results progression (June 2015)



Despite the nation's programme success, challenges around sustainability of the sanitation practices remain. Communities previously declared ODF have been reported to be slipping back to open defecation with studies reporting slippage rates ranging from 10% – 50%.<sup>17</sup> As part of their monitoring and evaluation framework, FAA recently carried out a nationwide cross-sectional outcome survey evaluating CLTS sustainability in Madagascar. Data collection for

<sup>17</sup> The discrepancy in the monitoring data have been credited to methodological differences and varying definitions of ODF.



this most recent outcome survey was completed in Fall 2019 and results are anticipated in early 2020.

## 2 STUDY AIM AND OBJECTIVES

In line with their research priorities, the Ministry of Water, Sanitation, and Hygiene (WASH) and RANO-WASH have partnered with LSHTM to conduct research on the sustainability of CLTS interventions in the Madagascar.

The study aims to explore current sanitation practices in villages where CLTS has been previously implemented in order to understand those factors that contribute to adoption and sustainability of CLTS interventions in Madagascar.

Primary objectives are to:

- Investigate determinants of sustained ODF status, slippage and non-adoption at community level
- Investigate determinants of sustained latrine use, slippage and non-adoption at the household level

Secondary objectives include :

- Explore the integration of equity, gender, households with and without disabilities, and female-headed households.
- Explore the role played by the sustained presence of civil society organisations in villages on CLTS sustainability
- Understand the impact, if any, of the ripple effect CLTS has had on latrine adoption and use in neighbouring communes where direct triggering did not take place
- Explore the role that existing and accessible sanitation market systems may play in the sustainability of CLTS

**For the purposes of this research, sustained adoption will be defined as the continued maintenance of CLTS behavior at least 2 years after ODF certification.**

Research findings will inform future programmatic efforts to increase and maintain sanitation coverage in Madagascar. Specifically, results will inform adaptation and elaboration of RANO WASH's CLTS programme strategies.

Efforts will provide targets for improved sustainability, population groups that require targeted interventions, and strategies for improving the long-term sustainability of behavior change.

These findings will also help inform broader national initiatives to improve sanitation coverage and use in Madagascar.

## 3 STUDY SETTING

In line with the outcome survey, the study will be conducted across all regions of Madagascar with maximum overlap in regions where the RANO-WASH programme has been implemented by CARE-Madagascar. RANO-WASH regions include: Atsinanana, Vatovavy-Fitovinany, Alaotra Mangoro, Amoron'i Mania, Haute Matsiatra and Vakinankaratra

## 4 STUDY DESIGN

This qualitative study will be informed by the on-going FAA/GSF-led national evaluation of the nationwide CLTS programme in Madagascar – referred to as the GSF Outcome Survey. Findings from GSF Outcome Survey will be discussed with key stakeholders in a participatory workshop and determinants of interest & target groups identified for further investigation.

The research is anticipated to employ the use of multiple qualitative field-based methods that will be designed to capture information about a range of identified determinants. This includes in-depth interviews (IDI), focus group discussions (FGD) and direct observations (DO). Structured and participatory methods will be embedded within IDIs and FGDs - exploring specific determinants identified as priorities. Research will follow an iterative design where findings and insights from one activity will inform data collection and data analysis in the next.

## 5 STUDY POPULATION AND SAMPLE

Given the exploratory nature of the study, sample selection is anticipated to reflect the estimated maximum needed in order to reach theoretical saturation and reflect anticipated diversity informed by the outcomes on the GSF survey.

Prior to sampling, villages will be grouped in to 3 categories:

- 1) **ODF villages** - Villages that have maintained their ODF status at least 2 years after ODF certification
- 2) **Slippage villages** - Previously ODF certified villages that have been identified as having reverted 2 years after ODF certified
- 3) **Non-adopter villages** - Villages that have not achieved ODF status

From each category, 6 - 8 villages will be selected.

### 5.1.1 Village selection

Villages will be purposively selected to reflect the range of geographies and village sizes. This will include a mix of smaller and larger villages ensuring that at least one village from each of the 6 RANO-WASH implementing regions is represented in the sample. . A full list of villages will be finalized pending results of the GSF Outcome Survey. The full list of villages will be provided by CARE-Madagascar and selection done by LSHTM.

Within each village, data will be collected from a range of respondents. The following key population groups have been identified a priori whose experience will be collected across activities:

- 1) Heads of the household (or the financial controllers of the household)
- 2) Female caregivers of young children aged below 5 yrs. old
- 3) Persons with disability/mobility limitations
- 4) Persons over 65 years of age
- 5) Local community care groups
- 6) Community beneficiaries of on-going CLTS
- 7) Community leaders

Final identification of priority respondent groups will be completed following the results of the GSF outcome survey.

Multiple data collection activities will be completed with each recruited participant within the context of a single FGD or IDI.

Anticipated sample sizes can be seen below:

Methods	Sample size per village	Total sample size
<b>In depth interviews</b> ( <i>Structured methods + Participatory methods</i> )	6 respondents	Up to 144 respondents
<b>Key informant interviews</b>	2 Community leaders	Up to 48 respondents
<b>Focus group discussions</b> ( <i>Participatory methods</i> )	1 (6 – 10 participants)	Up to 240 respondents

Anticipated sample sizes listed above are indicative. Sample size may change based on the number of target behaviors identified, anticipated scope of data collection, and resource availability.

Selection of regions, villages and households will be finalised in partnership with CARE-Madagascar and GSF / FAA.

## 6 DATA COLLECTION

### 6.1 Methods

- 1) In-depth interviews (IDI): We will use an interview guide approach to allow for in-depth probing while permitting the interviewer to keep the interview within the parameters traced out by the aim of the study. In-depth interviews will be carried out on 6 participants per village. 1 participant per household will be selected for the in-depth interview ensuring that across the village, respondents reflect a diversity of responses informed by the outcomes of the survey and target groups identified.
- 2) Focus Group Discussions (FGD): 1 FGD will be held per village consisting of 6 – 10 community members to obtain their perceptions on the defined topic of interest. Some of the FGDs will be gender separated while others will be mixed. Each FGD will be conducted by 2 people – a moderator to lead and moderate the discussion and a note taker to document the conversation and take notes of non-verbal communications.
- 3) Key Informant Interviews (KII): 2 community leaders will be selected to offer insights into the priority behaviors of interest.

Multiple data collection activities will be completed with each recruited participant within the context of a single FGD or IDI. The exact activities used will be matched with the specific respondent group of interest and the target behavior. Activities are taken from the Behaviour Centred Design Toolkit (28) and will be customized prior to data collection based on selected priority behaviors and field experience. Indicative activities are described below. Not all participants will complete all data collection activities. However, they represent the possible range of activities that may be employed during the research.

#### *5.1.1.1 Direct observations: Structured observation*

Observation will be used to document key behavioral settings.

