United Nations Development Programme

Country: Honduras

PROJECT DOCUMENT

Project Title: Inclusive Green Tourism - Energy Efficiency in the Hotel Sector in Honduras
Alignment to the UNDP Strategic Plan 2014-17 - Outcome 1 - Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded. **Outcome Level** Indicator 1.3. Annual emissions of carbon dioxide (in million metric tons) **Output 1.5.** Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy). Indicator 1.5.1 Number of new development partnerships with funding for improved energy efficiency and/or sustainable energy solutions targeting underserved communities/groups and women.
Expected CP Outcome(s): Result 3 - - In the context of economic rights and environmental conventions, contribute to a productive Honduras, generating decent jobs, leveraging sustainable and integrated natural resources and reduce disaster risks resulting from environmental vulnerability. **Outcome 2 -** The Government of Honduras, the private sector and communities in areas of intervention, adopt best practices of ecosystem management, solid waste management, disposal of substances that deplete the ozone layer, mitigation and adaptation to climate change enabling the preservation of natural capital, reduce economic losses and income generation opportunities for sectors in conditions of greater vulnerability. **Indicator -** Number of avoided CO2 emissions voluntarily.
Executing Entity/Implementing Partner: Ministry of Environment (MiAmbiente)
Implementing Entity/Responsible Partners: MiAmbiente / National Energy Directorate of Honduras

Brief Description: The MSP Objective is to remove barriers to the increased commercial use of more energy efficient electrical equipment in the small and medium-sized hotel industry in Honduras, in line with the National Strategy for Sustainable Tourism. Energy efficient markets in the power sector, in a business-as-usual scenario, face up political, financial and information barriers that need to be removed by reaching 3 outcomes and developing a group of cost-effective activities: i. enabling a more favorable policy-environment for EE, ii. creating a long-term innovative financial mechanism, the *"Green Scheme"*, and mobilizing existing commercial lending beyond the MSP completion, to finance a portfolio of 9 pilot-hotel investments during the MSP with commercial-oriented mechanisms such as guarantee notes, leasing, subsidized interest rates and micro-insurance, and iii. implementing an information dissemination platform to reach 400 hotels nation-wide, to achieve 40 GWh of annual savings and mitigate 319,615 tons of CO2, over a 20-year period.

Programme Period:	2016-2018
Atlas Award ID:	00081012
Project ID:	00090479
PIMS #	5061
Start date:	January 2016
End Date	December 2018
Management Arrangements	NIM
PAC Meeting Date	_____

Total resources required	USD	9, 958,538
Total allocated resources:		9, 958,538
• GEF		1, 228,538
• Other:		
o UNDP (cash/in kind)	USD	430,000
o GoH (cash)		7,500,000
o Other (cash)		500,000
In-kind contributions		300,000

Agreed by (Government): _____

Date/Month/Year

Agreed by (Executing Entity/Implementing Partner): _____

Date/Month/Year

Agreed by (UNDP): _____

Date/Month/Year

Contents

LIST OF ACRONYMS

A/C	Air Conditioning unit
ACDI	Canadian Agency for International Development
AP+L	Cleaner Production Agreement
ANDI	National Association of Industries
APR	Annual Project Review
AWP	Annual Work Plan
BAU	Business-as-Usual case without GEF involvement
BELCO	Bonnaca Electric Company of Guanaja Island
BTU	British Thermal Unit
CABEI	Central American Bank for Economic Integration
CANATURH	National Chamber of Tourism of Honduras
CCAD	Central American Commission for Environment and Development
CEHDES	The Honduran Business Council for Sustainable Development
CEPAL	Economic Commission for Latin America and the Caribbean
CFL	Compact Fluorescent Lamps
CII	Interamerican Investment Corporation
CNE	National Energy Commission
CNP+LH	Cleaner Production Center of Honduras
CO	UNDP Honduras Country Office
CO2	Carbon dioxide
COHEP	Honduran Council of Private Sector
COPANTL	Latin American Commission of Technical Standards
CPAP	Country Program Action Plan
COSUDE	The Swiss Agency for Development and Cooperation
CREE	National Regulatory Energy Commission
DGCC	Climate Change Energy Directorate
DGE	National Energy Directorate of Honduras
EE	Energy Efficient Electric Equipment
EEC	Energy Efficiency Committee
EER	Energy Efficiency Ratio
ENCC	National Strategy for Climate Change
ENEE	National Power Utility
ERP	Strategy for Reduction of Poverty
ESCO	Energy Service Company
ESMAP	Energy Sector Management Assistance Program
FOPESIC	Fund for Energy Efficiency in the Industrial and Commercial Sectors
GAUREE	Generación Autónoma y Uso Racional de la Energía Eléctrica
GEF	Global Environment Facility
Gg	Giga-gram (1×10^9)
GHG	Greenhouse Gases
GIZ	The German International Cooperation Agency
GoH	Government of Honduras
GWh	Gigawatt hour
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbon

HIPC	Heavily Indebted Poor Countries
HOPEH	Association of Small Hotels of Honduras
hr	Hora
HVAC	Heating, Ventilation and Air Conditioning
IDB	International Development Bank
IHT	Honduran Institute of Tourism
INE	National Institute of Statistics
IPCC	Intergovernmental Panel on Climate Change
JICA	Japan International Cooperation Agency
K	one thousand(1×10^3)
Kg	Kilogram
kWh	kilowatt hour
LED	Light-emitting diode
LCCP	Life-Cycle Climate Performance
M	Millions (1×10^6)
M&E	Monitoring and Evaluation
MiAmbiente	Ministry of Environment of Honduras
MSP	Medium Size Project
MW	Mega Watt (1×10^6)
MYPYME	Micro, Small and Medium Enterprise
NGO	Non-Governmental Organization
OCE	Energy Conservation Opportunity
OHA	National Bureau of Accreditation
OHN	National Bureau of Standards
OIT	International Labor Organization
PB	Project Board
PEER	UNDP-GEF Regional Program for Energy Efficiency in Central America
PIF	Project Implementation Form
PIR	Project Implementation Review
PMU	Project Management Unit
PPG	Project Preparation Grant
PNUD	United Nations Development Programme
PYME	Small and Medium Enterprise
QPR	Quarterly Progress Report
RCU	UNDP Regional Coordination Unit
RTA	Regional Technical Adviser
SBAA	Standard Basic Assistance Agreement
SERNA	National Secretary for Natural Resources and Environment
SICCS	Advise and Certification on Standard Quality for Restaurants
S&L	Standards and Labels
S&M	Small and Medium
SNC	National Quality System
UNAH	National Autonomous University of Honduras
UNFCCC	United Nations Framework Convention on Climate Change
UNITEC	Technological University of Honduras
UPCO	Utila Power Company of the Utila Island
URE	Rational Energy Use

USAID	The United States Agency for International Development
US$	United States Dollars
WTI	West Texas Intermediate
RECO	Roatan Electric Company of the Island of Roatan

1.1 Context and Global Significance

1. Honduras is the second largest country in Central America (8,041,654 inhabitants). The opportunities for Sustainable Human Development are quite large. The Country's responsibility to the global environment and its compliance with a national agenda to address the major challenges for sustainable growth are complementary processes, whereby sustainable management of the tourism industry becomes a key meeting point, given its importance in generating wealth nationwide.

2. The Ministry of Energy, Natural Resources, Environment and Mines – MiAmbiente – has implemented an institutional platform to manage under a long-term vision, all public-driven environmental initiatives underway in a programmatic manner. This institutional platform works interdisciplinary to generate synergy between projects financed by international cooperation agencies and implemented under the arm of MiAmbiente. Each project supports a common view from a programmatic point of view within the framework of the Strategy of MiAmbiente and its Action Plan, both under design and elaboration.

3. This operative platform, called the Programmatic Office, becomes a structure that links activities of the proposed MSP with other public institutions in the field of environment and development, as well as with other projects implemented by MiAmbiente, and for the sake of this project integrates key actors in an Energy Efficiency Committee (EEC), involving among other, institutions such as the Honduran Institute of Tourism (IHT), private sector (e.g. CANATURH and HOPEH), financial entities operating as the Fund for Energy Efficiency in the Industrial and Commercial Sectors (FOPESIC), and national financial initiatives under construction as the Green Environment Fund, and all in all, to assure an integral and complementary implementation of activities impacting the small and medium-sized (S&M) hoteliers.

4. Two aspects should be highlighted in the agenda for development in Honduras, accelerate job creation and contribute significantly to poverty reduction. Both agendas cannot be seemed separated from a Sustainable Human Development perspective. Taking into account that approximately 65% of the population still lives in poverty and 45% in extreme poverty, the market development for energy efficiency should be conceived with a focus on environmental and social responsibility that contributes to promoting permanent and decent jobs by targeting underserved and/or vulnerable groups within the small and medium hotel industry such as youth and women.

5. Therefore, the substantive role of women will be integrated into the implementation of the MSP activities as a cross-cutting theme, seeking to reduce inequities and capitalizing on their entrepreneurial potential in the chain of tourism services, especially in small hotels, many of which are owned and operated by women. On the relationship between gender inequality and power, women are more likely to be excluded from decision-making processes than men, concerning their development. Although no analysis of gender composition was done within the framework of this MSP, it can be inferred from a USAID ProParque Project study that 58% of the hotels are owned by men, while 63% of the food and beverage sector (restaurants) is dominated by women.

6. Related to climate change issues in Honduras in the tourism sector, and in specific the hotel sector, the topic is twofold, one regarding adaptation and the other mitigation. Both dimensions are complementary to each other, and therefore to promote resilience in front of the effects of

floods, hurricanes and tropical storms, with loss of human lives and considerable infrastructure damage in the hotel sector, is a keystone to assure sustainability in the tourism sector. On the mitigation side, UNDP-Honduras is giving attention to achieving global benefits in terms of the mitigated tons of carbon dioxide, but also in seeking opportunities to generate more and better jobs while achieving this goal, favoring inclusion and job generation through implementation processes that includes key commodity chains linked to the hotel sector such as restaurants, tourist agencies and other collateral services, since tourism is the third source of foreign income in Honduras, it can also functions as an economic engine that can benefit from a more green and social and environmental responsible branding image.

7. Sustainable hotel management offers better quality opportunities for stable employment, as well as training for empowering women, it attracts more committed tourist businesses, green jobs and it adapts and mitigates the impacts of climate change holistically, including fundamental aspects that contribute to Sustainable Human Development.

1.2 Sustainable Tourism Management in Honduras

8. Honduras is implementing its National Strategy for Sustainable Tourism (2006-2021), which focuses on protection of the environment as one of its main objectives, harmonizing tourism development with the conservation of natural resources while maximizing economic, social, and environmental benefits. This Strategy indicates that: *"Honduras should develop tourism, with the aim of promoting greater economic growth, combatting poverty, distributing equity and making sustainable use of natural and cultural resources, contributing to their conservation."* In order to achieve this, it is necessary to create new products and improve existing services, increase rates of hotel occupation, the average daily expenditure and the rate of overnight stays, especially in the geographic areas of major growth in recent years.

9. In this regard, the drivers of Honduran tourism are concentrated mainly in two regions with globally important attractions, the archaeological site of the Copán Valley in the land settlement of the Mayan Culture and the Bay Islands (Roatan, Utila and Guanaja) in the Caribbean Sea, where there is an extensive tourist chain of low impact facilities around protected areas, mainly consisting of small and medium-size accommodations regulated by the Honduran Institute of Tourism (IHT).

10. On the other hand, the former Ministry of Natural Resources and Environment (SERNA), now MiAmbiente, is the public institution responsible for the enforcement of environmental legislation, under the scope of Technical Norm "PNHN 25:2009 on cleaner production", which aims at "specifying the requirements and procedures for the establishment of an Agreement for Cleaner Production (AP+L) between the public and the private sectors". Under this institutional framework, in 2011 SERNA carried out a comprehensive environmental assessment of the tourism sector, which included hotels and restaurants at the national level.

1.3 Tourism Sector, Unemployment and Poverty

11. A main principle of the National Strategy for Sustainable Tourism is that it proposes being based on sustainable patterns. This economic activity should not be seen as a formula for resolving a labor surplus; on the contrary, it should use its potential to create decent employment for men, women, ethnic groups and minority groups. According to figures from IHT (2010), the number of visitors reached 1.6 million in 2009, achieving a growth of 2% compared to 2008.

12. The employed population in Honduras in 2015 is 6.4 million people and the active economic population is 3.47 million, of which 53.1% have stable jobs and 42.3% work in the informal

economy, where the tourist sector is the major source of direct and indirect jobs at the national level. Therefore, regarding the challenge of unemployment, sustainable tourist management that includes hotels, restaurants and other ancillary services, and promote permanent and decent jobs through higher annual occupancy rates, is a direct means of contributing to the eradication of poverty, while introducing energy efficiency measures that are adopted, operated, monitored and maintained by underserved and/or vulnerable groups such as youth and women.

13. Table 1.1 shows the pace of employment growth projected in the tourist sector through 2018, the year that this MSP is expected to conclude.

Table 1.1: Current Status of Employment in the Tourism Sector in Honduras			
Jobs	2010	2015	2018
Direct	65,509	83,607	106,706
Indirect	79,821	101,874	130,019
Total	145,330	185,481	236,725
Source: ProDoc 2015, based on data from IHT and an annual growth rate of 5%.			

14. At the national level, the unemployment rate is 4.6%, however, the visible underemployment rate is about 8% and invisible underemployment is close to 32%. Small business is one of the niches where the visible and invisible underemployment is concentrated, counting for almost 70% of visible underemployment and 75% of invisible underemployed, working in small businesses (HDR Honduras, 2011). Therefore, sustainable and socially responsible management for the small and medium hotel industry located in strategic areas with high potential for tourist attractions contributes substantially to keeping the economically active population keeping a permanent and decent job, especially in the tourist areas of Copán and the coastal areas of the Caribbean, where in the last decade there has been a significant increase in tourism infrastructure and foreign investment.

15. Honduras is ranked 61 on a list of the 135 poorest countries in the world. It is worth mentioning that in countries such as Honduras, poverty and inequality force much of the population to work in in jobs that are underpaid, especially in niche sectors for small and medium enterprises such as tourism and hotel sectors. Therefore, it is important to enhance the linkages between inclusive green tourism, environmental and social responsible businesses and to promote tourism's contribution to equity and poverty alleviation in order to increase the inclusion of underserved and vulnerable groups in the development of a socially and environmentally sound hotel and tourism sector in the country with better and more adequate access to financing mechanisms for the energy efficiency investment. Links between tourism sector, especially hoteliers, with staff, neighboring communities, land-holders, producers of food, fuel suppliers, operators of micro tourism businesses, craft-makers, and other users of tourism infrastructure and resources (e.g. water) should be taken into account as extensions of a possible green value chain of the hotel sector. There are many types of strategies to address poverty and inequality from a tourism perspective, ranging from increasing local employment from a human rights perspective to building financing and capacity building mechanisms for green entrepreneurship.

16. The critical factor is not the type of stakeholder involved or the type of tourism, but that an increase in the net benefits that go to underserved and/or vulnerable groups can be demonstrated with evidence through a result-based management and showcasing positive changes in the equity for access to implement energy efficiency measures, and promoting co-benefits, primarily from tourism and for the sake of this MSP specific business activities correlated to the hotel sector

such as restaurants. In 2010, tourism in Honduras captured approximately US$650million on revenues, this without counting the value chain involved in the tourism sector as such, which in an inclusive green strategy for the sector can reach a larger potential for mitigating climate change, while achieving social and environmental co-benefits.

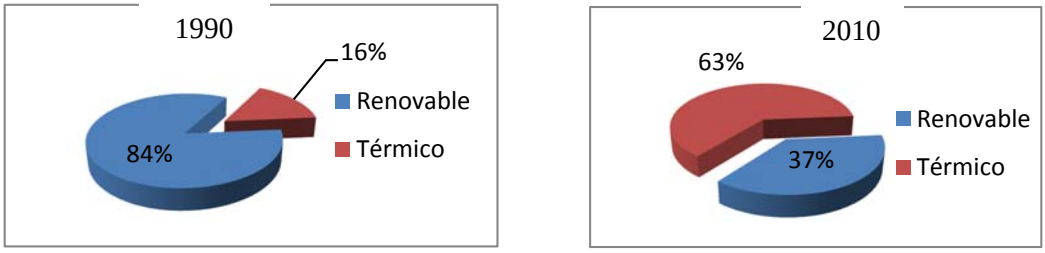
1.4 Energy Sector and Climate Change Policy

1.4.1 Energy Sector Update and Policy

17. Honduras has a total installed capacity of 1,748 MW and a peak demand of 1,336 MW (2013 data), with projected annual growth of 5.7 percent, according to the Expansion Plan 2007-2020 prepared by the national power utility (ENEE).

18. Total energy consumption in 2010 was equivalent to 17.7 billion barrels of equivalent oil, of which 4.6 million were used for power generation. Energy imports in recent years accounted for $1.6 billion per year on average, representing a heavy burden to the national economy. While in 1990 Honduras was 84% dependent on hydroelectric power, by 2010 this composition changed substantially: 63% of the electricity in the national interconnected system was generated using fossil fuels (Figure 1). In the Caribbean islands of Roatan, Utila and Guanaja, with high tourist demand, each interconnected system relies on large off-grid generation systems that are 100% operated with bunker oil and diesel.

Figure 1. Comparative Analysis Power Generation 1990 vs 2010
(Ref.: ENEE)



19. The above scenario has shown a slight improvement in recent years. According to ENEE, in 2013, electricity generation using imported hydrocarbons represented 57.9% of total generation, with hydropower at 34.5%, while wind power and biomass (sugarcane cogeneration) accounted for 7.6%. Hydropower generation in Honduras has also been affected by the reduction of hydraulic flows in recent years due to the effects of climate change, as has been the case throughout the Central American region.

20. High dependency on hydrocarbons has serious consequences for the Honduran economy, mainly affecting investment in social programs of the Government such as education, health and public safety. For example, while in 2001 imports of hydrocarbons over total exports represented 15.73%, when the average price of the West Texas Intermediate (WTI) oil barrel was US$25, in 2010 when the average price of a barrel rose to US$79, the country's oil bill rose from US$395M in 2001 to US$1,487M in 2010.

21. Electricity prices are regulated by the recently passed General Law of the Power Industry, which adjusted tariff structures including for kWh consumed (61.48%), the cost of fuel (36.42%), and

an extra charge for public lighting (2.1%). Therefore, national dependence on imported hydrocarbons for thermal power generation directly affects fuel costs for the consumer, including the hotel industry, where electricity rates have increased by 36% since 2009 due to the rising fuel-cost adjustment. Therefore, while the average price in the commercial sector was 19.54 cUS$/kWh in 2010, electricity pricing was 22.7 cUS$/kWh in 2013.

22. In accordance with the IDB Country Analysis, this high dependence on imported fossil fuels raises costs for the provision of services by the electric company, a cost that has not been regularly added to the tariff structure, aggravating the financial situation of ENEE. However, the new Government of Honduras (GoH) is adjusting this gap in production costs to align power utility rates with their real costs.

23. One of the persistent challenges in the national electric system of Honduras is power losses in the national grid, representing 24.2% of the energy generated, of which 12.5% are considered technical losses and 11.7% as non-technical losses, due to theft and energy that is not invoiced because of the lack of electricity meters, particularly in the residential sector. The ENEE/GAUREE Program indicates that the desirable maximum loss would be 15%, so a policy for efficient energy management by the end consumer and the application of best practices in S&M hotels, is a cost-efficient way to meet this challenge.

1.4.2 Climate Change Policy and Commitment

24. In response to its international commitment on environmental issues, on June 8, 2010, the former Ministry of Natural Resources and Environment (SERNA) presented the National Climate Change Strategy for Honduras (ENCC) as a cross-cutting strategic component of the national agenda, especially because of the significance of the energy sector, which accounts for 27% of total CO_2 emissions. Strategic Objective 16 of the ENCC states: *"Reduce and limit greenhouse gas emissions, voluntarily contribute to the mitigation of climate change and strengthen collateral processes for socioeconomic and environmental sustainability."* In line with this MSP, the ENCC states the promotion and adoption of renewable energy sources as well as more energy efficient technologies and best practices.

25. The ENCC lists several impacts of climate change at the national level; it highlights the variability of precipitation regimes, since this condition creates a deficit in the rainy season, reducing the power-generating capacity of hydroelectric plants, a reason that has led to a significant increase in thermo-electric generation in recent years in order to meet the national demand for electricity.

26. Following the IPCC methodology, the energy sector has been included as a key variable in the national inventory of greenhouse gas emissions and thermo-power generation. As a whole, the energy sector is responsible for 29.4% of anthropogenic emissions of CO_2 equivalent in Honduras (2000), equivalent to 3,204 Gg of CO_2. Of this figure, 24% corresponds to equivalent emissions from the generation of electricity with fossil-fuel based plants (694 Gg).

27. In summary, the current map of Honduras in light of this MSP can be defined as follows:

- high dependence on imported fossil fuels,
- high vulnerability to oil prices, and
- low efficiency in the end use of electricity for all sectors.

1.5 Regulatory Environment to Advance Energy Efficiency

28. Regulatory, institutional and public policies that are directly related to energy efficiency in Honduras are very limited. Under this context, the preparatory phase of this ProDoc MSP has identified some guiding regulations to deal with energy efficiency and the rational use of energy policies in the power sector.

29. Decree No. PCM-022-2010, published on June 8, 2010, states that the State of Honduras has the obligation to create and to instrument adaptation and mitigation measures, by implementing the National Strategy on Climate Change and proposing its Action Plan. However, it is important to emphasize that it did not establish indicators for the efficient use of energy for the productive sectors, while for the tourism sector; this Strategy makes explicit the goal of increasing the number of visitors by 8.4% per year.

30. More recently, on March 20, 2014, the Legislative Branch published Decree 404-2013 which enacts a full reform of the power sector, the General Law of the Electric Industry. Even though there is no a precise reference to energy efficiency, this new Law creates the Power Regulatory Commission (CREE) as a decentralized entity. Article 18 of the Law sets forth that tariffs for the sector should reflect the real costs of power generation, transmission, distribution and other costs of providing a public electric service, which will be an indirect market incentive for the end consumers, such as S&M hotels, to undertake cost-efficient actions on the efficient end-use of electricity, load management, and best practices. In any event, the ongoing reform of the entire electricity sector, with subsidies gradually reduced to zero, will result in tariff increases in the medium term.

31. In the framework of this MSP, it is worth highlighting the fact that CREE is now in charge of regulating bi-directional measurement, allowing public utilities to buy excess power generated from residential and commercial end-users that are willing to generate using renewable energy sources and inject it into the grid (Art. 15D).

32. Also, on the policy front, note the lead undertaken by the DGE since 2011, which has submitted to the National Congress a draft proposal for the “Promotion of the Rational Use of Energy", providing a legal framework that affects all consumption levels of the energy matrix in its various dimensions, such as financing, training, public policy, and standardization and labelling of more efficient equipment. In March 2015, this was sent to the legislative plenary but it still needs to be shared with all relevant sectors to make it effective under legislative procedures.

33. The National Competitiveness Program has designated the National System for Quality (SNC) as the public bureau to carry out all the activities related to the national system of quality, standardization, metrology, and accreditation. Since 2007, through national technical committees, this Bureau has been supporting processes for preparing standards and labels for the electrical equipment most commonly used in the industrial and commercial sectors, as a key regulation already available for public policy.

34. This set of regulations, which are effective as *voluntary* norms, also provide information to consumers about efficiency (labels), as described in Table 1.2, indicating minimum performance (levels), labelling and verification of conformity (testing), and in theory, they must be met at customs points for the main sorts of electrical equipment currently used in the hotel sector.

