



UNDP
UNITED NATIONS DEVELOPMENT PROGRAMME

ENERGY PROJECT
Project 4602 São Tomé and Príncipe

MIDTERM REVIEW

Evaluation Report MTR



JUNE 2019
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Resilient nations.*

INITIAL REPORT OF THE MIDTERM EVALUATION

DESIGNATION OF THE PROJECT Promotion of sustainable development and hydroelectric production, interconnected or in an isolated grid, through an integrated approach in São Tomé and Príncipe.

PROJECT REFERENCE 4602 São Tome & Príncipe

COUNTRY São Tomé and Príncipe

CLIENT UNDP

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REPORT DATE 13 June 2019

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ACRONYMS

GRAoSTP	General Regulation Authority of São Tomé and Príncipe
HPP	Hydroelectric power plant
PA	Project Assistant
TA	Technical Advisor
ADB	African Development Bank
EBI	European Bank of Investments
WB	World Bank
DSS	Decentralized State Structures
CEO	Chief Executive Officer
CO	UNDP Country Office
GD	General Direction
DGRNE	General Directorate of Natural Resources and Energy
NPD	National Project Director
EDP	Electricity of Portugal
EMAE	Company of Water and Energy
CF	Community Forest
IMF	International Monetary Fund
GHG	Greenhouse Gases
GEF	Global Environment Facility
GoSTP	Government of São Tomé and Príncipe
PM	Project Manager
SLM	Sustainable Land Management
SMAL	Sustainable Management of Agricultural Lands
SLFM	Sustainable Land and Forest Management
IGA	Income-Generating Activity
FSM	Financial Support Mechanism
MAFRD	Ministry of Agriculture, Fisheries and Rural Development
MPWINRE	Ministry of Public Works, Infrastructures, Natural Resources and Environment
MOU	Memorandum of Understanding

MTR	Mid-term Review
NGO	Non-Governmental Organization
ONG	Organização Não Governamental
UN	United Nations Organization
PAPAFPA	Programme of Participative Support to Family Agriculture and Artisanal Fisheries
IWMP	Integrated Watershed Management Plan
PIR	Project Implementation Review
LDCs	Least Developed Countries
NIP	National Intervention Partner
UNDP	United Nations Development Programme
POPP	Project and Program of Operations Policy and Procedures
PPA	Power Purchase Agreement
PPG	Project Preparation Program
IPPs	Independent Power Producers
SALM	Sustainable Agriculture Land Management
SATOCAO	Cocoa Exploitation Society
SIDS	Pequenos Estados Insulares em Desenvolvimento- Small Island Developing States
STP	São Tomé and Príncipe
TdR	Termos de Referência
ToR	Terms of Reference
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UNID	United Nations Industrial Development
USD	United States Dollar

1. EXECUTIVE SUMMARY

1.1. Main Project Data

PROJECT TITLE

Promotion of sustainable development and hydroelectric production interconnected or in an isolated grid, through an integrated approach in São Tomé and Príncipe.

EFFECT

The Government and Districts, as well as the population, adopt techniques and behaviours that promote a sustainable environment, and the prevention and management of risks and natural disasters

FOCUS AREA OF THE UNDP STRATEGIC PLAN

Environment and Sustainable Development: Promotion of the use of renewable energy and sustainable agricultural and forest management practices; Integration of the environment and energy.

EXECUTING ENTITY / IMPLEMENTATION PARTNER

Ministry of Public Works; Infrastructures; Natural Resources and Environment (MOPWINRE).

OTHER IMPLEMENTATION PARTNERS

Water and Electricity Company (WEC) and the Ministry of Agriculture, Fisheries and Rural Development (MAFRD).

ENTITY OF IMPLEMENTATION / RESPONSIBLE PARTNERS

United Nations Development Program (UNDP).

FINANCING

Global Environment Facility (GEF).

BENEFICIARIES AND PARTNERS

Public Administration, Private Investors, Rural Communities, Environmental Organizations and NGOs.

COMENCEMENT DATE

June 2016

FORECASTED DATE OF CLOSURE

December 2021

PROJECT BUDGET

USD 5.274.544

MTR TEAM MEMBERS

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ACKNOWLEDGMENTS

The MTR team wishes to thank the managers of the programmed UNDP – S. Tomé; the Project Management Unit, and all the partners and beneficiaries who availed themselves to help us gather documentary information. To all of them, our sincere thanks.

LEGAL WARNING

The opinions expressed in this report are under the responsibility of the MTR team, and do not necessarily reflect the views of the Implementation or Execution Units.

1.2. Brief Description

Project Energy was designed in accordance with the reality known at the time, aiming to: “**Introduce an integrated approach in the construction of mini/small hydropower plants, agriculture and forest management, capable of ensuring sustainable management of river basins**”.

To achieve this objective, four components (results) were defined for project implementation:

1. Development of a regulatory framework capable of harmonizing the hydroelectric production, agricultural holding and sustainable forest management;
2. Promotion of investment in hydroelectric production;
3. Introduction in an integrated form of sustainable agricultural and forest management practices;
4. Dissemination of good practices through a policy of proximity and promotion of good experiences and lessons learned, with the goal of replicating them in the countries of the “Small Island Developing States” (SIDS)”.

In accordance with the internal standards of project management, the initial design of this project reported the results of the analysis of the environment in which it would be developed, designed the indicators and identified the main activities to be implemented.

When new facts emerged (non-existent or unknown previously) between the project design date and the commencement of its implementation, there was a need for some adaptation to its implementation. The new main factors that needed to be addressed were: A sudden drop in the availability of the EMAE`s production park, which has focused on its recovery, the efforts of various entities involved in the project; the identification of the existence of an obstacle to the implementation of the hydroelectric production development component by way of an existing concession agreement for the rehabilitation of existing hydroelectric power plants and the construction of new ones; the emergence of multi-donor initiatives with a high degree of overlapping .

This new reality was analysed and reflected in decisions taken in multilateral meetings, namely between UNDP, ADB and the WB which decided on how to ensure the articulation of their projects. The resulting update from the evaluations was formalized in the UNDP internal document: “Reprogramming the Energy Project– April 2017_V1”.

As a substantive result of that review process, Outcome 2 (Promotion of Investment in Mini-Hydro) was redesigned, discarding the planned activities to create financial mechanisms, recalculating the objective of increasing renewable power to promote but still within the time period of the project’s implementation. As for Component 1, the harmonization of activities was responded to in accordance with decisions made at multilateral donor meetings.

The project, however, maintained the integrity of its initial objectives at the level of its main pillar, to ensure an integrated vision and management of river basins, limiting the impact of adaptation measures to the existing reality, the redefinition of some activities, and correction of the values of the initial project indicators.

1.3. Status of Project Development

The project formally commenced in June 2016, but with a slow start-up, yet having gained its normal pace of development in the beginning of 2017.

Although with differentiated levels of progression in its various components, physical realization of the project is aligned with its financial execution, which indicates a prudent use of funds. However, both financial and physical implementation is unfortunately several months behind.

The project monitoring documents present some justifications related to the context in which the project has been developed, which partially justify this delay. However, the constraints placed on the development of the promotion of investment in mini hydro, present themselves as the main justification for the existing global delay.

The development of the regulatory framework, interventions at the level of innovative agroforestry practices, and capacity building are well under way, and positive results have been recognized by the beneficiaries directly involved.

Regarding the disclosure component, it is known that its natural development curve is more intense in the final phase and is currently in agreement with what is expected. Several public sessions and open meetings have already been held, and a document defining the strategy for communication has been completed.

