TRANSPAMANAGER

Running Water Infrastructure Community Project in Mandou

(Remote locality of the 4th communal section of Anse-d'Hainault, Grand-Anse Department, Haiti)

Disclaimer: This document is made available online on the website www.transpamanager.com solely to serve as a guide for drafting community projects intended to be posted on said website for a donation fundraising campaign.

Much of the data mentioned here is fictional and does not reflect the reality of the locality of Mandou. It is cited for illustrative purposes only. You are not required to copy this plan verbatim to draft your community project. However, you must ensure that you present the essential information in your project's operational plan, drawing inspiration from this present guide.

Table of Contents

This document presents various essential elements of the project's operational plan. These said elements are divided into four main parts, namely project definition first, followed by its feasibility and viability. The first part primarily presents the main characteristics of the project, such as its origin, goal, stakeholders, main output, etc. The second part addresses the conditions for project implementation and viability. In the third part, we present the general project implementation strategy, its schedule, provisional budget, etc. Finally, in the fourth part, we discuss the management, monitoring, and control strategy of the project.

Part 1: Project Definition

This first part of the document revolves around the presentation of the Running Water Infrastructure Community Project in Mandou (a very remote locality of the 4th communal section of Anse-d'Hainault, Grand-Anse Department, Haiti). It contains important details that allow readers to have a clear and precise idea of what this project is, its rationale, and the social and geographical context in which its development takes place.

1.1 Project Origin and Stakeholders

It is important to situate this project within the socio-economic and environmental framework in which its initiators and executors operate. Indeed, its rationale and scope cannot be understood without an idea of the material and social conditions in which its promoters and beneficiaries evolve. We will present the origin of the project, i.e., the need it addresses, while taking care to identify the various actors involved closely or distantly.

1.1.1 Project Origin

This project is carried out in Mandou (a very remote locality of the 4th communal section of Anse-d'Hainault, Grand-Anse Department, Haiti). It is a rural locality devoid of much basic infrastructure. In this locality, there is no electricity infrastructure. This population is left to its own devices to implement projects that contribute to improving their living conditions. State intervention is virtually absent in this locality.

One of the main problems facing the population of this community is the lack of infrastructure that would allow them easier access to running water in their homes. Indeed, there is a major shortfall in this area. The target area houses approximately 500 homes that lack water connections. To obtain water, the population is forced to travel and fetch it directly from the source. Depending on the position of their home relative to the source, some travel about 15 km to fetch water, often transported under very difficult conditions. This is where this project becomes a necessity. Infrastructure that brings running water close to homes will meet everyone's fundamental need in the community.

1.1.2 Stakeholder Identification and Project Rationale

This project connects several stakeholders, the main ones being the population of Mandou, the promoter, and institutions operating in this locality, namely churches (of various denominations), the Mandou National School, a private school, the Mandou health dispensary, etc. It presents a fundamental interest for all these stakeholders. The project's interest lies mainly in facilitating access to running water near homes: the entire population of the locality will benefit. The installation of running water infrastructure will play an important role in facilitating the functioning and ordinary activities of these churches, schools, and the community dispensary.

From a symbolic point of view, the execution of this project will constitute a concrete achievement of the Association of Youth of Mandou, its promoter, a structure whose objective is to promote environmental protection activities in the locality.

1.1.2.1 Project Promoter

The project promoter is the Association of Youth of Mandou, a local association operating in several fields including environmental protection, sanitation, education, etc.

1.1.2.2 Project Agent (Mandataire)

The Association of Youth of Mandou will act as the agent for this project, but it will deal with partners who can provide it, as needed, with technical expertise for setting up the infrastructure.

1.1.2.3 Project Partners

Project partners include community schools, a volunteer association offering labor, the Pragmatic Development Agency, etc.

1.1.2.4 Other Possible Stakeholders

Other potential project stakeholders include two local associations that have significant influence in Mandou: the Mandou Coordination Committee and the Society of Conscious and Responsible Citizens, an institution operating throughout the Grand-Anse department, Haiti.

1.2 Project Formulation

1.2.1 Main Output

The main output of this project is the installation of a functional infrastructure system that makes running water supply possible for all homes in the locality of Lopineau. *(Note: Lopineau is referenced in the source text output definition).*

1.2.2 Project Objectives

The project pursues the following objectives:

- Construction of a reservoir 4 meters deep by 10 meters wide and 12 meters long
- Installation of a 5 HP Franklin submersible pump and a 15 KW generator
- Installation of an underground plumbing system (piping) in Mandou
- Facilitating access to running water in the homes of Mandou residents

1.2.3 Project Goal

The project aims to make running water accessible for household consumption in Mandou.