Table 1.2: State of the Art of Technical Standards for Electrical Equipment	
Current Standards	Enacted

Window, split, and package Air Conditioning Units OHN 45:2011 Performance range OHN 46:2011 Labelling OHN 47:2011 Testing Method	National Standard (OHN) published May 31, 2011.
Compact Fluorescent Lamps OHN 09:2011 Requirements OHN 10:2011 Labelling	National Standard (OHN) published May 31, 2011.
Household Refrigerators and Cooling Units OHN 11:2008 Values of energy consumption OHN 12:2008 Labelling OHN 13:2008 Testing Method	National Standard (OHN) published Dec. 17, 2009.
Self-contained Refrigeration Equipment OHN 14:2008 Limits of energy consumption OHN 15:2008 Labeling OHN 16:2008 Testing methods	National Standard (OHN) published Dec. 17, 2009.
AC Motors OHN 5:2008 "*Energy efficiency of alternating current motors, three-phase induction, squirrel cage type, rated output of 0.746 to 373 KW — Limits, test methods and labeling."*	National Standard (OHN) published Dec. 17, 2009.
Source: www.hondurascalidad.com/normalizacion.com.htm#normasohn	

35. Finally, MiAmbiente has also the mandate to coordinate EE activities in light of Executive Decrees PCM10-212 and PCM 34-2014, which guide a strategic national plan for electricity savings and the immediate implementation of energy efficiency measures in public institutions, respectively.

36. Activities planned for this MSP will support the regulatory environment above, to make it effective and in tune with incentives policies for the tourism sector (i.e. Decree 103-93, 2006), in a way that additional investments are guaranteed by new government policies and regulations in the S&M hotel sector.

1.6 Stakeholders Analysis

37. This section describes the institutional framework where the process of change will take place during the execution of the MSP, Tables 1.3, 1.4, and 1.5. Due to the high dependence on thermo-power generation, there is great potential for the reduction of demand for electricity through the implementation of energy efficient technologies and best management practices in all sectors of the economy, so that the anticipated change proposed under this MSP can have a much broader spectrum than the S&M hotel sector itself.

1.6.1 Public Sector

Table 1.3: EE Institutional Frameworks at National and Local Levels	
Public authorities	Responsibilities – Roles and Purpose

Ministry of Environment General Energy Directorate (MiAmbiente/DGE)	MiAmbiente (also the GEF Operational Focal Point) is leading national policies on adaptation and mitigation and is the primary Implementing Partner of the MSP. This Ministry also coordinates the AP+L initiative with the objective of increasing the competitiveness of hotels and restaurants over the long run. DGE is the national bureau of the newly created Ministry for Environment (MiAmbiente) that is in charge of implementing EE public policies in the energy sector.
National System for Quality (SNC)	Decree 29-2011 creates the institutional infrastructure for quality in Honduras, based on the public activities of three main bureaus: • National Bureau of Standards (OHN), • National Bureau of Metrology, and • National Bureau of Accreditation (OHA).
National Power Utility of Honduras (ENEE)	ENEE is in charge of power generation, transmission and distribution and it is going through a major process of change under the recent General Law of the Electric Industry. From 2001 to 2011, it implemented a Rational Energy Use Program (URE) with major support from the European Union (the GAUREE Project). The main actions were: - Setting up the existing URE Department with full-time technical and administrative staff. - Execution of energy audits for utility consumers and demand-side management programs in the industrial and commercial sectors. - Implementation of educational campaigns and awareness-raising programs. - Replacement of 6 million incandescent lamps for CFLs that cut peak-demand by 43 MW and have saved 142 GWh/year.
National Energy Commission (CNE)	CNE used to be the public agency in charge of regulating and overseeing the power sector. This agency will be transformed into the National Regulatory Energy Commission (CREE), in 2015.
Honduran Institute of Tourism (IHT)	IHT is the public institution responsible for setting up national policies for sustainable tourism in Honduras, under Decree 103-93 of July 14th, 2006.
Technological University of Honduras (UNITEC)	This public university offers a comprehensive graduate Program on Energy Engineering (5 years), and a post-graduate training program for engineers and architects (2 years), having energy efficiency as one of its three main focus areas.
National Autonomous University of Honduras (UNAH)	This is also a public university with regional branches throughout the national territory. In the engineering academic area, it has several formal training programs that can support formal and informal capacity building activities for both, staff maintenance of S&M hotels and financiers.
Source: MSP ProDoc Formulation, 2015.	

1.6.2 Private Sector

Table 1.4: EE Private Sector Institutional Framework	
Central American Development Bank (CABEI/MiPYMEs Verdes)	CABEI is the regional development bank that is implementing a large regional initiative: MiPYMES Verdes, to finance energy efficiency and renewable energy investments through financial intermediaries.
Power Utilities in the Bay Islands	The following private power companies are operating on the three main Caribbean Islands of Honduras: RECO (Roatan Electric Company) in Roatan, UPCO (Utila Power Company) in Utila, and BELCO (Bonnaca Electric Company) in Guanaja.
Investment Fund for the Commercial and Industrial Sectors (FOPESIC)	FOPESIC is a financial scheme that is cofinanced by the GEF and ACDI since 2008 and it is managed by CEHDES and UNDP. This Fund is one of the outcomes of the PESIC MSP UNDP/GEF to trigger EE markets in the industrial and commercial sectors, carried out from 2008 to 2011. This Fund is wholly dedicated to supporting EE investments in these sectors and it already has a lending portfolio of US$1.4 M.
National Chamber for Tourism of Honduras (CANATURH)	CANATURH is fully engaged in supporting cleaner production actions in line with the National Strategy and Action Plan for Cleaner Production. The role of CANATURH is two-fold: the liaison of the restaurant sub-sector with the PMU and facilitator of more favorable public policies and policy incentives for the S&M hotel population.
Honduran Association of Small Hotels (HOPEH)	HOPEH is also linked to the National Strategy and Action Plan for Cleaner Production, actively supporting cleaner production activities in small hotels throughout Honduras. Both organizations, CANATURH and HOPEH, will take a proactive role in the overall execution of the MSP activities, especially in the design, implementation, and follow-up of the *"Green Scheme"*. HOPEH will also link the interest of S&M hotels with the PMU. Under this Strategy, the commitment of Honduras is two-fold: strengthening of capacities and transfer of energy-efficient technologies and switching entrepreneurial behavior for end-users through communication and dissemination of best practices.
National Center for Cleaner Production of Honduras (CNP+LH)	This Center, also attached to CEHDES, provides technical assistance and strengthening for cleaner production and management systems to industries and commercial businesses. It has an institutional track record of supporting many of the capacity-building activities proposed in this MSP.
Red Katalysis	This is a Central American network, based in Honduras, made up of a group of micro-financiers focusing on the provision of financial services and innovative products to address the investment needs of low income people. They currently implement a training program on energy efficiency and renewable energy with support from the CABEI/MiPYMEs Verdes Program.
Banco Atlántida (Green Fund)	Banco Atlántida in 2011 received a US$28M loan from the IDB to set up a financial facility to support the development of its renewable energy lending portfolio.

Banco del Pais (Subordinated Loan)	Banco del País in 2011 received a loan from the IDB to support growth in their lending portfolio in high social impact areas to Small and Medium-size Enterprises (SMEs) in Honduras. The types of projects that BanPais will finance, among others, are geared to reduce greenhouse gas emissions with loans of US$10,000 and up to US$1 million.
EE Private Consulting firms	There are a few consulting firms fully engaged in the EE business in Honduras, among them: • Energy Efficiency of Honduras, very active firm providing services to the hotel sector. • CTII, very active in the San Pedro Sula region and senior consultants to FOPESIC. • SAGE Electro-mechanical, also senior consultants to FOPESIC. • Vegas Electric, a large private consulting firm in the industrial and commercial sectors, mainly for hotels on the Bay Islands and on the northern coast. Vegas are also a wholesale retailer of EE lighting systems, solar pumps and photovoltaic systems.
Source: MSP ProDoc Formulation, 2015.	

1.6.3 International Development Organizations

Table 1.5: International Development Organizations participating in EE	
United Nations Development Program (UNDP)	UNDP is the GEF implementing agency for this MSP. UNDP-GEF also carried out the Central American Regional Program (PEER 2006-2011) that has triggered energy efficiency markets for electrical equipment in Central America in the commercial and industrial sectors, particularly the development of technical standards and labels for electrical devices.
4E Project (GIZ/SICA)	4E is a regional program implemented by GIZ to increase capacity building towards renewable energy and energy efficiency in Central America by acting on three levels: i. Policy and management. ii. Increasing institutional capacities. iii. Carrying out pilot projects.
Japan International Cooperation Agency (JICA)	Japan's cooperation agency has an ongoing technical assistance program to increase national capacities of tourism experts.
Source: MSP ProDoc Formulation, 2015.	

1.7 Barrier Analysis

38. This section includes an analysis of the barriers faced by the change in the use of energy for the S&M hotel sector in Honduras, depending on its scope and causes, which must be overcome to ensure the outcomes of this MSP. The baseline principle is that this sector is willing to increase its competitiveness and also contribute to reduce social inequality, by taking a series of actions, in this case, around cost-efficient opportunities to follow a low-carbon path through energy efficiency.

1.7.1 Policy Barriers

39. In the current institutional context of the power sector in Honduras, a strong intervention by the GoH is required to eliminate structural points of conflict and to change the existing BAU policy context.

- Policy Barrier #1: Honduras has a weak institutional framework to enforce public policies concerning the efficient use of energy and to implement green incentives for small and medium-size entrepreneurs, which affects good will for catalyzing the use of more efficient electrical equipment, once an energy audit is completed.

  Cause: The main issue is that Honduras does not have an effective public policy in this field in order to set up a long-term strategy, effective actions and deadlines, under the leadership of a governing agency. For example, the effective handling of a draft law on energy efficiency has been delayed due to the lack of continuity and effective institutional actions to lobby the legislative branch.

- Policy Barrier #2: There is a set of effective voluntary technical standards (OHNx) as described in Section 1.5, which set forth the minimum performance standards and performance labeling for the main electrical equipment used in hotel operations, however its application in the domestic retail-market is extremely weak.

  Cause: OHNx standards have not been shared with other key players for their full implementation in the market, such as customs officers, utility officers, and wholesale equipment importers.

  Neither are there facilities to test and validate the requirements for conformity assessment, in order to ensure compliance with minimum efficiency levels, for instance, at points of entry into the national territory. For example, there is a secondary market to import outdated, low efficiency electrical equipment that works against the concept of energy efficiency to lower costs, such as air conditioners; hoteliers then purchase them as an act of faith based on their operation, not on their energy performance, certainly motivated by the low cost of the initial investment.

- Policy Barrier #3: A major gap is the need to integrate two key aspects of these markets into the execution of the energy efficiency programs at the national level, i.e.: the accreditation of qualified professionals responsible for the preparation of energy audits, pre-investment actions and follow-up, and the monitoring protocols to effectively ensure the estimated energy savings.

  Cause: The cause of this gap is the lack of leadership, at the policy level, to effectively coordinate the many initiatives financed by international cooperation agencies and in-country training institutions, which are often executed in isolation without any follow-up after their conclusion. For example, interesting models of intervention already developed by several hoteliers and project developers in the Bay Islands have not been documented and shared with other hoteliers at the national level.

1.7.2 Financial Barriers

40. One of the valid questions in the process of structuring ProDoc refers to why, if electricity pricing represents a high cost in hotel operations, does this saving opportunity continue without due attention from the hotelier? To address this situation, the following barriers were identified in order to access project financing.

- Financial Barrier #1: There are investment funds available in commercial banks, mostly conventional green investments for SME credit lines; however, S&M hotels have limited access to them.

  Cause: Conventional lending has a high cost for S&M hotels, due to the high rates of intermediation of the financial system in Honduras and collateral requirements established by national banking regulation that hinder access to existing credit lines. Table 1.6 compares the lending conditions under which FOPESIC operates, as a fund exclusively dedicated to energy efficient investments in the industrial and commercial sectors, through its two windows, which are much more attractive than other conventional lending conditions based more on the financial and environmental benefits of the investment (*project finance*) than on the type of collateral.

Table 1.6: Financial Terms for SME Lending in Honduras

Financial Entity	Interest rate / Term (in local currency)	Guarantee Type
Conventional Lending		
Banco Atlántida	18.5% annual 23% annual	Mortgage Fiduciary
Banco del País	30% annual	Mortgage and Fiduciary
BANHCAFE	36% annual	Fiduciary and collateral on the equipment
BANADESA	34% annual	Fiduciary
BAC/CREDOMATIC	17% annual	Mortgage
ODEF Financier	34% annual/12-48 months 42% annual/6-18 months	Mortgage Fiduciary
IDH Micro-financier	36% annual	Mortgage and Fiduciary
COMIXMUL	26-28% annual 34% annual	Mortgage Fiduciary
FINSOL	30% annual	Fiduciary Collateral on the equipment
World Relief	34% annual	Mortgage Fiduciary
FOPESIC		
FOPESIC/FOPAT (Fund for Technical Assistance)	6% annual US$/36 months	Collateral on the equipment
FOPESIC/FAEP (Fondo de Avales)	6% annual US$ /36 months	Allocated through commercial bank intermediation up to 80% guarantee on the equipment
Source: MSP ProDoc, 2015, adapted from the CP+LH.		

  Cause: On the other hand, the lack of technical understanding (of credit officers and risk analysts) to gauge the economic benefits of investments in more efficient equipment; in their analysis they qualify S&M hoteliers as too risky, arguing that occupancy rates vary throughout the year, significantly affecting the financial flow for the repayment of the loans. In addition, technical specialists (engineers) who execute energy audits have limited capacity in filling out loan

applications and writing bankable business plans, to make the financial worthiness of an EE investment attractive to conventional lending entities.

- Financial Barrier #2: According to the experience developed by ENEE in the framework of the GAUREE Project in the industrial and commercial sectors, the majority of energy audits do not move forward to the implementation phase, because there is a limited entrepreneurial capacity to invest in energy efficiency.

  Cause: There are no alternative mechanisms to support the financing of the energy conservation measures recommended in those energy audits, because many S&M hoteliers have already reached their borrowing capacity and their regular income is already earmarked to cover other existing debt obligations as well as their daily operating costs, or they do not comply with the legal requirements established for SMEs in the regulated banking system. For instance, CANATURH has estimated that 51% of S&M hotels do not carry records of their energy consumption, as pointed out in Section 1.8.2.

- Financial Barrier #3: The tourism sector in Honduras, according to Decree N° 314-98, reformed by Decree N ° 194-2002, enjoys a series of tax incentives, which reduce import tariffs for assets needed for hotel operations, however, these incentives do not generate benefits for S&M hotels and their access is generally intended for large hotels.

  Cause: Low volume of purchasing assets, given the size of their facilities, does not justify dealing with all the paperwork that this sort of hotel business can do in a cost-efficient way, given its limited management and administrative capacity.

1.7.3 Information Barriers

41. There is a gap between the profitable energy-efficient investment opportunities identified in many national initiatives referred to in Annex 4, and the level of implementation in practice. The roots of this gap reside in a series of barriers, such as the need for more effective public policy and limited access to financing as analyzed above, but also due to the lack of information and other hidden costs that prevent these markets from working effectively and efficiently.

42. Greater flow of information, appropriate means of communication and knowledge management are essential actions to ensure the success of climate change mitigation policies through improvements in the efficient use of energy for the hotel industry in this case.

- Information Barrier #1: As a result of several projects implemented by different institutions that have run energy efficiency programs in Honduras, experiences are little known or not have not generated lessons learned to be documented for the development of an early-stage learning curve.

  Cause: The DGE does not have knowledge management tools to systematize the experiences developed around the efficient use of energy; for example, an Information Center that would become a permanent reference could not only serve the hotel industry but also other energy-consuming sectors.

- Information Barrier #2: The lack of timely information for S&M hotels to access funding opportunities available in the Fund for Energy Efficiency in the Industrial and Commercial Sectors (FOPESIC), which offers more attractive lending conditions and technical assistance than commercial banks.

Cause: This barrier is due to the budgetary constraints of FOPESIC that prevent it from positioning a nationwide marketing strategy, because its geographic area of influence is largely limited to the Sula Valley Metropolitan Area and is mainly aimed at facilitating non-resource project financing to companies in the productive sector. However, to date, this window has funded three small hotels: ApartHotel Guijarros (Tegucigalpa), Vereda de San Juan (Sula, Santa Bárbara), and Hotel Las Cascadas (San Pedro Sula).

- Information Barrier #3: Public institutions directly responsible for guiding compliance with technical standards and labelling of electrical equipment mostly used by the hotel industry (lighting systems, air conditioning, and refrigeration units), do not have technical resources duly trained to comply with their mission.

  Cause: Policymakers should be aware that it is cheaper to save one kilowatt-hour than build a power plant to generate an additional kilowatt. This is a principle of public policy in the energy sector, which must be internalized by the policymakers in order to support the institutional strengthening the National Quality System requires.

- Information Barrier #4: Limited knowledge to carry out energy audits using a holistic approach, incorporating different means of access to project financing in the technical analysis.

  Cause: There are a very limited number of professionals trained to carry out energy audits and able to incorporate viable forms of access to innovative financing in the technical analysis. On the other hand, the lack of indicators of energy intensity and the limited use of demand load curves versus hotel occupancy is also common among architects and engineers, hotel developers, and financiers, to be used as a reference (benchmarking). These tools are important in order to "get to know what should be monitored and how" with regard to investments in energy efficiency in a post-investment phase.

1.8 Project Baseline and Significance of the Hotel Sector

1.8.1 Energy Consumption in Honduras

43. As per CEPAL statistics in terms of electricity consumption, while the commercial sector in Honduras claimed 1,378 GWh in 2010 out of approximately 5.122 GWh of total demand at the national level (27% share), in 2013 this increased to 2,172 GWh out of a total of 5.455 GWh (40% share), where the bulk of consumption is in the metropolitan area of Tegucigalpa and the industrial city of San Pedro Sula, in the northern part. In 2013, electricity generation using imported hydrocarbons represented 57.9% of total generation, while hydropower was at 34.5%, and wind power and biomass (sugarcane cogeneration) were 7.6%, representing a total of 42.1% of renewable energy power generation.

44. The tourism industry as a whole represents a significant portion of consumers in the commercial sector of Honduras, about 25%. Without any specific GEF-supported actions, in the next 20 years, overall electricity consumption in this industry will increase from about 344 GWh in 2013 to 621 GWh in 2034, assuming that the same qualitative factors that characterize business-as-usual (BAU) will remain and that power consumption is expected to increase at an annual rate of 3%.

1.8.2 Energy Profile of the Hotel Sector in Honduras

45. In the last ten years, hotel infrastructure and availability of restaurants have had remarkable development in Honduras, especially in those geographic areas with high tourist potential known as the Maya Region (Copan) and along the northern coast and the Bay Islands due to their archaeological and natural beauty, and of course, in the large cities of San Pedro Sula and Tegucigalpa as business destinations.

46. In accordance with official data registered by CANATURH, the National Hotel Registration is made up of 400 hotels: 141 as small-sized (less than 15 rooms), 190 of these facilities are registered as medium-sized (between 15 and 49 rooms) and 69 as large (more than 50 rooms).

47. In 2011, CANATURH, with assistance from USAID and CCAD, characterized the tourist sector according to the "AP+L Technical Norm PNHN 25:2009 on cleaner production" for hotel sizes. A sample of 41 hotels across the country highlighted the following issues, specifically with respect to energy consumption:

    - ✓ 51.2% of those in the sample do not even estimate their energy consumption and 82.1% do not have any sort of measure for this operating cost.

    - ✓ 90.2% have implemented some kind of energy-saving device, mainly Compact Fluorescent Lamps (LFC), instead of conventional incandescent bulbs, followed by the replacement of window-type air conditioners with mini-split units.

    - ✓ 44% of large hotels use low efficiency electrical equipment for cooling and refrigeration.

    - ✓ Energy consumption in the restaurant sector is basically concentrated in the kitchen area, where 11% of large hotels and 16% of S&M hotels still use electric cookstoves instead of the LPG-type.

48. SERNA, CANATURH and HOPEH, with technical assistance from CP+LH, conducted a more comprehensive assessment under the same PNHN25:2009 Standard for S&M hotels, which provided substantive information on energy consumption for CANATURH´s registered hotels, as shown in Table 1.7.

Table 1.7: Monthly Electricity Consumption according to the Hotel Size

Size(rooms)	# of hotels	Average Consumption (kWh/month)	Average (kWh/month/room)
Large (more than 50)	69	67,840	61
Medium (16 to 49)	190	51,040	54
Small (less than 15)	141	5,721	n.a
TOTAL	400		

Source: USAID/CCAD/CNP+LH, 2011.

Note: Average consumption was adjusted for ProDoc 2015 calculations. In 2011, occupancy rate at the national level was about 30% (as a consequence of the political conflict held in 2010) while in 2015 this occupancy reach 60%.

49. Relative percentage of annual savings potential is calculated for all EE technologies combined under the GEF-supported alternative scenario as shown in Table 1.8. Also, it is assumed that the annual occupancy rate of 60% will increase by 1% per year beyond 2015.

Table 1.8: Assumptions for the Calculation of the Savings Potential			
End-Use	Share of Total Annual Consumption (%)	Savings Potential (%)	GEF Alternative
Air-conditioning	35	15	• High EER (over 13%) with a combination of higher efficiency but lower GWP cooling gas options • Inverter technology
Lighting	15	50	• LED lighting systems fully implemented
Refrigeration	15	15	• High EER (over 13%) with a combination of higher efficiency but lower GWP cooling gas options • Inverter technology
Water heating	15	100	• Replacement of electric heaters for solar-thermal systems with large tank capacity
Electrical motors and water pumping	10	5	• High efficient premium motors
Others: reception, laundry-kitchen	10	5	• Replacement of current electric washing, laundry and household appliances for LPG units
Total	100%		
Source: ProDoc 2015.			

50. Table 1.9 aggregates data for a population of 400 hotels to calculate annual consumption (for 2015) on the order of 182 GWh. The same table disaggregates this overall consumption for each of the main end-uses, following the standard format of an energy audit to analyze energy conservation opportunities.

Table 1.9: Electricity End-use in the Hotel Sector: Base Year 2015		
End Use	kWh	Current Equipment Profile
A/C	63,777,928	These units are mostly window units and old mini-splits with low EER.
Lighting	27,333,398	Linear fluorescent lamps (20-40 W) with electromagnetic ballasts, CFL and incandescent lamps.
Refrigeration		These are, in general, low efficient compressors with an over-extended useful life.

	27,333,398	
Water heating	27,333,398	These systems are electric heaters: water tanks and shower-head types.
Electric motors and pumping	18,222,265	Old-fashioned, low efficiency and poorly maintained units.
Others: reception, laundry, kitchen	18,222,265	Electric washing, drying and ironing appliances used in the laundry area, usually of the household type.
Total	182,222,652	
Source: ProDoc 2015.		

51. In the framework of this MSP, energy conservation opportunities will mainly be introduced in the areas, i.e. air-conditioning and lighting, with more efficient air-conditioning units (EER higher than 13) and LED lamps respectively, as well as best practices in the management of energy demand (for example, scheduling laundry operations outside peak hours). Due to its geographic location, there are also ample opportunities to integrate the rational use of energy, such as the use of solar systems for heating and water pumping. This set of measures and practices adapts the service customer to unplanned blackouts, allowing hoteliers better management of their electric bills, and it is a cost-efficient way of avoiding power generation in the national interconnected system, as it will be calculated in the next section.

1.8.3 Energy Consumption in the Hotel Sector, Savings and GHG Emissions

52. The APL+L initiative led by CANATURH and HOPEH provides the foundation to calculate annual energy consumption for the hotel sector, as indicated in Table1.10.

Table 1.10: Total Annual Consumption in the Hotel Sector (Base year: 2015)

Hotel Size	Potential Market (# of Hotels)	Average Monthly Consumption (kWh/hotel)	Annual Consumption (kWh/hotel)
Large (more than 50 rooms)	69	67,840	814,080
Medium (16 to 49 rooms)	190	51,040	612,480
Small (less than15)	141	5,721	68,652
Total	400		
Source: ProDoc 2015 adjusting data as per the AP+L Report.			