Observation may include an inspection of the household sanitation and hygiene facilities to identify proxy measures of latrine use and maintenance using a structured questionnaire and assessment guide. Observation questions will cover:

- Presence of human and animal faeces in and outside the compound
- Proxy measures of latrine use e.g. well-worn path
- Presence of a water seal
- Latrine maintenance
- Designated place for handwashing with soap and water
- Household and compound solid waste management

To maintain dignity and privacy, no direct observations will be undertaken of the participants as they perform the actual sanitation behavior. However, if given consent, we may request to observe sanitation and hygiene related behaviors around young children who are not yet independently toilet trained. At the end of the inspection of the behavioral settings, the participant may be asked some follow up questions to find out more about their experiences based on what has been observed. e.g. if we realise there is no functional latrine, we may ask the participant to point out some of the common areas they go to as an alternative. Observations may also document the specific behavior change tactics/messaging used by any identified community 'leaders', the messages they deliver, who they deliver them too, and how often this occurs.

#### *5.1.1.2 Behaviour features/functions ranking*

This will be used to gain insight into which functions the target behavior performs, from the perspective of the target audience. Participants may be asked to list reasons to do the target behavior and then prompted for ranking of known reasons. This can be performed in conjunction (or in lieu of) the motives exercise below. This exercise gives more focused, reliable and replicable results about the existing 'drivers' of the target behavior.

#### *5.1.1.3 Motives exercise*

The motives exercise has been used in several settings to explore potential levers of behavior change for a variety of different types of behavior. It is designed to explore which of the 15 proposed motives – or emotional states (29) - may influence target behaviors. A set of drawings will be designed to explore the motives associated with completing specific behaviors of interest. Motive exercises ask respondents to reflect on which motives are salient for a specific behavior, how motives compare to one another, and which motives have the greatest

association with specific behaviors. It is good at producing unexpected mental associations to target behaviors.

#### *5.1.1.4 Routine Scripting*

Participants are asked to describe their typical daily routine step by step from the moment they start their day until the time they go to bed with emphasis on practices related to the target behavior. As they speak a simple picture/ key word is drawn to represent the activity. The interviewer may probe on additional events that are not listed by the respondent or may ask for more details on specific events. If necessary, events may be clustered according to what could be thought of as belonging together.

#### *5.1.1.5 Situational constraints (Scenarios ranking exercise)*

Participants will be asked to rank their likelihood of performing the behavior in different scenarios e.g. when the toilet is smelly, or when a menstruating woman has just used it etc. This will be useful to gain insights into the kinds of situational factors that may constrain performance of the target behavior.

#### *5.1.1.6 Aspirational figures*

To gain insight into what ideals and aspirations the target groups hold and what kind of hygiene and sanitation behavior they associate with these ideals. The participants will be asked to describe and rank alternative social exemplars.

#### *5.1.1.7 Norms Testing*

This is to get an overview of both the perceived and empirical norms as well as the value they place on those norms and the referent group. The participant will be presented vignettes of various hypothetical cases and asked how various people in their social network (if not done already, the participant would be asked to make a social network drawing) would respond, how the respondent would value that response and if they think other people in and outside the social network would exhibit that behavior.

#### *5.1.1.8 Setting Diagnostics*

Settings Diagnostic is a simple, flexible tool used to gather information about a specific behavioral setting. It includes asking a respondent to show you where a particular behavior occurs, to demonstrate how they would normally perform the behavior, and gather key information about when the behavior normally occurs, the individuals that are involved in the behavior, how the respondent learned to do the behavior (30). Understanding behavioral settings provides a unique view into routine, habitual behaviors – behaviors that are typically difficult for respondents to provide information on motives, knowledge, or priorities. Some demonstrations may be photographed. While participant's actual sanitation behaviors will not be asked to be demonstrated, we may ask the participants to demonstrate related behaviors such as handwashing behaviors or child faecal management behaviors.

#### *5.1.1.9 Free Listing and Pile Sorting*

Free listing may be included into some IDIs or FGDs as a participatory approach to get participants to free list items or concepts related to a specific behavior. As each item is listed, the interviewer will write it down on an index card (31). After lists have been generated, the

interviewer will then ask the respondent to rank or categorize items into specific categories or along specific continuum. If sufficient lists have already been developed, the interview may skip the free listing step and produce a set of cards reflecting the most salient / common items from previous interviews (31). Pile sorting is useful to explore dichotomies / categories and understand how respondents organize items within their own frame of reference. Sort data will be recorded for subsequent analysis. In addition, individuals may be asked a series of follow-up questions to explain their ranking / sorting results.

#### *5.1.1.10 Behavioural Demonstrations*

Small groups of individuals will each be asked to model a target behavior to one another - for example, mothers may be asked to demonstrate their child faecal management process from beginning to end. Afterwards participants will be asked to discuss their steps and those of others. Facilitators may also model a behavior to a group of people and ask them their opinions of this in comparison to their own behaviors. This activity is designed to explore practices, perceptions, and norms around the target behavior.

#### *5.1.1.11 100 People Activity*

100 People activity is specific designed to explore descriptive norms around a behavior of interest. In this exercise, completed either in interviews or in FGDs, participants are asked to think about 100 people from their community and asked a series of questions about how many of them do or do not do a specific behavior. For example, participants may be asked to estimate how many of these 100 people always wash hands regularly after going to the toilet, how many people consistently use only the toilet etc.

#### *5.1.1.12 Prop/Infrastructure-oriented life history*

This will be to gain insights into life history with the sanitation infrastructure and related props (and the participant's relationship/role at each stage). Life history will include: the acquire stage (how the site managed to get the facility in place), the use stage (who uses the toilet and for what purposes), the maintain stage (who cleans, empties and repairs), and the dispose/replace stage.

Additional family members may also be recruited for IDIs or for one or more of the data collection activities outlined above. All FGDs and IDIs will last less than 2 hours and will be tape recorded to avoid missing valuable details in the discussions.

## **6.2 Data collection tools**

Data collection tools will consist of audio recordings and structured data collection paper forms. Interviewers will also take free form written notes during data collection to highlight key findings.

Additionally, immediately following data collection, the interviewers will prepare a written summary on a semi-structured form. These semi-structured forms will provide interviewers with an opportunity to record immediate impressions of the data collection activities, identify areas for future inquiry, and reflect on their experiences with data collection.

Indicative data collection tools are provided with this protocol. All tools will be translated in the appropriate language(s). They will undergo pretesting and any revisions will be made based on feedback from CARE- Madagascar staff, pretested respondents, field staff and enumerators.

All final tools will be pilot tested during training prior to implementation in the field.

Because of the qualitative nature of the research, tools may be iteratively refined and adaptation through the data collection process. Adapted tools will, however, focus on the same thematic areas and utilise the same manner of questioning.

