UNITED NATIONS DEVELOPMENT PROGRAMME

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PROJECT DOCUMENT

HAITI

Project title: Project for Improvement of Rural Electrification

Project No: xx

Implementing agencies: Ministry of Public Works, Transport and Communications, MTPTC Energy Unit

Other implementing agencies/responsible agencies: Department of Mines and Energy, Municipalities, UNDP

Start date: January 2018 **End date:** December 2022

Brief description of the project

The project seeks to provide electricity in the remote target rural areas where these is exploitable energy potential by establishing five (5) micro electricity networks using renewable energy. The project will reduce the town/country divide, strengthen social cohesion and contribute to greater gender equality by improving domestic well-being and the functioning of energy supplies, as well as that of the local economy in rural areas; promote decentralized energy supply option in rural areas and contribute to the generation of productive activities for goods and services which particularly benefit women and other disadvantaged groups. In addition, electricity generation from renewable energy sources will ensure a significant reduction in greenhouse gas emissions, especially carbon dioxide (CO2). The project is structured around three main pillars:

1. *Strengthening inclusive and equitable national and local capacities for planning, management, monitoring and control of decentralized energy supply services;*
2. *Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities;*
3. *Support for communities in efforts to manage the recovery of reserve funds by emphasizing economic development and women's leadership.*

Effect CPD contributing to the project: CPD Output 3: National, regional and local institutions and civil society improve the management of rural and urban areas, agriculture and the environment, and mechanisms to prevent and reduce risks and improve the population's resilience in the face of natural disasters and climate change. Indicative outcomes: CPD Output 3.2: Mechanisms and partnerships are put in place to promote sustainable methods of production, distribution and consumption.	**Total resources required:**	**US$ 5,700,000**	
	Total resources allocated:		
		UNDP TRAC:	
		Japan:	**US$ 5,700,000**
		Government:	
		In kind:	
	Not financed:		

Acronyms and abbreviations

- CE: Energy Unit (Cellule Energie)
- BME: Office of Mines and Energy
- CIAT: Inter-ministerial Committee for Regional Development
- MICT: Ministry of the Interior and Local Communities
- MPCE: Ministry of Planning and Foreign Cooperation
- MTP: Ministry of Public Works
- PSDH: Planning and National Strategies of Haiti
- EU: European Union
- GDP: Gross Domestic Product
- EDH: Electricity Company of Haiti
- MENFP: Ministry of National Education and Vocational Training
- MSPP: Ministry of Public Health and Population
- CEAC: Coteaux District Electricity Cooperative
- UNDP: United Nations Development Program
- AGLDT: Support to Local Governance and Territorial Development
- PINNE-PISUD: Intervention Programs in the North, North-East and South
- MICT: Ministry of the Interior and Local Government
- GEF: Global Environment Facility
- PTA: Annual Work Plan
- UJANE: Young People's Union for the Advancement of the Northeast

I- DEVELOPMENT PROBLEM

1.1. Current situation

Haiti is faced with a serious energy crisis despite the fact that its local energy resources (especially biomass and, to a lesser extent, hydro energy) could meet around 75% of its energy needs. This crisis is characterized by a number of factors, including:

i. The burden on the economy represented by the importing of oil products for the purchase of fuel;
ii. Extremely low per capita consumption and high energy consumption intensity (energy consumption per unit of GDP);
iii. Lack of access to electricity;
iv. Failure to exploit renewable resources.

This crisis has been exacerbated by a lack, at State level, of a long-term vision and a clear strategy which goes beyond the electoral cycle and would promote local energy resources. Several analyses have underlined the lack of clarity in the energy sector because responsibilities are not defined, and institutions suffer from chronic dysfunctions. Although the three decrees of 6 January 2016 governing the electricity sector fall within the framework of a development desired by many actors, the background to their promulgation remains obscure. To alleviate this shortcoming, a draft law setting out the legal framework for small-scale hydro-electricity was put forward in 2016 with the aim of opening the electricity sector to Haitian, foreign and municipal private investors.

A major national challenge in for Haiti's endogenous sustainable development is the recentralization of public policies on expansion of access to energy. Inefficiencies in the sector throughout the value chain impact heavily on its competitiveness and development. Between 1977 and 2017, the percentage of renewable energies in the "Electricity Mix" declined drastically from 96% to 19%[1]. In Haiti, access to electricity is one of the lowest, covering 10% of electrification needs and per capita electricity consumption of 75KwH per year.

Up to now, the country's electricity coverage is around 30%, generally in urban areas, and less than 7% in rural areas[2]. Haiti Electricity (EDH), the State commercial and industrial company, and the only company transporting, distributing and selling electricity throughout the country is far from being a commercial enterprise capable of generating profits, and has, for years, been a heavy burden on the national budget. In July 2015, the public financing of EDH reached 450 million dollars per year[3]. It is worth emphasizing that this State support for EDH is roughly the equivalent of the amount of the annual budgets of the Ministry of Education and Vocational Training (MENFP) and the Ministry of Public Health and Population (MSPP) combined. The annual revenues of EDH, which are around 60 million dollars, are more than seven times less than the subsidy granted by the Treasury.

Furthermore, the country's forestry resources are not used in a sustainable manner. The production and sale of wood fuels is one of the principal sources of revenue in the rural department of South Haiti. This trend constitutes a direct threat to the main coastal ecosystems which provide the means of subsistence and gives rise to an increased risk of erosion of deforested slopes[4]. Sustainable exploitation of planted trees and access to other alternative energy sources could stimulate the local economy and reduce the vulnerability of the environment.

[1] Source: World Bank (open data site, 2016).

2 Access to Electricity in Haiti by Municipal Section Source: BMSE, 2013.

[3] Http://lenouvelliste.com/lenouvelliste/article/148127/EDH publishes on March 8, 2015.

[4] Supply chains for charcoal and fuelwood in the Southern Department. UNEP Haiti, September 2016.

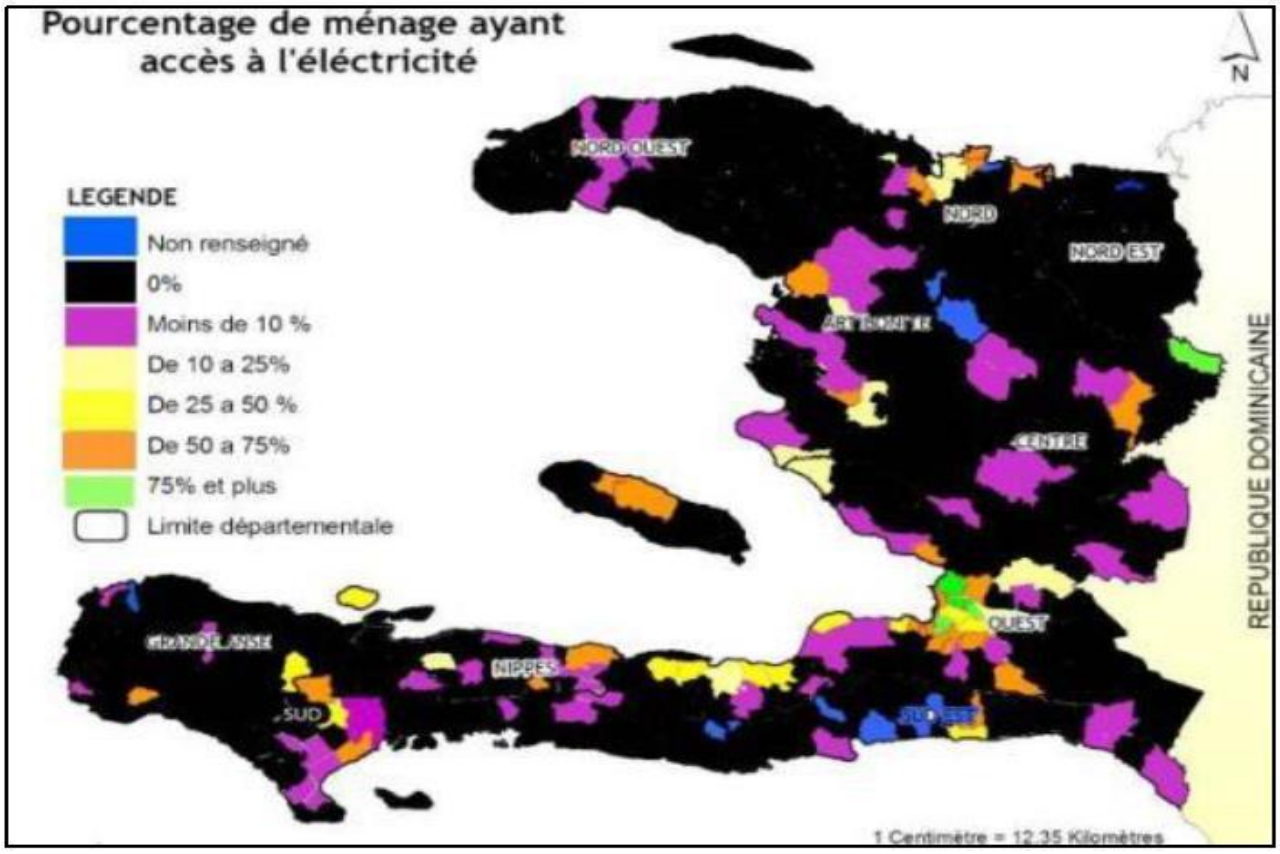

Figure 1.- Access to Electricity in Haiti by municipal district BMSE, 2013

To be sustainable, rural electrification must be a commercially viable and socially equitable service. Several initiatives, including the installation at Boucan Carré under the current programme "Ban m Limyé, Ban m Lavi", the Electricity Cooperative of the Coteaux District (CEAC) and its electrification project at Roche à Bateau, Coteaux and Port à Piment, the self-generation efforts at the Mirabalais and Bernard Mews hospitals show the feasibility of photovoltaic solar energy in the country. Recent rural electrification initiatives in the north-east and south with the private sector (Earth Spark and NRECA) are examples of successful rural electrification in Haiti.