53. Table 1.11 lists 24 hotels, all CANATURH members, preliminarily identified during the preparation of the ProDoc that are actively participating in the AP+L Initiative carried out by CANATURH as well as in the SICCS Program developed by the OIT/COHEP/IHT, which form the basis for selecting the 9 pilot hotels that will initially support the MSP. Obviously, the development of a much larger S&M hotel pipeline should be seen in the much broader context of

barrier removal activities such as: improving the policy framework; capacity building; increasing access to investment capital; and awareness and information.

Table 1.11: Preliminary List of Pilot Hotels			
Hotel	City	Rooms	Size
The Lodge at Pico Bonito	Ceiba	37	Medium
Cibeles	Ceiba	32	Medium
Roca Miel	Ceiba	41	Medium
Sherwood	Tela	22	Medium
Honduras Shores Plant.	Tela	45	Medium
Veromar	Tela	50	Medium
Marsol	Tela	21	Medium
Kaukira	Moskitia	40	Medium
Playa	Omoa	24	Medium
Flamingo´s	Omoa	10	Small
Casa Alemana	Trujillo	25	Medium
Brinkley	Trujillo	10	Small
O´Glynn	Trujillo	25	Medium
La Vereda Hotel	San Pedro Sula	24	Medium
Casa de Arbol	San Pedro Sula	13	Small
Guacamaya Inn	San Pedro Sula	10	Small
Ejecutivo	San Pedro Sula	40	Medium
Humuya Inn	San Pedro Sula	22	Medium
Las Cascadas	San Pedro Sula	35	Medium
Banana Inn	La Lima	30	Medium
Camino Maya	Copan Ruins	40	Medium
Hotel Costes	Copan Ruins	12	Small
Hacienda San Lucas	Copan Ruins	12	Small
Casa Rosada	Copan Ruins	12	Small
Source: MSP ProDoc Formulation, 2015.			

54. Thus, with the parameters from Table 1.10, annual savings potential and GHG emissions reductions are projected over a 20-year period, as shown in Table 1.12, due to:

- technology changes to more efficient electric equipment,
- 5% increase due to load management and best practices;
- a emission factor of 0.66 $kgCO_2/kWh$, and
- an adjustment of 1% per year due to better occupancy rates.

Table 1.12: FORECASTING OF SAVINGS AND ESTIMATE OF MITIGATED TONS OF CO2 (2015-2034)							
YEAR	OCCUPANCY RATE (1 %)	ADJUSTED ANNUAL CONSUMPTION (kWh)3	Total Annual Consumption (kWh)	Total Savings (kWh)	5% Increase due to Best Practices	Mitigation Factor (kgCO2/kWh)	tCO2 mitigated per year (tCO2/año)
2015	0,60	182.222.652	**182.222.652**	**0**	**0**	0,66	**0**
2016	0,61	184.044.879	**184.044.879**	**57.053.912**	**59.906.608**	0,66	**39.538**
2017	0,61	185.885.327	**185.885.327**	**57.624.451**	**60.505.674**	0,66	**39.934**
2018	0,62	187.744.181	**187.744.181**	**58.200.696**	**61.110.731**	0,66	**40.333**
2019	0,62	189.621.622	**189.621.622**	**58.782.703**	**61.721.838**	0,66	**40.736**
2020	0,63	191.517.839	**191.517.839**	**59.370.530**	**62.339.056**	0,66	**41.144**
2021	0,64	193.433.017	**193.433.017**	**59.964.235**	**62.962.447**	0,66	**41.555**
2022	0,64	195.367.347	**195.367.347**	**60.563.878**	**63.592.072**	0,66	**41.971**
2023	0,65	197.321.021	**197.321.021**	**61.169.516**	**64.227.992**	0,66	**42.390**
2024	0,66	199.294.231	**199.294.231**	**61.781.212**	**64.870.272**	0,66	**42.814**
2025	0,66	201.287.173	**201.287.173**	**62.399.024**	**65.518.975**	0,66	**43.243**
2026	0,67	203.300.045	**203.300.045**	**63.023.014**	**66.174.165**	0,66	**43.675**
2027	0,68	205.333.045	**205.333.045**	**63.653.244**	**66.835.906**	0,66	**44.112**
2028	0,68	207.386.376	**207.386.376**	**64.289.776**	**67.504.265**	0,66	**44.553**
2029	0,69	209.460.240	**209.460.240**	**64.932.674**	**68.179.308**	0,66	**44.998**
2030	0,70	211.554.842	**211.554.842**	**65.582.001**	**68.861.101**	0,66	**45.448**
2031	0,70	213.670.390	**213.670.390**	**66.237.821**	**69.549.712**	0,66	**45.903**
2032	0,71	215.807.094	**215.807.094**	**66.900.199**	**70.245.209**	0,66	**46.362**
2033	0,72	217.965.165	**217.965.165**	**67.569.201**	**70.947.661**	0,66	**46.825**
2034	0,72	220.144.817	**220.144.817**	**68.244.893**	**71.657.138**	0,66	**47.294**
				1.187.342.982	**1.246.710.131**		**822.829**

1.8.4 GEF Cumulative GHG Emissions Reduction and Abatement Cost

55. Detailed calculations of the cumulative *direct* early investments (2015-2034) and *indirect project* impacts (2015-2034), based on a GEF contribution factor of 0.6 for indirect impacts (2015-2034), GHG reductions calculation and abatement costs are presented Annex 2.

Table 1.13: Total Cumulative GHG Emissions Reduction and Abatement Costs		
Sources	Tons	Comments
Direct	1,978	Cumulative lifetime CO_2 emission reductions from 9 early investments (2015-2034).
Indirect	314,340	*Indirect* reductions consist of S&M hotels consisting of 400 large, medium and small hotels nationwide, of which 9 projects are considered early investments, 15 hotels are considered direct spin-offs of the GEF intervention, and 69 large hotels that got benefits during the MSP's influence period (2015-2034).
TOTAL	**316,318**	Abatement Cost[1]: **USD 3.88**

56. Significant reductions can also be achieved by switching to low GWP A/C alternatives. In the case of choosing refrigerants R-32 and R-290 shown in the analysis of Annex 2, or similar eco-friendly cooling refrigerants available in the market, the GWP gain is 36,340 and 44,400 tons of CO2, respectively, over a 12-year useful life for a typical 18,000 BTU A/C unit.

1.9 Incremental Changes with GEF Involvement

57. Small and medium-size hotels in Honduras are not in a position to invest in EE improvements, especially the former. The proposed MSP makes an innovative business model available to move EE recommendations forward into the financial implementation phase through the "*Green Scheme"* that will be fully described in Section 2.

[1] GEF funding USD1,228,538/319,615 ton CO_2 = USD3.84 (Direct, Direct Post Project, and Indirect)

58. MiAmbiente, SNC and ENEE, in partnership with the private sector through CANATURH, HOPEH and private developers, are fully aware of the urgency to proceed with the national objective of increasing the competitiveness of the national tourism industry and contributing to Human Sustainable Development, where this MSP offers a window that, until now, has not been accurately addressed in the different programs and projects implemented in this sector, i.e. the efficient end-use of energy, but with very ample opportunities to impact other power-consuming sectors of the national economy.

59. In the absence of the proposed MSP, the S&M hotel sector has minimum opportunities to deal with significant operating costs, because the conventional financial market is not fully committed to small-scale investments and still sees it as too risky and asks for substantial guarantees (or the EE equipment offered as collateral may not be sufficient guarantee). The GEF involvement should also have significant incremental impact in the field of improving the policy and regulatory environment for energy efficiency under the newly created institutional platform of MiAmbiente.

60. Total annual savings potential for CANATURH´s registered members (400 hotels) will be at least 40 GWh per year (Annex 2) that would otherwise have been generated by fossil fuels, plus other direct impacts that outcomes also have on energy-intensive sectors of the economy, such as the domestic and industrial sectors, which are beyond the scope of this MSP. Total emissions avoided with GEF involvement are 319,615 tons of CO2 over a 20 year period, which generates a Unit Abatement Cost of 3.84 per tCO2, following the baseline assumptions of Annex 1 and the GEF calculations of GHG emissions reductions in Annex 2. This Annex also includes an analysis of GHG emission reduction benefits due to replacing HCFC-22 with low global warming potential gases.

2.1 Project Objective, Outcomes, Outputs and Activities

61. In the absence of this MSP, at the in-country level some bilateral efforts from international development agencies will continue catalyzing work on energy efficiency. But given the magnitude of the barriers and the current transformation for more electricity-intensive hotel industry, these efforts will be too limited and anticipated not to be systematic and inclusive. Hence the need for participatory, multi-stakeholder approach proposed under this UNDP/GEF intervention. The proposed alternative is designed to remove a number of specific barriers to enhance EE technologies and investments for the end-use of electricity for the Small and Medium (S&M) hotel sector in Honduras considering an environmentally and socially sound basis and evidence and human rights based-approach. It is intended to implement a number of cross-sectorial activities in the hotel sector and restaurants, mainly focused on implementation of standards and labels in selected electrical equipment, establishment of legal frameworks, capacity building activities, sustainable and green business schemes for entrepreneurial women, social and environmental incentive mechanisms (Award), promotion of green goods and services, innovative financing mechanisms and knowledge management.

62. UNDP´s experience to date has shown that the barriers that need to be removed to advance EE projects in the hotel sector generally relate to three market characteristics: (i) policy and regulation, and capacity building; (ii) an EE project financing mechanism to trigger investments over the long-term; and (iii) awareness raising through a knowledge management platform. The proposed MSP is consistent with Objective 2 of the GEF 5 Strategy: *''Promote market transformation for Energy Efficiency in Industrial and Building sector''*. Projects under this objective aim at stepping up policy interventions as well as scaling up energy efficiency investments. Emphasis will be placed on integrated and systemic approaches to remove the three main groups of barriers that can´t be removed separately (Section 1.7 above).

63. In Honduras, the first group of identified barriers is the weak and fragmented policy environment, including the need to enforce a set of technical standards and labels for electric equipment in the commercial and industrial sectors, as well as enabling a more supportive legal framework that can be adequate for private sector conjunction with energy efficiency policies and normative. The second group of barriers is related to the lack of financial mechanisms to support project finance for S&M hoteliers, together with an intensive awareness raising campaign and advocacy to raise awareness among policy-makers, investors, tourists, financiers, knowledge managers, among other key stakeholders linked directly to the value chain of the hotel industry. That is the MSP's strategy: an inclusive and green hotel sector.

64. The **long-term goal** of the MSP is to speed up the sustainable market development for energy efficiency in the hotel sector, with a significant marginal impact also in other sectors, creating "level-playing fields" to support EE investments, primary to S&M hotels with the aim of contributing to a low carbon path for the tourism industry in Honduras. In this regard, the MSP is taking into consideration the long-term objective of the National Strategy for Sustainable Development 2006-2021 (ENCC) and the on-going national initiative on cleaner production in the industrial and commercial sectors led by the private sector.

65. To this end, the **Project Objective** is to remove the barriers to the increased commercial use of energy efficient electrical equipment in the small and medium-sized hotel industry in Honduras. Component 1 will deal with policy, regulatory and capacity building barriers, Component 2 with financial barriers and Component 3 with awareness raising barriers.

66. The proposed MSP is broken down in 3 Components and 3 Expected Outcomes as follows:

- Component 1: Sustainable Tourism Low Emission Policies
  Outcome 1: Energy efficiency (EE) enabling policy framework enforced and technical capacity strengthened in the Honduran hotel industry

- Component 2: Sustainable Tourism Low Emission Funding
  Outcome 2: Commercially-driven investment in energy efficient equipment and technology for the hotel industry mobilized (grant and non-grant mechanisms)

- Component 3: Sustainable Tourism Low Emission Knowledge
  Outcome 3: Increased practice and application of energy efficient technologies in the Honduran hotel industry

Outcome 1: Energy efficiency (EE) enabling policy framework enforced and technical capacity strengthened in the Honduran hotel industry

67. Component 1 focuses on the enforcement of an Energy Efficiency (EE) enabling policy framework and the strengthening of technical capacity for the S&M hotel sector, in line with the National Strategy for Sustainable Development of Tourism Sector in Honduras (ENTS-Honduras).

68. Component 1 is important as it will assess the existing context of the voluntary schemes for Standards and Labels (S&L) of the most used electrical equipment in S&M hotels, i.e.: air conditioners, lighting systems (CFL), refrigeration units, and in less degree, electric motors and water pumps. This Component also sets forth the conditions to promote a public-private institutional platform, including the programmatic approach to inter-institutional governmental evidenced-based results for the implementations of S&L schemes, involving key stakeholders such as power utilities (e.g. RECO, INELEM, ENEE), academia (e.g. UNAH, UNITEC) and the private sector (e.g. financial institutions, CANATURH, HOPEH), sketching out the path for designing and implementing energy efficiency projects in the hotel industry, that promote not only the result of implementing legally-binding S&L schemes for certain electrical equipment, but also encouraging in the long term perspective that the energy efficiency proposal law under review view by national stakeholders in Honduras is approved by Congress. These S&L activities and policy goals target an outcome that impacts other energy-consuming sectors of the national economy, which can trigger down positive co-benefits in other crosscutting sectors such as residential.

Output 1.1: *Established national EE policy and operationalized a Honduran hotel EE scheme in compliance with minimum energy performance standards for appliances*

69. Under the institutional coordination of the SNC Bureau, national technical committees will promote: (a) implementation of the conformity assessment procedures for air conditioning units, compact fluorescent lamps (CFL), light-emitting diode lights (LED) and refrigerators and freezers used in the industrial and commercial sectors; and, (b) design and implementation of a voluntary agreement for an "Energy Efficiency Scheme" geared to those hotels interested in receiving a distinction as a "more sustainable and resource efficient hotel". Technical assistance will be carried through the following set of activities:

Activity 1.1.1: Conduct a situation analysis of the S&L context in Honduras

70. Systematized data with reliable information on the baseline conditions for the current context for standards and labelling.

- Develop a participatory approach in order to review current standards (A/C, CFL, and self-contained refrigeration units) and integrate other institutions such as the National Executive Directorate of Income, Consumers Associations and National Institute of Tourism, among other stakeholders with high interests such as the private sector.
- Conduct a situation and gap analysis that includes an analysis of the legal framework provided and required, institutional assessment, and a final proposal of a context sensitive design of S&L schemes for Honduras, politically adequate with current legal and normative frameworks, financially viable and taking into account the technical, political and economic interests of the actors involved in the energy efficiency arena.
- The analysis will include a comprehensive proposal to implement the technical standards OHNx. Specifically, since the LED technology has become now a common practice in commercial and industrial lighting installations. SNC will lead the technical coordination through the National Technical Committee to prepare the corresponding technical standard, labeling scheme and its compliance, all in all in dialogue with the Energy Efficiency Committee proposed to assure quality and appropriate implementation of the MSP.
- Put up to speed public officers of SNC, ENEE, DGCC and DGE through their participation with current discussions in international S&L committees for electrical equipment, such as COPANTL and the regional PTB LAC Project.

Activity 1.1.2: Enforcement of Conformity Assessment

71. Once the situation analysis has been processed and the outline of a S&L Scheme proposal presented, the Project Management Unit (PMU) in coordination with the Energy Efficiency Committee will validate it with the relevant MSP policy-makers and other key public institutions, such as customs authorities, consumer associations, private chambers, universities and interested financiers as well as to submit it for broader discussion through the National Dialogue Platform (Act. 1.2.), in order to:

- Review the current voluntary scheme OHNx and analyze the institutional willingness to transform one or more S&L Scheme into a mandatory-enforcement scheme (*reglamentos técnicos*).

Activity 1.1.3: Green Award in the Hotel Industry

72. For those hotels that successfully accomplished an EE management operation, MiAmbiente, with support from CANATURH and HOPEH, will create an annual recognition in terms of an award. This award will be an honorary distinction, with significant media coverage to promote competition amongst hoteliers, and does not include any sort of monetary recognition.

- Design and implementation of a voluntary agreement for a “Green Award” geared to those hotels interested in receiving an annual distinction as a “more sustainable and resource efficient hotel”. In this regard, the role of HOPEH is critical since operations in S&M hotels are basically women-led organizations, so gender benefits will be highly recognized in the evaluation process of the proposed award and sufficient social and environmental criteria will be developed to generate a hierarchical proposal of awards that incentivize financially that the S&M hotel industry is achieving targets that promote inclusive green tourism.

Output 1.2: *Completed capacity development for key stakeholders on electricity use, energy savings and GHG mitigation*

73. Led by the Energy Efficiency Committee, this Output aims at strengthening the current knowledge of energy efficiency management by fomenting energy efficiency entrepreneurship among hoteliers, especially among those SMEs and hotels owned or run by women in undeserved and vulnerable conditions. Likewise, to foment a learning-by-doing approach by technical staff, financiers and beneficiaries for an implementation of best practices on electricity consumption, e.g.: energy audits, preparation of adaptive business plans for S&M hoteliers, and post-investment protocol follow-up and monitoring of energy savings and GHG mitigation.

Activity 1.2.1: Set up a National Dialogue Platform

74. Promote an intensive and proactive dialogue between public stakeholders and the private sector by organizing and coordinating a National Dialogue Platform for Energy Efficiency, in order to align the scope of existing international cooperation programs to maximize MSP impacts as well as to guarantee transparency throughout the overall MSP execution -under the leadership of MiAmbiente- including key topics that will be of special interest of the Energy Efficiency Committee of the MSP, such as:

- cooperate with MiAmbiente to move forward EE activities in light of the Executive Decrees PCM10-212 and PCM 34-2014,
- gauge in-country strengths and weaknesses for mandatory-enforcement schemes (*reglamentos técnicos*) for EE technologies,
- define a road map for the EE law proposal under discussion in the Energy Commission of the National Congress, including its analysis and discussion with all sectors, retain a consultant for review, and update of the existing draft,
- convey an action plan with ENEE to develop its URE Program in a participatory approach, giving special attention to small and medium hotels,
- structure a common path for training and capacity development for public agencies and the private sector through CANATURH and HOPEH with the support from JICA through its technical assistance program for the tourism sector, as well as GIZ/4E, CNP+LH, and UNITEC,
- implement the "*Medición Bidireccional*" policy for those interested hotels located in geographic zones with high solar radiation levels, through ENEE (mainland) and the private power utilities operating in the coastal areas (e.g. INELEM),
- increase cofinancing as MSP evolves, and
- share on-going experiences as EE market evolves.

Activity 1.2.2: Carry out a geographical training program for technical staff and energy efficiency entrepreneurs.

75. The regional branches of the private sector (e.g. financial institutions, CANATURH and HOPEH) will coordinate a horizontal knowledge training program amongst maintenance and management personnel through the lifetime of the MSP, based on sub-regional contexts, prioritizing San Pedro Sula, Copan Ruins and the main cities of the northern coast as first priority, Tegucigalpa and the Bay Islands as second priority, and the Choluteca geographic area as third priority. For the design of the Program, the actors in the private sector identified will be supported by several institutions such as SNC, ENEE, GIZ/4E, CNP+LH, and UNITEC. The thematic content of this Program includes, but is not limited, to the following topics:

- Develop measures for compliance with technical standards and labels for electric equipment, to accelerate the market penetration of the most energy efficient technologies (SNC through OHN)
- Present various schemes available in public institutions for the implementation of green incentives for the hotel industry (IHT)
- Prepare standard guidelines for analyzing investment proposals in energy efficiency, as described in Act. 2.1.3 (UNAH, UNITEC)
- Define energy intensity indicators, load curves for electro-mechanical design, as described in Act. 2.2.1 (ENEE, CNP+LH)
- Adapt formal academic knowledge on Energy Management, Project Formulation and Evaluation, Energy Analysis in Facilities and Energy Audits, to train technical staff (UNAH, UNITEC)
- Implement a new culture towards energy use in the hotel industry through best practices (CNP+LH).

Activity 1.2.3: Established a training program for financiers, technical staff and energy efficiency entrepreneurs.

76. There is a group of financial intermediaries already acting in the financial market supporting cleaner production, SMEs, and greener investments. Based on current lessons learned and best practices, this activity aim to promote energy efficiency entrepreneurship among youth and women, including at least two main efforts:

- Strengthen capacities of conventional financial intermediaries towards EE project finance, for instance, furnish them basic understanding of the main findings of an energy audit for due diligence within the traditional financial sector.
- Develop, through OHA/SNC, an accreditation system of skilled professionals for preparing energy audits and monitoring of energy savings. Only the technical reports prepared by these qualified professionals will be considered by the *"Green Scheme"* for due diligence.

Outcome 2: Commercially-driven investment in energy efficient equipment and technology for the hotel industry mobilized (grant and non-grant mechanisms)

77. Increase access for EE investments in S&M hotel facilities will be developed by promoting the mobilization of innovative, commercially-driven investments of more energy efficient technologies. The proposed innovation, called *"Green Scheme"*, supports investments in energy efficiency, energy conservation and mitigation of GHG emissions in the hotel sector, developing and stimulating national, regional and international initiatives to channel financial resources for implementing cost-effective measures, best practices, purchasing high-efficiency equipment, and the introduction of alternative sources of clean energy with renewable energy resources - commonly used in hotel facilities- such as solar water heaters and photovoltaic systems for lighting and refrigeration.

78. The *"Green Scheme"* will be also linked to other on-going social and environmental initiatives carried out by the hotel and restaurant sector as part of its social and environmental responsibility, and the evidence-based results in this area will be awarded. Two main criteria are considered: a) focus on the promotion of permanent and decent jobs among youth and women by capitalizing synergies with on-going initiatives such as "Green Jobs in the Tourism Industry" implemented by HOPEH and CANATURH with technical support from the International Labor Organization (OIT); b) focus on the promotion of environmental responsibility that moves beyond energy

efficiency measures, and adding muscle to complementary and programmatic approaches that promote sustainable management of natural resources and protection and/or restauration of vital ecosystems for an inclusive and green tourism sector.

Output 2.1: *Established the "Green Scheme" for EE projects in the hotel industry*

79. The *"Green Scheme"* to be developed will work as a guarantee and collateral mechanism that provides up to 50% of the initial investment (non-reimbursable) with technical assistance to hotels with less than 50 rooms (i.e. 9 S&M hotels), mostly provided in the form of energy audits, preparation of adaptive financial plans and ex-post follow-ups, with the remainder to be covered by the hotelier.

80. As a result, funding alternatives will be available to hoteliers that mostly operate at full debt capacity, women and youth in underserved and vulnerable conditions. The access to fresh capital for the intended energy efficient pilot projects should focus on further development and implementation of differentiated and context-sensitive financial schemes. Part of the grant component of soft loans will also cover capacity development support beyond MSP closure (technical assistance).

Activity 2.1.1: Design of the *"Green Scheme"*

81. The development of a green financial mechanism, wholly dedicated to support the take-off of project financing for S&M hotels in Honduras, is the path proposed by this MSP to move forward EE investment opportunities identified at the energy-audit stage, but do not have the leverage to be implemented because of the lack of access to capital investments. The proposed "*Green Scheme*" will be implemented in two steps:

Step 1: Non-reimbursable assistance for carrying out pre-investment activities.

82. In order to bring the attention of the hotel industry, there will be a maximum of a 50% subsidy level (non-reimbursable) to cover technical-assistance (approximately $100k to be contracted via UNDP), pre-investment costs such as the calculation of the load curve for each type of hotel as described in Activity 2.2.1 and the development of financial plans for 9 S&M hotels (approximately $400k worth of grants disbursed via UNDP to existing EE funding mechanism, e.g. FOPESIC).

83. The participating pilot hoteliers should be willing to cover at least 50% of the cost of the energy audit and pre-investment analysis. This share will manage the risk of not continuing participating in the MSP or showing a lack of interest to move ahead into the investment phase.

84. Pre-investment costs includes co-financing of energy audits and technical assistance by consultants for the preparation of short business plans and teasers, licensees, access to government incentives, access to key information, and any other standard requirement that is common practice for large hotels but becomes too cumbersome for S&M hotels.