## 7 STUDY PROCEDURES

### 7.1 Piloting and training of data collectors

CARE Madagascar will organise the recruitment of data selection staff and organize transcription and translation of data. Recruited staff should have the appropriate amount of prior experience with conducting qualitative interviews and must not have been involved in any previous CLTS activities related to ensure that they remain unbiased. LSHTM staff will oversee training on all aspects of data collection. Training will cover all aspects of the survey including but not limited to:

- Rationale and background for conducting the survey
- Study protocol and data collection tools
- Interview and probing techniques
- Human subjects' protection and participant safeguarding
- Selection of eligible households in a village and participants from within a household
- Timetable of activities
- Roles and responsibilities of team

An interviewer's manual and training materials will be developed if needed to assist the interviewers throughout the training and while in the field.

3 days of training will be conducted at an appropriate venue using presentations, role playing and mock interviews. The study team will then undergo a further 3 days' pilot in the field to consolidate the training.

### 7.2 Organisation and management of the study

Each field data collection team will be made up 3 data collectors, 1 supervisor and 1 driver. Assuming one team can complete 6 IDIs in one day, 2 KIIs in half a day and 1 FGD in half a day, it is estimated that one team would spend a total of 2 days per village. Therefore, one team would a total of 48 working days to complete all the data collection across all the appropriate respondents. The number of teams picked will depend on the budget and availability of appropriately qualified data collectors.

### 7.3 Recruitment and consent

Recruitment will be done at the community- or household-level. In-country data collection partners will work with relevant staff operating in those regions for introductions to local communities and staff will assist in identifying local individuals who can facilitate recruitment in participating communities.

Household selection will be performed on site by the data collection team.



### 7.3.1 Household selection

Within each selected village, 6 households will be selected. Household selection will be informed by target populations. If the GSF Outcome Survey results suggest significant intra-household variation in sanitation use, we may recruit two individuals from the same household to participate in the study.

For recruitment at all levels, data collection teams will explain the purposes of the research and give the participant a broad overview of the activities. For IDIs and DO: consent and data collection may occur immediately after recruitment. For FGDs, participants may be invited to participate in a discussion at some point in the near future.

## 8 DATA MANAGEMENT

All data – including notes and images – stored on a password protect computer. Hardcopies of written documents will be kept in a lockable drawer prior to digitisation.

While the research is ongoing, the data will only be accessed by the research team, including local field staff, LSHTM staff and key staff from the RANO-WASH consortium.

## 9 DATA ANALYSIS

Data will be analysed in multiple ways throughout the project.

Structured data collection tools will be analysed at the end of each day and data recorded and entered into an excel spreadsheet and links with data collection notes prepared by field teams. A live analysis process – in which daily findings are reviewed by all data collection staff together and important themes and concepts identified – will be used to identify immediate areas of adaptation, inform subsequent sampling, and identify emergent themes and key findings.

Structured data, such as Pile Sort or Free Listing, will be analysed using various standard approaches, including multi-dimensional scaling, hierarchical cluster analysis, or rank-order logistic models (32-34). These analysis techniques will be used to identify response patterns between and within respondent groups.

Textual data – notes, transcripts will be analysed according to the thematic analysis procedures outlined by Braun and Clarke (35).

Qualitative data from the observations will be analysed through the technique of parsing whereby recorded practices of interest will be analysed by two different individuals and broken down into key behavioral actions. This richer, contextual data on behavior as it occurred in a naturalistic setting, will be triangulated with data from the interviews, FGDs and other methods.

## 10 ETHICAL CONSIDERATIONS

The study protocol will be submitted to ethics committees at:

<b>London School of Hygiene and Tropical Medicine</b>	Keppel St, London WC1E 7HT, United Kingdom Telephone: <a href="tel:+442076368636">+44 20 7636 8636</a> Email: <a href="mailto:ethics@lshtm.ac.uk">ethics@lshtm.ac.uk</a>
<b>Madagascar</b>	TO be determined



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Members of the RANO-WASH consortium will aid in finding the local IRB for ethics submission.

## 11 INFORMED CONSENT

All individuals participating in the study will be given a participant information sheet (PIS) and photo consent sheet explaining the purpose of the study, their rights as study participants, and expected time they will be involved in the study. For all respondents, the information on the PIS will be reviewed by the data collection staff with the study participant and consent recorded.

Consent forms will document yes/or no for each of the following:

- 1) The respondent has read / been read and understands the PIS
- 2) The respondent gives permission for data collection to be audio recorded
- 3) The respondent gives permission for photos to be taken for research purposes
- 4) The respondent gives permission for photos to be used in future research communications
- 5) The respondent agrees to take part in the research. If the respondent is not literate, signature of an adult witness will be recorded.

Consent forms for FGDs will explicitly state that participants should not discuss aspects of the group discussion with other members of the community and that they should respect the privacy of other members of the discussion. This will also be explained verbally prior to the start of data collection.

It is planned that this permission form would only be signed once by any one individual and thereafter verbal permission would be sought prior to the taking of specific images.

An additional consent has been included to enable participants to allow us to use images and videos in communications about this study – such as manuscripts, project reports, presentations or research posters. An additional information sheet has been included to capture photo consents from household members who may appear in photos taken of the research participant. These consents are designed to collect consent to use images of household members who are not the primary research participant. A specific alphanumeric code will be assigned to each study participants data files indicating if respondent and/or household members have provided consents for use of images in research communication.

## 12 CONFIDENTIALITY

All individuals enrolled will be allocated a village or household identification number. These numbers will be used to identify all records relating to the village or household. Data will be stored in an electronic spreadsheet and will be identifiable by household or village ID number only. A separate list will be kept listing the village and household names and locations and ID numbers. This list will be password protected only be accessible to senior project staff. All senior project staff will have received training of human subject research ethics.

Participants will not be identified using any personally-recognisable means. Reported quotes and observed behaviors will be anonymised and deductive disclosure will be avoided by ensuring that there are at least five individuals in any subgroup of analysis. Participants will be asked

specifically whether they consent to photos being used for research purposes or to communicate findings. Name and potentially identifying information will be redacted from digital transcripts.

Upon completion of the research a copy of all electronic field notes and audio data will be stored in a password protected file on the computer of the lead investigator for a period of 10 years. A copy of all handwritten field notes will be retained by project staff in a sealed envelope and kept for a period of 10 years also. After this period all handwritten notes will be shredded and electronic files, with the exception of the project report, will be permanently deleted.

## 13 RISKS OF THE STUDY

We note a small number of risks associated with this study. Participants may be inconvenienced during data collection. Prior to data collection, all participants will be informed that they may take a break from data collection – or terminate data collection entirely - at any point without any risk of harm or penalty. In such cases, the data collection staff will attempt to return at a time more convenient for the participant. Additionally, participants will have their right to terminate the observation at any point explained to them clearly. Upon request of the participant, the observer will also give them a 15 – 30-minute break window of privacy without termination of the observation.