1.2. Challenges concerning gender equality

As in many regions in the world, inequalities between the sexes persist in the production, distribution and use of energy, and, proportionately, women and men are affected differently by the challenges related to energy. Haitian women (especially in rural and periurban areas) are often disproportionately responsible for household tasks, including the supply and use of fuel for cooking. Women and children thus tend to bear the burden of "energy poverty" with the consequent negative effects, for example, less time to engage in remunerative or educational activities. Women are also disproportionately affected by the harmful effects on health of using charcoal in the house: a study by UNEP in 2016 showed that, since women and children spend a great deal of time in the house, they often run a higher risk of developing respiratory diseases due to exposure to the smoke from the burning of charcoal. Lastly, the lack of community lighting infrastructure can compromise the safety of women and girls and restrict their access to public spaces, while responsibility for collecting fuel can expose them to a greater risk of gender-based violence.

Throughout the world, the data show that the more a population has access to electricity, the greater the equality between the genders. For these reasons, the project will adopt an approach which includes components which contribute to greater gender equality and independence of women.

The economic situation of urban and rural families was exacerbated following the earthquake of 12 January 2010, and following the passage of Cyclone Matthew in October 2016 which cause enormous damage in almost all the departments of the Southern Region. The official toll is alarming: 2.1 million people affected (12% of the population of Haiti), 806,000 people potentially affected by extreme food insecurity and 1.4 million people in need of humanitarian aid. In the Department of Grand'Anse, it is estimated that 40% of the population, some 546,000 people, are women of child-bearing age. The information published in the departments of South, South-East, Nippes and Grand'Anse mentions a catastrophic situation due to food poverty. Families are faced with massive and brutal impoveri0shment due to decapitalization, loss of means of production and limited access to basic services (water, electricity, health, etc.). These natural disasters have contributed enormously to the weakening of the Haitian economy.

Today, Haiti is moving on from the humanitarian phase to that of recovery, while seeking inclusive growth and sustainable development in the long term. The objective is to break the cycle of vulnerability of women and men and to secure their independence, and their capacity to participate in and benefit from the new economic dynamics. A larger proportion of women are unemployed than men, with a rate of 32.1% against 23.4% for men; and this is true irrespective of the place of residence[5]. Access to electricity allows more efficient household activities, which can reduce the time and effort of women and allow them to engage in productive activities outside the home. Research has shown that in certain countries, the incomes of independent rural women who have access to energy are more than double than those of their counterparts without access to energy. In rural areas, the gaps are even more pronounced, ranging from 144 per cent to 132 per cent for the highest incomes for those who have electricity.[6] The researchers attributed this increase to the fact that access to electricity liberated women from home production and allowed the creation of micro-enterprises. Access to electricity also changes the lives of young people: it boosts their creativity and their spirit pf enterprise. Furthermore, a well-designed energy intervention can benefit women as suppliers, not only consumers, of energy. Renewable energy solutions such as solar energy have immense potential for developing small enterprises owned by women. As such, renewable energies can be a driver of change and accelerate the achievement of gender equality, independence of women and the process of development of rural communities.

1.3. Justification of the project

In Haiti's strategic development plan (PSDH), the Government has made a commitment to make Haiti and emerging economy by 2030. Energy is one of the priorities of the administration of President Jovenel Moïse. The objective of the Haitian government is to guarantee everyone access to reliable, sustainable and modern energy at an affordable cost[7]. One of the crucial stages in achieving this objective would be the exploitation of the country's vast renewable energy resources.[8] Since 2015, an approach resolutely turned towards renewable energies has been under consideration. Backed by the investment plan of the Scaling-up Renewable Energy Program (SREP), Haiti has the objective of mobilizing, by 2030, 149.5 million dollars, of which 94.5 million earmarked for access to non-grid electricity. The Clean Technology Fund (CTF) funds are currently being mobilized by the Haitian Government through the Ministry of Public Works, Transport, Communications and Energy (MTPTC) with the aim of accelerating the development of business models for renewable energies devoted to non-grid electrification by the creation of a non-grid electrification fund of USD 12 million. In addition,

[5] Survey of living standards (ECVH) Vol 1, Haitian Institute of Statistics and Information Technology (IHSI).

[6] O'Dell, Kathleen, Sophia Peters, Kate Wharton. Women, Energy, and Empowerment: Applying a gender lens to amplify the impact of energy access. Deloitte University Press, September 2014.

[7] http://www.metropolehaiti.com/metropole/full_une_fr.php?id=29673

[8] SREP (Scaling Up Renewable Energy Program) Investment Plan for Haiti.
http://www.cif.climateinvestmentfunds.org/sites/default/files/SREP_13_5_SREP_Investment_Plan_for_Haiti.pdf

MTPTC has sought UNDP support to continue the interventions and consolidate the results achieved with the implementation of the project "Development of hydroelectricity on small scale in Haiti" carried out from 2013 to 2016. The final evaluation of this project recommended continuing to support the development and installation of renewable energy production with a focus on rural electrification for equitable access to electricity to remote communities[9].

Furthermore, Haiti's national energy sector development policy matrix, the result of a public consultation conducted from April to November 2016, headed by the Office of the Prime Minister, had as its primary objective to take advantage of Haiti's energy potential.

Haiti has excellent potential for renewable energy, particularly for solar, wind and hydropower. According to a resource assessment conducted by the WorldWatch Institute in 2014, the country has theoretically the potential to meet all of the electricity demand from renewable resources and technologies that are currently available. The potentials, identified through the WorldWatch Institute study, are presented in the following table.

Table 1- Potential renewable energies[10]

RE sources	Potential renewable energies	Location
Solar irradiation	5 to 7 KWh/m^2/day	Most of the country
Solar irradiation	8 KWh/m^2/day	Port-au-Prince, coastal areas (Gonaïves, Saint-Marc)
Wind	Average wind speed: 7 - 9 m/s Altitude 80m	West, South-West, North-West
Wind	Average wind speed: 7 m/s Altitude 80m	Magane, les Cayes, North-East
Hydro energy	36 MW	Port-au-Prince
Hydro energy	18 MW	South-East
Hydro energy	14.4 MW	Grand 'Anse
Hydro energy	10.3 MW	Nippes
Hydro energy	> 1MW : 27 sites 0.1-1 MW : 72 sites < 0.1 MW : 41 sites	All 10 departments
Solid waste	730,000 tonnes/year	Port-au-Prince
Solid waste	191,000 tonnes/year	Cap-Haïtien, Gonaïves, Les Cayes, Saint-Marc, Vergettes, Jérémie, Port-de-Paix, Limbe

Haiti possesses enormous solar potential. Solar radiation, or GHI varies from 5 to 7 kilowatt hours per square metre per day (kWh/m2/day) in most of the country and is close to 8 kWh/m2/day in certain regions (Matthew L. et al., 2014). In comparison, Germany, which accounts for almost half the installed photovoltaic capacity in the world has few sites with a GHI of more than 3.0 kWh/m2/day, and practically none above 3.5 kWh/m2/day, and Phoenix, Arizona, known for its solar potential, has an average GHI of 5.7 kWh/m2/day (GEF, 2009)[11]. Several locations in Haiti have an extremely strong wind energy potential. Only a few medium-sized wind farms in the country could provide the majority of Haiti's current energy demand. Nowadays, power generation technologies based on renewable energies are highly advanced and affordable for small communities. Small hydro-electric power plants can be installed at water level; collapsible wind turbines can operate at wind speeds varying between 4 and 5 m/s; solar modules can be coupled as required.

9 MTPTC, EDH, UNDP Haiti. (2017). Terminal Evaluation of Small Scale Hydro Power Development in Haiti. SSHPD-S file. PIMS 2820

10 Matthew Lucky, Katie Auth, Alexander Ochs, et al., Haiti Sustainable Energy Roadmap: Harnessing Domestic Energy Resources to Build an Affordable, Reliable, and Climate-Compatible Electricity System (Washington, DC: Worldwatch Institute, 2014)

11 Global Environmental Facility (GEF) investing in renewable energy. The GEF experience. Washington, DC, 2009

With respect to hydroelectric power, it is important to operate small power plants that do not require high flows and to develop a strategy to support and encourage the communal sections to protect forests and water sources. A recent study commissioned by the MTPTC and EDH with the support of UNDP has just updated the mapping and database of hydroelectric potential in Haiti. It presents georeferenced sites in operation, studies and potential sites in remote areas.