85. The proposed initial figure of up to 50% is based on current knowledge of the average cost of an energy audit ranging from US$3k up to US$20k, per total pre-investment, depending on the size of the pilot hotel. Preference will be assigned to those hoteliers that commit the lower share and show full commitment with the activities planned for this MSP. For instance, each pilot hotelier should assign at least two staff members to participate in the planned training programs, each one from the administrative and the maintenance departments, of which, at least one participant

should be a woman. Justification for not complying with this criterion should be endorsed by the MSP Energy Efficiency Committee and reported to the GEF during the Mid-term evaluation.

86. Subsidies for pre-investments will be allocated only during the first 2-year period of the implementation phase of the proposed GEF initiative. By the end of the MSP, and once the proposed innovative mechanisms become a common practice for the hoteliers and financiers, and most likely for the administrative manager of the *"Green Scheme"*, the subsidy level will not be needed and the mechanism will continue its operations without any further GEF grant.

Step 2: Financial assistance for implementation.

87. In addition to the above subsidy at the pre-investment stage, the *"Green Scheme"* will also allocate project finance for those hoteliers interested in developing innovative, non-recourse project financing for their investments in EE as well as in the tourism value chain, for example, energy conservation opportunities in the restaurant business. The complexity of the Honduran financial market is characterized by the fact that conventional lending has a significant cost for S&M hotels, due to the high rates of intermediation of the financial system and collateral requirements established by national banking regulation that hinder access to existing credit lines. In addition, many S&M hoteliers have already reached their borrowing capacity and their regular income is already earmarked to cover other existing debt obligations as well as their daily operating costs. Under this context, this window of the *"Green Scheme"* will support S&M hotel EE financing between three different financial instruments:

- Savings guarantees to help hoteliers access commercial lending based on shares savings and providing EE equipment as collateral (at least 2 hotels).

  This mechanism will support the financing of larger investments (above $50k) for medium hotels through commercially-oriented lending institutions. This financial assistance will be provided through commercially-oriented lending institutions in the form of a guarantee letter that in case of default or not reaching the projected energy savings, the guarantee will cover the principal of the loan. It is a type of collateral (financial obligation) provided by the *"Green Scheme"* for at least two medium-sized hotels during the execution of the MSP in order to trigger an alternative funding mechanism that has not been tested in the Honduras financial market. In order to cope with this risk, there should an effective information-dissemination campaign and systematization of lessons learned to increase the level of motivation from hotel owners and from FIs for the growth and consolidation of this financial mechanism, after the MSP is completed. It is expected, as the financial market for EE matures, that this sort of mechanism will not be necessary beyond the completion of this MSP.

- Leasing for mechanical equipment (at least 4 hotels).

  Upon completion of the MSP project, it is expected that leasing mechanisms of current use in the financial markets of Honduras for other type of fixed assets, will be adopted by the hoteliers and endorsed by the financiers, transforming this as a "business-as-usual" practice for S&M hotels, in particular for replacing inefficient air conditioners and obsolete refrigeration equipment with high EER units. The lessor will be one or several commercial banks as the ones indicated in Table 1.6, already operating this mechanism in the Honduran financial sectors for other assets. The role of the *"Green Scheme"* will be to facilitate the development of a leasing investment portfolio with the S&M hotels as well as to assist in the formulation of the first leasing operations between the lessor and the interested hotels.

- Subsidized interest rates through conventional debt (at least 3 hotels).

  This type of finance will be also considered under the MSP. Due to high constraints to most of the S&M hotels to access conventional finance through debt, the *"Green Scheme"* could also assign an economic incentive by absorbing a portion of the commercial interest rate for those hotels willing to access such conventional credit lines when they borrow capital from local banks, as a premium when their EE metrics over-exceeds the benchmark and are willing to access conventional credit lines. For instance, a special recognition will be given to those hoteliers fully committed with best practices on social aspects, such as keeping legal employment conditions and providing period training for their staff.

Activity 2.1.2: Define the appropriate governance for the operation of the *"Green Scheme"*

88. UNDP Honduras has developed a track record in this regard. This MSP will design and adjust the final tuning of the "*Green Scheme*" during the first semester, testing its assumptions and making the required adjustments throughout the remaining execution of the MSP. For its management, the Project Management Unit (PMU) may consider two options:

i. To manage it, on a competitive basis, UNDP would invite financial intermediaries (i.e.: commercial banks, micro-financiers, financial networks), already operating in Honduras to bid for the management of the "*Green Scheme"*. The final selection of interested financial institutions will be made based on the best technical and financial proposals presented by these financial intermediaries as part of a bidding process. Table 1.6 presents those financial entities already providing SME finance that could participate in the bidding process.

   Choosing for this option should also take into consideration the fact that the amount of funds allocated by the GEF for this Component could be too low to cover the administrative costs charged by this type of intermediaries. However, it could be also an opportunity to engage a strong financial partner with the ability to commit its role by decreasing subsidies over time as the EE market evolves and becomes BAU for the intermediary; taking advantage of second-tier capital availability from regional development banks for such intermediaries that operate today.

ii. UNDP has implemented another GEF fund for energy efficiency in the industrial and commercial sectors in Honduras, known as FOPESIC. Up to now, this Fund has been managed by the Honduras Business Council for Sustainable Development (CEHDES). Several lessons have been learned so far, as a result of this GEF MSP, being the principal one in the financial front, as described in Table 1.6. This Table compares the lending conditions under which FOPESIC operates, which are much more attractive than other conventional lending conditions, budgetary constraints prevent it from positioning a nationwide marketing strategy. This has been considered in the design of this MSP by integrating not only conventional financing operations but also innovative financial mechanisms, as explain in Act. 2.1.1.

   However, it is necessary to carry out an external assessment of its performance so far as well as of its current administrative environment while being hosted in CEHDES, measuring their experience and impacts regarding EE project financing in those sectors since 2008 and its financial sustainability over the long-run.

   Part of this assessment should consider the possibility of expanding FOPESIC`s mission to become part of a larger Environmental Trust Fund under design by the Government and financed by a climate mitigation strategy defined mainly by ONU REDD, FCPF and CliFor (see co-financing letter emitted by the Government in Annex 6). This Fund will manage a diversity of

financial mechanisms for environmental protection, carbon-stock trading, payment for environmental services in key sectors (e.g. fishery, cattle and forest sectors), and energy efficiency in the tourism sector, as the commitment letter issued by MiAmbiente in this regard and attached in Annex 6.

Activity 2.1.3: Due diligence for the allocation of innovative financial mechanisms.

89. Based on the standard load curves -for at least three types of hotels- developed in Act. 2.2.1, the next step is to evaluate alternative EE technologies for more efficient lighting systems, high EER air conditioners, high efficiency rated refrigeration equipment and implementation of energy management practices such as Solar Water Heating and Pool Pumping Systems, as well as the ones indicated in Annex 3.

- Development of guidelines to standardize business plans for accessing EE project finance under the *"Green Scheme"*, by executing the following key activities:

  - Determine main energy conservation opportunities (OCEs) considering those technologies available in the Honduran market complying with minimum EE standards.
  - Carry out a financial analysis of reduced usage per each OCE, including value of energy savings, time to pay-back initial investment, and value of investment over time (Net Present Value), for the main EE end-uses.
  - Prepare, with assistance from the CNP+LH and FOPESIC, user-friendly templates to formulate quick business plans and teasers for easy understanding of both, S&M hoteliers and financiers. This information will be widely open for other financiers.
  - Build capacity within the S&M hotel in preparing a business plan to present an energy efficiency investment project to a financial institution in order to catalyze this kind of investments. This activity will be a topic to be integrated in the training activities 1.2.2 and1.2.3 mentioned above.

Output 2.2: *Portfolio of 9 pilot projects at feasibility level with funding plans to implement EE measures*

90. At least 9 pilot projects would help demonstrate the viability of reducing electricity consumption in an environmentally sound and cost-effective manner; thus, it will create the necessary awareness and interest of EE benefits amongst hotel owners, and to have working examples available for replication. Pilot projects will include EE financial plans ready for negotiation with national financiers (e.g. FOPESIC), and second-floor regional development banks (e.g. BCIE/PyMEs and IDB-CII/GreenPymes).

Activity 2.2.1: Development of a benchmark range for electricity consumption

91. This activity is technically-oriented towards the strengthening of the engineers and technicians with the abilities to sustain an EE market in the power sector over the long-term. It includes:

- Verify the savings potential for the participating pilot hotels, as shown in Table 1.11, as well as to validate key EE improvements (best practices) during the first semester after the MSP starts. These figures will also be verified along the MSP execution through energy consumption records and evaluation.

- Develop energy indicators for electricity consumption for different end-uses at the hotel facility, for instance (kWh/occupied room) and the determination of load curves for 3 hotel

sizes, following the standard procedure in the industry for this type of calculations based on the occupancy rate. This means to identify the overall energy usage of the hotel facility through an energy audit by executing the following key activities:

- Historical electric energy billing available from the public utility (at least 12- months)
- analysis of the current tariff
- measurement of energy usage by existing power consumption equipment to provide baseline data
- analysis of historical occupancy data to determine requirements for electricity consumption on a yearly basis
- analysis of time-of-day energy usage (load curve) and cost of kWh to determine cost and value of energy offsets
- plot both curves to evaluate which alternative EE technologies could offer a more cost-efficient performance, and
- define most appropriate energy indicators, such as: kWh per guest, kW per guest, kWh per occupied room.

- Develop load curves to determine a benchmark will be prepared for the following 4 types of hotels:

  - Small-size city hotel / number of rooms / occupancy rate
  - Small-size beach hotel / number of rooms / occupancy rate
  - Medium-size city hotel / number of rooms / occupancy rate
  - Medium-size beach hotel / number of rooms / occupancy rate

Activity 2.2.2: Scaling up an investment portfolio

92. The preparatory phase of the ProDoc has identified a portfolio of at least 24 opportunities for EE investments in the S&M hotel sector. The target of this Output is to trigger 9-early investments, thereby making full use of the different financial mechanisms developed under Output 1.3. Other supportive measures developed under Outputs 2.2 and 2.3 are anticipated to build a strong basis for successful replication of at least 15 additional investments by providing assistance to access innovative financing for their implementation. Moreover, the barriers addressed are common in many other Central American countries where there is a significant potential for replication of the proposed removal mechanisms.

93. Motivation in the S&M hotel sector already exists in Honduras based on on-going AP+L activities. The following activity will be implemented along this line of action in order to identify 9 pilot projects:

- The PMU, together with CANATURH and HOPEH, will undertake a selection process based on the preliminary list of hotels listed in Table 1.10 and on the criteria shown in Annex 5 for selecting the pilot projects; information that was prepared and validated with CANATURH during the formulation of the ProDoc.

- Training will be implemented by the PMU through the development of 9 EE pilot investments by assisting hotel managers and administrative staff to prepare business plans; but also by adapting the formal training modules developed by the Technological University of Honduras (UNITEC) graduate program to short-term, on-the-job/hands-on training modules for S&M hoteliers.

***Output 2.3**: Set up a programme for monitoring and evaluation of actual energy savings, GHG emission reductions and EE investment performance*

94. The measure of actual benefits of the MSP will help EE awareness-raising. For all MSP activities, a monitoring system will be developed and implemented by the PMU in accordance with the indicators, means of verification and risks and assumptions described in sections 3 and 5 to ensure that:

    i. Information and experiences achieved will be useful for replication and scale up,
    ii. Information gained from it could be used to make changes in MSP design, if necessary, and
    iii. Report on performance and impact indicators in accordance with UNDP and GEF M&E standard procedures established and agreed in Section 5.

Activity 2.3.1: *Monitoring and evaluation of energy savings and GHG emission reductions*

95. This activity also contributes to a replication strategy based on the experience gained from the early investments, assessing the market conditions and the activities to create the foundation for market transformation of EE equipment and best practices in the hotel sector, but also of broader impact to other sectors. This activity also includes monitoring of GHG emission reduction benefits due to replacing HCFC-22 (R-22), with low global warming potential gases.

- Design and implementation of a Monitoring Strategy including actual energy savings and GHG emission reductions. Developing this Strategy is based on the need to standardize, formalize and document the monitoring of all projects, from 5 areas of work:

    i. Elaborate tools for data collection, plan field trips, standardized forms of documentation and systematization of data.
    iv. Provide support to new interested hoteliers based on experiences, also technical assistance and evaluation of management results.
    v. Conduct planned field-visits and document these visits with photographs and guided interviews.
    vi. Inform the Board Management, MiAmbiente, UNDP, GEF and other agencies involved in the MSP, and
    vii. Recognize the strengths, identify problems and improve overall MSP management.

Activity 2.3.2: *Monitoring of EE investment performance*

96. Close monitoring of the 9 pilot projects covers a broad range of aspects within S&M hotels, such as:

- insertion of EE management into the overall environmental management of the hotel,
- appropriate technology transfer and adaptation,
- formulation of a business plan and similar tools –user friendly- throughout the EE investment decision-cycle,
- on-going access to innovative financial mechanisms for EE investments,
- equipment installations and energy-savings monitoring.

Outcome 3: Increased practice and application of energy efficient technologies in the Honduran hotel industry

97. Broad dissemination of successful experiences and best practices will improve the deployment of energy efficient technologies in the Honduran hotel industry, together with the systematization of experiences and lessons learned at the national level, based on the outputs of Components 1 and 2. CANATURH and HOPEH membership has both institutional capacities and knowledge management for replication and upscaling of MSP outcomes.
98. The MSP will provide an effective brokering and will promote dialogue between policy-makers, consultants, engineers, financiers and hoteliers. Training materials, information sources, best practices and lessons derived from the experiences of the "pilot hotels" will be actively shared through outreach and dissemination activities. The intent of this Outcome is to make a variety of stakeholders –not only S&M hoteliers- aware of EE projects as a viable business opportunity and thereby be motivated to adopt EE practices as part of their entrepreneurial practices.

99. There is no duplication with other initiatives in Central America. The proposed MSP will create synergies with similar EE initiatives in Central America, for instance, taking advantage of the knowledge management platform created by PEER (2006-2011) and the learning curve developed by the UNDP-GEF MSP Energy Efficiency in Public Buildings under implementation in El Salvador.

Output 3.1: *Documented and vetted case studies from the 9 projects piloted nationwide*

100. For comparison purposes, the case studies will require the development of energy indicators for electricity consumption for different end-uses at the hotel facility, for instance kWh/occupied room and the calculation of load curves; thus, identifying the key sources of power consumption in the hotel sector (Act. 2.2.1). Case studies based on the experience of piloting 9 different hotel-facilities incorporating the gender aspect are also incremental activities under this Output. The PMU should create awareness and interest for MSP outputs within S&M hotel owners, CANATURH and HOPEH and the financial community. If information is not available to all stakeholders in useful form, it reduces impacts.

Activity 3.1.1: Elaboration of case studies based on the experience of piloting 9 pilot projects.

101. This activity refers to documenting and systematizing lessons learned related to the initial 9 energy efficiency investing projects, illustrating also the direct benefits to women and youth. The historic learning curve developed by ENEE under the GAUREE initiative is a very valuable source of information for this activity as well as best practices systematized by the CNP+LH in the hotel and restaurant sectors. Also, to highlight the work that CABEI/MiPymes Verdes and FOPESIC have done at the country level on EE project financing.

- Prepare informational material with lessons learned and best practices from past and on-going activities.

- Integrate the financing aspect in the lessons learned on project finance from the lending perspective based on the learning curve developed by FOPESIC and the *"Green Scheme"*.

Activity 3.1.2: Information dissemination and promotional campaign.

102. Public visibility of the MSP outputs should be part of a large promotional campaign targeting inclusive green tourism in Honduras, in order to make a variety of stakeholders aware of co-benefits that move beyond of EE projects as a viable business opportunity and thereby be

motivated to adopt EE practices as part of their entrepreneurial practices, for this reason is critical the:

- Participate in local, national, and international events of both, energy and tourism events, to disseminate lessons learned and share MSP outcomes as a branding image of inclusive green tourism.

Output 3.2: *Operationalized database and website on energy efficiency best practices, success stories and services for Honduran hotels*

103. Information activities will be designed to assist the building of a knowledge platform for broad dissemination through printing and dissemination of EE hand-outs on air conditioners lighting, refrigeration; dissemination of standards and labels for air conditioners and lighting systems, database and a website on best practices, available consulting services, experiences from the pilot projects and business links to commercial lenders and international EE networks.

Activity 3.2.1: Operationalized database and website on energy efficiency best practices, success stories and services for Honduran hotels.

104. Results, main findings and lessons learned will be widely disseminated to sustain communication to society and promote replication by different instruments such as an EE database and a website to support information exchange, including key activities such as:

- Virtual EE Information Center. The strategy for e-communications and outreach is to systematically expand the MSP web site as a virtual platform on energy efficiency which will promote the work and enable existing and potential partners to access information on policies and available financing, lessons learned gained through the early-investments, EE experts roster available in Honduras, service and product providers, posting technical publications, links to the UNDP and GEF websites, other EE GEF projects under implementation, as well as a continuous follow up of MSP's activities. This activity will also provide technical assistance as an electronic help-desk to interested stakeholders not only in Honduras but throughout Central America.

- Create a database on EE equipment suppliers, engineering firms, private consultants and financiers, both at the local and regional levels. Of this database, at least 25% of the records should be professional women who are already performing in energy efficiency and small-scale renewable energy markets in Honduras.

Activity 3.2.2: Best practices manuals for A/C, lighting, refrigeration and electric motors fully disseminated (4 publications)

105. Following a similar approach on providing technical advice and supporting knowledge management carried out by BUN-CA in Central America on energy efficiency during the PEER UNDP/GEF/FSP (2006-2011), the MSP will:

- Release a series of technical publications for: lighting systems, A/C systems, refrigeration systems, electric motors, and best practices associated with their use. This information will be broadly disseminated in an attractive and easily readable format. In order to sustain its impact after the end of the MSP, these publications will be readily available in electronic form and linked to other institutional EE information centers like HOPEH, CANATURH,

UNITEC, FOPESIC websites at the national level, among others, and in BUN-CA`s website at the regional level.

Activity 3.2.3: Exchange of experiences and capacity building between stakeholders (peer-to-peer knowledge and learning)

106. The evolution of innovative business models due to the market implementation of the early investments, for instance, will be structured as a learning mechanism that needs to be fully shared, not only in Honduras, but throughout the Central American tourism business.

- Develop a program for disseminating impacts and results. Through HOPEH, the learning curve developed during the MSP, will be shared with the other small hotel associations and hotel chambers, like the Central American Association of Small Hotels, and during the different regional forums for sustainable tourism held in the region.

2.2 Project Risks

107. A group of risks has been identified and has to be taken into account during the execution of the MSP. At the MSP design stage, the UNDP met several times with most relevant financiers, private stakeholders, and high-ranked public officers of MiAmbiente. Because of the implementation of the financial mechanism, the failure of obtaining the support of second-tier financial institutions is consequently considered as the main MSP risk. However, two regional development banks established in Honduras have shown their interest to embark on the MSP. Banks will make their decision based on the detailed design of the *Green Scheme* and the related regulation. Table 2.1 below presents the different types of risks and describes the risk mitigation strategy that has been designed to overcome them.

Table 2.1: Identified risks and their mitigation strategy

Risks	Likely	Mitigation Strategy
1. High levels of crime and insecurity jeopardizing intended tourism growth and development in Honduras.	High	The levels of high insecurity are mostly concentrated in the urban areas, but the majority of hotels are located in lower-risk zones. The social component of the full environmental screening is focused on safety and security measures from stakeholders required to address this risk.
2. In an emerging market for EE equipment, low quality technologies may drive high quality products out of the market, causing unfair competition.	High	The MSP has included a group of activities to enforce and promote strict technical norms for EE equipment, a topic that is transversally treated in the execution of all activities related to capacity building and including key stakeholders of the private sector.
3. Limited institutional capacity of public sector stakeholders could delay the execution of the proposed activities.	Moderate	In order to mitigate this internal risk, the MSP has created an Energy Efficiency Committee made up by a mix of public and private stakeholders complemented by an open national forum, the National Dialogue Platform. This strategy is geared in the short term (2015-2018), in the direction of strengthening institutional capacities and in developing MSP execution activities also to the private sector, such as the key role that CANATURH, HOPEH and FOPESIC

		may play to effectively address the existing institutional challenges.
4. The *Green Scheme* is not sufficient to guarantee the triggering and long-term sustainability of the energy efficiency market in the Honduran hotel sector.	Moderate	Different types of financiers (e.g. commercial lenders, development banks, international aid cooperation agencies) are being engaged by the AP+L initiative to diversify financial access, and mitigate risks around the catalytic impact of the collateral mechanism. CANATURH and HOPEH and MiAmbiente and IHT back-up will also help mitigate this risk.
5. Low levels of motivation from hotel owners to implement further EE actions and that commercial lending from FIs will be readily available for the growth and consolidation of innovative financial mechanisms, after the MSP is completed	Low	This risk will be mitigated with the spread of MSP interventions across different types of hotels/locations (pilot investments), like those geographic regions where electricity pricing is higher. With the demonstration of similar levels of energy savings across the nation –through HOPEH- the industry will feel the urge to remain competitive after the MSP ends. Improving the capacity of financial institutions to provide commercial lending for EE investments is being addressed in Component 1. In addition, the lessons learned from the structuring of at least 9 early investments, negotiated and implemented with the FIs in Component 2, will be fully systematized, validated, and disseminated in Component 3.
6. In an emerging market for EE equipment, low quality technologies may drive high quality products out of the market, causing unfair competition.	High	The MSP has included a group of activities to enforce and promote strict technical norms for EE equipment, a topic that is transversally treated in the execution of all activities related to capacity building.
7. Honduras' climate and position between the Atlantic and Pacific Oceans makes it susceptible to climate-related disasters including hurricanes, tropical storms, floods and rainfall-triggered landslides	Moderate	Climate resilient will be promoted hotel installations with emphasis on their ability to withstand extreme conditions. The proposed EE interventions in buildings will be an integral part of the disaster risk and emergency management activities promoted in the tourism sector, as another means of promoting climate change adaptation.
Source: ProDoc 2015.		

2.3 Expected Global and National Benefits

108. For the global environment, the MSP will lead to a direct reduction of GHG from the investments carried by the hoteliers, due to the implementation of technological changes to replace inefficient electrical equipment for more efficient devices, such as air conditioners, lighting systems (mainly LED and compact fluorescent lamps), and refrigeration units, complemented by the execution of end-use best practices.

109. The expected Global Environmental Benefits associated to the above outcomes are estimated as follows: as a direct result of this MSP, 1,978 tCO2 of direct emissions are expected to be avoided over a 20-year period, based on a 0.66 tCO2/MWh emission factor (FOPESIC, 2015); based on a sample consisting of 9 small and medium hotels. For the entire hotel sector registered in CANATURH, made up by 400 hotels nationwide, also over a 20-year period, 316,318 tCO2 of indirect emissions will be avoided and a potential saving of about 40 GWh/year which represents 22% of savings based on the estimated current levels of consumption.

110. Moreover, the MSP would lead to further reductions once obsolete R22-refrigerators and cooling equipment are replaced with new refrigeration systems,withamongst the HFC options available in the market that provide the lowest GWP potential vis-à-vis the highest EE mitigation potential.

111. The main national and local benefits are expected to be:

- Alignment of a national public-policy for energy efficiency, for the first time, in the Honduran energy context.
- Enforcement of 4 technical standards and labels for imported electrical equipment of most common use at the national level, which leads to the cumulative energy savings of 40 GWh (direct, post-project and indirect) each year.
- Increasing income for small and medium hotel owners in the highly tourist areas of Copan and the Caribbean Coast, thus supporting permanent jobs all-year-around for servicing staff and maintenance crews.

2.4 Project Rational and GEF Policy Conformity

112. Within the GEF CC focal area, the MSP supports the objectives of Climate Change Objective 2: *"Promote market transformation for energy efficiency in industry and the building sector"*. The GEF support under this objective may involve technical assistance, innovative financing mechanisms, awareness campaigns, and investments in demonstration and deployment of high-performance technologies.