1.4. Achieved Goals and Performance Evaluation

The evaluation of the state of the project was based on its initial design, together with the revision that was made at the beginning of its implementation. In order to guarantee the maximum degree of objectivity of the evaluation, a thorough analysis of the relevant documentation was carried out and testimonials were gathered at meetings, interviews and field visits. Documentary evidence related to the development activities and results obtained were also carried to the process. All relevant documentation and sources are identified in the following Annexes

Table 1 • Summary of the MTR evaluation of Project Energy (UNDP)

MEASURE	MTR EVALUATION	RESULTS OBTAINED
STRATEGY	N/A	The long-term strategy for the project to have the expected impact has been maintained, regardless of the need for implementation adaptations
RESULTS EVOLUTION	Development of a regulatory framework. (MS)	A significant part of the Law and Regulations proposals have been completed, in spite of the delay in their approval and publication. The remaining planned and missing regulation must be coordinated with other initiatives from third-party interveners in the electricity and water sectors.
	Promotion of investment in renewable energies. (U)	This component has been reprogrammed. There is no measurable development, except for some training actions and a study of the energy potentials of São Tomé and Príncipe. New actions to be developed are currently being studied.
	Integrated land use and its sustainable management (S)	The activities have a good level of achievement; both at the level of physical realization and capacity building. Some results of the training and introduction to the agroforestry processes have already been validated by the beneficiaries at a highly satisfactory level. However, the already intervened agricultural and forestry areas are still behind schedule. An adequate reprogramming indicates, however, the anticipation that the indicators will be reached by the end of the project.
	Dissemination of experiences and awareness programs (S)	Public outreach activities have been carried out through public sessions, direct contact and publication of a communication strategy document on agroforestry, resulting in a satisfactory achievement in accordance with the programmed achievement level.
IMPLEMENTATION FLEXIBILITY AND ADHERENCE OF MANAGEMENT	Coordination of the Implementation Entity and Project Management Unit (S)	New and unknown facts when designing the project have been recognized by the project managers, translated into the adaptation of activities and, in some cases, already successfully solved. The current context also requires greater focus on coordination with third parties, reprogramming of activities and reassessment of indicators.
SUSTAINABILITY	Development of regulatory framework, new agroforestry	With the exception in the delay in approving the proposed Law-Decreets and Regulations, there is no visible opposition to the regulations being proposed, nor political alterations that may cause fear that they will not be respected.

MEASURE	MTR EVALUATION	RESULTS OBTAINED
	processes and hydroelectric production (MS)	Experience in the areas already covered by the introduction of new agroforestry practices, has been positive and the results already recognized by the beneficiaries, anticipating that they will be developed autonomously. With regard to hydroelectric production, there is a risk of not achieving the initial objective, but not the sustainability of the results that may eventually be achieved.

SUBTITLE: Highly Satisfactory (HS) | Satisfactory (S) | Moderately Satisfactory (MS) | Moderately Unsatisfactory (MU) | Unsatisfactory (U) | Highly Unsatisfactory (HU)

1.5. Summary and Conclusions

Project Energy is being developed in order to achieve its objectives, but in a more complex reality that has introduced new data which has led to a moderate but more sensitive level of review of the activities and goals.

Project Management has been active and able to develop the activities with lower levels of interdependence with external factors at a good pace, but with difficulties in the overcoming of external constraints.

Unrecognized factors in the initial design of the project condition the development of activities related to the creation of the regulatory framework of the electric sector and jeopardize the objective of promoting hydroelectric production through the raising of private investment.

Other donor and financing entities have intervened in the electric sector whose programs and projects have a direct impact on the development of Project Energy, a reality already recognized by the various stakeholders, but by whose reinforcement the project will benefit from.

Given the current reality and the stage of development of the project, the need to reprogram some activities is recognized together with the reassessment of some of the immediate objectives as a way to maintain the medium-and long-term objectives.

1.6. Summary and Recommendations

Table 2 • Summary Table of Recommendations

SUMMARY TABLE OF RECOMMENDATIONS	
Organizational and management adaptation	Strengthening the Management Unit with the expected admission of a technical advisor, mobilize the regular intervention of the Technical Committee and the inactive stakeholders, and elaboration of a complete roadmap of activities until the end of the project.

SUMMARY TABLE OF RECOMMENDATIONS		
Actions to reinforce the guarantee of term benefits		Strengthening the dissemination of the project at the level of proximity and definition of a progressive process of empowerment of the beneficiaries already covered by the interventions in the agroforestry area.
		Introduce gender-sensitive indicators in the activities from which they benefit.
Redirection and new actions towards key objectives	Completion of the regulatory framework and investment in hydroelectric production	Formalize the coordination platform between UNDP, ADB, WB and EIB, and promote the drafting of a joint guide for the reformation of the electricity and water sector.
		Selection of a hydroelectric project to promote and mobilize the Project Implementation Entity, other donors and interested stakeholders, namely private investors and consumers for the project.
	Agroforestry management	Extend the intervention area and the universe of beneficiaries with a search for new mechanisms to increase income through intervention in the marketing chain and / or complementary activities.
	Disclosure of experience gathered	Replicate, in an adapted way, the communication plan already elaborated regarding the agroforestry components, water management and the production and consumption of electricity.

2. INTRODUCTION

2.1. Context

Within the scope of the UN action, a Country Program for São Tomé and Príncipe is currently being developed based on the "São Tomé and Príncipe Vision 2030: The Country We Want to Build", a program aimed at boosting good governance and public sector reform; promote sustainable and inclusive growth; strengthen human capital and the provision of social services; social cohesion and social protection.

In this context, and as a contribution to the objectives of the Program, the UNDP has promoted the Energy Project with the specific objective of developing a regulatory framework for sustainable management of river basins, and the promotion of sustainable projects in the areas of energy, agriculture and forests, with the potential to be replicated after the project closes.

This Energy Project was designed in such a way that its results will contribute to the overall objectives of the Program and with the obligation to be managed in accordance with the internal procedures of the entity responsible for its implementation: UNDP.

As part of these procedures, it is expected that, in addition to the internal monitoring of its execution, a Mid-Term Review (MTR) will be carried out, which this Report presents, and a final evaluation, still to be completed.

2.2. Purpose and Objectives of the MTR

Given that the purpose of the MTR is to give the image of the state of development of the project, its central objective is to make a comparative evaluation between the results achieved and those foreseen in the Project Document, detect deviations and anticipate possible risks of failure. In light of this evaluation, it will also seek to identify and recommend the necessary changes in order to align the project with the desired results.

2.3. Scope and Methodology

The scope and methodology of the MTR were summarily defined in the MTR Initial Report, and a methodology that was followed and confirmed as appropriate in the subsequent phase of meetings, interviews, visits and evidence gathering.

In this way, a methodology was respected that developed into three characteristic phases. The first that collected documentation elements, and which, in addition to the project documents and their internal monitoring, included a vast set of documents with diverse origins. To this documentation, received and

analysed prior to the writing of the Initial Report, more documentation that was identified and brought to the process during the mission was added. During this period, an intense phase of meetings and collaboration was held with project managers; top management representatives from the majority of the most directly involved partners; relevant actors in the private sector, both from private banks and large consumers; individual beneficiaries and / or families with visits to the areas where there was physical intervention in the scope of the project.

After this intense phase of involvement of third parties, the documentary review was carried out, with the analysis of the documentation obtained during the mission and afterwards, completed the program of visits to the intervention sites, the clarification of doubts that had arisen and the collection of corroborative evidence of the reported results.

The MTR methodology also required a draft of the Report, which was presented and discussed, incorporating the relevant points in the Final Report.

2.4. Report Structure

Therefore, this Report aims to describe the MTR process, presenting the results of the analyses carried out and substantiating its conclusions and recommendations. Its structure complied with the Guidance for Conducting Midterm Reviews of UNDP-Supported, GEF-Financed Projects and ANNEX B: Guidelines on Contents for the TOR Midterm Review Report.

In addition to the Executive Summary and other introductory elements contained in previous chapters, the following are sequentially presented: the updated description of the project; what was found to be relevant and critical to the project; the project strategy; analysis of the evolution of the project in the sense of expected results; implementation and management of the project; sustainability analysis; conclusions and recommendations. It should be noted that, in the chapter on conclusions and recommendations, a more detailed analysis than normal in this type of process is done, regarding the project component at risk of non-compliance in order to justify the recommendations aimed at attempting to correct the existing deviation.

3. DESCRIPTION OF THE PROJECT AND ITS ENVIRONMENT

3.1. Socioeconomic and Institutional Context

São Tomé and Príncipe (STP) is one of the smallest countries in Africa, with a 209 km coastline. This small country is composed of an archipelago located in the Gulf of Guinea, in the Atlantic Ocean. The main islands of the country are: the island of São Tomé and the island of Príncipe, which give the name to the country. These two islands extend from the north-west coast of Gabon (1 ° 00 'latitude, 7 ° 00'E longitude) and West Africa, respectively, 300 and 250 km. The Ecuadorian line crosses the island of Rola (a small island) to the south of São Tomé Island. At sea level, the tropical climate is hot and humid, with average annual temperatures around 27 ° C with few daily variations. In annual periods considered normal, it presents high levels of rainfall in the islands, where the rivers cross the mountains with exuberant forests and farms in the inferior zones of the hydrographical basins.