Part 2 - Project Feasibility and Viability

2.1 Project Feasibility

In this part of the document, we address various modalities of project implementation. It is important for us to highlight some important aspects concerning project feasibility. More specifically, we address its market feasibility, technical feasibility, environmental and social feasibility, etc.

2.1.1 Market Feasibility

As part of this project, it is important for us to analyze our service offer in relation to the target population. This is a very important exercise even though our primary objective is not necessarily to make a financial profit but rather to meet an essential need of the residents of the locality of Mandou. It should be noted that this is a population of about 4,000 inhabitants who will benefit directly from the fallout of this project. Once the

installation system begins operating, the served individuals will have to pay reasonable fees that take into account their lack of income, which will allow the project promoter to have the necessary funds to develop, plan, and execute other management and maintenance projects for these facilities. Over the long term, we plan to collect an amount greater than what was spent on equipment installation. The viability of this project will thus be seen in the coming years, and we will take measures to evaluate it at regular intervals.

2.2.2 Technical Feasibility

This infrastructure project is technically feasible. We base ourselves on a similar but smaller-scale experience carried out in the same locality over a decade ago. It was an experience that succeeded, but whose management was catastrophic. Indeed, the project promoter did not know how to manage it well, and its system fell into disrepair. It became dysfunctional and was quickly abandoned permanently. We will take into account the geological and topographical characteristics of the terrain to better adjust our equipment installation. All materials (pump, generators, etc.) are chosen based on a set of parameters, taking into account the reality of our terrain.

2.2.3 Environmental and Social Feasibility

This infrastructure project has the advantage of concerning everyone in the Mandou community. This is an advantage because it tends to facilitate the involvement of local residents who see it as a necessity. The main impact of this project on the population will be to facilitate access to running water in homes, allowing them to save the time and energy usually spent fetching water from the local source, which is very far away.

2.2.4 Organizational Feasibility

This infrastructure project requires the contribution of several human resources at one level or another. While the Association of Youth of Mandou can count on a certain number of human resources to manage it, it nevertheless needs other human resources at the execution level. To mobilize these resources, it relies on the participation of community members. As a strategy, the association intends to designate two people to handle project management and hire professionals from elsewhere and other workers from the community to work on setting up the facilities.

2.2.5 Other Feasibilities

One of the essential questions we asked ourselves in the framework of this project was how to gain access to lay underground pipes in various locations of the Mandou locality while securing the consent of landowners located along our installation trajectory. This problem is practically resolved, as we will have the cooperation of these individuals who see themselves as direct beneficiaries of the project.

The other fundamental aspect remaining to be considered in the planning and execution of this project is its financial feasibility. The project remains financially feasible, but we must rely on the generosity of donors everywhere to find a large part of the financing, with the local population contributing according to its modest means.

2.2 Project Viability and Financial or Welfare Benefits

Given the nature of this project and the socio-economic and environmental context in which it will be executed, its viability is primarily considered in terms of its contribution to the welfare of the target population. Indeed, the execution of this project will contribute to improving the living conditions of beneficiaries who will no longer need to walk kilometers to transport water to their homes.

Part 3 - Project Operational Plan

In this part, we want to specify how we will proceed to have an always up-to-date execution plan, so that we have a guide to direct and control the project during its execution phase. It is a matter of addressing in a coherent and detailed manner the means we intend to put in place to realize the project, while taking its constraints into account. It is therefore important to specify what we will do, over what period, what responsibility will be entrusted to whom, how much it will cost us, etc. In this section, we will address the means we implement to define the various tasks, schedule them, so that we can determine when a given task will be executed, allowing us to establish our timeline. This will allow us further down to establish our task execution schedule and define the project budget.

3.1 General Project Implementation Strategy

The realization of this project requires harmonization at the level of work packages to be accomplished, and a coherent articulation of the work of each actor or group of actors involved. To achieve this, it is important to have a global idea of what needs to be done, who will do what, from what point in the project's progress, without losing sight of the stakes and constraints present. At this stage, the distribution of responsibilities is very important. Once the various tasks are identified and assigned, it becomes relatively straightforward to establish a timeline that takes into account the tasks to be accomplished during the different implementation stages of the project. This allows us to arrive at the execution plan that serves as our guide at each phase. The execution plan allows us to situate ourselves as the project progresses; it also gives us an idea of things to do or adjust, from the beginning to the end of the project. It is thanks to the execution plan that we determine whether or not we have achieved certain partial objectives throughout the project implementation process.