113. To this end, the proposed MSP, under Component 1 –*Sustainable Tourism Low Emission Policies*- will review the limited application of the voluntary standards and labels (BAU) applicable for the EE technologies in the industrial and commercial sectors, involving a partnership between government agencies and the private sector, and will analyze the most favorable path to effectively contribute to the adoption of low-carbon standards and labels for electrical equipment (alternative).
The observance of national standards and labels provisions for electrical equipment, together with a technical assistance carried out at the national level will help and motivate hoteliers and other sectors of the economy to implement energy efficiency measures, also to reduce their high electricity bills and national oil bills due to import of hydrocarbons.

114. Under Component 2 -*Sustainable Tourism Low Emission Funding*- due to the lack of access of conventional funding for small and medium hoteliers in the EE arena (BAU), the MSP stresses the importance of developing an innovative financial mechanism, the *"Green Scheme"*, which catalyzes access to additional finance by S&M sized hotels and helps demonstrate the commercial viability and cost-effectiveness of EE investments for different types of hotels nationwide (alternative).
The successful implementation of the pilot project portfolio in the northern part of Honduras leads and creates the conditions for the replication of EE measures across the country, which is

translated into: (a) increased electricity bill savings, (b) reduced GHG emissions; (c) improved S&M hotel competitiveness.

115. For Component 3 -*Sustainable Tourism Low Emission Knowledge*- and due to a significant fragmentation of information and past experiences (BAU), the MSP hosts knowledge management in the hotel sector nation-wide through different information and communication tools, highlighting alternative energy efficient investment mechanisms viable in the Honduras market place for S&M hoteliers, best practices and lessons learned at the national level as the main cost-effective measure amongst cleaner production actions for the hotel industry to increase productivity and competitiveness (alternative).

Existing technical information at the regional level that is widely available from past UNDP/GEF initiatives, i.e.: PEER will be adapted to the hotel industry and for other energy end-users in the commercial and industrial sectors.

2.5 Country Ownership

116. Honduras ratified the UNFCCC on February 14th 1995 and as a country with an economy in transition is eligible for UNDP/GEF funding. As signatory party to the Convention, Honduras prepared its Second National Communication in order to honor its commitments under the Framework Convention, which was submitted in 2000, and is in the process of preparing its Third National Communication.

117. The UN Partnership Framework of the Republic of Honduras for 2013-2017 identifies energy and resource efficiency as one of the key programming areas seeking to promote changes in production and consumption patterns in both the public and private sector. In line with this the proposed MSP advances and strengthens actions of the National Strategy for Climate Change, the National Strategy for Sustainable Tourism, and national agreements on cleaner production.

118. This MSP is supporting the Government of Honduras in implementing the newly established institutional platform on environment, under the leadership of MiAmbiente. One of the key actions for sustainable energy policy-making is to promote energy efficiency-related legislation, such as the Rational Energy Use Law Proposal (2011), which has been submitted already to Congress and has identified the need for modern standards for electric equipment, including mandatory enforcement in priority end-uses, like electric equipment.

119. The MSP is strongly supported also by MiAmbiente, the newly created public entity on environment, which has committed to co-finance the MSP with an in-kind amount of $400.000.

2.6 Financial Modality and Cost-Effectiveness

120. The GEF support will primarily consist of a grant of US$1.2 million that will be mainly used to support the financial mechanism with the aim of implementing the "*Green Scheme*" and 9 EE pilot projects from 2015 to 2018, and in strengthening capacity building to remove policy and information barriers. The GEF funding will be complemented by the direct co-financing of US$ 9.6 million.

121. Each US$1 of GEF funding allocated to the *"Green Scheme"* will be leveraged by US$9.6 million by international development agencies focused on mitigation activities. The co-financing will be used for: (i) lending EE investments to S&M hoteliers (about $8 million) and policy-making and training; (ii) $1.6 million in capacity building activities, design of legal and normative frameworks, and grant to additional EE hotel projects to carry out energy audits and for implementing additional EE training activities that foment inclusive green tourism. Finally the

UNDP will invest $30,000 to support project implementation and to continue promoting the programmatic and strategic development of MiAmbiente through a result-based management and an evidence-based change approach to achieve sustainable human development throughout the implementation of the MSP.

2.7 Sustainability

122. In terms of sustainability, this broader sustainable development approach for the hotel industry, not focusing only on the hotels with large capital access, will help financiers understand and scale-up other markets niches for the implementation of energy efficiency investments. At least 9 projects within the MSP timeframe will be fully financed with the participation of commercial lending intermediaries and that financial sustainability of this *Scheme* will mobilize further investments after 2018, because financiers and hoteliers will be incentivized by profits from energy efficiency investments.

123. By setting up the *"Green Scheme"* to trigger EE investment/project financing in small and medium hotels, the main barrier should be overcome the lack of capital access. Based on the financial market players already operating in Honduras, projected capital mobilization will arise by developing commercially-oriented, but innovative mechanisms, described under the financial assistance window for implementation, the *"Green Scheme"* for hoteliers and restaurants.

124. The exit strategy, that is, how hotel stakeholders will further invest in energy efficiency after the MSP implementation is over, consists in positioning this *Scheme* under a much larger financial window, like FOPESIC, and to continue working with other intermediaries in the financial market place in order to channel funds from the on-going financing window implemented by the regional development banks. Likewise, the Environmental Trust Fund that envisions the Government can absorb the technical and financial arm of FOPESIC when established. This is how the Scheme will be continually administrated and funded. The successful operation of the Green Scheme during the lifetime of the MSP and after the completion of all activities is the key action to support to achieve the whole MSP sustainability.

125. In the gender and youth front, small hotels offer an opportunity for equity, as many of these facilities with less than 15 rooms are women-owned or managed, concentrates a young labor force that can be trained, so additional access to capital (i.e. any of the conventional debt and innovative financing mechanisms underscored earlier) will help them be more competitive vis-à-vis their peers.

126. In short, the sustainability after completion of the MSP depends on three main outcomes:

- Decrease non-reimbursable funding over time as the EE market matures,
- Attract commercial lending so the "*Green Scheme*" will continue its operations without any further GEF grant, and
- Keep supporting S&M hotels so that they can continue to access to funding for EE because innovative financiers will be incentivized by stable returns from EE investments.

2.8 Replicability

127. In terms of replication, the potential for scale-up is primarily linked to direct benefits of the industry in terms of energy savings, operating cost savings, and increasing low-carbon/environment awareness image for the hotel. There are 400 hotels registered in the National Bureau of Tourism of Honduras in 2015, of which 83% (331 facilities) are S&M hotels.

CANATURH initiatives in Honduras cover the entire hotel sector, both S&M and large hotels. It is expected that MSP outcomes will also impact large hotels, for instance, the use of more efficient energy technologies widely used by these hotels, like mini-splits A/C, CFLs, and more efficient self-contained refrigeration units.

128. In financial terms; that is, not only linked to the access to debt finance, but also to other forms hotels are expected to reap, for instance, the acquisition of EE equipment through a leasing operation with a commercial bank. Alternatively, the *"Green Scheme"* may be designed to pay part of interest for loans which local banks lend to the hotel owners. In this regard, GEF resources may be used as guarantee funds to reduce risk and hence reduce interest of loans for hotel owners when they borrow capital from local banks, so that funding will not only benefit the selected 9 hotels but also all small and medium hotels in Honduras, over the long-term.

129. The National Strategy for Sustainable Development of Tourism in Honduras 2006-2021 targets the protection of the country's wild beauty, jointly with the need to address ever increasing energy costs and high dependence on thermal power generation, which enable the opportunity to cost-effective alternatives due to lower energy consumption equipment, better load management and best practices, such as the use of solar systems and photovoltaics.

130. In addition, the MSP will target growing interest to support Sustainable Human Development throughout the Country for sustainable and low-carbon tourism. Therefore, the MSP will not only help address climate mitigation but also aims to sum up to the national interest of scoring points to a Low-carbon Development Strategy, where the MSP also points out indirectly to a possible NAMA in the hotel sector.

SECTION 3 - PROJECT RESULTS FRAMEWORK

3.1 Project Results Framework

Country Programme Outcome Indicators: Result 3 - In the context of economic rights and environmental conventions contribute to a productive Honduras, generating decent jobs, leveraging sustainable and integrated natural resources and reduce disaster risks resulting from environmental vulnerability. **Outcome 2 -** The Government of Honduras, the private sector and communities in areas of intervention, adopt best practices of ecosystem management, solid waste management, disposal of substances that deplete the ozone layer, mitigation and adaptation to climate change enabling the preservation of natural capital, reduce economic losses and income generation opportunities for sectors in conditions of greater vulnerability. **Indicator -** Number of avoided CO2 emissions voluntarily.

Alignment to the UNDP Strategic Plan 2014-17 - **Outcome 1** - Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded. **Outcome Indicator 1.5 Outcome Indicator 1.5.1** Number of new development partnerships with funding for improved energy efficiency and/or sustainable energy solutions targeting underserved communities/groups and women

Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): 1. Mainstreaming environment and energy OR 2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.

Applicable GEF Strategic Objective and Program: Climate Change Objective 2: Promote market transformation for energy efficiency in industry and the building sector.

Applicable GEF Expected Outcomes: CC Objective 2: Sustainable financing and delivery mechanism established and operational

	Indicator	**Baseline**	**Targets** **End of Project**	**Source of verification**	**Risks and Assumptions**
Project Objective: The Objective is to remove barriers to the increased commercial use of energy efficient electrical equipment in the small and medium-sized (S&M) hotel	Energy savings and the corresponding GHG emissions resulting from hotel and restaurants end- uses of electricity	• 0	• Energy savings: 299,698 kWh as a result of 9 pilot projects at the end of MSP: • Direct (20-year) GHG emissions (9 hotels): 1,978 tons CO2 Indirect (20-year) GHG emissions (391 hotels): 314,640 tons CO2	• Mid-term and final evaluation reports	• GoH and IHT will commit to provide financial incentives to S&M hotels to increase competitiveness of the tourism industry and create new incentives for CO2 mitigation. • Commercially-driven and Government support to

industry in Honduras			Total: 316,318 tons CO2 Note: There is also a GWP gain by switching to low GWP refrigerants in A/C units (Annex 2)		capitalize sources of funding that support the *Green Scheme* triggered mechanisms after MSP completion to help ensure sustainability of outcomes.
	Number of energy efficiency policies and/or legal normative for commercial electrical equipment enforced	• 0	Conformity assessments and labelling fully implemented for the commercialization of : • air conditioners, • lighting (CFL and LED), and • refrigeration units	• National decree(s) enacted by the GoH • Mid-term and final evaluation reports	
	Number of related jobs (disaggregated by sex/type) direct / indirectly promoted	• 185,481	• 236,725	• IHT databases / estimates	
			•	•	
<u>Outcome 1:</u> Energy efficiency (EE) enabling policy framework enforced and technical capacity strengthened in the Honduran hotel industry	Number of standards and labels for commercial electrical equipment enforced	• 0	• 4 standards, conformity assessments and labelling fully implemented for the commercialization of air conditioners, lighting (CFL and LED), and refrigeration units	• Official publication for each standard approved	• MiAmbiente and private stakeholders involved in EE activities agree to work together and partnerships be strengthened and effective during the execution of the MSP. • Stakeholders such as GIZ/4E, SICCS and UNITEC agree to effectively support capacity building activities.
	MSP contributions to national policy and legislation related to project thematic priorities	• 0	• 1 law EE proposal submitted to the National Congress and if approved, the legal code prepared during MSP execution (2016-2018)	• MSP reports • EE Law approved by the National Congress	

					• S&M hoteliers and financiers agree to attend the training sessions, no fee, and to scaling up their knowledge to other hoteliers and restaurants. • Government institutions under the leadership of MiAmbiente are fully involved and continue their interventions after the MSP completion.
	number of stakeholders trained on EE and integrating EE electrical equipment and promoting best practices and allocation of EE investments in the hotel sector	• 0 hoteliers	• 75 hoteliers 30 hoteliers trained on energy management 20 hoteliers trained on EE best practices 25 technical staff trained on energy audits and EE-related topics 4 hotels gained Green Award	• Certificates of participation in the training sessions issued by the relevant trainer • Result-based and evidence-based Reports of the Green Scheme and the Green Award	
<u>Outcome 2:</u> Commercially-driven investment in energy efficient equipment and technology for the hotel industry mobilized (grant and non-grant mechanisms)	*"Green Scheme"* designed, applied and monitored	• (Currently, FOPESIC manages a fund of about US$500k for EE investments and technical assistance in the commercial and industrial sectors)	• 1 financial scheme fully operational to support EE investments for S&M hotels, including FOPESIC`s investment funds and a climate change mitigation Fund able to couple with FOPESIC, of at least US$ 8.6 million	• EE pilot projects completion reports • Financial statements audited	• CANATURH and HOPEH members understand the benefits of greening their business and fully engaged in implementation, both for pre-investment activities and for project financing. • EE hotel projects meet the selection criteria in term of cost, payback and measurable savings.

	Number of hotels and restaurants implementing EE measures and best practices, in compliance with national policies (e.g.: AP+L and ENCC)	• 4 hotels (2 in Roatan, 3 in San Pedro and 1 in Tegus, already have energy audits)	• 9 new successful MSP interventions completed	• Reports from CANATURH and HOPEH networks working in AP+L and SICCS • Mid-term and final evaluation reports	• Due diligence process show that the commercial financial terms of the *Green Scheme* facility are not still suitable for the capacity payment of S&M hoteliers. • Private developers (EE S&M hoteliers) can get access to project financing from the *Green Scheme* with their willingness to co-invest about 20-50% of the front costs with equity.
	Electricity savings from investments	• 0	• 149,849 kWh saved by year 2 and 299,698 kWh accumulative by the end of MSP	• MSP reports • The *Green Scheme* lending portfolio report	
	Number of decent and permanent job created through social responsibility bind to the *Green Scheme* as well as the promotion of women-led entrepreneurial activities in the hotel sector	• 113 jobs retained at 60% occupancy rate in 9 pilot projects (9 pilot hotels x 25 rooms x 0,5 direct and indirect jobs per room)	• 113 direct and decent jobs retained at the end of the MSP thanks to an increase in occupancy rates of 63%, enforcing social responsibility bind as well as the promotion of women-led entrepreneurial activities	• IHT official statistics • HOPEH and CANATURH employment records	
<u>Outcome 3:</u>	Number of hotels with restaurants implementing EE	• 6 hotels	• 24 new hotels and restaurants have adopted	• List of participants	• Key stakeholders effectively increase their

Increased practice and application of energy efficient technologies in the Honduran hotel industry	measures and best practices, in compliance with national policies (e.g.: AP+L and ENCC) from: - MSP - Replication	Existing projects at CANATURH`s subsidiaries level: ➢ Tegus: 1 ➢ San Pedro: 3 ➢ Bay Islands: 2 (Barefoot and Coco Beach hotels)	and implemented EE plans	and training information of which at least 50% are women and ethnic groups • Reports from CANATURH and HOPEH networks working in AP+L and SICCS • Mid-term and final evaluation reports	capacities and use this knowledge for improved EE measures, best practices, and project finance. • S&M hotels overcome the lack of knowledge by selecting more energy efficient technologies and implementing best practices. • Number of hotels fully engaged in EE project finance will increase significantly after MSP completion due to promotion and campaign of inclusive green tourism strategies.
	Lessons learned systemized and disseminated	• 0	• 9 case studies prepared, validated by MSP stakeholders and widely disseminated through promotional campaigns aiming inclusive green tourism	• Publications available	
	Number of contributions from MSP to national and international publications and media	• 0	• 12 press releases and formal and informal publications released at the national and international levels, on EE measures and opportunities and	• Press releases and formal and informal publications aiming the promotion of	

			achievements in the S&M hotel business, during the lifetime of the MSP	inclusive and green tourism • Documents released (cases studies, lessons learned)	
Outcome 1: Energy efficiency (EE) enabling policy framework enforced and technical capacity strengthened in the Honduran hotel industry Output 1.1: Established national EE policy and operationalized a Honduran hotel EE scheme in compliance with minimum energy performance standards for appliances (4 technologies: air conditioners, lighting (CFL and LED), and self-contained refrigeration units) Output 1.2: Completed capacity development for key stakeholders on electricity use, energy savings and GHG mitigation (75 hoteliers and financiers trained)					
Outcome 2: Commercially-driven investment in energy efficient equipment and technology for the hotel industry mobilized (grant and non-grant mechanisms) Output 2.1: Established the *Green Scheme* for EE projects in the hotel industry (US$ 8.6 million fully commissioned to support EE investments to reduce emissions by 319,615 tCO2 in 20 years) Output 2.2: Portfolio of 9 pilot projects at feasibility level with funding plans (savings guarantees, leasing, subsidized interest rates, micro insurance) to implement EE measures (investments to reduce emissions by 300 tCO2 in 3 years) Output 2.3: Set up a programme for monitoring and evaluation of actual energy savings, GHG emission reductions, and EE investment performance (450 MWh in 3 years due to the execution of 9 pilot-hotels and an Environmental Trust Fund operating, among other sectors, for EE in the tourism industry)					
Outcome 3: Increased practice and application of energy efficient technologies in the Honduran hotel industry Output 3.1: Documented and vetted case studies from the 9 projects piloted nationwide (9 case studies prepared, validated, and disseminated) Output 3.2: Operationalized database through a public and private alliance and promotion of website on energy efficiency best practices, success stories and services for Honduran hotels					

3.2 Budget and Work Plan

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Total (USD)	Notes
Component 1: Energy efficiency (EE) enabling policy framework enforced and technical capacity strengthened in the Honduran hotel industry	**SERNA**	**62000**	**GEF**	71200	International Consultants	30,000	0	0	30,000	1
				71300	Local Consultants	20,000	0	0	20,000	2
				71600	Travel	5,000	5,000	5,000	15,000	3
				72100	Contractual Services - Companies	0	50,000	51,000	101,000	4
				74500	Miscellaneous	2,000	2,000	1,000	5,000	5
				75700	Workshop/training	30,000	70,000	70,000	170,000	6
					Total Component 1	**87,000**	**127,000**	**127,000**	**341,000**	
Component 2: Commercially-driven investment in energy efficient equipment and technology for the hotel industry mobilized (grant and non-grant mechanisms)	**SERNA**	**62000**	**GEF**	71200	International Consultants	20,000	0	0	20,000	7
				71300	Local Consultants	10,000	10,000	0	20,000	8
				71600	Travel	5,000	10,000	10,000	25,000	9
				72600	Grants	0	200,000	200,000	400,000	10
				74100	Audit	0	20,000	10,000	30,000	11
				74500	Miscellaneous	5,000	15,000	5,000	25,000	12
				75700	Workshop/training	10,000	10,000	10,000	30,000	13
					Total Component 2	**50,000**	**265,000**	**235,000**	**550,000**	
Component 3: Sustainable Tourism Low Emission Knowledge (Includes Monitoring and Evaluation Costs)	**SERNA**	**62000**	**GEF**	**71200**	International Consultants					
				71300	Local Consultants	0	15,000	15,000	30,000	14
				71600	Travel	5,000	10,000	15,000	30,000	15
				72100	Contractual Services - Companies	0	17,000	17,000	34,000	16
				74200	Printed media	0	5,000	10,000	15,000	17
				75700	Workshop/training	20,000	20,000	20,000	60,000	18
					Sub-total Component 3	*25,000*	*67,000*	*77,000*	*169,000*	
				71200	International Consultants		20,000	20,000	40000	19
				71400	Contractual Services - Companies	5,000	2,000	2,000	9000	20
				71600	Travel			6,500	6,500	21
				72500	Supplies			500	500	22
					Sub-total Monitoring and Evaluation	*5,000*	*22,000*	*29,000*	*56,000*	
					Total Component 3	**30,000**	**89,000**	**106,000**	**225,000**	
Project Management Costs	**SERNA**	**62000**	**GEF**	**71400**	Contractual Services - Individuals	30,000	40,000	30,000	100,000	23
				72200	Equipment	5,000	0	0	5,000	24
				74500	Miscellaneous	2,000	2,685	2,853	7,538	25
					Total Project Management costs	**37,000**	**42,685**	**32,853**	**112,538**	
					PROJECT TOTAL	204,000	523,685	500,853	1,228,538	

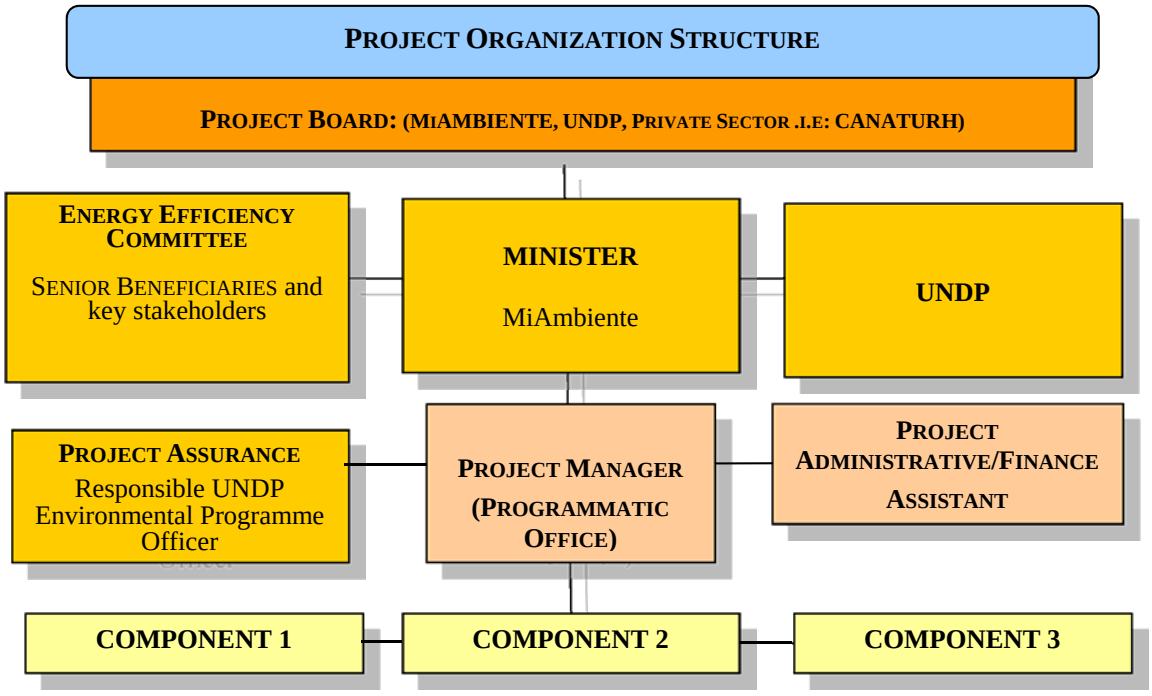
Budget Notes

#	Budget Code		($)	Description
Component 1				
1	International Consultants	71200	30,000	International specialist in technical standards for more efficient electrical equipment: air conditioners, CFL, LED and cooling systems
2	Local Consultants	71300	20,000	Support SNC in regulatory management, Acts. 1.1.1 y 1.1.2
3	Travel	71600	15,000	Apportionment of national travel costs of National Project Coordinator and national and international travel costs of national staff and consultants
4	Service Contracts - Business	72100	101,000	Conceptualization, design and operationalization of the "Energy Efficiency Award" model as a tool for promoting sustainable hotel management.
5	Miscellaneous	74500	5,000	Support institutional management of SNC actions related the Technical Committees
6	Training	75700	170,000	Participatory workshops for capacity building and strengthen hoteliers and financiers on energy efficiency investments, Acts. 1.2.2 y 1.2.3
Component 2				
7	International Consultants	71200	20,000	International specialists in financial structuring of environmental funds and in the development of energy efficiency investment portfolios
8	Local Consultants	71300	20,000	In-country support for international consultants
9	Travels	71600	25,000	Apportionment of national travel costs of National Project Coordinator and national and international travel costs of national staff and consultants
10	Grants	72600	400,000	Scaling up of an S&M hotels investment portfolio
11	Audit	74100	30,000	Energy audits
12	Miscellaneous	74500	25,000	Management support for the "Green Scheme"
13	Training	75700	30,000	Participatory workshops for capacity building among the different groups of stakeholders
Component 3				
14	Local Consultants	71300	30,000	Local support for knowledge management
15	Travel	71600	30,000	Apportionment of national travel costs of National Project Coordinator and national and international travel costs of national staff and consultants
16	Service Contracts - Business	72100	34,000	Development of Web page and e-communications
17	Printed media	74200	15,000	Printing and dissemination of MSP outreach
18	Training	75700	60,000	Training courses, workshops and training costs to develop skills in financial sustainability.
Monitoring & Evaluation				
19	International Consultants	71200	40,000	Mid term/Terminal Evaluation
20	Contractual Services-Companies	71400	9,000	a) 3,000 (Inception Workshop); b) 6,000 (External Audit)

21	Travel	71600	6,500	Travel Costs for terminal evaluation
22	Supplies	72500	500	Supplies for Terminal Evaluation
Component 4				
23	Service Contracts - Individual	71400	100,000	Salary costs of the National Project Coordinator and Administrative Assistant
24	Equipment	72680	5,000	Computers, printer and photocopier for the PMU
25	Miscellaneous	74500	7,538	Inception, mid-term and closing workshops.