The archipelago is classified as one of the Least Developed Countries (LDCs) and as a Small Island Insular State (SIDS), in accordance with the United Nations Framework Convention on Climate Change (UNFCCC) for countries most vulnerable to the impacts of climate change. The country published its first national communication to the UNFCCC in 2004, where it identifies five sectors that are particularly vulnerable to climate change: fisheries, forestry, health, education, hydroelectricity and agriculture.

Among the five sectors vulnerable to climate change, agriculture / forestry, water and hydroelectricity stand out, sectors which, particularly in São Tomé and Príncipe, have a very direct interdependence in the impact on river basins. It is this interdependence that the Energy Project recognizes and proposes to contribute to its integrated and harmonious management, through the development of a regulatory framework that integrates these aspects and the introduction of sustainable practices.

3.2. Barriers and obstacles to face

The problems for which the project aims to contribute, and which all converge in environmental sustainability risks, are at the level of agricultural processes, forest management and energy issues. It is, however, in the energy issue that the major challenges to the development of the Energy Project are presented, in particular in the development activities of the regulatory framework related to water and energy, and in the initiative to promote investment in hydroelectric production, where the greatest obstacles have occurred.

The fragility of this sector and the urgency of its resolution have justified the emergence of initiatives from several donors that, converging towards the same objectives, have a high degree of interdependence. This interdependence has already been recognized and has led to several coordination actions between the UNDP, the World Bank, and the AfDB. Potential overlapping was identified in the

development of an updated network code, tariff study and the restructuring of EMAE, which has also been the subject of IMF analysis.

EMAE is a predominantly publicly owned company in which 51% is owned by the Government of São Tomé and Príncipe, 40% owned by the Angolan public company Sonangol, and 9% owned by an anonymous local private company. According to Decree No. 40/2008 of October 31, 2008, EMAE has the power and objective to provide services related to the production, transmission and distribution of electricity and drinking water. The indicators for the provision of these services are, however, worse than those of comparable countries. A reality recently aggravated by a significant reduction in installed capacity of almost 30%, which has led to a multiplicity of initiatives.

This situation has added new initiatives with the same overlapping potential to the already identified overlaps. In addition to regulatory initiatives, the drafting of a concession contract with the EMAE is being prepared, also the restructuring of EMAE itself, and the allocation of water and electricity sector regulations to the Regulator - AGER, in parallel with the definition of the functions of an Institute for Water Policy Management.

It is in this complexity that the main obstacle to the development of the Energy Project exists which can only be overcome through a clear framework that establishes the precedence between the activities to which they are obliged to, and the planning and coordination of the activities that, occurring in parallel, have areas of mandatory harmonization.

3.3. The Project, its strategy, objectives and expected results

In view of the objectives of the MTR and its methodology, in this point, as well as in the following ones that intend to present the Project under evaluation, its design is respected and reproduced in its original format.

The objective of the project is to introduce an integrated energy and ecosystems-based approach to grid/isolated-grid-based mini/small hydro-electricity generation in Sao Tome and Principe by leveraging \$ 20.7 million in multilateral and private sector financing over its five-year implementation period. This, in turn, is expected to generate direct global benefits of 137,200 tons of CO₂ over the same period and 36,850 tons CO₂/yr thereafter in avoided greenhouse gas (GHG) emissions. When one looks at the 25 year lifetime of the hydropower stations earmarked for development during the 5-year project period, the power station would have generated 365,000 MWh, with a combined amount of CO₂ reduced of 874,200 (737,000 + 137,200) tons, including the CO₂ reduction related to sustainable land and forest management; this is equivalent to \$ 6 of GEF funds per tCO₂. The project will achieve this target by introducing a conducive, regulatory framework and by establishing a financial support mechanism that together will facilitate private sector participation in increasing the share of hydropower electricity generation in the country.

In addition, in order to ensure the availability of hydro resources for electricity generation (and irrigation systems for the creation of jobs), the project will also implement an integrated watershed management approach, which aims at integrating natural resource management with the improvement of community livelihoods in a sustainable way, and within a landscape approach. The project will introduce innovative participative methods of natural resource management, conservation farming and agro-ecology. This will be achieved through watershed level land use planning and implementation of community forests over 6,000 ha, sustainable agricultural land management practices over 10,000 ha, and income generating activities (such as mushrooms, medicinal plants, ecotourism, etc.) for rural communities. This landscape approach will be sustained by a financial mechanism between the private hydroelectricity producers and the upstream communities, based on the maintenance of environmental services (water supply regulation).

The design of the project provides a Results Chart that presents a detailed presentation of objectives and expected results. These provisional data are incorporated into the table, "Evaluation of the Progress of Activities towards Results", of the next chapter. The total reproduction of the initial Results Table would result in a repetition of information that would reduce the readability of the report. Therefore, only the summary of the expected effects is reproduced below, being more detailed in the table of the next chapter.

Table 3 • Expected effects of Project Energy

PROGRAM RESULTS FOR S. TOME AND PRINCIPE (UNDAF)	Employment and competitiveness are assured by diversifying the economy and resilience to Climate Change, improving the quality of life of poor and vulnerable populations and access to financial aid and markets by youths and women.
RESULTS OF THE STRATEGIC PLAN	Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for poor and excluded groups.
INDICATORS 1 – EFFECTS OF THE PROGRAM ON THE COUNTRY	Percentage of members of vulnerable communities having access to at least one form of communication to receive early warnings.

3.4. Organization model for project implementation

The project will be implemented through the NEX execution modality by the Ministry of Public Works, Infrastructure, Natural Resources and Environment (MPWINRE) as the National Implementing Partner (NIP). MPWINRE will provide office space to the project team as part of its contribution. The Ministry will assign a senior officer as the National Project Director (NPD) to: (i) coordinate the project activities with activities of other Government entities like the Empresa da Agua e Electricidade (EMAE – Water and Electricity Company), Ministry of Agriculture, Fisheries and Rural Development, Ministry of Finance, Central Bank of Sao Tome and Principe; (ii) certify the expenditures in line with approved budgets and work-plans; (iii) facilitate, monitor and report on the procurement of inputs and delivery of outputs; (iv) approve the Terms of Reference for consultants and tender documents for sub-contracted inputs; and (v) report to UNDP on project delivery and impact.

The National Project Director will be assisted by a Programme Management Unit headed by a Project Manager (PM). The PM will be responsible for overall project coordination and implementation, consolidation of work plans and project papers, preparation of quarterly progress reports, reporting to the project supervisory bodies, and supervising the work of the project experts and other project staff. The PM will also closely coordinate project activities with relevant Government and other institutions and hold regular consultations with project stakeholders. In addition, a Project Assistant (PA) will be recruited to support the PM on administrative and financial issues. A technical staff / local agent will be stationed at each watershed of the project and will manage the field activities in collaboration with the communities. They will be recruited progressively during the project implementation. Furthermore, the need for additional staff for project implementation and supervision will be evaluated during the initial 6 months of the project.

Finally, the UNDP CO will provide specific support services for proper project implementation, as required, through its Administrative, Programme and Finance Units and through support from Bratislava Regional Centre. Specific support services will include support for annual PIR review (project implementation review), mid-term review and Terminal Evaluation. An organogram representing the implementation arrangement is presented below.

The Project Manager will be supported by a non-resident Technical Adviser (TA), short-term international and national experts/consultants who will support implementation of specific technical assistance components of the project. During the initial 6 months of project implementation, UNDP will re-evaluate the support being provided by the non-resident Technical Adviser to determine whether the objectives and outputs of the project would be best served by having a full-time Technical Adviser on board. Contacts with experts and institutions in other countries that have already gained more experience in implementing mini/small hydropower projects, related policies and financial support measures are also to be established.

A Project Board, chaired by the Ministry of Public Works, Infrastructure, Natural Resources and Environment, will be established at the inception of the project to provide strategic directions and management guidance to project implementation. It will consist of representatives of the relevant ministries and Government departments (e.g. EMAE – Water and Electricity Company, Ministry of Agriculture, Fisheries and Rural Development, Ministry of Finance, Central Bank of Sao Tome and Principe) participating in the project, the UNDP Country Office, the National Project Director as well as representatives of the NGO community. Representatives of the private sector may be invited to participate as observers.