3.2 Specific Work Package Implementation Strategies

To properly operationalize the implementation of this project, and therefore to better establish our schedule, we understood the need to clearly define the various task packages related to the execution of this project. This is a process that requires us to take into account everything we have to do from start to finish to deliver the output, i.e., effectively achieve the installation and operation of an accessible running water system in the locality of Mandou. We then establish the most important stages of project realization and try to break down the major tasks required for each phase. We ensure we identify task packages that are repetitive so they can be repeated at the appropriate time.

The first task package is the responsibility of the topographer, who must conduct a terrain study to understand the relief and other characteristics of the space concerned, and determine the best strategies to adopt for installing the underground piping system. The topographer's work consists of making a detailed survey of the terrain's characteristics to give us an informed opinion to facilitate the engineer's work.

Another task package is executed by a team working under the direction of an engineer who conducts field visits and calculations, leading to estimates to propose a list of materials for project implementation. This team determines the trajectory of the plumbing system, the cleaning and clearing work to be done, the tools to be used, the number of people to be hired for drilling work, the duration of such work, etc.

When drilling work is well advanced, plumbing system installation can begin. Part of this installation time will coincide with the progress of drilling work.

Another task package consists of building a shelter to house the generator, pump, electrical installations, etc. To build this shelter, the responsible engineer calculates the quantity of materials and labor needed, the required time, deadlines, etc.

Materials require a separate type of task. Once identified on a list, project managers take care of locating local suppliers who can offer the best quality-price ratio. Project managers then prioritize suppliers located in the Grand-Anse department, specifically in communes close to the locality of Mandou, to avoid long-distance transport operations.

Here are some details concerning the work packages:

Lot	Description	Responsible
Lot 1	Establish a topographic data survey of the space concerned by the project. Transmit written and oral recommendations to the engineers.	Topographer
Lot 2	Draw the plan of the room that will house the generator, pump, and others; determine locations.	Engineer
Lot 3	Fetch, load, transport, and deliver construction materials (iron bars, blocks, cement bags, 2x4 lumber, corrugated sheets, nail boxes, tie wire, etc.).	Transporter
Lot 4	Fetch, load, transport, and deliver the generator, pump, and other materials to be installed in the room.	Transporter
Lot 5	Clean, clear, and dig locations.	Workers
Lot 6	Handle construction materials, move materials on site (sand, cement, iron bars, etc.), supply materials to the mason foreman while he is performing his work on site.	Workers
Lot 7	Coordinate and supervise drilling activities while workers perform them.	Mason Foreman
Lot 8	Erect posts, lay blocks, pour concrete, plaster walls.	Mason Foreman
Lot 9	Install the roofing.	Mason Foreman
Lot 10	Supervise drilling work for implementation.	Engineer
Lot 11	Supervise the construction work of the room housing the generator, pump, etc.	Engineer
Lot 12	Gather necessary materials, manufacture 2 wrought iron doors and 4 windows, install and adjust doors and windows to the space housing the generator and other materials.	Blacksmith
Lot 13	Installation of the piping system.	Plumber (and team)

Lot	Description	Responsible
Lot 14	Test the system.	Engineer and Plumber

3.3 Project Schedule

(Schedule Matrix representation matching original project timeline)

Year 2024	January	February	March	April	May	June	July
Topographer	Project Start - Week 1 (Lot 1)	-	-	-	-	-	-
Transporter	Week 3 (Day 1) - Lot 3	-	Week 5 (Day 1) - Lots 3 & 4	-	-	-	-
Workers	Week 2, Week 3 (Lots 5 & 6)	Week 4 (Lot 5)	Lot 5	Lots 5 & 6	Lots 5 & 6	Lots 5 & 6	Weeks 1, 2, 3 (Lots 5 & 6)
Mason Foreman	Week 2, Week 3 (Lots 7, 8 & 9)	Lot 7	Lot 7	Lot 7	Lots 7 & 8	Lots 7 & 8	Lots 7 & 8
Plumber	-	-	-	-	-	Lot 13	Lot 13
Engineer	Weeks 1, 2 & 3 (Lots 2, 10 & 11)	Lot 10	Lot 10	Lot 10	Lots 10 & 11	Lots 10 & 11	Week 3 (Lot 14) / End
Blacksmith	Week 2, Week 3 (Lot 12)	-	-	-	-	-	-

3.4 Provisional Project Budget

Labor

Position / Item	Unit Price (in Gourdes)	Quantity	Total (in Gourdes)
Topographer	13,238 gourdes/day	5 days	66,190
Engineer	10,590.4 gourdes/day	81 days	857,822.4
Transporter	Contract of 92,666 gourdes	1	92,666
Workers	2,647.6 gourdes/day/25 workers	100 days	6,619,000
Mason Foreman	5,595.2/day	50 days	264,760