Summary of Funds:

Source of Funding	Amount Year 1	Amount Year 2	Amount Year 3	Total
GEF	204,000	523,685	500,853	1,228,538
MiAmbiente	1,214,859	3,233,630	3,051,511	7,500,000
UNDP/MiAmbiente	64,792	172,460	162,748	400,000
UNDP	4,859	12,935	12,206	30,000
HOPEH	32,396	86,230	81,374	200,000
HOPEH	8,099	21,558	20,343	50,000
FOPESIC	48,595	129,345	122,060	300,000
CANATURH	8,099	21,558	20,343	50,000
CP+L	32,396	86,230	81,374	200,000
Total	**1,618,095**	**4,287,631**	**4,053,812**	**9,958,538**



131. MiAmbiente, through the Programmatic Office and the lead of the National Directorate of Climate Change (DNCC) and the General Directorate for Energy (DGE), will be the government institutions responsible for the implementation of the MSP, where the Project Manager will coordinate and apply the decisions taken by the Energy Efficiency Committee (EEC), made up by the main stakeholders identified in the tourism/hotel sector, and he/she will be responsible for technical and operative management during the implementation of the MSP and to advice executive decision-making taken within the Project Board.

132. UNDP is the Responsible Party for the MSP will be also part of the Board and the EEC with one representative, providing implementation support services in the administrative and operative management of the MSP. The MSP is nationally implemented (NIM), in line with the Standard Basic Assistance Agreement (SBAA, January 17, 1995) and the United Nations – Republic of Honduras Partnership Framework and Action Plan 2013 – 2017 signed between UNDP and the Government of Honduras.

133. MiAmbiente will take overall responsibility for the MSP implementation, and the timely and verifiable attainment of objectives, outcomes, outputs, and activities. It will provide support to, and inputs for, the implementation of all MSP activities. Through a public bidding process, MiAmbiente will nominate the Project Manager to serve as the National Coordinator of the MSP implementation and the administrative/finance assistance.

134. UNDP Honduras will support the MiAmbiente with implementation support services according to the Agreement between the Government of Honduras and UNDP for the provision of support services, including identification and recruitment of MSP consultants, identification of training activities and assistance in carrying them out, procurement of goods and services, financial monitoring and reporting, processing of direct payments, supervision of MSP

implementation, monitoring and assistance in MSP assessment. UNDP will recover the costs for its services based on the UNDP Universal Price List. The MSP will be implemented in line with UNDP rules and procedures (http://content.undp.org/go/userguide/results).

135. A MSP Project Board (PB) will be established at the inception phase to monitor the MSP progress, to guide its implementation and to support the MSP in achieving its listed outputs and outcomes. The Project Board will have 6 members, made up of one representative of each of the following institutions: MiAmbiente (who chairs the PB), National Directorate of Climate Change, National Energy Directorate (DGE), Honduran Institute of Tourism (IHT), beneficiaries (CANATURH/HOPEH), one representative of the private sector and UNDP Honduras. LPAC members concluded that Project Board can be co-chaired. The Project Board will meet regularly, at least 3 times per year or more often as required.

136. The Project Board will be the group responsible for making management decisions for a project when guidance is required by the Project Manager, including recommendation for UNDP/Implementing Partner approval of MSP annual plans and revisions. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance to standards that shall ensure best value to money, fairness, integrity transparency and effective international competition. MSP reviews by this group are made at designated decision points during the running of a project or as necessary when raised by the Project Manager. This group is consulted by the Project Manager for decisions (normally in terms of time and budget) have been exceeded.

137. Based on the approved Annual Work Plan (AWP), the Project Board may review and approve MSP quarterly plans when required and authorizes any major deviation from these agreed quarterly plans. It is their authority that signs off the completion of each quarterly plan as well as authorizes the start of the next quarterly plan. This ensures that required resources are committed and will arbitrate on any conflicts within the MSP or negotiate a solution to any problems between the MSP and external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Formal minutes shall be prepared and adopted for each meeting of the Board, detailing any proposals made and decisions taken.

138. A Project Management Unit (PMU), staffed with a Project Manager and Administrative Project Assistant, also paid from the MSP, will be established to assist MiAmbiente as well as other responsible institutions in the implementation of the MSP. The PMU, with the advice and counselling of the Energy Efficiency Committee, will ensure results-based project management and successful implementation of the MSP within 3 years, close monitoring and evaluation of MSP progress, observance of procedures, transparency and efficient use of funds, quality of works, and involvement of local and national stakeholders and beneficiary communities in the decision-making processes. The PMU will be hosted by MiAmbiente which will provide support to MSP implementation as per its mandate and commitments made in the co-financing letter provided.

139. Project Assurance is the responsibility of each MSP Board member; however the role can be delegated. The Project Assurance role supports the MSP Board by carrying out objective and independent MSP oversight and monitoring functions. This role ensures appropriate MSP management milestones are managed and completed. On behalf of UNDP, the function is delegated to a UNDP Portfolio Manager. Specific 'Assurance' tasks are to:

- Ensure that funds are made available to the MSP;
- Ensure that risks and issues are properly managed and monitored, and that the logs are regularly updated;
- Ensure that MSP Progress/Financial Reports are prepared and submitted on time and according to standards in terms of format and content quality and submitted to the Project Board.

140. The MSP team and the UNDP Country Office supported by the UNDP Regional Technical Advisor in Panama City will be responsible for MSP monitoring and evaluation conducted in accordance with established UNDP procedures. The Project Results Framework (Section 3) provides performance and impact indicators for project implementation, along with their corresponding means of verification.

141. Carbon monitoring: Given the important focus of the MSP on emission reductions from the hotel industry, particular emphasis will be placed on monitoring these reductions.

142. The following sections outline the main components of the monitoring and evaluation (M&E) plan and indicative cost estimates related to M&E activities.

Project start

143. A MSP Inception Workshop will be held within the first 2 months of MSP start with those with assigned roles in the MSP organization structure, UNDP Country Office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. If possible, an international technical advisor, expert in EE in the hotel industry, will also attend this Workshop. The Inception Workshop is crucial to building ownership for MSP results and to plan the first year annual work plan.

a. The Inception Workshop should address a number of key issues including: assisting all partners to fully understand and take ownership of the MSP. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff with respect to the MSP team. Discuss the roles, functions, and responsibilities within the MSP's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms.
b. Based on the MSP Results Framework, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
c. Provide a detailed overview of reporting, monitoring and evaluation requirements. The M&E work plan and budget should be agreed to and scheduled.
d. Discuss financial reporting procedures and obligations.
e. Plan and schedule MSP Board meetings: roles and responsibilities of all MSP organization structures should be clarified and meetings planned.

Quarterly

144. Progress made will be reported on a quarterly basis to the MSP Board and will be recorded in the UNDP Enhanced Results Based Management Platform. Based on the initial risk analysis submitted, the risk log will be regularly updated in ATLAS. An Issue Log will be activated in ATLAS and updated by the MSP Manager to facilitate tracking and resolution of potential problems or requests for change.

Annually

145. Annual Project Review/Project Implementation Reports (APR/PIR): This key annual Report will be prepared to monitor progress made since MSP start and in particular for the previous reporting period (reports will cover calendar years). The APR/PIR will be submitted to UNDP RCU no later than 1 month after the end of the previous calendar year. The APR/PIR includes, but is not limited to, reporting on the following:

Section 1. Brief summary and context;
Section 2a. Progress and achievements made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative);
Section 2b. Project outputs delivered per project outcome (annual);
Section 2c. Activities carried out during the reporting period under each output;
Section 3a. Lesson learned/good practice;
Section 3b. Difficulties encountered and measures taken to overcome problems;
Section 4. AWP and other expenditure reports (Note: Financial reports shall be submitted in US dollars);
Section 5a. Risk and adaptive management;
Section 5b. Changes introduced to activities, outputs or indicators;
Section 6. MSP work-plan for the following 12 months period, including forecasted progress in the achievement of objective(s) and indicators, as well as financial plan (budget for next 12 months).

146. To cover and reclaim direct costs for the MSP staff who, while working for this MSP, at the same time are working for other project(s), managed by the Country Office, only part of their time devoted to this MSP would be reclaimed. This will be confirmed by time sheets for use of EC in case of verification.

Periodic Monitoring through site visits

147. UNDP CO and the UNDP RCU will conduct visits to project-hotel sites based on the agreed schedule in the MSP´s Inception Report/Annual Work Plan to assess first hand MSP progress. Other members of the Project Board may also join these visits. A Field Visit Report will be prepared by the Country Office and UNDP RCU and will be circulated no less than one month after the visit to the MSP team and Board members.

Project Evaluation

148. An independent MSP evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP guidance. This evaluation will focus on the delivery of the MSP's results as initially planned. The MSP evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP Country Office based on guidance from the Regional Coordinating Unit. The Project Review and Evaluation should also provide recommendations for follow-up activities and will require a management response.

149. During the last three months, the MSP team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems encountered and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the MSP's results, and information on the measures taken to

make the GEF visible as the source of financing, as well as details on the transfers of assets and full summary of the MSP's income and expenditure and payments received, in line with article 2.5 of the Annex II (General Conditions). Final report will be submitted no later than 3 months after closure of the MSP.

Learning and knowledge-sharing

150. Results from the MSP will be disseminated within and beyond the MSP intervention zone through existing information sharing networks. The MSP will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to MSP implementation though lessons learned. The MSP will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

151. Finally, there will be a two-way flow of information between this MSP and other projects of a similar focus.

Communications and visibility requirements

152. With the aim to ensure coherence and coordination between related projects and activities under the UNDP/GEF MSP, the MSP will keep stakeholders informed on developments and progress relevant to the Agreement, upcoming relevant meetings and exchange related documents, press releases, publications when these are issued, and provide meeting and mission reports and share necessary links to project websites. Information will be channeled through UNDP Regional Centre to other regional stakeholders.

153. UNDP will take all appropriate measures to publicize the fact that the activities have been receiving funding from the GEF. Information given to the press, the beneficiaries of the MSP, all related publicity material, official notices, reports and publications, will acknowledge that the MSP was carried out "with funding by the GEF" and will display in an appropriate way the GEF logo. In cases where equipment and major supplies have been purchased using funds provided by the GEF, UNDP will include appropriate acknowledgement on such equipment and major supplies provided that such actions do not jeopardize UNDP privileges and immunities and the safety and security of the UNDP staff. The size and prominence of the acknowledgement will be clearly visible in a manner that will not create any confusion regarding the identification of the MSP as an activity of UNDP, the ownership of the equipment and supplies by UNDP, and the application to the MSP of UNDP privileges and immunities.

154. All publications of UNDP pertaining to the GEF-funded activities, in whatever form and whatever medium, including the internet, shall carry the following or a similar disclaimer: "This document has been produced with the financial assistance of the GEF and UNDP.

Table 5.1: M&E Work Plan and Budget			
Type of M&E activity	Responsible Parties	Budget US$ Excluding project team staff time	Time frame
Inception Workshop and Report	▪ Project Manager ▪ UNDP CO, UNDP/GEF	$1,000	Within first two months of MSP start up
Measurement of Means of Verification of project results	▪ UNDP/GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members ▪ Monitoring and Reporting consultant	To be finalized in Inception Phase and Workshop	Start, mid and end of MSP (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	▪ Oversight by Project Manager ▪ MSP team	To be determined as part of the Annual Work Plan's preparation	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	▪ Project manager and team ▪ UNDP CO ▪ UNDP RTA ▪ UNDP EEG	None	Annually
Periodic status/ progress reports	▪ Project Manager and MSP team	None	To be determined by MSP team and UNDP CO
Final Evaluation	▪ Project Manager and MSP team ▪ UNDP CO ▪ UNDP RCU ▪ External Consultants (i.e. evaluation team)	$ 47,000	At least three months before the end of MSP implementation
Project Terminal Report	▪ Project Manager and MSP team ▪ UNDP CO ▪ local consultant	0	At least three months before the end of the MSP
Audit	▪ UNDP CO ▪ Independent financial auditors	$8,000	$2,000 Annually (x 4 years)
Visits to field sites	▪ UNDP CO ▪ UNDP RCU (as appropriate) ▪ Government representatives	none	Included into the regional office fee.
TOTAL indicative COST Excluding MSP team and UNDP staff time and travel expenses, if needs be.		**US$ 56,000**	

Compliance with Basic Agreements

155. This document together with the Country Program Action Plan (CPAP) signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the Standard Basic Assistance Agreement (SBAA) and all CPAP provisions apply to this document.

156. 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.

157. The implementing partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in Honduras where this MSP is being carried;

b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

158. 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 this agreement.

159. The implementing partner agrees to undertake all reasonable efforts to ensure that none of the 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/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

160. This document together with the CPAP signed by the Government of Honduras and UNDP which is incorporated by reference constitute together the instrument envisaged in the Supplemental Provisions to the Project Document, attached hereto.

161. Audit clause: The Audit will be conducted in accordance with the UNDP Financial Regulations and Rules and applicable audit policies on UNDP projects.

ANNEX 1. BASELINE ASSUMPTIONS

Introduction

Tourism activity in the public interest in Honduras is regulated by the Honduras Institute for Tourism (IHT). This entity has tasked the National Chamber of Tourism of Honduras (CANATURH) with the responsibility of recording the number of hotels operating nation-wide through the National Hotel Registration.

The classified hotels recorded by CANATURH will be the target population for the definition of the baseline and the calculation of GEF GHG Emissions Reductions (Annex 2); the list will also provide the framework for action for the incremental activities to be implemented in the MSP.

Hotel regulation in Honduras

The National System for Quality (SNC) has enacted two standards for hotels. Standard OHN 6, published in 2010, sets forth the requirements for a small hotel, as well as the main guidelines for the provision of lodging services[2]. The content of this Standard allows setting limits on which this Medium Size Project (MSP) will act, as shown in Table 1.1.1:

Table 1.1.1: Scope of the MSP regarding Small Hotels according to Standard OHN 6

Section	Boundary	Consistency with the MSP
5.2.8.1	Training programs should be established for all staff in all operational areas: • Reception • Rooms • Laundry and drying • Kitchen • Restaurant • Electro-mechanical system	Implement informal training programs and best practices for maintenance, operations and management staff.
5.3.1	The hotel premises should be kept in good condition, so the purchase of energy efficient appliances is recommended.	Train the hotel sector on the importance of EE technical standards when purchasing electrical equipment.
5.3.3.2	Rooms must have a television set, lighting, A/C, internet access, electrical outlets, iron, hair dryer and coffee maker.	Finance more efficient lighting systems (CFL and LED) and high EER A/C units by the *Green Scheme*, in accordance with the official OHNx standard and labelling.

Source: ProDoc 2015.

To supplement Standard OHN6, Standard OHN 7 includes apart-hotels, lodges, cabins, bed and breakfast, hostels and guest houses in the definition of accommodation in addition to hotels. OHN7 also sets guidelines for this MSP and technological environment. For savings calculations, OHN7 criteria were adjusted based on an agreement with CANATURH, during the preparation of the ProDoc, as follows:

[2] Norma Hondureña OHN 6, 2010-11-25, "Hotel Pequeño – Requisitos"

Medium-sized: Minimum 16 and up to 49 rooms, with a minimum of 15 guest services.

Standard electro-mechanical equipment of these types of hotels for the calculation of their electricity demand includes: air conditioners, which are the units that have the higher energy consumption; followed by the lighting system, refrigeration units, washers and dryers, coffee machines, mechanical pumps and other electrical accessories for the rooms that use less power (TV set, hair dryer, electric water heater, and table lamps); as well as other sorts of electrical devices used in the reception area with lower consumption.

Small-sized: Minimum 5 and maximum 15 rooms, with a minimum of 5 guest services. These types of hotels have the advantage that the manager and owner roles are executed by a single person, so decision-making to engage in non-traditional activities may be more expeditious.

The standard equipment of small hotels for the calculation of their electricity demand includes: air conditioners, which are the units that consume more energy; followed by the lighting system, washers and dryers, electric kettle, coffee machine and electrical equipment for the rooms and reception area that draw less power. In this niche, the individual traders are predominantly legally incorporated companies[3].

In accordance with the official data registered by CANATURH, the National Hotel Registration contains 400 hotels, of which 141 as small-sized (less than 15 rooms), 190 facilities are registered as medium-sized (between 15 and 49 rooms) and 69 as large hotels (more than 50 rooms).

Current energy consumption in participating hotels

SERNA, CANATURH and HOPEH conducted a comprehensive assessment under the AP+L initiative based on CANATURH's database, which provided substantive information on the energy situation of the small and medium (S&M) hotels, as shown in Table 1.1.2[4].

Table 1.1.2: Monthly Electricity Consumption according to Hotel Size

Size(rooms)	# of hotels	Average consumption (kWh/month)[5]	Average (kWh/month/room)
Large (more than 50)	69	67,840	61
Medium (16 to 49)	190	51,040	54
Small (less than 15)	141	5,721	n.a.
TOTAL	400		

Source: USAID/CCAD/CNP+LH

[3] USAID/ProParque: Informe Final, "Evaluación de la Línea Base para MIPYME Turísticas en Cinco Destinos de Honduras", Octubre 2012, pag. 25.

[4] SERNA/IHT/CANATURH: Acuerdo de Producción más Limpia para el Subsector turístico hotelero y sus restaurantes, 2012-2014, pag.6.

[5] Average consumption was adjusted for ProDoc 2015 calculations. In 2011, occupancy rate at the national level was about 30% (as a consequence of the political conflict held in 2010) while in 2015 this occupancy reach 60%.

In summary, for design purposes and measuring the global impacts of this MSP, the following composition of the hotel sector is assumed, as indicated in Table 1.1.3, according to the National Hotel Registration:

Table 1.1.3: Energy Breakdown per Hotel Size			
Size(rooms)	# of hotels	Average consumption (kWh/month)	Basic services in addition to lodging
Large (more than 50)	69	67,840	• Cooling systems • Laundry and drying • Electro-mechanical systems • Restaurant • Convention Halls • Reception • Kitchen
Medium (16 to 49)	190	51,040	• Laundry and drying • Water pumping • Restaurant • Reception • Kitchen
Small (less than 15)	141	5,721	• Laundry and drying • Water pumping • Reception
TOTAL	400		
Source: ProDoc 2015.			

Considering the main end-uses, Table 1.1.4 shows annual electricity consumption in the hotel sector in 2015, using the total population of 400 hotels.

Table 1.1.4: Electricity End-use in the Hotel Sector, Base Year 2015			
End Use	kWh	Load Factor[6]	Current Equipment Profile
A/C	63,777,928	1	A/C units are mostly window and mini-split units with low EER.
Lighting	27,333,398	1	Linear fluorescent, CFL and incandescent lamps.
Refrigeration	27,333,398	1	These are, in general, low efficiency units with poor maintenance and an over-extended useful life.

[6] Load factor of "1" is used because electricity consumption is based on annual average values.

Water heating	27,333,398	1	Most systems are electric heaters.
Electric motors for water pumping	18,222,265	1	Old fashion, low efficiency and poorly maintained machines.
Others: reception, laundry, kitchen	18,222,265	1	Electric washing and drying domestic appliances used for daily operations.
Total	182,222,652		
Source: ProDoc 2015.			

With the GEF intervention, annual savings potential is calculated under the following assumptions, given the availability of more efficient energy technologies in the market place in Honduras and an average annual occupancy rate of 60%, as shown in Table 1.1.5.

Table 1.1.5: Assumptions for the Calculation of Savings Potential

End-Use	Share of Total Annual Consumption (%)	Potential Saving (%)[7]	GEF Alternative
Air conditioning	35	15	• High EER over 13 • Inverter technology
Lighting	15	50	• LED technology fully implemented
Refrigeration	15	15	• High EER (over 13%) • Inverter technology
Water heating	15	100	• Replacement of electric heaters for solar-thermal systems
Electrical motors and water pumping	10	5	• High energy efficiency Premium motors
Others: reception – laundry-kitchen	10	5	• Replacement of electric cooking, washing and laundry appliances for LPG-fueled appliances
Total	100%		
Source: ProDoc 2015.			

The end result, thanks to the GEF intervention calculated over a 20-year period, is that the total electricity savings potential is 1.246 GWh and a total mitigation potential of 822.829 tons of CO2, as indicated in Table 1.12.

[7] Note: For GEF calculation purposes in Annex 2, a 22% annual saving factor is assumed, on average.

Table 1.12: FORECASTING OF SAVINGS AND ESTIMATE OF MITIGATED TONS OF CO2 (2015-2034)							
YEAR	OCCUPANCY RATE (1 %)	ADJUSTED ANNUAL CONSUMPTION (kWh)3	Total Annual Consumption (kWh)	Total Savings (kWh)	5% Increase due to Best Practices	Mitigation Factor (kgCO2/kWh)	tCO2 mitigated per year (tCO2/año)
2015	0,60	182.222.652	**182.222.652**	**0**	**0**	0,66	**0**
2016	0,61	184.044.879	**184.044.879**	**57.053.912**	**59.906.608**	0,66	**39.538**
2017	0,61	185.885.327	**185.885.327**	**57.624.451**	**60.505.674**	0,66	**39.934**
2018	0,62	187.744.181	**187.744.181**	**58.200.696**	**61.110.731**	0,66	**40.333**
2019	0,62	189.621.622	**189.621.622**	**58.782.703**	**61.721.838**	0,66	**40.736**
2020	0,63	191.517.839	**191.517.839**	**59.370.530**	**62.339.056**	0,66	**41.144**
2021	0,64	193.433.017	**193.433.017**	**59.964.235**	**62.962.447**	0,66	**41.555**
2022	0,64	195.367.347	**195.367.347**	**60.563.878**	**63.592.072**	0,66	**41.971**
2023	0,65	197.321.021	**197.321.021**	**61.169.516**	**64.227.992**	0,66	**42.390**
2024	0,66	199.294.231	**199.294.231**	**61.781.212**	**64.870.272**	0,66	**42.814**
2025	0,66	201.287.173	**201.287.173**	**62.399.024**	**65.518.975**	0,66	**43.243**
2026	0,67	203.300.045	**203.300.045**	**63.023.014**	**66.174.165**	0,66	**43.675**
2027	0,68	205.333.045	**205.333.045**	**63.653.244**	**66.835.906**	0,66	**44.112**
2028	0,68	207.386.376	**207.386.376**	**64.289.776**	**67.504.265**	0,66	**44.553**
2029	0,69	209.460.240	**209.460.240**	**64.932.674**	**68.179.308**	0,66	**44.998**
2030	0,70	211.554.842	**211.554.842**	**65.582.001**	**68.861.101**	0,66	**45.448**
2031	0,70	213.670.390	**213.670.390**	**66.237.821**	**69.549.712**	0,66	**45.903**
2032	0,71	215.807.094	**215.807.094**	**66.900.199**	**70.245.209**	0,66	**46.362**
2033	0,72	217.965.165	**217.965.165**	**67.569.201**	**70.947.661**	0,66	**46.825**
2034	0,72	220.144.817	**220.144.817**	**68.244.893**	**71.657.138**	0,66	**47.294**
				1.187.342.982	**1.246.710.131**		**822.829**

During the first semester after the MSP starts, these figures will be verified using energy consumption auditing and evaluation for the participating pilot hotels as well as the validation of key EE improvements (best practices).