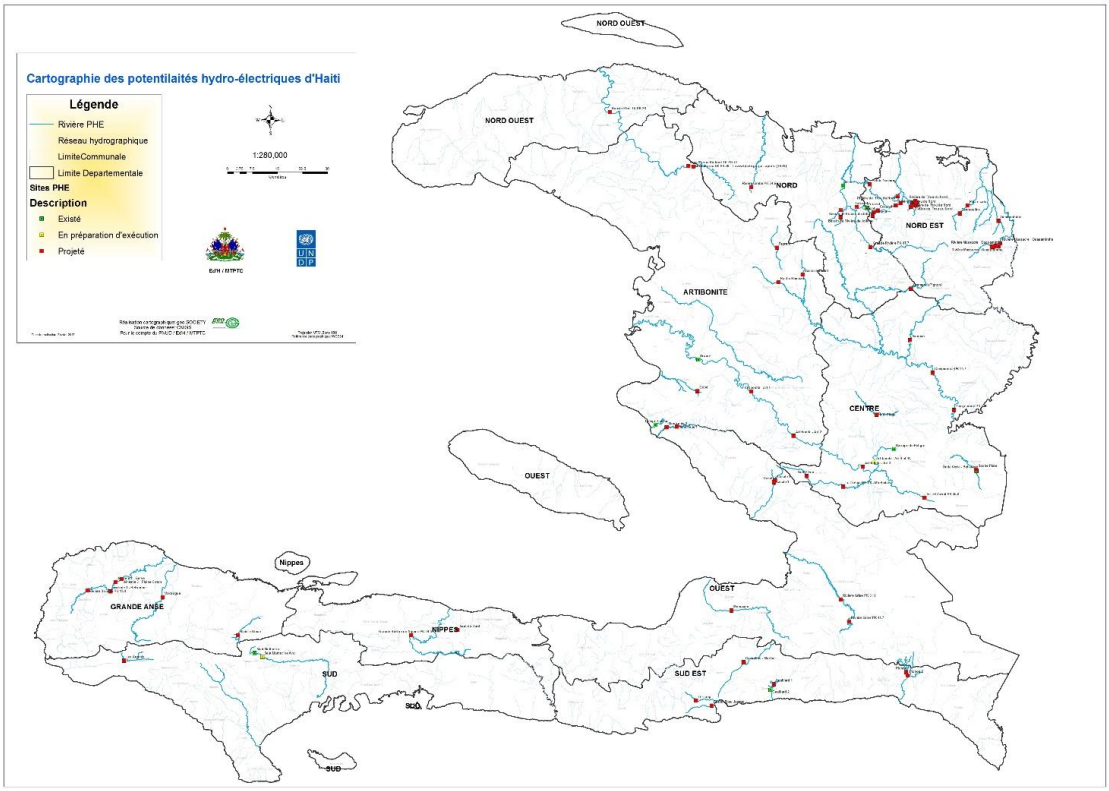

Figure 2.- Mapping of Hydroelectric Potential of Haiti, GeoSociety, 2017

Small hydro resources can play a significant role in providing low-cost electricity as well as expanding access to energy sources to the many remote sites currently underserved by the grid. It is considered important to evaluate to concentrate in the northern and southern regions that are among some regions in Haiti where the lowest electrification rates are recorded. The development of renewable energy in Haiti would not only extend access to clean, reliable and economically viable electricity, but would also allow savings in fuel used in thermal power plants while being an effective means of promoting energy production. (Processing of agricultural and fisheries products) and services (tourism, education, etc.). Responding to the need for alternative energy development models, the project will contribute to the Sustainable Development Objective (SDO) 7 to promote widespread access to clean, reliable, sustainable and modern energy services.

1.4. Role of UNDP

The United Nations Development Programme is working actively, in concert with the Haitian Government and other actors in the international community, to combine efforts to increase the resilience of Haitian rural populations. UNDP assists national and local governments to address development problems and helps local communities to adopt actions and approaches centred on management of risks, management of the environment and adaptation to climate change. It highlights its mandate to support sustainable development relying on a community-based approach and capacity building, with emphasis on gender equality and women's independence, supporting human rights for development and the institutionalization of processes at national and intranational level, and its multidisciplinary work through interventions in governance, means of subsistence and environment.

In the North-East of Haiti, in 2015, UNDP built a hydro-electric micro power station, near Magazen, in the municipality of Capotille à Ouanaminthe, in the framework of its micro finance programme (Small Grant Programme, SGP/UNDP) financed by the Global Environment Fund (GEF). This project used an approach of involving the community in the management and implementation of the project which proved to be an immense success. With the leadership of a community organization in the area, the Union of Youth for the Advancement of the North-East (UJANE), and co-financing from the Inter-American Foundation, the eleven-watt (11Kw) capacity hydro micro power station was installed, providing 70 families with electricity. While the initial impact was improving the living conditions of school children and the population through access to electricity in their home for the first time, the other fundamental impact which occurred in the area was the sale of frozen products, the production of juices and ice cream making by women, etc. The power station is managed by a committee elected by the community. The rules are written in Creole and provide for penalties (disconnection) in the event of failure to pay for electricity. The amount payable to establish a reserve fund is used for maintenance and repairs. The neighbouring communities are motivated by this achievement and have requested help from UNDP for similar projects in their areas. The Mont-Organise community has already sought collaboration with a Dominican NGO and has carried out a feasibility study which found a potential of 100 Kw which could supply some 200 families.

At strategic level, the Haitian Government, in collaboration with UNDP, has implemented the project on Development of small-scale hydro-electricity (micro-hydro) in Haiti, financed by the GEF with the objective of creating an environment favourable to private and public investment in small hydro-electric plants in Haiti. This project sought to reduce political and regulatory barriers by strengthening the capacity of institutions working in this field and allowing the generation of updated hydro-meteorological data. UNDP engaged in advocacy vis-à-vis the national actors with a view to reaching a draft reform to modernise the legislation on electricity, taking renewable energies into account. With the participation of the sectors concerned, the three decrees on the electricity sector promulgated by the previous Government were reviewed to adapt the "irritant" clauses and regulations establishing the legal framework for small-scale hydro-electricity were added. The four draft laws taken together form a coherent whole and are a step towards opening the sector to Haitian and foreign private investors. In addition, with UNDP support, EDH established in its planning department a Renewable Energies Unit with the task of promoting, within that institution, local energy resources[12].

Parallel to this, UNDP put in place exchange visit initiatives with the Dominican Republic, where over 43 micro-systems were established from 2005 to 2015, in communities situated in isolated mountain areas, who built and manage small hydro-electric plants. UNDP also trained staff of Haitian public institutions on energy development methods. In addition, since 2011, UNDP has been working actively, in concert with the Haitian Government and other actors in the international community, to combine efforts to make women independent. To respond to the economic needs of women in Haiti, UNDP, in partnership with the Ministry of Women's Condition and Women's Rights, launched, in 2011, a series of initiatives to support a national dynamic for the economic independence of women, and especially women entrepreneurs. In addition, UNDP implemented a project of support for the economic independence of women in 16 districts with populations displaced by the earthquake returning (project 16/6) and also supports the development of a common analysis and a strategic vision of women's entrepreneurship for all the partners involved in job creation programmes. At the same time, UNDP has put in place initiatives to support the emergence of young women entrepreneurs, thus creating opportunities for the million women in Haiti who are girls or women aged 15 to 24 years.

12 EDH launches a Renewable Energies Unit. Available from: http://www.lenouvelliste.com/article/166547/ledh-lance-une-cellule-energies-renouvelables#sthash.1nngKVHh.neOhQXpz.dpuf.

II- STRATEGY

The project will focus on the replication of rural electrification development models which have been tested in Haiti and abroad. The proposed model relies on the management of non-grid renewable energy systems by remote communities, organized in cooperatives. Municipalities and local authorities will be at the heart of decision making and the legal representative in defining and implementing community electrification plans. The project will facilitate and reinforce the capacities of local authorities, community-based organizations which will organize themselves into cooperatives or in partnership with the private sector and beneficiary communities in managing subsidies for the construction and management of production centres, transport and distribution of electricity. It will help to involve the population in taking ownership of the interventions and their sustainable management. This approach is based on two models used in Africa and the Caribbean: social enterprise (1) and the creation of a new economic sector (2). The first will promote social enterprise and engage the local populations through participatory management of the project by empowering all beneficiaries thus making the energy installation a common good to preserve. The second will develop a reliable local economic sector based on the many interactions woven with multiple actors: representatives of the state (national, commune, etc.), user communities, financial partners. Their involvement will integrate the project into the local economic and social fabric and will thus ensure the generation of income necessary to maintain electricity generation systems over the long term.

The beneficiary communities will be chosen on the basis of strict criteria which will prioritize the technical and economic feasibility of the scheme, the capacity of the municipality and existing organizations, existing needs, validation of the partner institutions (BME, MTPTC/CE, etc.) through the project steering committee. The future beneficiaries of the energy services will first have to give guarantees of perpetuation of a profitable micro-project. As such, and in the first place, a partial financial participation of the users is an indispensable prerequisite. On the one hand, the act of purchase will confer value or service. On the other hand, this participation, even subsidized, will ensure the maintenance of the systems and will constitute a capital base necessary for the first replacement of defective equipment. Other criteria will be clearly set out in the recommendations of the study on pre-identification of sites.

In addition, the project will support raising awareness of populations, education and social mobilization which should encourage payment for rights to electricity.