Position / Item	Unit Price (in Gourdes)	Quantity	Total (in Gourdes)
Blacksmith	141,646.6	1	141,646.6
Plumber	5,295.2/day	35 days	185,332
		Subtotal Labor:	**8,227,417**

Materials & Equipment

Item	Unit Price (in Gourdes)	Quantity	Total (in Gourdes)
Sand	20,000 gourdes / 1 truck	6	120,000
Gravel	20,000 gourdes / 1 truck	3	60,000
Cement	2,000 gourdes / 1 bag	350	70,000
Iron #2	158,856 / ton	3	476,568
Iron 3/8"	158,856 / ton	5	794,280
Corrugated sheets	5,295.2 / sheet	60	317,712
2x4 Lumber	1,985.7 / wood	48	93,313.6
Nails	4,633.3 / box	3	13,899.9
Tie wire	3,971.4 / roll	6	23,828.4
Galv. Union	780	13	10,140
Connection	225	30	6,750
Galv. 2"	5,630	3	16,890
Fuse 60 amps	630	4	2,520
Fishing line / Wire 1 amp, 30m	3,330	4	13,320
Double element 4 amps	1,395	1	1,395
Panel 4 circuits (GE)	3,780	1	3,780
Ducts 1"	630	12	7,560
Tank adapter 1" (Cuve)	147	12	1,764
Clamps	18	12	216
Valve 3"	4,179	1	4,179

Item	Unit Price (in Gourdes)	Quantity	Total (in Gourdes)
Pipe ½"	5,400	1	5,400
Elbow ½" * 90°	144	20	2,880
Elbow ½" * 45°	144	30	4,320
Tees 1½"	213	5	1,065
Nipples 6" * 1½"	180	12	2,160
Check Valve ½"	1,674	3	5,022
Caps 1½"	1,080	2	2,160
Wire #6	97.2	300	29,160
Wire #8	73.8	300	22,140
Safety 3 pole 60 amps	738	6	4,428
Kubota Generator	1,191,420	1	1,191,420
Franklin Pump 2HP	325,500	1	325,500
Fuel	100,000 gourdes / month	6 months	600,000
		Subtotal Materials & Equipment:	**4,220,450.9**

Total Cost: 12,447,867.9 Gourdes
Contingencies (10% of total project cost): 1,244,786.79 Gourdes
Grand Total: 13,692,653.79 Gourdes

Part 4 - Project Management, Monitoring, and Control Strategy

To properly manage this project and ensure its monitoring and control, we understood the need to clearly define our tasks and deadlines, and to discuss them each time with the actors involved (at the rate of one brief meeting per week) to ensure we are advancing on a sound basis. We will present in detail the strategies we intend to use to control the project, followed by the responsibilities assigned to each stakeholder.

4.1 Project Management, Monitoring, and Control Strategy

One of the essential elements of the management, monitoring, and control of this project is our execution plan associated with our activity schedule. To effectively use these two tools, it is important for each actor involved to be thoroughly familiar with them and use them as a compass to position themselves regarding the tasks they must execute. In this context, an atmosphere of effective communication is more than necessary. Initially, all actors become aware of the tasks to be performed; elements of clarification and precision are provided so that everything is clear at all levels regarding what needs to be done. We ensure the availability of each actor during the period when they must deliver their output within the framework of the project. Next, periodic meetings are scheduled with each actor, depending on their task package to be performed.