There is some level of discomfort expected with the discussion of sanitation practices across all participants. It is also expected that some groups, such as women, may experience more discomfort with the discussion than others particularly in mixed group settings. Prior experience, however, has shown that women often appreciate the opportunity to discuss their concerns around sanitation and resistance or discomfort is rare. However, to address this, data collection tools and methods will be reviewed to ensure that questions are asked in a culturally sensitive/appropriate manner. Gender composition across all teams/interviews will be selected appropriately and all teams will be trained on various interviewing techniques that minimise the discomfort of others, particularly in groups, without compromising the quality of information obtained. Research activities included in IDIs and FGDs are designed to be rapid and participatory and past experience has shown that respondents often find activities fun and enjoyable enough to offset some of the discomfort associated with discussing sanitation behaviors.

Breach of confidentiality is another risk of the study. Safeguards for data protection and management have been described above. Additionally, we note that sanitation facilities in this setting are external to the home and publicly visible. As such, sanitation behaviors are rarely private.

## 14 BENEFITS OF THE STUDY

There are no foreseen direct personal benefits to study participants. However, data collected during this study is expected to be used to improve future programmatic CLTS strategies. Small tokens of appreciation will be provided to participating individuals – such as bars of soap. Food and drink will be served during group discussions. We will defer to our in-country data collection partners on appropriate provisions for participants and ensure that they are not valuable enough to serve as incentive to participate in the research.

## 15 STUDY MANAGEMENT

The overall management of the study is the responsibility of the study PI, Dr Robert Dreibelbis from the Environmental Health Group at London School of Hygiene & Tropical Medicine. Dr Dreibelbis will be supported by Yolisa Nalule. If needed, other researchers from LSHTM may be involved in data collection, training and analysis, we will notify ERC if any additional staff join the study team.

We will partner with RANOWASH to provide data collection research staff, local ethical approval, support and review of data collection tools, management, interpretation and analysis.

Study roles and responsibilities:

- **Dr Robert Dreibelbis (LSHTM) PI:** Overall study management and coordination, including overseeing: ethical approval, protocol development, data analysis and interpretation, and manuscript writing.
- **Yolisa Nalule (LSHTM) Research Assistant:** Will support the ethics submission to the relevant institutional review boards, design study protocol and data collection tools and be the point of contact for the data collection team. She will be responsible for data analysis

## 16 PUBLICATION AND DISSEMINATION

Findings will be prepared for publication and published in an open-access journal. In some cases, anonymized data will be made publicly available in accordance with contract requirements. No data from this study will be submitted for publication without approval from the study management team.

CARE Madagascar will hold dissemination events to present study findings to state and national and regional stakeholders. CARE Madagascar will advertise the journal publications through its social media platforms and may submit the publications for inclusion any relevant newsletters or other relevant journals.

## APPENDIX A

### Scoping review on CLTS sustainability

This rapid scoping review seeks to identify the relevant current literature relating to sustainability of CLTS. The aim of the review is to establish the available knowledge on CLTS sustainability as well as understand the extent of other similar research of CLTS sustainability in order to inform the design of the RANO-WASH CLTS evaluation study. All peer-reviewed academic publications from developing countries and that were published in English were included. Grey literature was excluded. Searches were conducted on PubMed and also supplemented by hand searching for any additional references. The titles and abstract of studies were then reviewed for relevance. Among identified studies, only studies that provided relevant information that contribute to the purposes of the review were selected. In this scoping, we focused solely on studies that looked specifically at CLTS sustainability, defined as communities remaining ODF at a minimum of 6 months beyond the ODF verification(24). Studies that measured the effectiveness of CLTS before ODF verification process or within 6 months after ODF verification process were not included in the review.

The scoping identified a total of 3 studies that will be presented below.

#### Summary of the three study findings

- 1) A cross-sectional study looking at sustained latrine use, quality and condition at household level one year after the end of implementation of four CLTS interventions in Ghana and Ethiopia found no reversion to ODF in 3 out of 4 interventions with an 8 percentage point increase in the fourth intervention (1).
- 2) A mixed methods study looking at sustainability of CLTS outcomes in Indonesia across 6 ODF villages (587 HH), two years after ODF verification, found slippage rates of 14.5%, with 5 out of 6 villages having low slippage rates (8.8% average) and one village with a significantly higher slippage (51.9%) (2). This study also measured the impact of strength of social norms on slippage and found that weaker social norms in a village are significantly associated with slippage occurrence.
- 3) In Nepal, a qualitative sustainability evaluation study carried out 2.5 years after ODF verification found the key drivers of sustained latrine use to be habit formation, emotional drivers and civic pride where as the key barriers revolved around water-scarcity and financial barriers (18).

#### STUDY CHARACTERISTICS

Whereas there is some evidence that CLTS can be effective in the short term, it is not clear that the behavior changes are regularly sustained over time. Majority of the literature on CLTS evaluations focuses on CLTS effectiveness, outcomes measured during and/or immediately after the CLTS, and those looking specifically at measuring the sustainability of CLTS outcomes are scarce.

This review found 3 published studies that fit the criteria. Characteristics of these studies are presented in **Table I**. The three studies presented below have all applied different definitions and approaches to their outcome measures, follow-up periods and methodologies.

4 countries are represented across the 3 papers in this review – 2 from Sub-Saharan Africa and 2 from South Asia. The papers apply various study designs – 1 qualitative, 1 quantitative and 1 mixed methods with only 1 study comparing OD results from the midline and baseline and another between end line and a 'look back' period. The CLTS approach across all these studies was different with some countries having done an integrated WASH intervention of which CLTS was a part, and others having had different actors added on to the CLTS approach across different arms to test for