The project strategy is to work with civil society, governments and local leaders to ensure the sustainability and appropriation of the micro power plants. UNDP will rely on its vast experience of the process of construction of hydro-electric micro systems, especially in the Dominican Republic, where 37 micro-power plants were built in 10 years. The project will utilize existing information and lessons learned from other relevant UNDP initiatives. For example, multi-risk mappings developed for several municipalities in the Southern and Grand Canal Departments, as part of a UNDP project, will enable intelligent decisions to be made during the feasibility study for the implementation of a system. Similarly, mappings and the hydroelectric potential database, with the support of UNDP, will serve as a tool for the pre-selection of certain sites. In addition, the project will respond to the effort to manage environmental and social risks (E&S), the objective of which is to evaluate the environmental and social risks and impacts of each project submitted to the decision making bodies, proposing appropriate measures to limit exposure to such risks, or mitigate the effects, follow the implementation of these measures during the implementation phase of the operation and manage unforeseen events, and to improve the quality of the micro projects and the environmental and social performance of the counterparties.

To better strengthen the municipalities in the areas of intervention and with a view to making local authorities responsible for the governance of the project activities, the UNDP local governance project (AGLDT), the North, North-Easy and South intervention programmes (PINNE-PISUD) implemented by the MICT with UNDP support will serve as a basis for collaboration with the trained municipal technical staff.

From a legal point of view, the project seeks to integrate and apply the Decrees of 1 February 2006 on the decentralization charter which allows local government to define and implement their electrification plan. In addition, the draft law establishing the legal framework for small-scale hydro-electricity recently proposed with UNDP support, is part of a decentralizing perspective aimed at integrated local development. Thus, the project will make the municipalities major actors in the process of development of micro power stations. Moreover, by considering the shortage of resources affecting local communities, it seeks to mutualize the resources of public and private actors in a framework of cooperation.

In addition, the World Bank observed that the participation of women in the design and management of electrification cooperatives enhances the quality of their governance, cost recovery and output.[13] In the light of this information, a key strategy for the project will consist of guaranteeing women opportunities to act as decision makers and leaders in the process of design and management of electrification and ensure that these processes contribute fairly to results which benefit women and men.

In the case of the scope of the municipalities, with regard to the geographical coverage of the project, in support of the Office of Mines and Energy (BME) and the Energy Unit in the Ministry of Public Works, Transport and Communication (CE/MTPTC), interventions will focus on the Southern Region, heavily affected by Cyclone Matthew and the Northern Region. The project will be implemented in five municipalities or villages (depending on the power and characteristics of the sites). The collaboration with community organizations and strengthening of cooperatives will allow prioritization of interventions on the ground most likely to reduce environmental vulnerabilities, ensure appropriation of the project, develop ecological potential and correctly target the beneficiary areas.

2.1. Intervention strategy

Overall, this five-year project will contribute to the economic development and improvement o-f the lives of the population by providing equitable access to renewable energy services to the women and men of five (5) rural communities in the Northern Region and the Southern Region. It will support cooperatives in the management of renewable energy systems and will work in close collaboration with community based organizations, local entrepreneurs and communities to seek ways of developing local enterprises through access to electricity. Emphasis will be placed on building the capaci0ties of municipalities and the independence of women, especially job-creation for young people and women.

This principal objective of the project will be achieved through three components:

1. Strengthening inclusive and equitable national and local capacities for planning, management, monitoring and control of decentralized energy supply services;
2. Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities;

[13] Making infrastructure work for women and men: A review of World Bank infrastructure projects (1995-2009). World Bank, December 2010.

3. Support for communities in efforts to manage the recovery of reserve funds by emphasizing economic development and women's leadership.

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Component 1: Strengthening inclusive and equitable national and local capacities for planning, management, monitoring and control of decentralized energy supply services

The interventions in the framework of this component seek, firstly, to strengthen institutional capacities at central level to develop policies and acquire knowledge on renewable energy technologies, and, secondly, to improve capacities at local level and also to learn and create "collective community independence". At the municipal level, the project will work with the MICT to support the development of municipal electrification plans with the participation of CASEC, ASEC, and CBOs.

Component 1 will be implemented through a National Implementation Mechanism (NIM) by the MTPTC, through the Energy Cell. Thus, the MTPTC / EC will be responsible for producing the expected results, carrying out the activities and using the project resources. This component supports a comprehensive approach to sustainable capacity building. The latter aims at the development and consolidation of structural and technical capacities in order to guarantee the continuity of the actions implemented by the project while advocating an advocacy strategy towards actions allowing the sustainability of the system.

The approach is based on these main principles:

- Empowerment
    - Community Initiative
    - Commitment
    - Responsibility
- Training
- Networks
- Advantages

Component 2: Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities

Component 2 will be implemented by the MTPTC through implementing partnerships with local organizations or cooperatives with a view to capacity transfer. These organizations will be selected on the basis of specific criteria such as: experiences in carrying out community projects, transparency, technical and financial management capacities and collaborative experiences with UNDP. An operational system will be established and managed through institutional arrangements agreed between key stakeholders including government agencies, research institutes and universities giving

priority to South-South cooperation. The Dominican NGO, Guakia Ambiante, will act as a support partner and provide technical assistance on all micro-projects.

This component will implement priority interventions at five pilot sites in two major regions of Haiti in close collaboration with grassroots community organizations: the project will collaborate with CAEC in the Greater South Region and UJANE in the Great North North, emphasizing the development of appropriate measures for the creation of an organizational network for the management of electricity rights.

The pilot sites will be identified through an intensive consultative process at national and community level, based on multivariate analyzes taking into account physical and social factors (seismic risks, vulnerable groups, agricultural production). In addition to the criteria outlined above in the strategy, pilot sites will be selected based on the following criteria:

-Less negative impacts on humans and ecology;

-Avoiding displacement of populations;

-Opportunities in the water and agriculture sectors;

-Departments with high food insecurity;

-Existing investments in hydro-climatic and agro-climatic monitoring;

-For the conservation of biodiversity, no dam construction;

-No disturb flow of certain rivers of the North East;

At the end of the construction of a micro-plant, an effective, inclusive management structure will be set up by the creation of a cooperative or a village committee. The management committee of the plant will have a board of directors composed mainly of women. To be eligible to sit on the committee, a citizen must meet the following criteria:

- Notoriety in the community;
- Level of commitment in the organization;
- Credibility;

Finally, the resources of the Government of Japan will be used to establish the data-sharing network that will provide relevant information to decision-makers. The project will collaborate closely with BME, CIAT, CNIGS, EDH, MARNDR and MDE to create the data-sharing network to collect, process and disseminate data to the population.

Component 3: Support for communities in efforts to manage the recovery of reserve funds by emphasizing economic development and women's leadership

Component 3 will be carried out by the MTPTC with technical support from UNDP in close collaboration with the Ministry for the Status of Women. A partnership system will be sought with public and private institutions, local organizations and women's organizations. This component will focus on strengthening communities with emphasis on women's empowerment. It will put in place initiatives to support the emergence of young women entrepreneurs, creating opportunities for women and girls in targeted communities. It will be provided by two outcomes that will prioritize job creation and income-generating activities.

1. Direct and indirect employment of the population;
2. Income-generating activities developed to improve the quality of life of communities by promoting and creating micro-businesses and productive uses of electricity with local entrepreneurs;

III- OUTCOMES AND PARTNERSHIPS

3.1. Objectives, effects and outcomes of the project

The aim of the project is to reduce the town/country divide, strengthen social cohesion and contribute to greater gender equality by improving domestic well-being and the local economy in rural areas. Its principal objective is to facilitate access to electricity from renewable energy sources in target remote rural areas of the country and promote the functioning of decentralized energy services in rural areas and strengthen capacities for its management. This project will contribute to the improvement of the lives of about 25,000 people, the quality of basic social services, the empowerment of women and the development of local economic activities.

The direct beneficiaries are persons, organizations or enterprises associated with the construction of the five small power stations. These are families connected to the network with access to the electricity. The indirect beneficiaries are the persons, enterprises and communities which will be impacted by the social or economic benefits of access to electricity. The direct and indirect beneficiaries are estimated, respectively, at 1,000 families and over 25,000 people. 3,000 direct and indirect jobs will be created with 40% participation of women and 450 women will be trained in entrepreneurship and business management.

The results of the project will be achieved through the implementation of the following activities:

Component 1: Strengthening inclusive and equitable national and local capacities for planning, management, monitoring and control of decentralized energy supply services

1. Strengthening and evaluation of community-based organizations for initial pre-selection;
2. Capacity building, taking account of gender equality, through the following activities:

   (i) Supporting and developing the capacities of public institutions, community-based organizations (CBO) in planning, coordination and implementation of micro-projects, local government and community-based organizations relying on existing programmes;

   (ii) Strengthening and establishment of local level management by village communities to optimize opportunities to promote women's decision making and leadership; technical assistance to organizations and municipalities involved in implementing output 2, training for expert technicians, assistance to at least 4 micro-enterprises providing systems and network maintenance services, involvement of the police, journalists in the areas concerned to ensure taking ownership and sustainability of the systems management;

   (iii) Supporting organizations/cooperatives in establishing a strategy for collecting reserve funds;

   (iv) Exchange visits and sharing experiences;

   (v) 450 women trained in entrepreneurship and business management.
3. Elaboration and implementation of awareness raising campaigns on management and control of energy services, taking into account possibilities of highlighting gender equality and women's independence.

Component 2: Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities

1. Pre-identification of sites and conduct of the feasibility study and environmental impact study (including a comparative analysis between the sexes) of the proposed sites;
    (i) Computer graphics, cartography, specific information for the calculation of potential;
    (ii) Determination and improvement of criteria for the selection of sites;
    (iii) Collection of gender-specific data on interventions to develop renewable energy micro systems and management of the environment in partnership with the BME.