Finally, the UNDP CO will provide specific support services for proper project implementation, as required, through its Administrative, Programming and Financial Units, and through support from the Addis Ababa Regional Centre. Specific support services will include support for annual PIR review (project implementation review), mid-term review and Terminal Evaluation. An organogram representing the implementation arrangement is presented below.

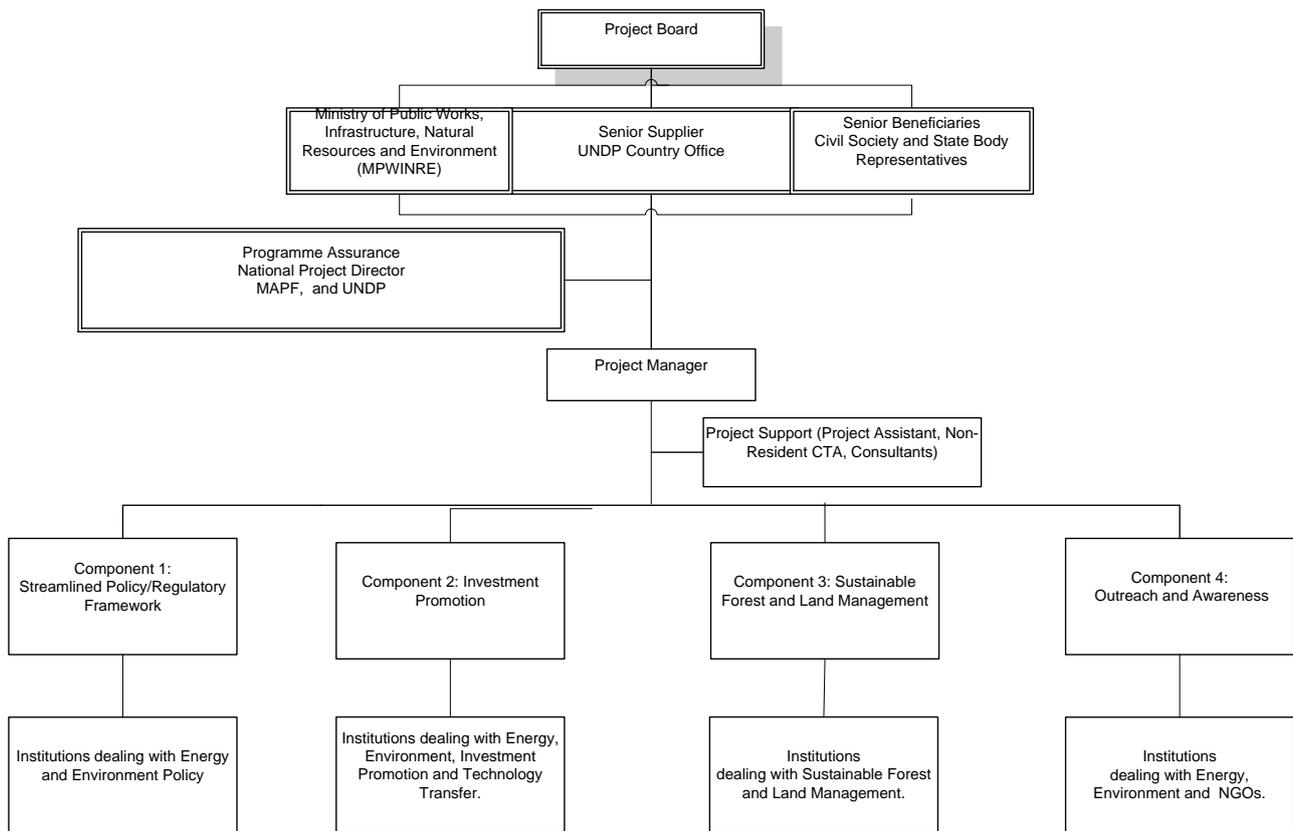


Figure 1 • Organogram

Project implementation will be governed by the provisions of the present Project Document and Programme and Operations Policy and Procedure (POPP). UNDP Sao Tome and Principe will maintain oversight and management of the overall project budget, utilizing a direct payment modality. UNDP Sao Tome and Principe support services will be charged in accordance with the Agreement between the NIP and UNDP for the Provision of Services by UNDP. Governance of the Project will be supported through annual work planning as well as reporting and monitoring the delivery of results and impact on the basis of the results framework. The annual work plans as well as progress reporting will be the responsibility of the project management and will be approved by the NPD in close consultation with UNDP.

3.5. Programming and Key Dates

The planning of activities was carried out on the basis of annual planning and had to be adjusted until the obstacles arising from the pre-existence of a basin concession agreement was resolved. The following table summarizes the situation up to the end of 2017, together with the upcoming scheduled activities.

REF	ACTIVITY	Years											
		Years Preparation		2016		2017		2018		2019		2020	
1	Project Design	1 Aug 2013	CAD initial										
2	Memorandum of Understanding			21 Jan 2016									
3	Effective Start of the Implementation			Jun 2016									
4	Development of part of the Regulation					Jun 2017							
5	Development of renewable												
6	Agroforestry Processes Under Production					Jun 2017							
7	Training and Qualification												
8	Monitoring and Evaluation												
8.1	Quarterly Reports												
8.2	Annual Report												
8.3	MidTerm Review (MTR)									May/ Jun 2019			
8.4	Final Evaluation											Nov/Dec 2021	
9	Project Cloin												Dec 2021

Figure 2 • Chronogram of the project

3.6. Main Stakeholders

Interested parts:

- Ministry of Public Works, Infrastructures, Natural Resources and Energy (MOPIRNE)
- Ministry of Agriculture, Fisheries and Rural Development (MAPDR)
- Local populations - farmers and their families
- Farmers’ Associations
- Decentralized technical structures of the state - CADR
- Local authorities – MUNICIPALITY
- Non-governmental organizations
- Private sector in agribusiness - SATOCAO, etc.
- Projects (e.g. PAPAFA, etc.)
- Financial Partners

4. CURRENT SITUATION OF THE PROJECT

4.1. Strategy and Design

After a few years on the initial design of the project and half the period of its implementation, its strategic vision remains current. The critical nature of the environmental issues, on which the project aims to create positive impacts in the medium and long term, reinforced the need for an integrated approach to the theme of watershed management. New or unknown realities at the time of the project design determine, however, the need to introduce the reprogramming of activities, weighing the expected results, and some adaptations in the management of the project and in ways to guarantee its sustainability.

The detection of the existence of a concession contract for most of the hydroelectric power plants to be rehabilitated, and the new locations, that although dormant, represented a determining obstacle to the development of the energy project in its main components. These obstacles, however, have now been adequately dealt with, but the complexity and external interconnections of the water and electricity sector remain as determining factors influencing the development of the project.

Also, in the agroforestry components, some specificities are presented, but which were not fully attended to initially. The existence of land whose owners are not interested in their agricultural exploitation, the dispersion of property in very small areas and even the effective area with potential for intervention, mean that, despite the success of the interventions already carried out, these do not reach the total area expected. This reality advises maintaining the intervention strategy and focusing on its expansion through the progressive empowerment of farmers already covered and the conquest of new ones, but with more diluted support. The strategy of fixing the agricultural population in the lands that they currently cultivate, through the increase of production income, may be supported by initiatives to improve the marketing chain and diversify sources of income in complementary activities.

4.2. Evolution of the Results

4.2.1. Process of analysis and presentation

The analysis of the evolution of the results was based on the initial project, monitoring reports, meetings, interviews and visits made, which is an effective procedure to evaluate the state of development of the project. However, for a better understanding of the presentation that follows, there exists the need for an aggregated analysis of the outcomes whenever possible, due to the lack of schedules of activities related to the outputs and as such, a detailed analysis was not possible.

The lack in the Project Design of an adequate plan of activities aligned with the results described in the Project Results Chart was exceeded by extracting the targets related to intermediate indicators that in

the Results Chart are recorded in the End of the Project, including the breakdown of activities in monitoring documents (RIPs).

The following table shows the initial and final objectives, the starting position and the expected level of execution at the date of the MTR. This table also records the evaluation of the progression of activities according to the colour code and classification levels of ANNEX 5.