**Table I. Characteristics of the included published literature on sustained CLTS evaluation**

CITATION	2	4	3
<b>Country</b>	Ethiopia, Ghana	Nepal	Indonesia
<b>Study design</b>	<b>Cross-sectional design</b> Household survey (Heads of household)  Obs of latrine quality & maintenance	<b>Qualitative &amp; participatory methods</b> 1) FGD 2) In-depth interviews 3) KII 4) Drawings/Stories of 'most significant change' 5) HH observation to examine presence and use of toilets & water facilities	<b>Cross-sectional study</b> Household survey (Head of HH) Direct observation  <b>Qualitative &amp; participatory</b> FGD with a range of village participants
<b>Sustainability eval follow up after ODF verification</b>	1 year	2.5 yrs	2 yrs
<b>Period of CLTS intervention of selected villages</b>	2012 - 2013	2008 - 2012	2013 - 2014
<b>Type of intervention</b>	<b>Ethiopia</b> 1) HW facilitated CLTS 2) Teacher facilitated CLTS  <b>Ghana</b> 1) NGO- facilitated CLTS 2) NGO- facilitated CLTS + additional natural leader training	CLTS + SLTS + PHAST	CLTS/CATS
<b>Households surveyed</b>	<b>Ethiopia</b> arm 1 - 971 HH, arm 2 -1266 HH <b>Ghana</b> arm 1 - 816 HH , arm 2 - 778 HH	1 village - 90 HH observed, 112 total participants	6 villages - 587 households
<b>Survey followup timepoints</b>	<b>Ethiopia</b> Baseline - 0 months Midline - 12 months <b>Endline - 24 months</b>  <b>Ghana **</b> Midline - 18 months <b>Endline -30 months</b>	Baseline survey 2008 Mid-line evaluation 2012 Look back study 2013 <b>Sustainability survey (end line) 2014</b>	2017
<b>Change observed during effectiveness</b>	During effectiveness (baseline - midline) 1) -20 % (-26, -15) - Ethiopia 1 2) -13% (-19, -17) - Ethiopia 2 3) - 7% - Ghana 1 4) -26% -Ghana 2  During sustainability study (midline -endline) 1) 8% (3,14) - Ethiopia 1 2) 1% (-7,8) - Ethiopia 2 3) -2% (-5,2) - Ghana 1 4) 0% (-5, 4) - Ghana 2	not mentioned	not mentioned
<b>Outcome measured</b>	Change in levels of open defecation at the household-level.  Latrine quality and condition	Perceived drivers and constraints of sustained hygiene behaviour change	1) Slippage/consistent latrine use among HH owning private latrine and all households  2) Impact of strength of social norms on slippage of all HH and those owning a private latrine
<b>Definition</b>	<b>OD defined as</b> If respondents reporting their family's primary place of defecation as somewhere other than a latrine  If respondent reported using a private latrine but did not allow the surveyor to observe it  Households whose latrines were observed to be full or have collapsed floors	Not mentioned	<b>Slippage defined as</b> (1) those who reported to not have a private latrine and defecate in the open usually (2) those who reported to not have a private latrine, and use a shared facility, but not always use the latrine (3) those who reported to have a private toilet, but not always use the toilet or households with a latrine not showing any sign of use via observation

any difference in effectiveness. Follow up time periods for when the sustainability studies took place varied as well ranging from 1 – 2.5 years after ODF verification.

The outcomes measured as proxies for sustainability differed across the studies including among those that used latrine use having different definitions of how to define 'consistent latrine use'.

The studies relied on self-reported measures and as such results are likely to be subject to issues of sensitivity and stigma, social desirability and recall bias. The different definitions of

consistent latrine use across the studies may have been over-estimated given that none of the researchers were involved in the ODF verification process however all assumed that the ODF verification was optimal and meant 100% ODF for all the households at the start of the survey. Majority of these studies were conducted in very small number of villages and so might not be generalizable outside those areas.

Most Importantly, in the absence of a clear and/or standard criteria on what constitutes sustained CLTS behavior change and standardised methodologies to measure latrine use behavior, it is challenging to make comparisons and draw any conclusions about ODF sustainability outcomes of sanitation interventions across the available studies (1, 2, 24).

### **Determinants of sustained behavior change**

There are some common barriers and factors to sustained CLTS behavior change outcomes mentioned across the studies that have been identified and summarised below. While it is not possible to assess the relative importance of these drivers, identifying some pre-existing influencing drivers could be helpful to guide the structure and interviews of subjects of the planned survey.

Various socio-economic factors were identified as drivers of sustained latrine use. In Ethiopia, households with a metal roof (used as economic indicator) were more likely to sustain latrine use while in Indonesia, households in the richest quintile, houses with all year-around water access for household needs, male respondents and smaller size households (1-3 members) were associated with lower odds of having slipped back (1, 2). Perceived costs associated with latrine construction were highlighted as a barrier to latrine construction in Indonesia by villages that demonstrated high slippage rate and in Nepal by participants (2, 18). Sustained use, similar to CLTS effectiveness, was also found to occur in regions characterised as small, more remote and with high baseline OD in Ethiopia and Ghana (1).

The development and establishment of new social norms around toilet ownership and use were important drivers of sustained latrine use, mentioned across all papers. In Indonesia, having weaker social norms (as measured by lower perception around latrine ownership coverage in their community) was found to be significantly associated with slippage. Respondents who disagreed that most people lack access to a toilet in their community as well as disagreed that it was acceptable to defecate in the open community were also significantly less likely to have slipped back (adjusted odds ratio (aOR) 0.36, 95% CI 0.19–0.67, and aOR = 0.44, 95% CI 0.21–0.92, respectively) (2).

Similarly, the likely establishment of a community norm around latrine building could also be credited to the high reported latrine repair/rebuild rate in Ethiopia and Nepal (1, 18). In Nepal, despite a drop in the ratio of permanent latrine versus temporary latrine (90:10 to 55:45) over time, overall household latrine coverage stayed the same (99%) and in Ethiopia, all broken down latrines (45%) were repaired or rebuilt in the same year. This quick turnaround demonstrates a high commitment of members to rebuild latrines which in turn indicates an established community norm for households to own a latrine, albeit temporary.

Emotional drivers particularly disgust, comfort, shame/stigma continue to play a role for respondents over 2 years after they were emphasised during the triggering process (2, 18).

Open defecation was regarded as dirty, leading to contamination of the environment when practised. In Indonesia, motivation to use a latrine for cleaner and healthier living in their home

was associated with a low odds ratio of respondents having slipped back (aOR 0.5 (0.3 – 0.81)(2). Additionally, while formal shaming/fining strategies no longer occurred, the respondents still mentioned ‘shame’ attached to ODF practices indicating that this had now become an internalised motivator for behavior change (2, 18). Respondents in Nepal also associated using toilets with comfort making people feel ‘nice and clean’ during and after use. Habit formation, particularly facilitated by the ease of use and access to water and sanitation facilities, was a motivation for sustained toilet use in Nepal (18). Majority of respondents cited toilet proximity to the house combined with the ease of access to clean water and hygiene facilities as a motivator to consistently use the toilet.

Collective action and civic pride is a key driver to sustained behavior change (2, 18). The establishment of ODF regulations during the implementation followed by public declaration and celebration of achieving ODF status resulted in the respondents’ sense of collective efficacy and civic pride in achieving ODF status sustained even 2 years after. In Indonesia, whereas 73 – 100% of respondents across 5 well performing ODF villages recognised that their community was verified as ODF and mentioned ‘pride’ associated with possessing an improved sanitation 2.5 years after verification, only 30.9% did the same in the village with the highest slippage. Additionally, across all sites in Ethiopia and Ghana, households in villages that had over 75% latrine use, at midline, were more likely to sustain their own latrine use over the following year (1).

The presence of community level support mechanisms as a proxy for social capital and cohesion was a factor in villages with low slippage rates in Indonesia, Ethiopia and Ghana ((1, 2). Strong community engagement of natural leaders for follow up purposes as well as reinforcing normative expectations was associated with sustained use of latrines (1, 2). Community groups across the 5 well performing ODF villages such as saving groups, local women’s groups, mutual self-support latrine building groups etc. were actively involved in constantly disseminating sanitation promotion messages, assisting with latrine construction including funding support for non-locally available materials and active follow up activities post ODF status (2). In Indonesia, the village with the highest slippage rate 2 years after ODF verification had significantly less supportive enabling environment evidenced by the respondents’ lower perceptions about participation in a sanitation meeting and absent recognition about their community as an ODF village.