2. Allocation of subsidy to organizations for the establishment of micro power stations under the supervision of the project partners;

3. Support for the construction of the required physical infrastructure
    (i) Erection of power plants and installation of mechanical equipment;
    (ii) Establishment of a mini network;
    (iii) Start-up and operation of hydro or solar power stations;
    (iv) Establishment of an efficient, inclusive and equitable management structure for production and distribution:

4. Communication and visibility of interventions, including special efforts to communicate with marginalized groups
    (i) Participatory analysis of the effectiveness of the approach;
    (ii) Dissemination of lessons learned;

Component 3: Support for communities in efforts to manage the collection of reserve funds by emphasizing economic development and women's leadership

1.2. Twenty (20) permanent jobs establish in the management of services for the generation and distribution of electricity;
    (i) Networking of power station management organizations;
    (ii) Providing 730 direct jobs to the community in the establishment and operation of the power stations.

2.2. Income-generating activities developed to improve the quality of life of communities through the promotion and creation of micro-enterprises and productive uses of electricity with local entrepreneurs;
    (i) Providing 2,750 indirect jobs to the community (including micro-enterprises and single person companies);
    (ii) Strengthening the participation, influence and leadership of women in the construction of community infrastructure, by paying special attention to equitable access to and management of electricity services.

Resources necessary to achieve the expected outcomes

The total resources required for this project are $ 5,700,000 to achieve the expected outcomes. UNDP will adopt a simultaneous approach, while giving priority to municipalities which best meet the selection criteria.

Partnerships

The project will establish partnerships with the State institutions concerned and will seek possible synergies with the interventions of other actors in the beneficiary communities. There are possibilities of partnerships at national and local level according to their mandate and their responsibility in the fields concerned. They include:

- **CIAT**, the Inter-Ministerial Land Development Committee could support us with guidance on the choice of sites.

- **UN Women** supports self-sufficiency and economic independence of women in rural communities affected by cyclone Matthew. It is possible to collaborate in their work to ensure that the strategies based on sound data to involve women are used, and that the impacts related to gender equality (at the level of the household and the community) deriving from the participation of women in these initiatives are monitored, evaluated and documented.
- **SGP**, the UNDP Small Grant Programme in the Dominican Republic is working on the establishment of non-grid community micro hydro-electric power stations in remote regions. UNDP will establish close collaboration with the SGP of Haiti and the Dominican Republic in terms of community strengthening.
- **VNU,** can support the programme by raising awareness among the community of protection of the environment; support to data collection in terms of community strengthening.
- **CBO**, community-based organizations will participate actively in the project activities and support for micro-projects belonging to the community. UNDP will work in close collaboration with the community organizations on the environmental management of the sites.
- In the private sector, UNDP has identified **Earth Spark International** in the South at Les anglais and **NRECA** in the North-East, as enterprises operating in the generation, transport and distribution of non-grid electricity in Haiti. UNDP could consider cooperation and partnership with them in the framework of the project.
- **Guakia Ambiente**, a Dominican NGO which works in collaboration with the Small Grants Programme (SGP) of the United Nations Development Programme (UNDP) in the Dominican Republic, promotes the development of communities through responsible management of natural resources. It collaborated with the SGP to provide hundreds of rural communities with training in the management of natural resources. UNDP could benefit from collaboration with them in the context of capacity building.
- **IAF**, the Inter-American Foundation grants subsidies to the most creative self-help ideas r6eceived from community groups and non-governmental organizations. It also encourages partnerships between community organizations. UNDP could guide and strengthen the CBOs in submitting project proposals for rural electrification to the IAF.
- **CEAC,** the Coteaux District Electricity Cooperative has already had experience of managing electricity micro power stations. Collaboration will be sought.

Visibility Stategy

A visibility strategy will be developed for the project in coordination with the Haitian Government representatives to ensure maximum visibility to the donor throughout the implementation of this project. Based on this strategy, the logo of the Japanese cooperation will appear on the equipment and materials purchased as well as on the general communication and communication media (communication, report etc.). A special effort will be made to ensure a consolidated communication by displaying branding with the logo of the Japanese cooperation in the zones of implementation of micro-projects. Public events such as the launching of the project and the inauguration of the microprojects will be organized in the presence and with the flags of representatives of the Government of Japan, national authorities, and UNDP. In addition, the project activities will be relayed on the UNDP site in Haiti and on social networks.

Risks and assumptions

Several parameters can impact and delay the implementation of the project. The principal risks relate to the national political instability (change of government, focal points in project partner institutions in ministries and departmental and municipal authorities) Apart from the uncertainties related to political insecurity, natural disasters could have a negative impact on project execution. A technical risk in the preparation and construction of the micro power stations could also impact the implementation of the project.

This project relies on several assumptions:

- The will and capacity of municipalities to take a leadership role in decision making and implementation of measures to provide their community with electricity;
- Validation of social and environmental impact studies by the authorities concerned;

- Productive collaboration between national institutions and the project team, and among the institutions;
- Stability of the political and security situation in Haiti;
- Absence of a humanitarian crisis in Haiti.

Involvement of the stakeholders

In order to promote ownership of the project, the project document was formulated from the start with the help of stakeholders. The project was conceived in a participatory way to ensure a significant input from the stakeholders and it will be implemented to ensure their full participation in all aspects of its implementation, including monitoring and evaluation. Consultations and participatory exercises are envisaged in the framework of the project to ensure its appropriation and continuing comments from local populations and stakeholders. The project will involve national and local stakeholders in all the components related to the planning and management of the process of development of micro power stations. The principal target group will be municipalities and organizations. At local level, efforts will be made to support and strengthen local leadership and responsibilization in community management of the micro-projects. Community participation will be assured through consultations with the population and local authorities. Particular attention will be paid to promotion of the active participation of women and other marginalized groups. UNDP will also take care to ensure that the knowledge is shared and that all the stakeholders participate in monitoring the project activities.

South-South and triangular cooperation (SSC/TrC)

The project includes South-South cooperation exchanges with the Caribbean (Dominican Republic) and Central America, notably Costa Rica, for their experience in the development of renewable energy, based on sharing of practice and lessons learned in strengthening planning and governance and management of renewable energy systems.

Knowledge

The project will generate specific knowledge-related outcomes such as: social and environmental impact studies, feasibility studies, publications, databases, media products, site mapping and beneficiaries, electrification plan, internal rules for the management of micro power stations. The project will create a visibility in terms of knowledge and lessons learned through effective communication, video clips, success stories and radio and television broadcasts.

Sustainability and extension

The fundamental approach of the project in terms of sustainability is to create incentives for the continued development and application of the capacities developed by the project. The project's exit strategy depends on then continuation of partnerships, collaborations and activities to collect electricity charges and maintenance of systems without requiring long-term international financing. These include:

- High-level political commitment to sustainable development;
- Permanent involvement and responsibility for collaboration of municipalities and organizations in decision making and planning process;
- Regular training for public officials at national and local level using study programmes on public administration for environmental management;
- Total commitment of all key stakeholders, in particular, non-state actors;
- Strengthening of public advocacy and women's leadership.

The project was conceived to have a lasting impact by emphasizing the participatory approach which will strengthen ownership and, also sustainable ecological governance, by emphasizing exploitation of the country's existing clean energy potential to secure environmental services on a sustainable basis.

IV- PROJECT MANAGEMENT

4.1. Cost-efficiency ratio and effectiveness and viability

Among all the alternatives studied, UNDP determined that the process of empowerment, participation and community leadership is the most effective strategy for the success of the project. In addition to the technique deployed, the success of the success of a capacity to understand the local needs, to integrate the stakeholders, to develop reliable relations with the partners, to ensure a positive and sustainable management, in particular in terms of training. The effectiveness and results of this project will be substantially enhanced as it builds on the experience of UNDP in the Dominican Republic in strengthening remote village communities through rural electrification projects. This program is considered very successful and this experience has been going on for more than 20 years in the Dominican Republic. The project also draws on the experience gained from the implementation of a Small Grant Program (SGP / GEF / UNDP) project for the construction of a micro-hydropower plant in Magazen, in the north- Haiti. The latter was a remarkable success and a leading example in Haiti.

The Project will also be closely coordinated with long-standing partners in Haiti (World Bank, USAID). As part of this initiative, improvements have been made in the capacity building model. By adopting a regional approach, the project will produce tangible results for users, which will create a visible impact directly attributable to the Project. This is necessary to convince the national and international stakeholders that this modality offers a viable alternative to provide users with a reliable electricity service and promote economic development in rural Haiti.

The cost / effectiveness ratio of this project is derived from the positive environmental effects on the basis of a tonne of directly avoided CO2 emissions and indirect emission reductions.

In addition, internal monitoring / evaluation procedures based on regular monitoring of expected results and indicators will be used to measure results. The existence of a monitoring / evaluation system will determine the capacity of the project to ensure effective communication with local authorities, civil society and technical and financial partners.

4.2. Project management

The project office, located in Port-au-Prince, with two teams assigned in the North and the South, will be composed of personnel with different responsibilities directly attributable to the action, including: technical assistance, administration and management. It will include personnel dedicate full time to the project and specialist personnel working part-time. The latter will be charged through direct costs of the project for the time spent directly in implementing the action.