ANNEX 2. CALCULATION OF GHG EMISSIONS REDUCTIONS

Background

This calculation is based on the project-level calculation formula provided by the GEF for *direct*, *direct post-project*, and *indirect* CO_2 reductions. The MSP pipeline and key parameters for GHG calculations were generated during the preparation of the ProDoc, with background information provided by relevant stakeholders in Honduras, as described in Annex1.

Assumptions and Baseline Scenario

The following approach is considered in determining the baseline scenario:

- In the baseline scenario it is assumed that combined-cycle thermal power plants running on natural gas will be implemented, with an emission of 0.66 kg CO_2/kWh[8].

- Carbon dioxide emissions due to electricity generation are measured in terms of CO_2/kWh only and do not consider emissions of other GHG gases such as NO_x and CO.

- The following factors are considered for the calculations:

  Direct reduction made during the MSP duration as a result of 9 early investments made in the pilot hotels, all located on the Caribbean coast and Bay Islands of Honduras.

  Direct post-project reductions made during the MSP duration that are not directly supported by GEF funds, but can be considered a direct spin-off from the GEF intervention the "*Green Scheme*". This MSP spin-off will result from 15 additional EE investments to be submitted to the *Scheme* or to other financial institutions during the 3-year MSP period and implemented after the completion of the MSP, considering a horizon of 20 years. These are hotels located in the northern part of the country where initial pilot-hotel experiences will also be developed.

  Indirect reductions consist of a pipeline proposed by CANATURH. It is made up of a total of 400 large, medium and small hotels nationwide, of which 9 projects are considered early investments and 15 hotels are considered direct spin-offs from the GEF intervention. The remaining 376 hotels constitute a market volume of EE investments that is anticipated to be a successful market transformation process through the GEF intervention over a 20-year period.

  Influence period for CO_2 reductions: 20 years (2015-2034)

[8] Source: FOPESIC, 2015.

Minimum percentage annual savings: 0.22 for *direct*, *direct post-project* and *indirect* investments, based on average potential savings per end-use, as indicated in Table 1.5 of Annex 1. Savings due to the replacement of the current equipment profile with more efficient equipment considers a conservative factor of 17%. In addition, 5% is added due to introduction of best practices, load management, and optimization of utility tariffs.

GEF Contribution Factor Type 3= 0.60, i.e.: *"GEF contribution is substantial but a small amount of indirect CO_2 can be attributed to the baseline"*.

Occupancy rate for GEF calculation purposes, assumes an annual-fixed occupancy rate of 60%. However, per the National Strategy for Sustainable Tourism, occupancy rates are expected to increase by 1% annually.

Calculations

Table 2.2.1 below shows the outcome of the calculations:

Table 2.2.1 Total CO_2 reduction due to the removal of barriers to EE in the Hotel Industry of Honduras

Sources of Reductions	Number of Projects (4)	Annual Electricity Consumption (kWh)	Estimated annual savings per project	Total Annual Savings (kWh)	Emission Ratio (kg CO2/kWh)	GEF CF	Total tons of CO2 reduction per year	Period (yrs)	Total (tons CO2)
Direct	9	681.132	0,220	149.849	0,66	1	99	20	1.978
Direct post-project	15	1.135.220	0,220	249.748	0,66	1	165	20	3.297
Indirect	376	180.406.300	0,220	39.689.386	0,66	0,6	15.717	20	314.340
Total	**400**			**40.088.983**			**15.981**		**319.615**
Unit Abatement Cost	**3,84**								

Conclusion by adopting more energy efficient technologies

Total annual savings potential for CANATURH´s registered members (400 hotels) will be at least 40 GWh per year that would otherwise have been generated by fossil fuels, plus other direct impacts that outcomes also have on energy-intensive sectors of the economy, such as the domestic and industrial sectors, which are beyond the boundaries of this MSP and not included in this calculation.

Total emissions avoided thanks to this MSP due to the replacement of more efficient equipment are 319,615 tons of CO_2 over a 20-year period, generating a Unit Abatement Cost of 3.84 per tCO2.

Calculation of global benefits to a reduction on GWP

In addition to the savings and GHG reductions resulting by adopting more energy efficient technologies, for this MSP there would be also a focus on switching inefficient Air Conditioning units (A/Cs), over to more efficient units, since electricity end-use of A/Cs shared 35% of total annual consumption in the entire hotel sector.

Table 2.2.2 shows the estimation for this MSP based on the number of rooms already available in Honduras, considering typical mini-split or window A/C unit installations.

Table 2.2.2: Monthly Electricity Consumption according to the Hotel Size

Size(rooms)	# of hotels	Average # of rooms per hotel	Estimated number of A/C units currently using R-22 refrigerant
Large (more than 50)	69	75	5.175
Medium (16 to 49)	190	30	5.700
Small (less than 15)	141	10	1.410
TOTAL	400		12.285

Additional global savings would come from a switch in the cooling refrigerant of the R-22 typically used in the Honduras commercial sector. One kilogram of this gas has the same global warming impact of 1,810 kilograms of CO2. For this MSP, it is assumed that it would be replaced by an A/C unit using alternative cooling refrigerants, either the R-32 or the R-290 (Propane, a hydrocarbon-based technology), that only have a Global Warming Potential (GWP) of 675 and 15, respectively. The overall calculation for emission reductions is estimated per each A/C unit to be replaced; this represents 12,285 A/C units installed nationwide. Typically, each room has installed a light commercial A/C unit with a cooling capacity of 18,000 BTU/hr, which is 1.5 Ton of Refrigerant (TR).

Table 2.2.3 shows the capacity of the standard unit using R-22 that will be replaced under this MSP, their charge ratio expresses in kilograms (how much refrigerant they typically contain), assuming that the average refrigeration capacity of each A/C unit is 1.5 tons of refrigerant and adjusting the charge ratio with respect to the standard/baseline A/C unit using R-22, since the proposed alternative gases require less charge in weight than R-22 for the same cooling performance.

Table 2.2.3: Direct (GWP associated with refrigerants) and Indirect GHG emissions of refrigerants and avoided tCO_2 emissions analysis for alternative refrigerants with respect to a 1.5 TR R-22/AC unit*.

Factors	**R-22 (baseline)**	**R-32 (alternative**	**R-290 (alternative)**
Global Warming Potential (GWP in Kg)	1,810	675	15
Charge ratio (% compared to a Kg of R-22 Charged)	100%	70%	40%
Modified GWP (GWP x Charge ratio)	1,810	473	6
Quantity charged (Kg)	0.80	0.56	0.32
Direct emissions (Kg) (Modified GWP x Quantity charged)	1,448	265	2
GHG emissions during useful life of the equipment (kg CO_2)**	3,620	662	6
Potential reduction in tons of CO2 with respect to 12,285 units installed	44,472	8,132	73

* UNDP/GEF reference: *"Discussion Note on GEF-5 project "Indonesia-Promoting Energy Efficiency for Non-HCFC Refrigeration and Air Conditioning (PENHRA)".*

** *Cumulative, assuming 2 times recharge of refrigerant during the life of a A/C unit (12 years) and that a 1.5 TR Unit needs between 1,25 kgrs of refrigerant.*

As it can be noted, significant reductions can be achieved by switching to low GWP A/C alternatives. In the case of choosing refrigerants R-32 and R-290 shown in this analysis, or similar eco-friendly cooling refrigerants available in the market, the GWP gain is 36,340 and 44,400 tons of CO2, respectively, over a 12-year useful life for a typical 18,000 BTU A/C unit.

ANNEX 3. ENERGY MANAGEMENT IN THE S&M HOTEL SECTOR

Best Practice	Expected Output
Energy Management	
Analyze utility tariff structure to optimize the current tariff affecting hotel costs.	Reduced monthly billing demand due to a change in the prevailing tariff.
Analyze opportunities to participate in the emerging market for distributed generation (bi-directional metering) or hourly-tariff schedules.	Reduced monthly billing demand due to a change in load curve.
Develop an energy balance to identify critical points of consumption.	Energy balance prepared and validated with hotel owner.
Develop electrical drawings, diagrams, location of equipment, electrical installations and load centers in order to analyze energy requirements for equipment replacement.	Drawings prepared and updated.
Set percentages of electricity consumption relative to baseline, sharing the results with hotel staff.	Energy consumption reduced by 5% due to best practices and at least 17% compared to technological replacement of inefficient equipment.
Prepare indicators of energy consumption according to each end-use.	Use of data records based on benchmarks.
Install energy consumption meters in areas or load-centers identified as priorities.	Meters installed.
Design and implement a preventive maintenance plan for electro-mechanical systems, equipment and machinery (regular cleaning and minor repairs).	Maintenance plan developed, maintenance records showing results in terms of less maintenance and energy savings.
Establish zoning or automated lighting system circuits and power supply.	Full management of the electrical system established.
Displace laundry and drying activities from peak hours (9:00 to 13:00 and 18:00 to 21:00) to valley hours.	Established appropriate schedules for operating services.
Carry out awareness-raising campaigns for employees (campaigns, external signs and regular talks on the efficient use of energy).	Report on activities and external signs, such as wall stickers promoting Energy Efficiency.
Cost-efficient Investments	
Conduct a lighting assessment to eliminate excessive lighting fixtures and determine optimal levels for each hotel area.	Study carried out and technical report validated by hotel manager/owner.
Replace incandescent lights still in use with more efficient energy-saving LED and solar lamps.	Keep records of the practices with photos and invoices.
Replace window unit air-conditioners for high efficiency mini-split units.	Units of A/C replaced (photos, invoices, etc.)
Replace cooling equipment in food and beverage areas with highly efficient equipment and reduction of the R22 refrigerant type.	Units replaced (photos, invoices, etc.).

Install skylights that allow natural light in places where this is technically and economically feasible.	Skylights installed.
Install solar technologies: water heating (solar heaters) and solar systems for water pumping and cooling (solar refrigerators).	Efficient technology according to technical study and financial profitability installed.
Install low-cost solutions, such as "*sensor entry keys*" and window overhangs and shades.	Technologies installed and validated with measurement protocols savings.
Adapted from: GoH/CANATURH: "Acuerdo de Producción Más Limpia del Sector Turístico Hotelero de Honduras", 2012.	

ANNEX 4. MAIN PROGRAMS: END-USE OF ELECTRICITY IN HONDURAS

Stakeholder	Program	Scope
PNUD/GEF/CEHDES/ ACDI/SERNA	Energy Efficiency in the Industrial and Commercial Sectors, PESIC (2005-2008)	Setting of FOPESIC financing structure for the industrial and commercial sectors.
ENEE	GAUREE (1999-2011)	Improving the load curve and providing technical training in energy efficiency in the industrial, commercial and residential sectors.
PNUD/GEF	Regional Program on Energy Efficiency in the Industrial and Commercial Sectors, PEER (2006-2011)	Strengthening of the OHN in technical standardization and labeling of electrical equipment, commercially-used in the industrial and commercial sectors.
CII/BID	GREENPYME (2011-2015)	Executing 50 quick scans and 40 detailed energy audits in Honduras companies in order to help business become more competitive by improving their EE practices and reducing GHG emissions.
CANATURH	First Agreement on Cleaner Production in the Framework of the USAID MIRA Project (2010-2015)	Training for tourism sector hotels and restaurants on quality, environment, safety, security, occupational health, and energy efficiency aspects, according to the AP+L guidelines of Honduran Standard NHN 25:2009-12-17.
SNC	Regional Program for Latin America and the Caribbean supported by the Polytechnic Institute (PTB), of Germany (2011-2015)	Strengthening technical requirements and criteria for harmonizing the development of capacities of the national quality bodies and political authorities that makes up the infrastructure of quality, with a regional focus.
GIZ/4E	Energy Efficiency Project in the Industrial and Commercial Sectors, (2012-2018)	Implementing the Energy Management Training Program in partnership with the National Association of Industries (ANDI).
OIT/BID/COHEP	Green Job Project	Strengthening sustainable labor management in hotel and restaurant sectors, which includes best practices in EE.
Source: ProDoc 2015.		

ANNEX 5. PRODOC SURVEY FOR IDENTIFYING S&M PILOT HOTELS

Encuesta: Criterios para la selección de hoteles piloto

1. **Ubicación**
   Copan(_) Roatan(_) Utila(_) Guanaja (_)
2. **Actividad principal**
   hotel (_) hotel-restaurante (_)
3. **Datos de contacto**
   Nombre del Hotel:_____
   Nombre del Gerente:_____
   Correo Electrónico:_____
   Enlace localizable la mayoría del tiempo:_____
   Correo Electrónico:_____

4. **Número de Habitaciones: _____**

5. **Tipo de Tecnología Principal** (5=muy importante, 1=menos importante)
   Iluminación (_)
   aire acondicionado (_)
   refrigeración (_)
   motores eléctricos (_)
   secadoras (_)

6. **Estado actual del proyecto de eficiencia energética**
   Idea (_)
   Pre-factibilidad (_)
   Factibilidad (_)
   Inversión (_)

7. **Monto estimado de la inversión en US$** (si está disponible)
   De US$1,000 a $10,000 (_)
   De US$10,000 a $100,000 (_)
   De US$100,000 a $300,000 (_)
   Mayor a US$300,000 (_)

8. **Rentabilidad financiera del proyecto** (si está disponible)
   TIR sobre patrimonio ≥ 20%: Si (_) No (_)
   Período de recuperación de la inversión: 3 años máximo: Si (_) No (_)

9. **Potencial estimada por la implementación de las medidas:**_____kWh

10. **Reducción estimada de toneladas CO2**: _____ (si está disponible)

ANNEX 6. COMMITMENT LETTERS

GOBIERNO DE LA REPÚBLICA DE HONDURAS

SECRETARÍA DE ENERGÍA, RECURSOS NATURALES, AMBIENTE Y MINAS

March 25, 2015 UCEMR-009-20015

To: Adriana Dinu
Executive Coordinator, GEF
United Nations Development Program
304 East 45th Street, 9th Floor
New York City, NY 10017, USA
Fax: +1 (212) 906-6998

Subject: Endorsement for Energy Efficiency Improvement in the Honduran Hotel Industry

In my capacity as GEF Operational Focal Point for Honduras, I confirm that the above project proposal (a) is accordance with my government s national priorities including, if available, the priorities identified in the National Adaptation Plan of Action and/or the National Capacity Self-Assessment,and our commitment to the relevant global enviromental conventions; and (b) was discussed with relevant stakeholders, including the global enviromental convension focal point.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency (ies) listed below. If the proposal will be prepared and implemented by the Ministry of Environment -MiAmbiente-. I request the GEF Agency(ies) to provide a copy of the project document befor it is submitted to the GEF Secretariat for CEO endorsement.

The total financing(from GEFTF,LDCF, SCCF and/or NPIF) being requested for this project is US$ 1,400,000, inclusive of projects preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The Financing request for Honduras is detailed in the table below.

Sources of Fund	GEF Agency	Focal Area	Amount (in US$)			
			Project Preparation	Project	Fee	Total
GEFT	UNDP	CC	50,000	1,228,538	121,462	1,400,000
Total GEF Resources			50,000	1,228,538	121,462	1,400,000

I consent to the utilization of Honduras's allocation in GEF-5 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely,

Rosibel Martinez Arriaga
Director of External Cooperation and Resources Management

Copy to Mr. Jose Antonio Galdames, Convention Focal Point for UNFCCC

GOBIERNO DE LA
REPÚBLICA DE HONDURAS

SECRETARÍA DE ENERGÍA,
RECURSOS NATURALES,
AMBIENTE Y MINAS

Tegucigalpa, 17 de Marzo 2015 **OFICIO No. DMA-0366-2015**

Señor
EDO STORK
Representante Residente Adjunto
Programa de las Naciones Unidas para el Desarrollo
PNUD – HONDURAS
Presente

Estimado Señor Stork:

Por este medio confirmo el interés que tiene el Gobierno de la República de Honduras por medio de la Secretaría de Energía Recursos Naturales Ambiente y Minas (*MIAMBIENTE*) de cofinanciar, a través de la gestión administrativa y operativa de la Oficina Programática, el desarrollo del Proyecto *"Mejora de la* Eficiencia *Energética en la Industria Hotelera Hondureña"*, cuyo Documento de Proyecto será presentado ante el Secretariado Ejecutivo del Fondo para el Medio Ambiente Mundial (GEF).

Esta importante iniciativa tiene como objetivo remover barreras que impiden el uso comercial de tecnologías energéticamente más eficientes en el sector hotelero de Honduras, y a la vez promueve buenas prácticas, incluyendo mecanismos innovadores para evitar y/o reducir emisiones de gases de efecto invernadero en el sector turismo, tanto por medio de mecanismos de financiamiento, como promoción de políticas públicas y gestión del conocimiento en el sector de eficiencia energética.

Por estas razones, encontramos que el marco de resultados presentado en el Documento de Proyecto apunta a actividades complementarias al trabajo de implementación que tiene contemplado MiAmbiente a través de su Oficina Programática y la gestión financiera de su cartera de proyectos, no solo en términos de impulsar medidas de mitigación al cambio climático, pero también promuerve acciones conjuntas que resultan complementarias para el diseño, elaboración e implementación de una Estrategia de Desarrollo Bajo en Carbono para el país.

Por ende, estamos interesados en valorar cómo se podría relacionar acciones conjuntas en términos de apoyo al cofinanciamiento al Proyecto del GEF *"Mejora de la* Eficiencia *Energética en la Industria Hotelera Hondureña"*, y manifestamos nuestro compromiso a estimar el apoyo financiero, y estudiar las posibilidades programáticas y de coinversión para promover actividades dentro de los tres (3) componentes del Documento de Proyecto, por un monto total en efectivo de hasta US$ 7,500.000, este monto corresponde al total comprendido por tres fuentes de financiamiento que son: ONU-REDD, Forest Carbon Partnership Facility (FCPF) y también en el marco del Proyecto de Forestería Comunitaria y Adaptación del Cambio Climático (CliFor), el cual cuenta con una línea presupuestaria para mitigación al cambio climático.

Muy atentamente.

ING. **JOSE ANTONIO GALDAMES**
SECRETARIO DE ESTADO

cc: Sr. Walter Sánchez, Oficial de Programa, PNUD Honduras

EDIFICIO PRINCIPAL: DESPACHO DE ENERGÍA, RECURSOS NATURALES Y AMBIENTE, 200 METROS AL SUR DEL ESTADIO NACIONAL
TEL. PLANTA: (504) 2232-2011, TEL. DESPACHO (504) 2235-7833 / 2239-4296, FAX: (504) 2232-6250, APDO. POSTAL 1389, 4710, WWW.SERNA.GOB.HN
TEGUCIGALPA, HONDURAS, CENTRO AMÉRICA

Dear Mr. Stork:

I hereby confirm the interest of the Republic of Honduras by the Ministry of Natural Resources Environment and Mines (MIAMBIENTE) to co-finance, through the administrative and operational management of the Program Office, for the development of the Project "Improving Energy Efficiency in the Hotel Industry Honduras", whose Project Document will be submitted to the Executive Secretariat of the Global Environment Facility (GEF).

This important initiative aims to remove barriers that prevent the commercial use of energy efficient technologies in the hotel sector in Honduras, while promoting best practices, including innovative mechanisms to prevent and/or to reduce greenhouse gas emissions in the tourism sector both through financing mechanisms such as public policy advocacy and knowledge management in the energy efficiency sector.

For these reasons, we find that the results framework presented in the Project Document aimed at implementing complementary work that has laid MIAMBIENTE activities through its Office Programmatic and financial management of its portfolio of projects, not only to promote climate change mitigation measures, but also promotes joint actions which are complementary to the design, development and implementation of a strategy for low carbon development of the country.

Therefore , we are interested in assessing how it might relate joint actions in terms of support to co-financing the GEF project " Improving Energy Efficiency in the Hotel Industry Honduras " and express our commitment to estimate the financial support, and study the programmatic possibilities and joint venture to promote activities within (3) components of the Project Document, for an amount in cash of up to US$7,500,000, this amount corresponds to the total comprised of three sources of funding: UN-REDD, Forest Carbon Partnership Facility (FCPF), and also under the Community Forestry Project and Climate Change Adaptation (CliFor) , which has a budget line for climate change mitigation.

Sincerely,

ING. JOSE ANTONIO GALDAMEZ
SECRETARIO DE ESTADO

Programa de las Naciones Unidas para el Desarrollo

Ref: MA-004/2015 (ma)

April 30, 2015

Al servicio de las personas y las naciones

Dear Mrs. Dinu:

Expression of Commitment to Co finance GEF/UNDP/SERNA Project "Energy Efficiency in the Hotel Sector in Honduras"

I am writing to express the commitment of the UNDP Honduras CO to support the proposed GEF project "Energy Efficiency in the Hotel Sector in Honduras".

Our commitment "in-kind" will be up to US$ 400,000 through the following projects: **"Support the preparedness of reduction of emission by deforestation and forest degradation (REDD)"** and **"Strengthening the Sub-system of Coastal and Marine Protected Areas"** which may vary in the course of the 3 year implementation period of the GEF Project.

Yours sincerely,

Consuelo Vidal
Resident Representative

REPRESENTANTE RESIDENTE
PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO

Mrs. Adriana Dinu
Executive Coordinator
Environment and Energy Group
United Nations Development Programme
New York

Casa de las Naciones Unidas, Colonia Palmira, Avenida República de Panamá, Apartado Postal 976, Tegucigalpa, Honduras
Tel: +504 2220-1100, 2231-0102, Fax: +504 2239-7084, Internet: http://www.undp.un.hn, Correo electrónico: registry.hn@undp.org

Programa de las Naciones Unidas para el Desarrollo

Al servicio de las personas y las naciones

Ref: MA-004/2015 (ma)

March 26, 2015

Dear Mrs. Dinu:

Expression of Commitment to Cofinance GEF/UNDP/SERNA Project "Energy Efficiency in the Hotel Sector in Honduras"

I am writing to express the commitment of the UNDP Honduras CO to support the proposed GEF project "Energy Efficiency in the Hotel Sector in Honduras".

Our commitment will be up to US$ 30,000, which may vary in the course of the 3 year implementation period of the GEF Project, in accordance with the project demand and UNDP resources availability.

Yours sincerely,

Edo Stork
Resident Representative a.i.

PROGRAMA DE LAS NACIONES UNIDAS PARA EL DESARROLLO

Mrs Adriana Dinu
Executive Coordinator
Environment and Energy Group
United Nations Development Programme
New York

Casa de las Naciones Unidas, Colonia Palmira, Avenida República de Panamá, Apartado Postal 976, Tegucigalpa, Honduras
Tel: +504 2220-1100, 2231-0102, Fax: +504 2239-7084, Internet: http://www.undp.un.hn, Correo electrónico: registry.hn@undp.org

Asociación de Hoteles Pequeños de Honduras
Hoteles Pequeños de Calidad Superior en cada rincón de Honduras

Tegucigalpa M.D.C 25 de Marzo del 2015

Señor
Edo Stork
Representante Residente Adjunto
Programa de las Naciones Unidas para el Desarrollo

Distinguido Señor Stork:

Por este medio confirmo el interés que tiene la Asociación de Hoteles Pequeños de Honduras, de gestionar que nuestros miembros participen en el desarrollo del Proyecto *"Mejora de la* Eficiencia *Energética en la Industria Hotelera Hondureña"*, cuyo Documento de Proyecto será presentado ante el Secretariado Ejecutivo del Fondo para el Medio Ambiente Mundial (GEF).