Social status was also important in Indonesia with people indicating the loss of social standing if they were found to practice OD (2).

Conversely, the preservation, availability and reliability of water sources were an important barrier to sustained latrine use (2, 18). Water scarcity particularly during the dry season not only made flushing and/or cleaning toilets challenging but members had to prioritise water use to other purposes making people less likely to use the toilet.

Latrine durability is a concern with the sustainability of CLTS behavior change. In Indonesia, 88.2% of respondents who were dissatisfied with their latrine reported poor construction as the primary reason (2). Majority of the latrines across two sites in Ethiopia had 45% of households reporting having to repair or rebuild within a year following the ODF status. OD reversion happened in one out of two of the interventions (1). However, as this study was carried out only one year after the end of the implementation, it is likely that a 45% annual latrine breakdown rate might push even more HH back to open defecation over a longer period of time.



The lower breakdown rate of latrines reported in study villages in Ghana compared to that of Ethiopia (6% vs 45%) is credited to study villages in Ghana being wealthier and having better market and service access to latrine products and materials than those in Ethiopia (1). Toilets in Ghana while also unimproved, were of better quality materials with 81% of latrines in Ghana having intact superstructures offering complete privacy compared to only 6% in Ethiopia. This indicates an ease of access to purchasing more durable non-local materials with which to construct latrines.

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## ANNEX 19: WASH FRIENDLY INSTITUTIONS SUPPORTED BY RANO WASH QI.20 UPDATE

Region	District	Commune	Name of the institution	
Alaotra Mangoro	Amparafaravola	Amparafaravola	CSB II Amparafaravola	
			EPP Antsahavola	
	Moramanga	Anosibe Ifody	Anosibe Ifody	EPP Ambodinifody
				CSB II Anosibe Ifody
		Beforona	Beforona	EPP Beforona
				CEG Beforona
				CSB II Beforona
		Sabotsy Anjiro	Sabotsy Anjiro	EPP Sabotsy Anjiro
				CSB II Sabotsy Anjiro
				Belavabary
CSB II Belavabary				
Atsinanana	Brickaville	Andovoranto	CSB II Andovoranto	
			EPP Ambila Lemaitso	
		Mahatsara	Mahatsara	EPP Isokatra
				CSB II Mahatsara
		Ranomafana Est	Ranomafana Est	CBS II Ranomafana Est
				EPP Ranomafana Est
	CEG Ranomafana Est			
	Toamasina II	Ampasimadinika	Ampasimadinika	CSB II Ampasimadinika
				EPP Ambarimilambana
		Ampasimbe Onibe	Ampasimbe Onibe	CEG Ampasimbe Onibe
				CSB II Ampasimbe Onibe
				EPP Ampasimbe Onibe
		Foulpointe	Foulpointe	EPP Foulpointe
				CEG Foulpointe
CSB II Foulpointe				

Region	District	Commune	Name of the institution
	Vatomandry	Ilaka Est	CSB II Ilaka Est
			CEG Ilaka Est
			EPP Ilaka Est
		Niarovana Caroline	CSB II Niarovana Caroline
			EPP Niarovana Caroline
Vatovavy Fitovinany	Ifanadiana	Ambiabe	EPP Ambalavolo
		Androrangavola	CEG Androrangavola
		Antaretra	CSB II Antaretra
			EPP Antaretra
			EPP Ambongo
		Kelilalina	EPP Kianjanomby
			EPP Kelilalina
			CEG Kelilalina
			Lycée Kelilalina
		Ranomafana	EPP Bevoahazo
	Ikongo	Ambatofotsy	CSB II Ambatofotsy
			EPP Ambalatenina
			EPP Ambodiara Sakorihy
			EPP Ambatofotsy
			CEG Ambatofotsy
			Lycée Ambatofotsy
		Ambolomadinika	CEG Ambolomadinika
			EPP Vohimary
			EPP Ambodilazabe
			EPP Tsararano
Kalafotsy	EPP Marozahatra		
Manampatrana	CSB II Manampatrana		
	EPP Manampatrana		

Region	District	Commune	Name of the institution
		Tanakambana	CEG Tanakambana
		Tolongoina	Lycée Tolongoina
			CEG Tolongoina
	Manakara	Lokomby	EPP Tolongoina
			CSB II Lokomby
	Vohipeno	Andemaka	EPP Lokomby
			CSB II Andemaka
			EPP Andemaka

## ANNEX 20. CHALLENGES FACED BY WOMEN LEADERS AND PROPOSED SOLUTIONS



# Challenges faced by Female Leaders in WASH, and Proposed Solutions



Cooperative Agreement No : AID-687-A-17-00002

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## I. RANO WASH PROJECT

RANO WASH aims to provide equitable and sustainable access to water, sanitation and hygiene services in rural areas of Madagascar in order to enhance health and nutrition and protect the environment in 6 regions of intervention: Alaotra Mangoro, Atsinanana, Vatovavy Fitovinany, Vakinankaratra, Matsiatra Ambony, and Amoron'i Mania.

The project relies on its gender equity and social inclusion components to achieve its goal.

## 2. UNDERSTANDING WOMEN'S EXPERIENCES IN WASH

The project held an interactive workshop in Ambatondrazaka on September 2019 to discuss the pathways and challenges that female leaders face in relation to WASH. High-ranked women from various sectors and districts in Alaotra Mangoro were present to share their experiences.

A panel discussion with four female leaders from the Alaotra Regional Directorate opened the discussions with their testimonies:

- Ms BE Katiucia, Regional Director, Ministry of Water, Energy, and Oil
- Ms RAZAFIMALALA Anja Clara, Head of the Administrative and Financial Department, Ministry of Population
- Ms ARIMANANA, Head of SMGSSE DRSP, Alaotra Mangoro
- Ms RANDRIAMANALINA Michela Dera, Journalist, TVM, RNM

The participants openly shared about the experiences they acquired, and the challenges they faced that led them to their current positions. These are further discussed in the following sections.

There were also exchanges between authorities and advice giving among friends. Through this exchange process, participants saw how important women are in their communities. Women have their own dignity and make great contributions to their community, but the journey to doing so isn't always easy.

Below are some takeaways on and encouragement from these female leaders to the next generation, discussion on the common challenges and barriers faced by women, and a discussion on solutions and looking forward.