Project Board *(also called* ***Project Steering Committee)****:* The Project Steering Committee is the group responsible for taking administrative decisions by consensus for a project when the project coordinator seeks guidance, including recommendations to UNDP/implementing agency for approval of plans and revisions of the project. To ensure the submission of a final report to UNDP, the decisions of the Steering Committee must be taken in accordance with rules which ensure management targeting the development results, value for money, equity, integrity, transparency and effective international competition. In cases where the members of the Committee cannot reach a consensus, the final decision will be taken by the UNDP programme director. In addition, the Committee plays a critical role in the course of evaluations commissioned to ensure the quality of the evaluation process and the outcomes. Revisions of the project by the group concern points to be decided during the execution of the project or as necessary at the instigation of the project coordinator. The group is consulted by the project coordinator for decisions when the latter has reached (flexibility) his tolerance threshold (normally in terms of time and budget). On the basis of the annual work plan (PTA), the Project Committee may revise and approve work plans where necessary and authorize any major deviations from these approved plans. It ensures that the necessary resources are committed and arbitrates any conflict within the project or negotiates a solution for any problem between the project and external entities. In addition, it approves the appointment and responsibilities of the Project Coordinator and any delegation of such Project Assurance responsibilities. Representatives of other stakeholders may be members of the Board as appropriate. The objective is to create a mechanism for the effective management of the project.

***Project quality assurance**:* Project quality assurance is the responsibility of each member of the Project Board. However, the role may be delegated. The role of project quality assurance supports the Steering Committee by fulfilling objective and independent project supervision and monitoring functions. The role ensures that appropriate benchmarks for the project management are managed and achieved. The person who exercises the project quality assurance role must be independent of the Project Director. Consequently, the Project Committee cannot delegate any of its quality assurance responsibilities to the Project Director. A UNDP programme officer or an M&E officer, in general, plays the role of project quality assurance on behalf of UNDP. The Country Office Gender Advisor will provide technical support to ensure that gender dimensions are monitored and evaluated closely.

National Project Coordinator: The National Coordinator has the authority to manage the Project on behalf of the Implementing Partner within the limits established by the Committee. The National Coordinator is responsible for day-to-day management and decision-making for the project. The primary responsibility of the Project Coordinator is to ensure that the project produces the outputs (outputs) specified in the project document according to the required quality standards and within the specified time and cost limits. Given the focus of the project on gender equality, the coordinator must have an adequate knowledge base on this issue. The Implementing Partner appoints the National Project Coordinator.

Project Manager: He / she will be responsible for the day-to-day implementation of the project. He / she will ensure the effective execution of planned activities and decisions taken by the Steering Committee, the timely submission of the semi-annual and annual reports on the progress of the project; The presentation of results-based reports to implementing agencies; The anticipated identification of risks that could jeopardize the successful implementation of a project and the successful implementation of risk mitigation activities. It is responsible for keeping the Project Committee informed of the progress, challenges and achievements of the project in order to ensure the effective engagement of its members in the project activities. He will be in charge of coordination between the parties and the implementation of project activities.

Project Support: The Project Support role provides administrative and financial support to the Project Director as necessary depending on the needs of the individual project or the Project Director.

Field Coordinator: There will be two field coordinators, responsible for operational coordination and monitoring of interventions in the field, at departmental and municipal level. He/she will devote 100% of his/her time to the action;

Monitoring and evaluation officer: The role of monitoring and evaluation officer is to provide support to the establishment and updating of tools to ensure better monitoring of the project activities and contribute to efforts to establish results-based monitoring.

Community agents: Two community agents will be recruited to ensure awareness and collective participation of the population.

Administrative Assistant: The administrative assistant will handle all administrative aspects of the project. He/she will devote 100% of his/her time to the action;

2 drivers: They will provide transport for the project staff in their travel in Port-au Prince and in the fi0eld, and will check the conditions of use of the vehicle. He/she will devote 100% of his/her time to the action.

V. MATRIX OF RESULTS

	Intended effect, as indicated in the schedule of resources and results of the national/PNUAD programme: National, regional and local institutions and civil society improve the management of rural and urban areas, agriculture and the environment, and mechanisms to prevent and reduce risks and improve the population's resilience in the face of natural disasters and climate change.
	Outcome indicators, as specified in the schedule of resources and results of the national programme, including baselines and targets: 1. Position of Haiti in the risk management index (INFORM).- Baseline: 6.1 (2015); Target: 5 (2021) 2. Cost as % of GDP of economic losses due to disasters.- Baseline: 2% per year (1975 to 2012); Target: less than 2% (2021)
	Applicable output(s) of the UNDP strategic plan: CPD indicative output: 3.2 Mechanisms and partnerships are put in place to promote sustainable methods of production, distribution and consumption
	Project title and project number in ATLAS: Rural Electrification through Renewable Energies and Women's Empowerment

EXPECTED OUTPUTS	INDICATIVE OUTPUT[14]	SOURCE OF DATA	BASELINE		TARGETS (by frequency of data collection)							METHODS AND RISKS RELATED TO THE DATA COLLECTION
			Value	Year	2017	2018	2019	2020	2021	2022	Total	
Output 1: ***Strengthening of national and local capacities for inclusive and equitable planning, management, monitoring and control of decentralized energy services***	***1.1 Number of training courses in management and control of energy services at national, departmental and municipal level***	Project	*0*	2017	*0*	5	10	10	*5*	*2*	*32*	*Report, Attendance list for training*
	1.2 Number of cooperatives and community-based organizations strengthened for the implementation of micro-projects and the implementation of business models (disaggregated by type of cooperative / organization)	*Project*	*0*	*2017*	*0*	*2*	*3*	*4*	*2*	*1*	*12 (At least 3 women's organizations)*	*Project report, municipal report, surveys*
	1.3 Number of enterprises trained in maintenance of	*Project*	*0*	*2017*	*0*	*1*	*2*	*2*	*2*	*0*	*7 (At least 2*	*Report, surveys*

	systems and networks (Disaggregated by sex of owner or manager of the company)										*manage d by a woman)*	
	1.4 Number of women trained in entrepreneurship and business management	*Project*	*0*	*2017*	*0*	*50*	*100*	*130*	*100*	*70*	*450*	*Report, attendance list, success story*
	1.5 Number of municipalities or municipal districts with electrification plans in place	*Project*	*0*	*2017*	*0*	*1*	*2*	*2*	*1*	*0*	*6*	*Report, workshop*
Output 2: ***Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities***	***2.1 Number of micro power stations constructed and managed by village communities***	*Community*	*0*	*2017*	*0*	*1*	*1*	*1*	*1*	*1*	*5*	*Report, video editing, Final evaluation,*
	2.2 Number of partnerships in place for the construction and management of micro power stations	*Community*	*0*	*2017*	*0*	*2*	*2*	*1*	*1*	*1*	*7*	*Follow-up report, Final evaluation*
	2.3 Number of civil society groups (including women's groups) consulted in the planning of constructions and buildings	*Municipalities*	*0*	*2017*	*0*	*20*	*200*	*300*	*300*	*200*	*140 (At least 40 women's groups)*	*Meeting report, workshop, report*
Output 3: ***Strengthening communities in efforts to manage the collection of reserve funds by emphasizing economic development and leadership of women***	***3.1 Total number of families benefiting from the electricity***	*Project*	*0*	*2017*	*0*	*100 (40% women)*	*200 (40% women)*	*200 (40% women)*	*200 (40% women)*	*300 (40% women)*	*1000 (40% women)*	*Report, article publication*
	3.2 Number of micro enterprises and single owner enterprises created (Disaggregated by sex of owner or manager of the company)	*Community*	*0*	*2017*	*0*	*10*	*20*	*50*	*20*	*50*	*150 (At least 75 manage d by women)*	*Report, Survey*
	3.3 Number of direct and indirect jobs benefited by the population (disaggregated by sex of	*Project*	*0*	*2017*	*0*	*400*	*600*	*8000*	*700*	*500*	*3000 (at least 40% of jobs held by*	*Report, survey, terminal evaluation*

	employee recruited)										*women)*	
	3.4 Existence of a network of cooperatives/ organizations responsible for the management of micro power stations and collection of reserve funds	*Community*	*0*	*2017*	*0*	*0*	*1*	*1*	*0*	*0*	*2*	*Report, Evaluation of women's participation and leadership in the network / cooperative, Publication, surveys*

VI. MONITORING AND EVALUATION

The project has an integrated, effective and well-resourced M & E framework which will ensure not only that the implementation of the project is as planned, but also provides information through regular interim reports for the corrective measures necessary and the decisions on adjustments to be made. In accordance with UNDP programming policies and procedures, the project monitoring will be carried out through the following monitoring and evaluation plans:

Monitoring Plan

Monitoring activity	Goal	Frequency	Expected action	Partners (if joint)	Costs (if applicable)
Project launch	The inception workshop is to establish ownership of project results and to plan the annual work plan for the first year. The workshop should address a number of key issues, including: Helping all partners to fully understand and take ownership of the project. Discuss roles, functions and responsibilities in the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.	During the first two months of project start-up	Steps are taken to engage the partners. Review and accept indicators, targets and means of verification, and re-test assumptions and risks.	Project Manager, UNDP, MTPTC, BME, MICT, MDE, MARNDR	10, 000
Monitoring progress towards results	The data on progress made compared with the indicative outputs in the RRF will be collected and analysed in order to evaluate the progress of the project towards the agreed outputs	Quarterly or as necessary for each indicator	Progress slower than planned will be addressed by the project management.		
Monitoring and managing risks	Identify specific risks which could threaten the achievement of the expected results. Identify and implement monitoring of risk management actions using a risk register. This applies notably to monitoring measures and plans which may not have been required under UNDP social and environmental standards. The audits will be carried out in accordance with UNDP's audit policy on managing financial risks.	Quarterly	Risks are identified by the project management and actions are taken to manage the risks. Th risk register is actively maintained to ensure monitoring of risks identified and actions taken.		
Learning	Knowledge, good practice and lessons will be regularly taken into account, including if they come actively from other projects and partners, and will be incorporated in the project.	At least annually	Relevant lessons are taken into account by the project team and used to contribute to management decisions.		
Annual quality assurance of the project	The project quality will be evaluated in relation to UNDP's quality standards to identify strengths and weaknesses of the project and to contribute to management decisions aimed at improving the	Annually	The areas of strength and weakness will be reviewed by the project management and used to contribute to decisions aimed at improving the		

	project.		performance of the project		
Review and correct the project path	Internal review of data and evidence resulting from all the monitoring actions to contribute to decision making.	At least annually	The data on performance, risks, lessons and quality will be examined by the project committee and will be used to correct the project path		
Project report	A progress report will be submitted to the project steering committee and the key stakeholders, containing data relating to progress which show the results achieved compared with the pre-defined annual targets at output level, summary of the annual evaluation of project quality, a risk register updated accompanied by mitigation measures, and all the evaluation of review reports prepared during the period	Annually and at the end of the project (final report)			
Revision of the project (project steering committee)	The project governance mechanism (i.e. the project steering committee) will organize regularly reviews of the project to evaluate the performance of the project and revise the pluriannual work plan in order to ensure realistic budget forecasts for the duration of the project. During the last year of the project, the project steering committee will carry out an end-of-project review to take account of the lessons learned and examine opportunities for expanding the results of the project and lessons learned and the opportunities for informing the people concerned about the latter.	Specify the frequency (i.e. at least annually)	All concerns in terms of quality and all progress slowed than planned must be examined by the project steering committee, and management actions must be agreed to address the problems identified		

VII. PLURIANNUAL WORK PLAN

COMPONENT	EXPECTED OUTPUTS	PLANNED ACTIVITIES		BUDGET BY YEAR					
			Description of Budget	A1	A2	A3	A4	A5	Amount
Component 1. Strengthening inclusive and equitable national and local capacities for planning, management, monitoring and control of decentralized energy supply services;	***Output 1.1 Strengthening and Evaluation of Grassroots Organizations for First Pre-Selection***	**Activity 1.1.1** Identification and micro-evaluation of organizations and cooperatives	1 national firm contract for pre-identification and pre-selection of sites; Contract for micro evaluation of organizations and cooperatives	30,000.00					30,000.00
		Activity 1.1.2 Consultation with partners in the public and private sector and civil society	3 two-day workshops in each region and two two-day workshops in Port-au-Prince, bringing together officials from ministries, universities, communities	15,000.00					15,000.00
		Activity 1.1.3 Project Launch	1 PAC meeting, 1 steering committee meeting, 3 launch workshops (one at P-Au-P and two in the regions)	13,113.96					13,113.96
		Activity 1.1.4 Mobilization by community agents	Contact and Meeting and focus group with local partners	3,000.00					3,000.00
		Subtotal Activity 1.1		***61,113.96***					***61,113.96***
	Output 1.2 Capacity building, gender mainstreaming	**Activity 1.2.1** Accompanying and developing the capacities of Community Based Organizations	Provision of service for training and implementation of systems management for expert technicians at national level, at local level for Village Communities to maximize opportunities to promote women's decision-making and leadership	40,000.00	40,000.00	40,000.00			120,000.00
		Activity 1.2.2 Implementation of micro-evaluations of selected organizations	One-off reviews of effectiveness and efficiency of micro-projects implemented by organizations, UNDP staff salary in charge	31,500.00	31,500.00	31,500.00	31,500.00	31,500.00	157,500.00
		Activity 1.2.2 Technical Assistance to Municipalities	Contract/Service delivery to support the development of electrification plans, Technical assistance to at least 5 micro enterprises providing system and network maintenance services with 40% women) of municipalities and communal sections	13,113.96	30,000.00	40,000.00	30,000.00	30,000.00	143,113.96
		Activity 1.2.3 Support of organizations / cooperatives in the implementation of a strategy for the recovery of reserve funds	Provision of service for training and technical support for the management of a system for the collection of reserve funds		30,000.00			20,000.00	50,000.00
		Activity 1.2.4 Exchange visits and sharing of experiences	Technical workshops, open house, travel and exchange visits in the region to acquire knowledge on renewable technologies	5,000.00	20,000.00	5,000.00	5,000.00	5,000.00	40,000.00
		Activity 1.2.5 450 women trained in entrepreneurship and business management	Trainings by Entrepreneurship and Business Service Providers to Women's Organizations and Groups		20,000.00	25,000.00			45,000.00
		Subtotal Activity 1.2		***89,613.96***	***171,500.00***	***141,500.00***	***66,500.00***	***86,500.00***	**555,613.96**

	Output 1.3 Development and implementation of awareness-raising campaigns	**Activity 1.3.1** Outreach activities including seminars, communication campaign	Awareness-raising workshops in the regions on the management and control of energy services, taking into account the empowerment of women;	20,000.00	15,000.00	15,000.00	15,000.00		65,000.00
		Activity 1.3.2 Production of communication media	Production of communication materials (video, brochures, etc.) on each micro-project	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	25,000.00
		Activity 1.3.3 Community Mobilization	Focus group, consultation with local authorities, advertising spot, broadcast on community radios	5,000.00	6,840.00	9,158.40	3,911.40	10,000.00	34,909.80
		Subtotal Activity 1.3.		***30,000.00***	***26,840.00***	***29,158.40***	***23,911.40***	***15,000.00***	***124,909.80***
		Total Component 1		***180,727.92***	***198,340.00***	***170,658.40***	***90,411.40***	***101,500.00***	***741,637.72***
Component 2. Construction and management of five micro power stations (depending on the power and characteristics of the sites) by village communities	***Output 2.1 Pre-identification of sites and completion of the feasibility study and environmental impact assessment***	**Activity 2.1.1** Site identification and feasibility studies	Provision of Services for Computer Graphics, Mapping, Special Potential Information and Feasibility Study	60,000.00	70,000.00	60,000.00			190,000.00
		Activity 2.1.2 Identification and improvement of site selection criteria	Meeting and Workshop with Partners and Head of Departments	7,000.00	2,000.00	2,000.00	2,000.00	2,000.00	15,000.00
		Activity 2.1.3 Gender-specific data collection of renewable energy microsystem development **interventions**	Provision of service for the establishment of a database at the Office of Mines and Energy					30,000.00	30,000.00
		Activity 2.1.4 Environmental impact studies for micro-projects	National contract or micro Grant for environmental impact studies	70,000.00		80,000.00	80,000.00		230,000.00
		Subtotal Activity 2.1		***137,000.00***	***72,000.00***	***142,000.00***	***82,000.00***	***32,000.00***	**465,000.00**
	Output 2.2 Implementation of the micro-plants under the supervision of the project partners	**Activity 2.2.1** Monitoring of microcentral development activities in the region	Monitoring and evaluation of the day-to-day activities of the project	7,000.00	5,000.00	6,000.00	6,000.00	7,700.00	31,700.00
		Activity 2.2.2 Agreements and subsidies for the implementation of micro centrals	At least five grants will be given to selected qualified organizations for the implementation of micro centrals. Each grant will provide financial resources to build microcentrals including micro grid, buy equipment such as meters, batteries, and provide training for users and customers.		500,000.00	750,000.00	750,000.00		2, 000,000.00
		Subtotal Activity 2.2.		**7,000.00**	**505,000.00**	**756,000.00**	**756,000.00**	**7,700.00**	**2, 031,700.00**
	Output 2.3 Support for the construction of the required	**Activity 2.3.1** Installation of power plants and installation of mechanical equipment	Provision of services for support and supervision of works and implementation of mini-network		20,000.00	20,000.00	20,000.00	20,000.00	80,000.00