4.2 Stakeholder Roles and Responsibilities

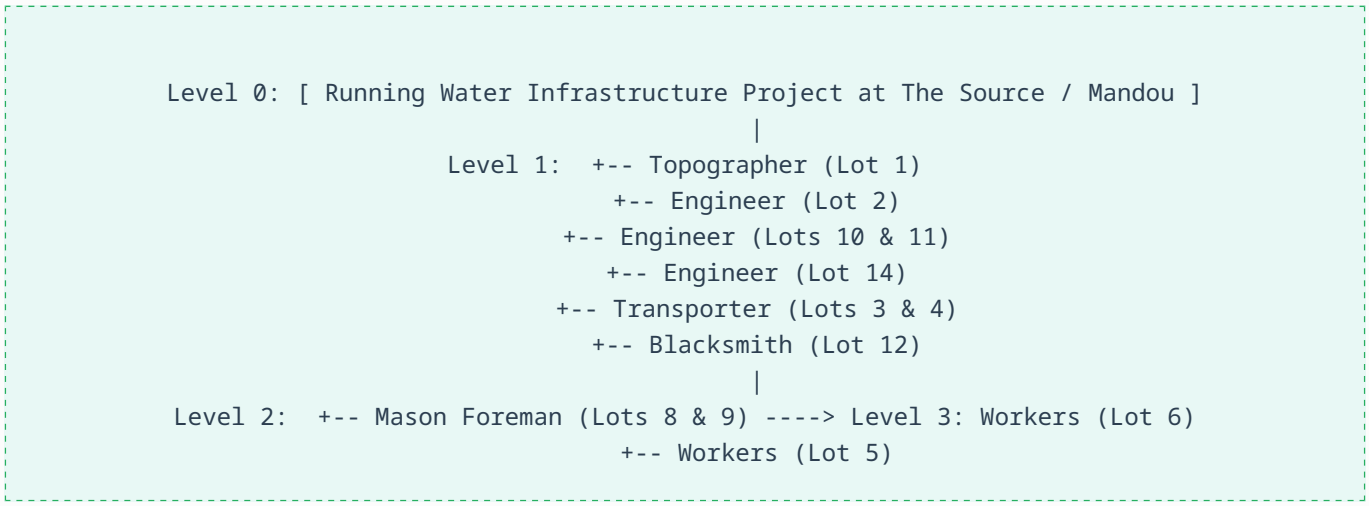
To achieve the coherent execution of the identified task packages, it is important to establish the roles and responsibilities of each project stakeholder. Let us start first with the project promoter, which is the Association of Youth of Mandou. The association's role is to appoint a person responsible for project coordination. For his part, this coordinator's role is to communicate with responsible parties, discuss with them to verify deadlines, and ensure the quality of outputs.

The main agent (mandataire) of this project is the engineer. It is he who hires the topographer and the mason foreman who works under his supervision.

To a certain extent, the association will also play an agent role for this project, as it will mobilize its members to work during the execution of the works. The workers are all members of the association. The transporter is hired by the association. The quality of their work is therefore verified by the promoter.

Other partners play a fundamental role in the project as financial donors. We are referring to the Pragmatic Development Agency and individuals who make donations on the online platform www.transpamanager.com.

Appendix A: Task Breakdown Structure



Appendix B: Logical Framework of the Project

Running water infrastructure in Mandou (remote locality of the 4th communal section of Anse-d'Hainault, Grand-Anse Department, Haiti)

Logic	Fundamental Parameters	Target Values	Source of Verification	Risks and Assumptions
Goal	Make running water accessible for household consumption in Mandou	Reduction of more than 95% in time and effort spent by Mandou residents fetching water (5 days)	System branches installed close to homes	Network overload Water scarcity in Mandou
Objective	Construction of a reservoir Installation of an underground plumbing (piping) system in Mandou Installation of a 5 HP Franklin submersible pump and 15 KW generator	Reservoir built in the first month of project execution Implementation of underground plumbing system over 7 months Water pump and generator installed	Water availability throughout the installed network Functional reservoir Functional plumbing system Functional water pump and generator	Supply problem due to water scarcity Breakdown in one or more sectors of the installed system Difficulty in maintaining equipment
Output	Implementation of a functional infrastructure system that makes running water supply possible for all homes in Mandou	Water infrastructure system implemented 7 months after project start Locations constructed for system implementation	Functional plumbing system Functional and high-performance generator Functional and high-performance water pump Locations ready for use	Equipment breakdown Break in piping system Underestimation of required time
Activity 1	Preparation of locations	Topographer: 2 days Transporter: 2 days	-	-
Activity 2	Installation of equipment (generator and water pump)	Water pump and generator installed from the 2nd month of project execution	Water pump and generator ready for use	Equipment breakdown

Logic	Fundamental Parameters	Target Values	Source of Verification	Risks and Assumptions
Activity 3	Installation of piping system	Implementation of piping system 7 months after project start	Functional plumbing system	Breakdown in one or more sectors of installed system
Activity 4	Project management and monitoring	Discussion meetings Mid-execution report (over 3 months)	Minutes of weekly or monthly meetings Measured cost price	Data availability Accurate accounting
Input: Human Resources	Engineer Mason Foreman Blacksmith Workers Plumber	81 days 50 days 1 day 100 days 35 days	Attendance sheet Payment slips	Availability of human resources
Input: Material Resources & Equipment	Piping system Cement bags, Iron bars Sand and gravel, concrete blocks Wood, nails, tie wire, etc. Corrugated sheets Water Pump Generator	Piping system installed Water pump installed Generator installed	Delivery slips Purchase slips	-
Input: Financial Resources	Donor funding	Funds granted	-	-