Table 4 • Assessment of the progress of the activities towards results

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
Effect 1: Comprehensive policy and legal/regulatory framework for private sector investment in hydroelectric production and for integrated management of hydrographic basin.	Tables finalized and available for consultation by potential investors and stakeholders of hydrographic basins.	None currently available.	N.A.	Regulatory framework elaborated. Regulatory framework approved.	To be completed within 12 months from the start of the project and approved by the Government at the beginning of Year 2.		MS	Law, Decree-Law and Regulation proposals, that could be developed autonomously, are made. Forest Law, Forest Community Management Regulation, Water Law, Forest Development Plan, Regulation of Decree-Law 26/2014 (renewable energies), and Regulation of Offences in the
Result 1.1: Appropriate policy and legal/regulatory framework established and operational for (A) the energy sector and for (B) integrated management of hydrographic basins.	Regulatory framework created and operational for: (A) Energy – developed and implemented the policy document outlining the legal/regulatory framework for private sector investment in hydroelectric plants. (B) The GSTF – updated and validation of the Forest Management Plan, validated texts for the FC, promoted law for Integrated Management of hydro resources, conceived PGIBH framework, validated framework of specific environmental safeguards.	None currently available.	INITIAL	Regulatory energy and hydrographic basins frameworks elaborated. Regulatory energy and hydrographic basins frameworks approved.	To be completed within 12 months from the start of the project and approved by the Government at the beginning of Year 2.			Activities of Production, Transportation and Distribution of Electricity. However, it is missing its approval by the Government and/or the Assembly, and also the regulation that is dependent on other initiatives in the field, namely the Regulation of Interconnections, EMAE Restructuring, concession agreement, Function Definition of AGER and of the Water Policy Management Agency.

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
<p>Result 1.2: Technical report on grid capacity requirements to allow power supply to networked mini-hydro systems, followed by the development of an updated grid code.</p>	<p>Present updated grid code to ensure the connection and deactivation of hydroelectric stations without interrupting the quality of the electricity supplied.</p>	<p>None currently available.</p>	<p>Define the capacity requirements of the grid to allow the power supply to systems of production of alternative energies connected to the network by private operators.</p>	<p>Regulation of interconnection to the transmission and distribution network approved.</p>	<p>To be completed within 12 months from the start of the project and approved by the Government at the beginning of Year 2.</p>			
<p>Result 1.3: Established standardized procedures and PPAs for the introduction of a transparent procurement process in the selection/adjudication of locations for hydroelectric power stations by private builders.</p>	<p>Standardized bidding documents for locations and PPAs elaborated and approved by government authorities.</p>	<p>None currently available.</p>	<p>Established standardized procedures and PPAs for the introduction of a transparent procurement process in the selection/adjudication of investors in energy production from all renewable energy sources.</p>		<p>To be completed within 11 months of the Start of the Project and approved by the Government by the end of the Year 1. Competitive bids for the concession of places / areas completed by the end of the Year 1. The PPAs for at least 4 MW of mini-hydro capacity signed by the end of the</p>			

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
					second year after the start of the project.			
<p>Result 1.4: Creation of a single counter for the issuance of building licenses and permits for developers of hydroelectric plants.</p>	<p>The single counter is established and operational. Brochure information and website are available.</p>	<p>Under the business scenario as usual, the average time to secure all building licenses and permits can take several years. No time currently.</p>	<p>Existing single counter with capabilities for document analysis and issuance of building and operating licenses to investors in energy production from all renewable energy sources.</p>		All building permits and permits are issued within 4-6 months of document submission.			
<p>Result 1.5: Standardized environmental methodology developed to evaluate hydroelectric energy projects and economic and financial appraisal methodology to calculate the tariffs of small hydropower plants to be paid to IPPs.</p>	<p>Standardized methodologies developed and operationalized for environmental and eco-finance analysis and to determine tariffs for internal power supply.</p>	<p>None currently.</p>	<p>Sustainable tariffs defined for investments in energy production in isolated rural grids.</p>		To be complemented within 10 months of the beginning of the project and implemented by the local Government.			
<p>Result 1.6: Capacity developed within the EMAE, local banks and major national actors such as the Ministry of Public Works, Infrastructures, Natural Resources and Environment to</p>	<p>Capacity/number of proposed projects installed and scheduled for development.</p>	<p>None currently available.</p>			4 MW of projects evaluated by Government personnel by the end of year 1.			

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
evaluate projects of mini/small hydroelectric power stations for development.					Six Government technicians trained during the first 12 months of the project.			
Result 1.7: Increased national and local capacity to coordinate institutions for the intersectoral approach of GST and to implement integrated management of water resources at the level of hydrographic basin.	Number of collaborators belonging to the Agriculture and Forest GD and main representatives of the districts' chambers and the Regional Delegation of Prince formed in GSTF. Protocol of institutional cooperation between institutions agreed and established. A coordinated and cross-sectoral database for GSTF at the established hydrographic basin level.	None currently available.	INITIAL		At least 50% of the staff is trained. To be completed within 10 months of the commencement of the project and implemented by the local Government. To be completed within 18 months of the commencement of the project and implemented by the local Government.			
Effect 2: Promotion of investment in mini/small hydro power plants through appropriate catalytic financial incentives	Document indicating the incentive prepared, approved and available to investors.	No complete documents available to date.			To be completed within 12 months of the commencement		U	Notwithstanding the relevant success in resolving the potential litigation with the company that had a

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
for project investors.					nt of the project and implemented by the local Government.			concession contract for the rehabilitation of hydroelectric power plants and most sites with hydroelectric potential, the achievement of the expected results is at risk. Some training actions and a study of the energy potential of the Island of Príncipe contribute to the objective, but do not solve the lack of a known and stable model capable of giving confidence to private investment.
Result 2.1: Financial Support Mechanism (FSM) established and capitalized to support private investment in mini/small hydroelectric plants connected to the grid / isolated grid.	Financial Support Mechanism (FSM) within the Central Bank of São Tomé and Príncipe established and operationalized.	None currently available.	Replaced in the 1st PIR by the Ilha do Príncipe Hydroelectric Inventory Study.	Inventory (MTR objective after reprogramming) .	To be completed within 12 months of the commencement of the project and implemented by the local Government.			Co-ordination initiatives with other entities to intervene in the sector, and the reprogramming already done, mitigate this risk, but will not eliminate it without additional measures. A coordinated action capable of mobilizing political decision makers to, in the continuity of previous studies, design and approve the concrete model for the electric sector is a necessary condition for the viability
Result 2.2: Memorandum of Understanding (MOU) signed with the Central Bank of São Tomé and Príncipe, defining the purpose, financing mechanism and rules of administration relating to its participation as fiduciary agent of the MAF (Maintenance Action Form).	MOU prepared, finalized and signed with the Central Bank of São Tomé and Príncipe.	None available.	Memorandum of Understanding (MOU) signed with the African Development Bank, defining the purpose and rules for the administration of a joint investment fund in the renewable energy sector in the Island of Príncipe.	MOU prepared, finalized and signed with the Central Bank of São Tomé and Príncipe. (MTR objective, after reprogramming) .	To be completed within 12 months of the commencement of the project and implemented by the local Government.			Co-ordination initiatives with other entities to intervene in the sector, and the reprogramming already done, mitigate this risk, but will not eliminate it without additional measures. A coordinated action capable of mobilizing political decision makers to, in the continuity of previous studies, design and approve the concrete model for the electric sector is a necessary condition for the viability
Result 2.3:	Incentives to be provided by the	No complete	Defined	Defined	To be completed			

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
Financial and other incentives to be provided to project developers.	Government to approved and operationalized project developers.	documents available to date.	incentives for investment in hydroelectric energy for future private investors.	incentives for investment in hydroelectric energy for future private investors (MTR objective, after reprogramming)	within 12 months of the commencement of the project and implemented by the local Government.			of private investment in hydroelectric production.
Result 2.4: Reports on financial agreement with identified investors.	Documents on financial agreement of at least 4 MW of hydropower plants prepared and finalized with investors.	Non available.	Defined agreements for electricity production management involving the community and the EMAE.	Power of 2.5 MW in any renewable energy (objective after reprogramming)	Completed within 12 months from the commencement of project.			
Result 2.5: Report on the completion of the construction of at least 4 MW of on-grid / isolated grid hydro-electric power commissioned at various sites at the end of the project.	At least 4 MW of hydroelectric power stations built and operational, providing both the grid and isolated mini-grids.	No construction is currently being carried out.	Installed capacity to produce at least 2.5MW of hydropower on-grid or isolated grid.	Installed capacity of 2.5MW hydropower in in-grid or isolated grid (objective after reprogramming)	At least 4 MW of mini / small hydropower stations built at the end of the project. 15,871 GWh of electricity generated annually at the end of the project.			
Effect 3: Integrated land use, sustainable land	Number of ha. under GSTA practices.	No land restoration technique			10,000 ha of land under good		S	Elaborated forest management plans; developed the monitoring