### 3. THE JOURNEY OF A FEMALE LEADER

- Pursuing education is key: learn as much as possible and aim for higher education
- Participating in professional competitions is particularly enriching for women. It generates self-satisfaction and personal development to women in the working world
- At the beginning of her career, a young woman faces many challenges, including being looked down upon by experienced women in the workplace. Older people generally do not trust the maturity and capacity of young people, especially that of women. This may present a negative introduction into the employment market for women.
- Always have an open mind for new ideas and opportunities, and have the courage to try them
- Participate and get engaged, first on the family level, and then the community level

### 4. CHALLENGES AND BARRIERS TO LEADERSHIP IN WASH

- Access to WASH services is limited, especially for women, girls, and children. Some examples shared by the participants included:
  - Fetching water is mainly reserved for women and girls, whereas you have to go to the hills, or to puddles far from the village.
  - The water used for hygiene is not good quality.
  - The quantity of water used is insufficient.
  - Women and girls' toilets are far away from the village, in a place with little privacy. They feel most uncomfortable defecating in the open air, especially in rainy weather.
- Women and girls are more likely to be infected by hygiene-related diseases: diarrhea, skin disease
- Women's participation in the business sector is limited due to lack of access to training, lack of autonomy, and distrust of certain donors or sponsors regarding women and young women
- There are few women that run WASH services, especially in rural areas. Men are the main decision-makers for the services, even when they are not the potential users of the services
- Women have limited access to training because of the barriers associated with remoteness of the training location

## 5. SOLUTIONS

Among the female panelists and the workshop participants, there was rich discussion to increase awareness of women and girls' experiences with limited access and control in matters that concern them, as well as discussion and exchanges on solutions. The following lines lists the solutions envisaged by women and young women to deal with these cases of violence against women.

- Support the access to and the engagement of women in WASH services. Pushing for women's right to access WASH services (clean water for drinking and washing, toiletries, bathrooms, sanitary towels during menstruation) will reinforce their healthy and dignity as women
- Family support in household chores, on the part of spouses, parents and children. When everyone is involved in a family or community activity, women feel valued, and both men and women feel respected
- Participation in local groups or organizations such as Women's organizations, youth organizations, etc.
- Support from local authorities for travel expenses for women to attend workshops or meetings held outside their home town
- Partner support for materials needs
- More spaces for communication and exchange for mutual personal development
- Setting structures that meet the needs of women

## 6. THE DREAM OF A FEMALE LEADER

Although the conditions of women today need improvement, there is no shortage of dreams. Women's aspirations touch on various aspects, including relationships and the economy. The following points were articulated in a Declaration developed by the workshop:

- Full integration of female leaders in social and economic activities
- Engagement of local men and leaders to support women's leadership
- Women that are inspired to take action that enables them to grow and impact others
- Clean, healthy, responsible and happy women in their career and in their households
- No more child, adolescent, and female victims of any forms of violence: physical and mental abuse, hunger, lack of education and services.

The audience for declaration are their communities, local authorities, responsible at different area and level and Government as well.

## 7. SUCCESSFUL, ACCOUNTABLE WOMEN

As a result of these discussions, the workshop participants outlined some ways women can be successful in their daily lives, in their relationships with others, and in all that they undertake. The following information provides information on these aspects:

- Prepared and ready to work
- Communicate effectively and strategically with a variety of people
- Work well and pay attention to all aspects of a situation (social, communication, economic, development)
- Value quality and long-term results
- Possess a daily thirst for learning and studies
- Show initiative
- Focus on diversity
- Look for improvement

## 8. LOOKING FORWARD

As a result of this workshop, which enabled women and young women to discuss issues of concern to them together, in collaboration with the various stakeholders in the field, RANO WASH is planning future activities that include:

- The results of this workshop will then be shared at the community level, particularly with groups of women and girls supported by RANO WASH, in order to develop their leadership (SLC, OSCEAH, VSLA, ...), in Malagasy.
- RANO WASH shares this information as a means of sharing and raising awareness among men, women, institutions and various decision-makers through mass media, for local, regional or national radio broadcasts.
- In order to bring to the table the challenges women face in terms of leadership, this kind of discussion will be conducted at the community and village levels. In order to better target the specific situation of women and girls, it is planned to have adult women and youth groups participate.
- In the long term, all the achievements and the process itself will be conducted at the national level to contribute to effective advocacy for women's empowerment and leadership in WASH.

## ANNEX 21. LIST OF TRAININGS Q1.20 UPDATE

N°	Level	Component	Topic	Objectives	Participants	Number			Date	Location	Observation
						M	W	Total			
1	Regional	Administration	Review after action: procurement process	Adopt a common view of the works procurement process, apply the frameworks governing the roles and responsibilities of CMTs during the procurement process, bring out the realities on the review after action.	Field workers	20	10	30	11 December 2019	IKM, Antananarivo	
2	National	Administration	Office 365 tools (SharePoint, OneDrive, Workplace)	Share best practices for using Office 365 tools (SharePoint, OneDrive, Workplace), capitalize on compliance	Staff member of RANO WASH and the consortium	20	12	32	19 December 2019	La City, Antananarivo	
3	Regional	MEAL	MEAL training for field agents	Training on MEAL system (project indicators, data collection forms, reporting, accountability system, etc.) and use of tablets for mobile data collection	Field agents, district supervisors, regional MEAL staff	23	8	31	06-08 November 2019	Tamatave	
4	Regional	MEAL	Census training	Training on conducting project census for new field agents and district supervisors	Field agents and district supervisors	7	1	8	25-26 November 2019	Manakara	
5	Regional	MEAL	MEAL capacity building "rollout" for supervision team	Training on MEAL roles and responsibilities, strengthening reporting, data validation, supervision of field activities	District supervisors, programming team, regional MEAL staff, regional coordinator	5	4	9	05-06 December 2019	Moramanga	
6	National	Governance	Dynamization and capacity building of CSO Amoron'i Mania Region, following on	Support the CSO WASH at Amoron'i Mania Region on appropriation on their role and attribution. Strengthening on relation between of CSO WASH	Member of CSO at Amoron'i Mania Region	18	16	34	23-25 October 2019	Manorintsoa Ambositra Salle de réunion soeur Benedictine	

N°	Level	Component	Topic	Objectives	Participants	Number			Date	Location	Observation
						M	W	Total			
			Election of new members of "Bureau exécutif Régional"	existence and the respect of human right with inclusion include							
7	National	Governance	Learning on WASH sector and governance strengthening	Harmonized the view on strengthening the sector of WASH	RANO WASH: PCT staff, the coordinator, the governance officer and de MEAL officer at region level, the responsible of WASH on the PTF of WASH sector The representative of different department at de MoWASH with the direction at regional level	36	32	68	12-14 November 2019	Carlton Anosy Antananarivo	
8	National	Governance	Establishment and harmonization of Communal plan strategy	Handing a harmonized guideline for the Communal plan to be implemented at the Commune of RANO WASH intervention	RANO WASH : Senior and specialist Staff RANO WASH region: WASH governance officer and the coordinator of the implemented partner DREEH: the technical staff from the DREEH	14	8	22	03-06 December 2019	Office RANO WASH Ivandry	