	physical infrastructure	**Activity 2.3.3** Commissioning and operation of hydro or solar power plants	Support to organizations for the commissioning and operation of hydro or solar power plants		15,000.00	15,000.00	15,000.00		45,000.00
		Activity 2.3.4 Establish an effective, inclusive and equitable management system for production and distribution	Service provider for technical support in the implementation of the management system and creation of system management co-operator		15,000.00				15,000.00
		Subtotal Activity 2.3.			***50,000.00***	***60,000.00***	***35,000.00***	***20,000.00***	***140,000.00***
	Output 2.4 Communication and visibility of interventions	**Activity 2.4.1** Inauguration of microcentrals	Inauguration ceremony with participation of beneficiary national and local authorities and population of the areas concerned		9,000.00	9,000.00	9,000.00	9,000.00	36,000.00
		Activity 2.4.2 Participatory analysis of the effectiveness of the approach	5 Thematic workshops and consultations on project perception	2,000.00	4,000.00	4,000.00	4,000.00	4,000.00	18,000.00
		Activity 2.4.3 Dissemination of Lessons Learned	1 consultation structure set up for each region (with at least 10 representatives from the community, civil society, communal sections, communal officials)		1,000.00	2,000.00	2,000.00	2,000.00	7,000.00
		Activity 2.4.4 Communication and visibility around microcentrals	Project promotion, logo, success story, Branting	5,000.00	10,000.00	10,000.00	10,000.00	10,000.00	45,000.00
		Subtotal Activity 2.4.		***7,000.00***	***24,000.00***	***25,000.00***	***25,000.00***	***25,000.00***	***106,000.00***
		Subtotal Component 2		***151,000.00***	***651,000.00***	***953,000.00***	***898,000.00***	***84,700.00***	***2, 742,700.00***
Component 3. Support for communities in efforts to manage the recovery of reserve funds by emphasizing economic development and women's leadership.	***Output 3.1 Direct and indirect jobs established in the management of services for the generation and distribution of electricity***	**Activity 3.1.1** Networking of plant management organizations established	Service delivery in support of networking, consultation with stakeholders		15,000.00	15,000.00	15,000.00	15,000.00	60,000.00
		Activity 3.1.2 Direct employment benefits in the establishment and operationalization of power stations	5 under national contracts, 150 men and women find direct jobs on construction sites and for network management		10,000.00	20,000.00	20,000.00	90,000.00	140,000.00
		Subtotal Activity 3.1			***25,000.00***	***35,000.00***	***35,000.00***	***105,000.00***	***200,000.00***
	Output 3.2 Income generating activities developed to improve the quality of life	**Activity 3.2.1** Activities developed for income generation	5 sub contracts, 1,700 men and women find income-generating activities		19,000.00	40,000.00	60,000.00	11,528.00	130,528.00
		Activity 3.2.1 Establishment of micro-enterprises and single-person enterprises	150 micro-enterprises subsidized (with 40% women)			50,000.00	75,000.00		125,000.00
		Subtotal Activity 3.2			19,000.00	90,000.00	135,000.00	11,528.00	255,528.00
		Subtotal Component 3			44,000.00	125,000.00	170,000.00	116,528.00	455,528.00

SUBTOTAL 1 (Subtotal Component 1+2+3)			***331,727.92***	***893,340.00***	***1, 253,658.40***	***1, 158,411.40***	***302,728.00***	***3, 939,865.72***
	Human Resources	***1. Human resources***						
		Salaries (gross amounts including social security charges and other national related costs)						
		1.1 Technical						
		Project Manager (national)	50,000.00	50,000.00	50,000.00	50,000.00	50,000.00	250,000.00
		Expert (national), projet support	37,000.00	37,000.00	37,000.00	37,000.00	37,000.00	185,000.00
		2 Regional Coordinators	43,312.50	43,312.50	43,312.50	43,312.50	43,312.50	216,562.50
		2 Community mobilizers	25,237.50	25,237.50	25,237.50	25,237.50		100,950.00
		1.2 Administrative staff						
		Administrative and financial assistant	21,393.75	21,393.75	21,393.75	21,393.75	21,393.75	106,968.75
		2 Drivers	17,887.50	17,887.50	17,887.50	17,887.50	17,887.50	89,437.50
		1.3 Gross security costs other common costs	6,000.00	6,000.00	6,000.00	6,000.00	5,993.31	29,993.31
		Subtotal Human Resources	**200,831.25**	**200,831.25**	**200,831.25**	**200,831.25**	**175,587.06**	**978,912.06**
	Audit and Evaluation	Audit and Evaluation		25,000.00			40,000.00	65,000.00
		Subtotal Evaluation, audit of project	**-**	**25,000.00**	**-**	**-**	**40,000.00**	**65,000.00**
	Offices and other Cost	***2. Rental of offices and other cost***						
		2.1 Cost of vehicles + maintenance	50,000.00	5,000.00	5,000.00	5,000.00	5,000.00	70,000.00
		2.2 Rental of offices, furniture, maintenance and associated costs (for 2 Offices in North and South region) and 1 office in Port-au-Prince)	27,000.00	67,000.00	27,000.00	27,000.00	27,000.00	175,000.00
		2.3 Other services (tel / fax, electricity / internet, water)	8,000.00	8,000.00	8,000.00	8,000.00	4,000.00	36,000.00
		2.4 Inverter and 24 batteries + installation	13,000.00					13,000.00
		Subtotal local Office and other costs	**98,000.00**	**40,000.00**	**40,000.00**	**40,000.00**	**36,000.00**	**294,000.00**
SUBTOTAL 2 (Subtotal HR+ Audit and evaluation+ Offices and other cost)			**298,831.25**	**305,831.25**	**240,831.25**	**240,831.25**	**251,587.06**	**1, 337,912.06**
General Sub Total (Subtotal 1+ Subtotal 2)			***630,559.17***	***1, 184,171.25***	***1, 494,489.65***	***1, 399,242.65***	***554,315.06***	***5, 277,777.78***
GENERAL MANAGEMENT SERVICES (8%)			50,444.73	94,733.70	119,559.17	111,939.41	44,345.20	422,222.22
GENERAL TOTAL			**681,003.90**	**1, 278,904.95**	**1, 614,048.82**	**1, 511,182.06**	**598,660.26**	**5, 700,000.00**

VIII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

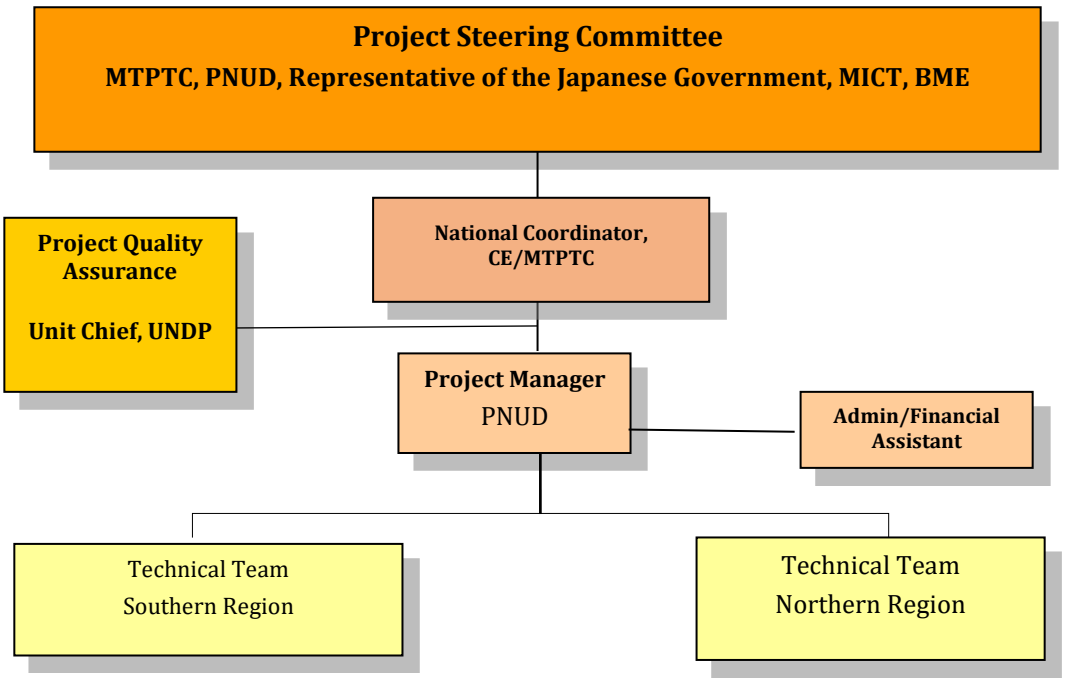
5.1. Management arrangements

The project will be executed according to UNDP's National Execution modality (NEX). Thus, the Ministry of Public Works, Transport and Communications, through its Energy Unit, will be responsible for the overall national execution of the project with technical participation from UNDP. This modality helps to develop appropriation of the results of the project and create conditions for its sustainability. During the implementation of the project, at the request of the MTPTC, the UNDP country office may support the following activities:

- Identification and recruitment of personnel to be assigned to the project;
- Procurement of goods and services.

As implementing agency, the MTPTC will appoint a National Coordinator for the project (the Energy Unit coordinator). The day-to-day execution of the project will be carried out by a project coordination unit consisting of a project manager, a national technical adviser, a technical assistant and an administrative and financial assistant recruited for the duration of the project. During the implementation of the project, the Project Manager will ensure the participation of other institutions in promoting the establishment of mechanisms for consultation and dialogue.

A steering committee which will involve all the principal project partners will be established to ensure national appropriation and proper operation of the project. This committee will be both a guidance body and a space for consultation for the project. It will be composed of a presentative of each of the following institutions: representative of the Embassy of Japan, MTPTC, UNDP, BME, MICT. The steering committee will meet at least twice a year and will have two principal functions: (1) Guidance of the project, and (2) Monitoring of the project. The steering committee will be chaired by the MTPTC.



With regard to project monitoring, the Steering Committee will ensure that key decisions are taken in accordance with the established rules and procedures and in the spirit of the project. The project

monitoring will be consistent with the procedures established by UNDP for the supervision of projects and the current rules of the MTPTC. The preparation of the various qualitative and financial reports on progress of the project activities must be in accordance with the procedures laid down by these institutions.

IX. LEGAL CONTEXT AND RISK MANAGEMENT

LEGAL CONTEXT

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of Haiti and UNDP signed in 1973. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by UNDP in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

X. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

5. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

6. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

7. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

8. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

9. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

10. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

11. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.
    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

12. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from

the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

13. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

14. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XI. ANNEXES

1. **Quality Assurance Report on the project**
2. **Model social and environmental impact study**
3. **Risk analysis.**
4. **Evaluation of capacities**
5. **Terms of Reference of the Project Steering Committee and Terms of Reference of key management positions**