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
<p>management and natural resource management provide social benefits and maintain environmental services at the river basin level.</p>	<p>High carbon stock in forests. CO2 sequestration with tree planting / forest rehabilitation.</p>	<p>implemented. Loss of approx. 1,515 t CO2 / year in 6,000 ha of forest. Loss of approx. 1,515 t CO2 / year in 6,000 ha of forest. No reforestation by the GoSTP (there is private initiative for commercial purposes).</p>			<p>management practices. At least an increase of 144,000 tCO2 over the life span of 20 years. At least 35,000 tCO2 sequestered for 20 years.</p>			<p>system for forest areas; introduced new agricultural practices on terraces with expressive positive results; introduction of new practices in the buffer zone of the forest and creation of nurseries capable of feeding the new practices; capacity building of forest and institutional guards. Delay in the total area of intervention as planned.</p>
<p>Result 3.1: Each specific PGIBH includes a water & carbon monitoring scheme that provides information on carbon stocks and on water flows upstream of the centrals.</p>	<p>Indicators of Selected Carbon and Water Flows in selected BH: carbon stock elevation (tCO2 / ha), reduced water deficiency, erosion, increased sediment retention, increased flow rates.</p>	<p>No complete monitoring scheme currently exists.</p>	<p>Software for DGRNE information system.</p>		<p>At least 3 monitoring schemes providing baselines for monthly data in each river basin.</p>			
<p>Result 3.2: Management lands integrated into the river basins include a CF managed effectively for the conservation of sustainable resources.</p>	<p>Number of hectares of secondary forest covered by participatory management plans.</p>	<p>0 hectares of secondary forest are covered by a management plan in the country.</p>	<p>ELIMINATED 1st PIR</p>		<p>At least 6 000 ha of Community Forests established and covered by a management plan.</p>			

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
Result 3.3: New methods and techniques of agroecology (agricultural conservation practices) reduce soil degradation in river basins.	Number of farmers trained in good practices. Increase of field for main production under SALM.	No training on SALM at the time of the PPG (The PAPAFA project will start training in the coming months).	INITIAL		At least 4,000 farmers trained. At least 20% increase in yield for major crops in SALM.			
Result 3.4: Watershed lands work to provide resources, alternative incomes and sustainable environmental services.	Number of ha reforested / rehabilitated forests. Number of Ecological Perimeters established. Percentage of increase in family income.	No large-scale reforestation activity conducted by GoSTP. No Ecological Perimeter including IGA (concept is new).	INITIAL		At least 7,000 ha reforested and 50 ha of EP under sustainable management. 20% increase in household income.			
Result 3.5: Mechanisms for reinvestment of energy income in the conservation of implemented community lands.	Volume of money (USD) collected each year in the Community Trust.	No scheme of benefit sharing established and operationalized in the country.			At least \$ 100,000 collected each year from the 3rd year of the project.			
Effect 4: Awareness-raising program and dissemination of experience / best practices / lessons learned from the project for replication across the region among SIDS countries.	Awareness program formulated. Project experience compiled, analysed and disseminated.	Lack of sufficient information to continue the program.			Increased awareness to develop the market for hydroelectric power stations in isolated networks / networks.		S	The dissemination of experiences has been done on a regular basis in public sessions and open meetings. The communication plan for the agroforestry area was elaborated. A high level of

OBJECTIVE	INDICATOR	BASE LINE	PIR LEVEL NOV/2017 (A)	MTR GOALS	END OF THE PROJECT GOALS	INDICATOR EVALUATION	LEVEL EVALUATION	JUSTIFICATION OF THE EVALUATION
Result 4.1: National Plan to implement promotional awareness activities aimed at internal (and international) investors.	Plan available and operationalized.	Such a plan is not available.	Implemented communication strategy to promote energy efficiency and sustainable use of forests.	Local actions and sectoral communication plans designed.	Completed within 18 months of start of project.			understanding of objectives and new farming processes was witnessed by the farmers interviewed. Although, still in restricted meetings, but the experiences have been shared with other donors, and conclusions were draw for action.
Result 4.2: Development of MOPIRNA / EMAE and MAPDR capacity to monitor and gain experience in the project.	Material for the development of prepared capacity. Compiled project experience data.	No capacity development program. None presently.	INITIAL	Formation of half the universe.	6 Government Technicians trained at the end of the project. Completed within 6 months of the end of the project.			
Result 4.3: Published materials (including video) and informative briefings with stakeholders on the experience / good practices and lessons learned from the project.	Experience and good project practices compiled, published and available on the website.	Lack of information on the best practices and lessons learned.		Disclosure of proximity initiated and external disclosure in the preparation phase.	Completed within 6 months of the end of the project.			

CAPTION:

- Achieved
- In line with the program
- Delayed

4.2.2. Analysis of Results Progression

From the analysis made, it can be concluded that the design of the project is anchored in guidelines oriented towards environmental sustainability, already validated by the international discussion on this theme. It is also concluded that it identifies the emerging priorities of the country associated with it and that its commitment to an integrated approach to river basin management is adequate. Also, the decision-making process has involved the direct final recipients, and in the executed part, sustainability and positive externalities are being confirmed. However, the result of the international experience was not adequately met in setting the objectives of mobilizing private investment for hydroelectric production. This issue will be dealt with in a more detailed manner in the chapter on "Conclusions and Recommendations".

It is also noted that the design of the project is silent on gender issues. This lack of visibility, however, does not mean that this aspect is not being considered. It is dealt with in an internal report by the Promoter Entity (in the PIR of 2018), and no differences in the treatment of this issue have been identified in relation to other similar projects. Giving visibility and monitoring, the project on this issue is, however, a requirement already taken by international practice and a recommendation to that effect is made in the "Recommendations Framework".

4.2.3. Logical framework of the project

The "Results Framework" presents a logical relationship between the impact, the effects and the expected results. However, it does not fully reflect the external constraints with a relevant impact on the development of the regulatory framework and the mobilization of private investment for hydroelectric production.

Most of the indicators, considered in the "Results Chart", are specific, measurable, and relevant and fixed in time, but there are some that are not achievable through the isolated action of the Project.

For the agroforestry component, the strategic approach is proving to be adequate, but the areas set in the indicators are difficult to reach. This difficulty is aggravated by the dispersion of ownership and the existence of landowners not interested in their agricultural holdings, but fundamentally in an overly ambitious relationship between the total area and the area foreseen for intervention.

Given the current reality and the knowledge already acquired, which has already been partly reflected in the internal monitoring reports and the reprogramming reflected in the 2018 RIP, it is advisable that some changes be introduced in the activity plan and partial indicators of the results framework, which, at the moment, does not imply that the general indicators considered for the medium- and long-term impact are impaired.

4.2.4. Analysis of progress of activities versus results

The summary of the result of the reflections made in this chapter is presented in the table "Evaluation of the progress of activities towards results".

It is verified that the progression of activities related to agroforestry components and promotion are in line with the program. The regulatory framework development struggles with external constraints and the private investment promotion component in hydroelectric production is at risk of non-compliance.

In order to recover the deviations verified, a set of recommendations are made, the grounds for which are given in the following points.

4.3. Implementation of the project and adaptation of its management

4.3.1. Organizational Model

The project management model initially designed, and presented in Chapter 3 of this report, remains in its core.

However, some of the resources, such as the existence of a non-resident Technical Advisor of the Management Unit Coordinator, have not yet been allocated, which will justify the low level of financial execution of this management component.

There was also no regular or visible intervention of the Steering Committee, related to the recent national elections and change of government department heads and ministries.

The mobilization of the Project Committee for an active intervention will prove necessary for the successful completion of the project.

As for the Technical Committee, it has actively participated in all the project activities and should maintain its level of involvement until the conclusion of the project.