N°	Level	Component	Topic	Objectives	Participants	Number			Date	Location	Observation
						M	W	Total			
9	Regional	Governance	Revue of strategic intervention into Commune Vakinankaratra	Harmonization of intervention of all TA at the Region of Vakinankaratra	TA and RZ	2	9	11	13 December 2019	Bureau Caritas Antsirabe	
10	Regional	Governance	Strengthening on accountability mechanism	Refresh TA to all activities relating to accountability mechanism at Commune	TA and RZ	2	9	11	19 December 2019	Bureau Caritas Antsirabe	
	National	Private sector	Environmental compliance rules with works construction: EMMP, ESF and climate risk management CRM	To have the same understanding of the measures to be taken and their importance for the sustainability and quality of services, to clarify to private operators the environmental activities that are also mentioned in their action plan and budget.	RANO WASH: Senior and specialist Staff, Regional Private Sector Manager BushProof and Sandandrano technicians	16	5	21	6 November 2019	Bureau CARE Ivandry	
	Regional				Field workers, Mayor, STEAH and water user association representatives, RANO WASH field agents	18	3	21	7-8 December 2019	Brickaville	
11						15	2	17	3-4 December 2019	Manakara	
12	National	Private sector	Contract Management Team: Sharing PPP Plus Strategies:	Initiation, Brainstorming on Members and their responsibilities Sharing and how to implement PPP plus strategies	RANO WASH: Senior and specialist Staff, Regional Private Sector Manager BushProof and	16	5	21	7-8 November 2019	Bureau CRS	

N°	Level	Component	Topic	Objectives	Participants	Number			Date	Location	Observation
						M	W	Total			
					Sandandrano technicians						
13	Regional	Private sector	Wash Market Assessment and elaboration of Regional WMDP	Restitution and validation of WMA Initiation of WMDP elaboration process	Various actors representing MoWASH Regional Technical Services, MFIs and local banks, operators, local masons, seamstresses, entrepreneurs, regions representatives,	16	5	21	2-3 December 2019 5-6 December 2019	Diantana Antsirabe Ambositra	
	Regional	Private sector	Regional WMDP elaboration process	Continue the WMDP elaboration process		16	5	21	18 December 2019	Antsirabe	
						27	15	42	19 December 2019	Ambositra	
14	National	Private sector	After Action Revue on procurement process of PPP RANO WASH Model Co-Invest-Build Operate	To discuss and determine the causes of successes and failures and to extract lessons learned.	PCT technical team, the Administration and Procurement teams of the consortium organizations , Regional Coordinators	15	5	20	11 December 2019	IKM Antsahavola Antananarivo	
15	Regional	Private sector	Management Delegation contract	Explanation of the content, role and responsibilities of the signatories of the contract	Authorities, notables and STEAH of the Communes, managing company, project implementation	12	4	16	13 November 2019	Salle de reunion Commune Mahatsara	

N°	Level	Component	Topic	Objectives	Participants	Number			Date	Location	Observation
						M	W	Total			
					team and DREEH technician						
						15	3	18	20 November 2019	Tranompokonolo Niarovana Caroline	
						10	5	15	22 November 2019	CEG Ampasimadinika	
16	Commune	Behavior Change	VSLA	Group VSLA training in savings, credit, credit reimbursement, end of cycle audit, community life, internal rules, leadership	VSLA members	24	292	316	06 November - 23 December 2019	Tanambe , Amparafaravola , Ambohibary , Morarano chrome, Ambatondrazaka suburbaine, Belavabary, Sabotsy Anjiro, Ilafy ,	
17	Commune	Behavior Change	Grow-up sticker approach	Training of local promoters in accompanying households on behavior change activities	Local promoters	43	108	151	26 October - 16 December 2019	Vodiriana, Ambalavolo , Ambohitsamanova, Antanimandry, Ambatomena, Soanindrariny , Ambohidranandriana.	
18	Commune	Behavior Change	VSLA	RANO WASH Staff training on VSLA	Support Technicians, District Manager, Coordinator, Regional BC	31	8	39	09-12 December 2019	Antsirabe	
19	Gender	Gender	Gender and social inclusion	Promoting gender equality and social inclusion related to WASH Improving the skills of mass media professionals to mainstream gender through communication products	Journalist from region intervention	26	20	46	13 December 2019	Colbert Antaninarenina	Led by the Ministry of population related to the 16 Days of Activism activities, with his partners

## ANNEX 22. COMMUNICATION AND MEDIA UPDATE Q1.20

During this quarter, the RANO WASH Communications team continued to produce and strategically disseminate a range of communication products. These documents were also posted to the RANO WASH webpages, launched during this quarter.

### Communications Plan

A RANO WASH Communications and media plan has started to be developed. The document will clarify RANO WASH's approach to communications, including target audiences, intended outcomes, and tracking indicators. The document will also include a comprehensive matrix listing communication, knowledge management products and development status for each.

### Social media and website

- RANO WASH website has been launched in November 2019 and is hosted by CARE Madagascar website server.
- The website presents project activities and will also be a resource center for relevant WASH resources (PPP, behavior change, etc). The site is set up in French and will be accessible via this link: <https://www.ranowash.org>

### Media

RANO WASH facilitated or organized media coverage of the following events during this quarter:

- Media coverage of the World Toilet Day event on 19 November 2019 in Antsirabe. A local radio station called RADIO HAJA provided coverage of the event.
- Media coverage of the World Handwashing Day with Soap Day on 17 October 2019 on V7V. The local radio FANONTSAFA (national radio in the region) provided media coverage of the event.
- Broadcast on the second meeting of the Regional Coordination Structure on 10 and 11 November 2019 in Alaotra Mangoro. TVM and TV Plus insured media coverage of the event.
- Broadcast on the third meeting of the Regional Coordination Structure on 16 and 17 January 2020 in Alaotra Mangoro by TV PLUS.

### Communication Consortium meeting

RANO WASH started holding monthly meeting with communication officers and focal points for the RANO WASH consortium. These meetings aim to harmonize communication practices and tools, share experience, and plan RANO WASH quarterly communication activities.

### Training

A training has been provided to journalists in the fight against violence on December 13, 2020 at the Hotel Colbert. This training aims to set up a communication mechanism for the promotion of gender and fight against gender-based violence.

### Roster and Image bank

RANO WASH is in the process of developing a roster of professional photographers to provide photo as well as drone video coverage of the project in all regions of intervention.

A project image bank is also under development included in the communication actions. This image bank will be divided into folders per topic (e.g.,: water infrastructure, sanitation, local promoters) and will be shared to the project's staff at national and regional levels.

**Branding and marking**

The main activities carried out this quarter were the design of various visibility supports of the project (Flyers, banners, roll ups, flagpoles and institutional videos of the project. The project has also conducted an internal review of protocols for branding, marking, and approvals to ensure compliance with USAID guidelines.