Esta importante iniciativa tiene como objetivo remover barreras que impiden el uso comercial de tecnologías energéticamente más eficientes en el sector turismo de Honduras, y a la vez promueve buenas prácticas, incluyendo mecanismos innovadores para evitar, reducir o compensar emisiones de gases de efecto invernadero, tanto por medio de mecanismos de financiamiento, como promoción de políticas y gestión del conocimiento en el sector de eficiencia energética.

Por estas razones, encontramos que el marco de resultados presentado en el Documento de Proyecto apunta a actividades complementarias al trabajo que tiene planteado La Asociación de Pequeños Hoteles de Honduras de fomentar el desarrollo del turismo sostenible, al mismo tiempo de impulsar medidas de mitigación al cambio climático y responsabilidad ambiental.

Por ende, estamos interesados en valorar cómo se podría relacionar acciones conjuntas en términos de apoyo al cofinanciamiento al Proyecto del GEF *"Mejora de la* Eficiencia *Energética en la Industria Hotelera Hondureña"*, y manifestamos nuestro compromiso de valorar el apoyo financiero, y estudiar las posibilidades programáticas y de coinversión por parte de los pequeños y medianos hoteleros para promover actividades dentro de los tres (3) componentes del Documento de Proyecto que sean de muto interés técnico y operativo, siempre y cuando cumplan con la aprobación de la Junta Directiva, por un monto en efectivo de hasta $ 200,000.00 y un total en especie de hasta US$ 50,000.00.

De usted, con toda consideración,

Lic. Nicole Marrder Aguilar
Presidenta HOPEH

PRESIDENCIA
HOTELESPEQUENOSHONDURAS

cc: Sr. Walter Sánchez, Oficial de Programa, PNUD Honduras

Colonia Florencia Norte, Blvd. Suyapa, esquina a Torre Libertad, Tegucigalpa M.D.C. Honduras

Señor Edo Stork
Deputy Coordinator
United Nations Development Programme

Dear Mr. Stork:

As per this means, I would like to confirm the interest of the Small Hotel Association of Honduras to encourage our members to participate in the development of the Project "Improvement of Energy Efficiency in the Hotel Industry of Honduras", " as per the Project Document to be submitted to the GEF Secretariat.

This important initiative that has the objective to overcome the barriers that impede the commercial use of more efficient energy technologies in the small and medium size hotels of Honduras, as well as best practices, including innovative mechanisms to avoid, reduce or compensate greenhouse gas emissions, either by financing mechanisms or promotion of policies and knowledge management in the energy efficiency sector.

Given the above context, we have found that logical framework included in the Project Document aims at complementary activities implemented by the Small Hotel Association of Honduras to strengthening the development of sustainable tourism, together with the implementation of climate change mitigation measures and environmental responsibility.

As such, we are interested in valuing how joint actions could be implemented related to cofinancing of the GEF Project "Improvement of Energy Efficiency in the Hotel Industry of Honduras" and hereby we express our commitment to value financial support and to study programmatic opportunities and co-investment from small and medium hoteliers to support activities of the 3 components of the Project Document of mutual technical and financial interests, given the approval of our Board of Directors, with a cash amount up to US$200,000 and a total in-kind amount of US$50,000.

All the best,

Nicole Marder Aguilar
President, HOPEH

DEDICADOS A HACER LA DIFERENCIA

CEHDES

Consejo Empresarial Hondureño
Para el Desarrollo Sostenible

San Pedro Sula, Cortés
18 de marzo de 2015

Señor
Edo Stork
Representante Residente Adjunto
Programa de las Naciones Unidas para el Desarrollo
Su oficina

Estimado Señor Stork:

En el marco del Proyecto *Mejora de la Eficiencia Energética en la Industria Hotelera Hondureña* y en acompañamiento al PNUD-GEF, nos presentamos para ofrecer los servicios técnico financieros que el Fondo para ejecución de Proyectos de Eficiencia Energética en los Sectores Industrial y Comercial de Honduras FOPESIC, ha venido implementando en los últimos años .

El FOPESIC ha tenido logros sustantivos que han permitido a los sectores anteriormente indicados ahorros energéticos de alrededor de 3100 MWH y 2000 Ton CO2 con inversiones de US 1.4 millones de dólares.

Por lo anterior dada la importancia del sector turismo y las exigencias de mercado para este tipo de proyectos, estamos en la mejor disposición de apoyar la presente iniciativa por lo que el Fondo puede ser evaluado de forma integral para adaptarse a dichas exigencias, lo que permitiría al sector hotelero acceder a recursos con las condiciones más favorables posibles.

Manifestamos valorar el apoyo financiero y estudiar las posibilidades programáticas y de coinversión para promover actividades dentro del segundo componente de financiamiento detallado en el Documento de Proyecto del GEF "Mejora de la Eficiencia Energética en la Industria Hotelera Hondureña", dado que éste es de mutuo interés técnico y operativo, siempre y cuando cumplan con la aprobación de los fondos asignados a FOPESIC, por un monto total de US$ 300,000.

Con muestras de alta estima y consideración.

Atentamente,

J. Roberto Leiva
Director Ejecutivo
CEHDES
Señor

Edificio DAVIVIENDA, 6to Piso.
Ave. Circunvalación, S.O.
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Miembro Regional del:
World Business Council for Sustainable Development
WBCSD

CAMARA NACIONAL DE TURISMO DE HONDURAS

Tegucigalpa, M.D.C., 19 de Mayo de 2015

PJC-226-2015

Señor
EDO STORK
Representante Residente Adjunto
Programa de las Naciones Unidas para el Desarrollo
Su Oficina

Distinguido Señor Stork:

Por este medio confirmo el interés que tiene la Cámara Nacional de Turismo de Honduras, CANATURH en participar en el desarrollo del Proyecto **"Mejora de la Eficiencia Energética en la Industria Hotelera Hondureña"**, cuyo Documento de Proyecto será presentado ante el Secretariado Ejecutivo del Fondo para el Medio Ambiente Mundial (GEF).

Esta importante iniciativa tiene como objetivo eliminar las barreras que impiden el uso comercial de tecnologías energéticamente más eficientes en los hoteles de tamaño medio y pequeño de nuestro país, objetivo que compartimos para la misión de nuestra Cámara. Los temas en que estamos muy interesados se relacionan con:

- Acompañamiento en la elaboración de políticas y normas que fomenten la mejora en la Eficiencia Energética.
- Acompañamiento en la implementación de asistencias técnicas y normativas en las empresas turísticas.
- Conformación de programas y documentos para la Gestión del conocimiento en materia de eficiencia energética.

Por lo anterior, le manifestamos nuestro compromiso de apoyar el Proyecto mencionado, asignando como contribución en concepto de aporte técnico, gestiones realizadas desde nuestra institución y apoyo logístico en general (especies) un monto de US$ 50,000.00 distribuidos en los tres (3) años de ejecución que contempla el proyecto.

De usted, con toda consideración,

CAMARA NACIONAL DE TURISMO DE HONDURAS CANATURH TEGUCIGALPA, M.D.C.

EPAMINONDAS MARINAKIS
Presidente-CANATURH

cc: Sr. Walter Sánchez, Oficial de Programa, PNUD

Centroamérica HONDURAS Todo está aquí

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Mr. Edo Stork
Deputy Coordinator
United Nations Development Programme
Honduras

Dear Mr. Stork:

Hereby I would like to confirm the interest of the National Cleaner Production Center of Honduras, CNPL+H, to participate in the development of the Project "Improvement of Energy Efficiency in the Hotel Industry of Honduras", as per the Project Document to be submitted to the GEF Secretariat.

This important initiative that has the objective to overcome the barriers that impede the commercial use of more efficient energy technologies in the small and medium size hotels of our country, it is shared along the objectives of our Chamber. The topics we are very interested are related to:

- Work together in the preparation of policies and standards to improve energy efficiency.
- Work together in the implementation of technical assistance and norms for the tourist industry.
- Set up programs and documents for knowledge management related to energy efficiency.

Therefore, we express our commitment to support the said project, assigning as a contribution for technical back up, logistical support from the Chamber (in-kind) with an amount of US$50,000 split along the 3-year period of the project.

Expressing all our consideration,

Sincerely,

EPAMINONDAS MARINAKYS
Presidente - CANATURH

CNP+LH IMPULSANDO EL DESARROLLO SOSTENIBLE

San Pedro Sula, 16 de Marzo 2015

Señor Edo Stork
Representante Residente Adjunto
Programa de las Naciones Unidas para el Desarrollo

Distinguido Señor Stork:

Por este medio confirmo el interés que tiene el Centro Nacional De Producción Más Limpia de Honduras, CNP+LH en participar en el desarrollo del Proyecto *"Mejora de la Eficiencia Energética en la Industria Hotelera Hondureña"*, cuyo Documento de Proyecto será presentado ante el Secretariado Ejecutivo del Fondo para el Medio Ambiente Mundial (GEF).

Esta importante iniciativa que tiene como objetivo eliminar las barreras que impiden el uso comercial de tecnologías energéticamente más eficientes en los hoteles de tamaño medio y pequeño de nuestro país, objetivo que compartimos con la misión de nuestra Institución.

Los temas en que estamos muy interesados se relacionan con gestión del conocimiento, desarrollo de políticas públicas, ejecución de estudios de eficiencia energética y apoyo en el desarrollo de incentivos de mercado para el sector turístico relacionados a la eficiencia energética.

Por lo anterior, le manifestamos nuestra anuencia de apoyar el proyecto mencionado y de ser posible ofrecer contrapartidas de Us.$ 200,000.00 y apoyos en la búsqueda de co-financiamientos para el mismo.

Deseamos a usted éxitos en sus funciones despidiéndonos con las muestra de nuestra más alta consideración,

Roberto Leiva
Director Ejecutivo

cc: Sr. Walter Sánchez, Oficial de Programa, PNUD
Sr. Daniel Ayes Dirección Técnica, CNP+LH.

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Miembro de:

Señor Edo STork
Deputy Coordinator
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This important initiative that has the objective to overcome the barriers that impede the commercial use of more efficient energy technologies in the small and medium size hotels of our country, it is shared along the mission of our institution.

The topics we are interested are related to knowledge management, development of public policies, preparation of energy efficiency studies and support to the implementation of market incentives for the tourist industry related to energy efficiency.

As per the above, we would like to express our commitment to support the said project and if possible, to offer a cofinancing amount of US$200,000 as well as in identifying other sources of cofinancing for the same purpose.

We wish you all the best in your duties expressing all our consideration,

Roberto Leiva
Executive Director

ANNEX 7. TERMS OF REFERENCE FOR PMU STAFF

Title: Project Manager (PM)

Duty Station: Tegucigalpa - Honduras

The Project Manager (PM) will be primarily focused on the day to day operation of the MSP including administrative, financial and operational aspects. The PM`s role is to manage and coordinate the implementation of MSP activities in ensuring quality and timeliness of activities and delivery of outputs and outcomes.

Duties and Responsibilities

The Project Manager (PM) shall report directly to the MSP Project Board and shall be responsible for:

- Managing and coordinating the implementation of MSP activities to ensure the maintenance of quality and timeliness, and delivery of outputs;
- Liaising and working closely with the MSP partners and beneficiaries;
- Reporting regularly to the Project Board and UNDP Honduras on the MSP`s progress;
- Maintaining close contact with designated focal points from UNDP, MiAmbiente and other stakeholders, indicating any estimated changes to the work plan, and proposing a budget revision when appropriate;
- Ensuring that the requisite allocations are available in accordance with the agreed budget and established schedules of payment, if any, in consultation with MiAmbiente and UNDP;
- Working closely with key stakeholders in the drafting and preparation of relevant Terms of Reference for local and international consultants;
- Monitoring the MSP budgets, cofinance commitments and in-kind resources;
- Preparing progress and financial reports of the project when required (e.g.: QPR/APR/PIR);
- Maintaining an up-to-date accounting system to ensure accuracy and reliability of financial reporting;
- Being actively involved in the preparation of relevant knowledge products (including publications and reports);
- Performing the function of ATLAS External User, creating requisitions and vouchers, and other relevant ATLAS processes;
- Coordinating the management and implementation of activities of the MSP as set out in the ProDoc and recommending any such modifications/revisions as may be necessary to the Project Board through the NPD;
- Delivery of the Project Inception Reports and the results as per the agreed Project Results Framework in the ProDoc (Section 3);
- Submitting regular progress reports to the national implementing agency MiAmbiente and UNDP Honduras;

- Preparing the annual work plan (AWP) and budget and its timely submission to MiAmbiente and Project Board; and seek appropriate recommendation if required toward the adaptive management approach:

  - Collating deliverables from all 3 components and being responsible for the write up of progress reports;
  - Reviewing and editing technical reports in cooperation with the national and international experts;
  - Assisting the National Project Director in the preparation of the Annual Progress Report (in line with the Annual Work Plan); Project Implementation Report, Quarterly Operational Reports for submission to the Executing Agency and UNDP;
  - Facilitating the work of the Project Board and Energy Efficiency Committee by presenting to the Project Board regular progress reports and results of project development.

Requirements

- Advanced Degree in Mechanical/Electrical/Civil Engineering or any other science-based background;
- Possess a professional qualification or a member of an acknowledged professional organization;
- At least 5 years extensive working experience in the field of energy efficiency and possesses a strong knowledge of the national energy context;
- Extensive experience in project management with adequate exposure to financial management, financial mechanism and the banking systems in Honduras, and
- Have a good command of the English and the national language (Spanish).

Fee

Payment for retained services will be in accordance with the scale of remuneration for services contract in force by the UNDP

Duration

The Project Manager will be appointed under UNDP service contract for the duration three (3) years, following UNDP rules and regulations, on performance based on Mid-term evaluation and contract extensions.

Appendix cont'd

TERMS OF REFERENCE

Title: Administrative Project Assistant

Duty Station: Tegucigalpa - Honduras

Duties and Responsibilities

The Project Administration Officer shall report directly to the Project Manager and shall be responsible for:

- Providing administrative and logistic support to the MSP team;
- Executing secretarial tasks and related activities;
- Managing schedules and MSP implementation within specified MSP constraints;
- Undertaking secretariat services to specific MSP activities;
- Providing limited backup support to the team and translation during meetings (if needs be).

Requirement

- Minimum qualification is a tertiary education in secretarial science degree/diploma or related professional qualifications;
- At least 3 years of administrative and logistic experience;
- Have a good command of English and Spanish;
- Experiences in project management and the energy sector of Honduras are preferred.

Fee

Payment for retained services will be in accordance with the scale of remuneration for services contract in force by the UNDP

Duration

The Project Assistant will be appointed under the UNDP service contract for the duration of three (3) years, following UNDP rules and regulations, on performance based on Mid-term evaluation and contract extensions.

ANNEX 8. SOCIAL AND ENVIRONMENTAL SCREENING TEMPLATE

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document. Please refer to the Social and Environmental Screening Procedure and Toolkit for guidance on how to answer the 6 questions.

Project Information

Project Information	
1. Project Title	Energy Efficiency in the Hotel Sector in Honduras
2. Project Number	UNDP-GEF PIMS 5061
3. Location (Global/Region/Country)	Honduras

Part A. Integrating Overarching Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Overarching Principles in order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the Project mainstreams the human-rights based approach
This MSP mainstreams the right to work, social security and education, in an interrelated and interdependent way through several capacity building activities, women`s empowerment and access to quality and decent jobs through the "Energy Efficiency award".
Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment
In the gender front, small hotels offer an opportunity for equity, as many of these facilities are women-owned or managed (63%), so additional access to capital will help them be more competitive vis-à-vis their male peers. Gender benefits will be highly recognized in the evaluation process of the proposed "Energy Efficiency Award" for the hotel business. Also, in the database to be supported in Outcome 3, it is proposed that at least 25% of the records should be professional women who are already working on energy efficiency and small-scale renewable energy markets in Honduras.
Briefly describe in the space below how the Project mainstreams environmental sustainability
In the financial front, by setting forth the innovative financial window, the *"Green Scheme"*, this MSP will trigger energy efficient project financing in small and medium hotels, so the main barrier will be overcome, the lack of capital access. In the climate change area, total annual savings potential for 400 registered hotels will be 40 GWh per year that would otherwise have been generated by fossil fuels; total emissions avoided thanks to this MSP are 319,615 tons of CO2 over a 20-year period (2015-2034).

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Describe briefly potential social and environmental risks identified in Attachment 1 – Risk Screening Checklist (based on any "Yes" responses). If no risks have been identified in Attachment 1 then note "No Risks Identified" and skip to Question 4 and Select "Low Risk". Questions 5 and 6 not required for Low Risk Projects.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5 below before proceeding to Question 6*			**QUESTION 6: What social and environmental assessment and management measures have been conducted and/or are required to address potential risks (for Risks with Moderate and High Significance)?**
Risk Description	***Impact and Probability (1-5)***	***Significance (Low, Moderate, High)***	***Comments***	***Description of assessment and management measures as reflected in the Project design. If ESIA or SESA is required note that the assessment should consider all potential impacts and risks.***
Risk 1:	I = P =			
Risk 2	I = P =			
Risk 3:	I = P =			
Risk 4:	I = P =			
[add additional rows as needed]				

QUESTION 4: What is the overall Project risk categorization?		
Select one (see SESP for guidance)		**Comments**
Low Risk	☒	**None**
Moderate Risk	☐	
High Risk	☐	

QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are relevant?		
Check all that apply		**Comments**
Principle 1: Human Rights	☐	

	Principle 2: Gender Equality and Women's Empowerment	☐	
	1. Biodiversity Conservation and Natural Resource Management	☐	
	2. Climate Change Mitigation and Adaptation	☐	
	3. Community Health, Safety and Working Conditions	☐	
	4. Cultural Heritage	☐	
	5. Displacement and Resettlement	☐	
	6. Indigenous Peoples	☐	
	7. Pollution Prevention and Resource Efficiency	☐	

Final Sign Off

Signature	*Date*	*Description*
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks	
Principles 1: Human Rights	**Answer (Yes/No)**
1. Could the Project lead to adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	No
2. Is there likelihood that the Project would have inequitable or discriminatory adverse impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups? [9]	No
3. Could the Project potentially restrict availability, quality of and access to resources or basic services, in particular to marginalized individuals or groups?	No
4. Is there likelihood that the Project would exclude any potentially affected stakeholders, in particular marginalized groups, from fully participating in decisions that may affect them?	No
5. Is there a risk that duty-bearers do not have the capacity to meet their obligations in the Project?	No
6. Is there a risk that rights-holders do not have the capacity to claim their rights?	No
7. Have local communities or individuals, given the opportunity, raised human rights concerns regarding the Project during the stakeholder engagement process?	No
8. Is there a risk that the Project would exacerbate conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Principle 2: Gender Equality and Women's Empowerment	

[9] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

1.	Is there likelihood that the proposed Project would have adverse impacts on gender equality and/or the situation of women and girls?	No
2.	Would the Project potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
3.	Have women's groups/leaders raised gender equality concerns regarding the Project during the stakeholder engagement process and has this been included in the overall Project proposal and in the risk assessment?	No
4.	Would the Project potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	No
Principle 3: Environmental Sustainability: Screening questions regarding environmental risks are encompassed by the specific Standard-related questions below		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
1.1	Would the Project potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	No
1.2	Are any Project activities proposed within or adjacent to critical habitats and/or environmentally sensitive areas, including legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3	Does the Project involve changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	Would Project activities pose risks to endangered species?	No
1.5	Would the Project pose a risk of introducing invasive alien species?	No
1.6	Does the Project involve harvesting of natural forests, plantation development, or reforestation?	No
1.7	Does the Project involve the production and/or harvesting of fish populations or other aquatic species?	No
1.8	Does the Project involve significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	No

1.9	Does the Project involve utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)	No
1.10	Would the Project generate potential adverse transboundary or global environmental concerns?	No
1.11	Would the Project result in secondary or consequential development activities which could lead to adverse social and environmental effects, or would it generate cumulative impacts with other known existing or planned activities in the area? *For example, a new road through forested lands will generate direct environmental and social impacts (e.g. felling of trees, earthworks, potential relocation of inhabitants). The new road may also facilitate encroachment on lands by illegal settlers or generate unplanned commercial development along the route, potentially in sensitive areas. These are indirect, secondary, or induced impacts that need to be considered. Also, if similar developments in the same forested area are planned, then cumulative impacts of multiple activities (even if not part of the same Project) need to be considered.*	No
Standard 2: Climate Change Mitigation and Adaptation		
2.1	Will the proposed Project result in significant[10] greenhouse gas emissions or may exacerbate climate change?	No
2.2	Would the potential outcomes of the Project be sensitive or vulnerable to potential impacts of climate change?	No
2.3	Is the proposed Project likely to directly or indirectly increase social and environmental vulnerability to climate change now or in the future (also known as maladaptive practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	No
Standard 3: Community Health, Safety and Working Conditions		
3.1	Would elements of Project construction, operation, or decommissioning pose potential safety risks to local communities?	No
3.2	Would the Project pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	No
3.3	Does the Project involve large-scale infrastructure development (e.g. dams, roads, buildings)?	No
3.4	Would failure of structural elements of the Project pose risks to communities? (e.g. collapse of buildings or infrastructure)	No

[10] In regards to CO_2, 'significant emissions' corresponds generally to more than 25,000 tons per year (from both direct and indirect sources). [The Guidance Note on Climate Change Mitigation and Adaptation provides additional information on GHG emissions.]

3.5	Would the proposed Project be susceptible to or lead to increased vulnerability to earthquakes, subsidence, landslides, erosion, flooding or extreme climatic conditions?	No
3.6	Would the Project result in potential increased health risks (e.g. from water-borne or other vector-borne diseases or communicable infections such as HIV/AIDS)?	No
3.7	Does the Project pose potential risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during Project construction, operation, or decommissioning?	No
3.8	Does the Project involve support for employment or livelihoods that may fail to comply with national and international labor standards (i.e. principles and standards of ILO fundamental conventions)?	No
3.9	Does the Project engage security personnel that may pose a potential risk to health and safety of communities and/or individuals (e.g. due to a lack of adequate training or accountability)?	No
Standard 4: Cultural Heritage		
4.1	Will the proposed Project result in interventions that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: Projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.2	Does the Project propose utilizing tangible and/or intangible forms of cultural heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
5.1	Would the Project potentially involve temporary or permanent and full or partial physical displacement?	No
5.2	Would the Project possibly result in economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	No
5.3	Is there a risk that the Project would lead to forced evictions?[11]	No
5.4	Would the proposed Project possibly affect land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	No

[11] Forced evictions include acts and/or omissions involving the coerced or involuntary displacement of individuals, groups, or communities from homes and/or lands and common property resources that were occupied or depended upon, thus eliminating the ability of an individual, group, or community to reside or work in a particular dwelling, residence, or location without the provision of, and access to, appropriate forms of legal or other protections.

Standard 6: Indigenous Peoples		
6.1	Are indigenous peoples present in the Project area (including Project area of influence)?	No
6.2	Is it likely that the Project or portions of the Project will be located on lands and territories claimed by indigenous peoples?	No
6.3	Would the proposed Project potentially affect the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to the screening question 6.3 is "yes" the potential risk impacts are considered potentially severe and/or critical and the Project would be categorized as either Moderate or High Risk.*	No
6.4	Has there been an absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	Does the proposed Project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	Is there a potential for forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	No
6.7	Would the Project adversely affect the development priorities of indigenous peoples as defined by them?	No
6.8	Would the Project potentially affect the physical and cultural survival of indigenous peoples?	No
6.9	Would the Project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	No
Standard 7: Pollution Prevention and Resource Efficiency		
7.1	Would the Project potentially result in the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	No
7.2	Would the proposed Project potentially result in the generation of waste (both hazardous and non-hazardous)?	No
7.3	Will the proposed Project potentially involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? Does the Project propose use of chemicals or materials subject to international bans or phase-outs?	No

	For example, DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Conventions on Persistent Organic Pollutants or the Montreal Protocol	
7.4	Will the proposed Project involve the application of pesticides that may have a negative effect on the environment or human health?	No
7.5	Does the Project include activities that require significant consumption of raw materials, energy, and/or water?	No