4.3.2. Work Plan

The project has not defined a full schedule of activities for its five years of implementation. The overall planning has been done considering the objectives set in the Results Chart and the annual schedule based on Annual Activity Plans, but with no fixed start and end dates. Also, there have been frequent changes in activities resulting from the emergence of the new facts already described above.

4.3.3. Financing

Regarding the project financing, except for arrangements resulting from the recommended coordination with other donors, no need for any change is identified. The physical realization of the project is not delayed because of its financial execution, being the reason why the amount corresponding to the activities not yet developed still remains available.

In adopting the recommendations of this report, there will be an acceleration in the financial execution related to project management and coordination activities, and in activities related to the mobilization of private investment for hydroelectric production. It is anticipated, however, that the use of a significant part of the money earmarked to leverage this investment in production may only be made in parallel with third-party investment and, as such, the date of its implementation will be conditional on that evolution.

Table 5 • Project co-financing

ORIGINS OF FUNDS	NAME OF CO-FUNDERS	TYPE OF CO-FINANCING	CONFIRMED VALUE (a)	VALUE OF CONTRIBUTION AT MTR DATE	CURRENT EXPECTED AMOUNT IN PERCENTAGE (c)
	GEF		5 274 544 USD		3 180 192 USD (60,29%)
	PNUD		300 000 USD		250 000 USD (83,33%)
TOTAL			5 574 544 USD	1 108 090 USD (b)	3 436 194 USD (61,64%)

(a) These values are those provided in the project document. Their approval remains to be confirmed.

(b) Amount collected from the 2018 RIP.

(c) The sum predicted for the 1st and 2nd years and half of the predicted for the 3rd year.

4.3.4. Project monitoring and evaluation

From the analysis of the PIRs, Work Plans, Annual Reports and data obtained during the mission, it is verified that communication and collaboration between the Coordination of the Promoter and the Coordinator of the Management Unit is fluid, resulting in a positive evolution in the quality of the report in the Annual Reports.

Internal monitoring is therefore complemented by reports relative to specific activities including reforestation of the introduction of agricultural processes.

In the scope of the project evaluation, Financial Audit reports were also identified, and the MTR evaluation is currently underway which, with the expected Final Evaluation, will meet the requirements for this process.

4.3.5. Involvement of Stakeholders

In addition to the implementing partners mentioned above, the project has the participation of several other stakeholders, who should be part of the Project Committee. These other potential partners were identified initially and involved in the opening session of March 23, 2016. This session was attended by representatives of most of the identified partners. Subsequently and as of the date of this report, the available documentation and meetings and interviews during the MTR mission reveal the existence of much differentiated involvement, a high level of involvement of other donors and a low involvement of commercial banking partners and of the Public Bank. This situation is fundamentally due to the elimination of the planned activities for the creation of Financing Mechanisms. Regarding the final beneficiaries, the involvement of farmers in the project and of public entities related to the agroforestry sector was identified. However, the involvement of individuals and companies benefiting from the components of the development of the regulatory framework and the promotion of hydroelectric production is almost non-existent.

4.3.6. Activity Reports and internal communication

As already mentioned in the previous point, regarding monitoring and evaluation, the existence of the reports and their dissemination are verified in agreement with what is foreseen and with the common procedures in the management of this type of project. Among the various entities and persons directly involved in the project contacted during the mission, there was no significant lack of knowledge of the progress of the processes, nor contradictions in understanding regarding the facts discussed.

4.4. Sustainability

The project document reflects on the Project's sustainability and identified potential risks to its development: risks of changes in government, institutional resistance (government), resistance of agricultural communities, lack of private sector interest in investment in hydroelectric production, or climate change. Of these inventoried risks, the change of government was verified, but in the normal conditions of the democratic exercise, with impacts not having been identified beyond the delays that the change of interlocutors, normally, entails. Concerning resistance from agricultural production sectors, this has not been the case for individual farmers or communities. The risk of a lack of interest by the private investment sector has not yet been tested, as the conditions for such an expression of interest may not yet have been created and, regarding climate change, the impact of this risk is on a long-term basis, so in this short period of time it is not possible to extrapolate definite conclusions. In general, it can be stated that the risks identified in the project and the form of mitigation remain updated. There were, however, some obstacles that were not fully identified. One, that was overcome in the meantime, was the existence of a dormant contract for the concession of hydroelectric power, and another remaining that may be included in the risk of institutional resistance: the impact of the ongoing process of reform of the EMAE.

None of these, however, conditioned the sustainability of the project, understanding this sustainability as the ability to maintain and replicate the positive results obtained in the project in the future. This sustainability can already be confirmed in the introduction of new agroforestry practices given the recognition of its good results by the direct beneficiaries and training actions developed. Regarding the renewable production component, there is a risk that the expected results will not be achieved. However, if this component is to be recovered, there is already experience in the operation of hydroelectric power plants (Contador), which makes it possible to rely on its sustainability.

5. CONCLUSIONS AND RECOMENDATIONS

5.1. Conclusions

After analysing the high number of documents directly produced within the scope of the project, or with those related and the set of meetings, interviews and visits made, it is possible to draw a set of conclusions.

As a general conclusion, it can be stated that the overall existing objectives regarding the project development decisions have been reinforced, and that the activities carried out are in line with this. On the other hand, some initial slowness, but fundamentally an undervaluation of the external constraints to the project in the development of some of its activities, jeopardizes the achievement of an important part of the set objectives. Reservations are not placed on the correct application of funds, and it is worthy to highlight the good results in some components, but rather the need to reprogram the action in order to incorporate the vectors of the existing reality. Therefore, a possible reprogramming, considering the current surroundings and knowledge, and because the financial execution is still around 33% of the predicted results, remains viable.

The project bears some decisive strengths. First, are its strategy of approach to integrated river basin management, and the establishment of measurable goals of recognized environmental and social importance. On the contrary, are its underestimated external constraints, which did not identify facts associated with the electric, water and sanitation sectors, whose problems require a more encircling confrontation and reforms, and whose order cannot be randomised.

At the level of coordination on the part of the Promoting Entity and the Management Unit, there were also some strengths identified that are revealed in the ease of internal dialogue and with the Entity of Implementation and in the proper management of the activities that did not suffer unanticipated constraints.

However, given the increase in the amount of work associated with the need to reprogram activities, reinforce coordination with other entities and mobilize silent stakeholders, it is urgent to hire a technical adviser whose recruitment had already been programmed.

There is also a low level of financial execution in some activities, including project management, and in the Annual Plans, some cost estimates are below normal market values, with the risk that this may translate into weakness of action and demand for product quality.

At the level of the achieved results, the situation is varied. There is a good level of accomplishment in some activities related to the development of the regulatory framework, and, in a general way, in those related to agroforestry, training and dissemination. In contrast, there is a significant weakness regarding activities related to the promotion of hydroelectric production.

At the regulatory framework level, the project struggles with the impossibility of defining some regulations on its own initiative, running the risk of diverting to the development of less relevant regulations and which at the present stage, do not add value. It is, however, regarding the objective of mobilizing investment for hydroelectric production which presents the highest risk and for which an assessment of mitigation measures is made in the following points.

5.2. Recommendations

5.2.1. Introduction

In previous chapters, particularly the analysis of project development and identification of the factors on which the achievement of its objectives depends, general conclusions and recommendations are given. About the risk of non-compliance with the objective of mobilizing private investment for renewable production, a more comprehensive and detailed analysis of support for suggestions and recommendations to mitigate this risk is required.

This is followed by an evaluation based on two pillars: international experience in similar cases, and an analysis of objective conditions (natural, social and institutional) to identify the concrete project that can best satisfy the objectives of the project.

5.2.2. Framework and proposals for mobilizing private investment - lessons learned

a. Bases for a consequent reform of the electric sector in São Tomé and Príncipe

The problems faced by Sao Tome and Principe in the water and energy sectors are not unique and the approach to their resolution must take into account a lesson learned: that universal and sustainable energy availability in a country requires competences and resources for its planning, production and distribution, but which is based fundamentally and primarily on a clear strategy and a sustainable business model that separates social responsibilities from commercial ones.

The São Tomé and Príncipe, the electric system is based on a system of tariffs disconnected either from costs or from segmentation of customers by commercial or social criteria, presenting high levels of commercial and technical losses, and, apart from the independent diesel resource production, verticalized in a single company which is in a recognized state of rupture, the need for the restructuring of this sector presents itself as an emergent factor.

The conclusion drawn from this situation is that the approach must be integrated, with the success of individualized initiatives being subject to chance and with low chances of success. This reality is being recognized by the various international donors with intervention initiatives in the sector already under way and that has already motivated the recognition of the need for coordination and the holding of some meetings with part of the stakeholders.

The complexity of the subject and the decisive advantage that can represent a structured coordination justify, however, the coordination mechanisms to be strengthened and the formalization of a platform supported by the UNDP, the Implementation Unit (MOPIRINA) and other donors and funders such as the WB, the EIB, the AfDB, and the IMF itself, which is involved in setting priorities for the restructuring of the EMAE.

From this coordination, it should result in the immediate launching of a joint initiative to develop a roadmap for sector reform, in which the various initiatives converge. A script that from the start frames: the work in progress of elaboration of the Concession Contract with the EMAE; the restructuring of the EMAE itself and that this restructuring results in the guarantee of a model for the commercialization of electricity which guarantees the payment of the production, regardless of whether it is produced by EMAE or another producer; independent study of the cost structure required for tariff setting; the definition of functions and areas of responsibility of the Water Policy Agency and the AGER Regulatory Entity, and how the financing of these entities (similarities and differences, rates and ceilings) should be guaranteed.

The main outcome of this increase in coordination will be to define the precedence of the activities that are already under way and in which, since it is already sensible, some cannot be completed without having in advance the outcome of others. A second result will be to ensure the compatibility and quality of the Laws and Regulations. A third result, conjectural, but not negligible, will be that of saving resources. It is also expected that this increase in density will help to recover to the project other interested parties, namely the private ones who in the initial phase mobilized to participate in the initial actions of the project and also to guarantee the effective participation of EMAE that, although included as one of the project implementation partners, has not had an active role.

The importance attached to ensuring that the focus is on the organizational component justifies emphasizing this with historical appeal. During the MTR mission, part of the studies already carried out regarding the hydroelectric potential were identified: May 1981, by the Leningrad branch of the Hidroproext Institute; 1985, UNDP / World Bank; 1986, Hidroproekt; 1989, Hydro-Quebec International; 1989, United Nations Industrial Development Organization (UNIDO); 1991, Electricité de France International (EDFi), 1992, ISL, Bureau d'Ingénieurs Consultants; 1992, Mott MacDonald International / BCEOM / SOGREAH; May 1996, Hidrorumo for the INDES- Institute for Economic and Social Development; 2008, CECI Engineering Consultants, Inc., Taiwan. No project was, however, implemented.

In summary, it can be said that during the project's implementation phase, the measures that streamline and guarantee the final quality in the decision process will be continued. Initiatives that, jointly or individually, contribute to the decision process in its different phases of study, counselling and negotiation between funders and decision makers.

b. Leverage of private investment

MAINTAINING THE COHERENCE OF THE ENERGY PROJECT

Any project, and this Energy Project is no exception, does not lose its coherence for possible changes in its implementation, provided that its final objectives are maintained. Objectives with respect to promoting investment in hydroelectric production were to have a positive impact on environmental sustainability and socio-economic development.

A possible change in the technology of electricity production, or even the change by an equal reduction of consumption through projects of rationalization of consumption, can be studied, but also since they also result from the change in the regulatory framework and serve to validate a new path of diesel production by another environmentally sustainable and economically more favourable form. In any case, the investment in hydroelectric production continues to present itself as the best solution in the energy project strategy. In practical terms, the project to be promoted must guarantee the contribution of private investment, serve to test the new regulatory model and the intervention of the various entities involved (Regulator, Government and EMAE), and incorporate a sustainable and commercial model.

CRITERIA AND EXPECTATIONS FOR PROJECT SELECTION

The selection of opportunities to develop a project should fit the objectives described above and be able to be a successful case that encourages its replication. For this, it is important, now, to counter misperceptions that there are low-cost solutions available. In fact, the unit cost of electric power installation is as high as the installed power is low, which will make the cost in Sao Tome and Principe higher than the average, not vice versa. The cost resulting from the energy mix can benefit from a competitive advantage compared to many other island countries, which is the available hydroelectric potential and possible lower transport and distribution costs, which is why the definition of this pillar is considered viable for the Energy Project, continuing to give it priority. This objective is still possible, if there is a convergence of actions and interests.

The convergence of actions has already been advocated in this report and a recommendation has been made in that sense. Concerning the convergence of interests, it is important that, in addition to the existing interest on the part of the Government and the Donors, the interest of electricity users and the interest of potential investors should be identified. Therefore, the degree of probability of achieving this convergence of interests should guide the selection of investment.

Taking into account the recent study, "A Low Cost Electricity Development Plan for São Tomé and Príncipe", three projects with favourable indicators can be identified, and in which there have already been lengthy studies presenting themselves as feasible projects leveraged by the Energy Project which are: The AH of Augustine Neto, the Guegue and the Papagaio, the latter being located on the island of Príncipe.

HOW SHOULD PROJECT ENERGY LEVERAGE THE PROJECT

To meet the objectives, the investment in the project will have to include private investment in the production that will be remunerated by the energy injected into the network. The installation of this production centre will require, at this moment, investments in the network, dispatch, counting and marketing systems and, also, conjunctural costs of context as a guarantee of payment. This is a necessary investment that cannot be supported by the producer. Therefore, this is the complementary investment that can benefit from ongoing public initiatives.

As soon as the investment estimate is known and the tariff is fixed, it will be possible to estimate the percentage needed by way of public contribution that should be the minimum necessary in order to captivate private interest.

Table 6 • List of projects with the highest leverage interest for Project Energy

PROJECT	ORDER OF PRIORITY Least Cost Development Plan	USD/MWh
Capitalising on the Agostinho Neto Hydroelectric power	1 st S. Tomé	21
Capitalising on the Guegue Hydroelectric power	2 nd S. Tomé	33
Capitalising on the Papagaio Hydroelectric power	5 th in Príncipe / 1 st Hydroelectric power	70

5.2.3. Recommendations

Table 7 • Table of main recommendations

TABLE OF MAIN RECOMMENDATIONS	
Organization and management adaptation	Completion of the framework provided for the Project Management Unit with the technical advisor and revitalizes the activity with the interested parties.
	Completion of an overall planning of activities for the remaining phase of the project, based on a schedule of activities duly dated.
	Mobilize the Project Committee for an active and regular intervention.
	Involve stakeholders from AGER from the outset and during the activities that are pertinent to the said activities and recover the participation of large consumers and current private producers of electricity.
Actions to reinforce the guarantee of term benefits	Reinforce the dissemination of the project at the level of proximity
	Define a progressive autonomy plan in the introduction of the new

TABLE OF MAIN RECOMMENDATIONS		
	agroindustrial processes, with a corresponding enlargement of the universe reached.	
	Introduce gender-sensitive indicators in the activities they benefit from.	
Redirection and new actions towards nuclear objectives	Completion of the regulatory framework and investment in hydroelectric production	Formalize a coordination platform between UNDP, ADB, WB and EIB, and promote the elaboration of a joint guide for the reform of the electric and water sector.
		Focusing on the creation of the conditions for approval and adoption of the structuring regulations, guaranteeing the speeding up of their application, leaving for afterwards the regulation not absolutely necessary in the current phase.
		Select a hydroelectric project to promote and mobilize other donors and other stakeholders, including private investors and consumers, for its implementation.
	Agroforestry management	Extend the introduction of new agricultural processes to new areas, requiring a greater percentage of the contribution from the beneficiary farmers, as a way to guarantee a wider range of use.
		Analyse, in interventions in the buffer zone, and eventually promote, complementary ways of increasing family income in conjunction with the requirement of their commitment to new practices.
	Disclosure of experience	Apply the communication plan already studied in the agroforestry area and extend it to the remaining components of the project.
		Disseminate the results of the experimental interventions, with consolidated results.

ANNEXES

- ANNEX 1. ToR to MTR
- ANNEX 2. Evaluation Matrix
- ANNEX 3. Plan of meetings, interviews and visits
- ANNEX 4. Evaluation Scales
- ANNEX 5. MTR Mission Itinerary
- ANNEX 6. List of persons interviewed
- ANNEX 7. List of documents considered
- ANNEX 8. Signed Code of Conduct
- ANNEX 9. MTR signature form