



**PROJECT DOCUMENT**

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| **1.Project Summary** | |
| **Project title** | Scaling-Up Rural Households’ Use of Renewable Energy and Energy-Efficient Technologies in Cameroon |
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| **Ali Mohamed SINANE**  Programme Specialist  Bureau for Strategic Planning |
| **Geographical scope:** | The Republic of Cameroon |
| **Duration in months:** | 24 months |
| **Total funding requested in US$** | 1 000 000 US$ |
| **Development Partner** | India-UN Development Partnership Fund |

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| **2. Project description** | |
| **Rational and background** | |
| **2.1 Summary Description** | The overall objective of the project is to increase energy access in the North and Far-North regions of Cameroon. Activities aiming to promote contextualized solar and biomass energy systems will be undertaken in selected pilot sites. Solar equipment will be introduced. Knowledge on the production and uses of biomass briquettes and rocket stoves will be transferred to catalyze the adoption and usage of such renewable energy sources by local communities.  By the end of the project, the partnering communities, particularly women and youths, will have the skills and capacities to use efficient renewable energy technologies. Various stakeholders across the targeted areas will be aware of the high renewable energy potential of their areas and the positive impacts associated with the use of renewable energy in terms of better quality of life and sustainability of the environment and natural resources management. |
| **2.2 Sustainable Development Goals** | The project will contribute to the achievement of the following SDGs/targets among others:   * **Goal 5:** Achieve gender equality and empower all women and girls * **Target 7.2**: Increase substantially the share of renewable energy in the global energy mix by 2030 * **Target 7.5**: Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programmes of support. * **Target 9.7**: Support domestic technology development, research and innovation in developing countries. * **Target 12**.2 : By 2030, achieve the sustainable management and efficient use of natural resources; * **Target 15.5**: Take urgent and significant action to reduce degradation of natural habitat, halt the loss of biodiversity, and by 2020 protect and prevent the extinction of threatened species;   **Target** 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning   * **Target** 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism ;   **Target 17.9**: Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation. |
| **2.3 Overall purpose and relevance** | Access to renewable energy, particularly in rural areas, is a key driver to simultaneously address most of the SDGs (reduce poverty, improve education and health, broaden access to water, mitigate land and ecosystem critical degradation, combat climate change, promote gender equity, develop livelihoods, etc.). UNEP’s analysis in the Atlas of Africa Energy Resources it states “Low energy supply with shortages, high costs and poor access, remains major impediments to Africa’s social and economic progress” (UNEP 2017) (see also ”World Energy outlook 2018 “ - International Energy Agency) .  In Cameroon, around 63 % of households have access to electricity[[1]](#footnote-1). Poor energy supply is most evident in the far north region where the electricity coverage stands at a meagre 22%. Even households that have access to energy face frequent cuts due to the insufficient production, and thus rationing of electricity by ENEO, the company currently managing energy distribution in Cameroon. The population use kerosene lamps for lighting and wood for cooking.  In the far north and north regions, forest biomass constitutes more than 95% of household’s energy, with at least 80% coming from the illegal exploitation of forest wood. Most often this implies inefficient transformation of wood into charcoal or other sources of heating. This affects the fragile savannah landscape, which currently represents less than 20% of the territory, and is decreasing on a daily basis. This situation has led the government and some civil society organizations to put in place reforestation plans in those regions. However, to be more relevant and sustainable, there is a need for a complete transformation in the system of energy production and consumption mainly at the household level.  An assessment carried out in Cameroon in 2012 (Global village Cameroon) highlighted the existence of significant potential in renewable energies, as well as concrete possibilities of development and use of these forms of energy notably solar energy and biomass, although their contribution to national energy balance is still very marginal. This is why the Cameroonian authorities intend to focus their action in the sector of energy on the promotion of the use of renewable energies as stipulated in the Growth and Employment Strategy Paper (GESP) 2010-2020 (page 60). This commitment has led to the creation of a separate Department dedicated to the promotion of renewable energy within the Ministry of water and energy resources (Prime ministerial decree N°2012 /501 of 7th November 2012).  Solar energy is renewable, clean and available in northern Cameroon; it is a reliable source of energy almost all year-round. Cameroon is already using solar energy systems especially in urban settings. Equipment and technical expertise for its installation and maintenance for solar energy systems is thus available in the country.  Solar systems are well adapted to rural areas as their equipment are modular, flexible and can be used for many purposes (lighting, charging phones and radios, televisions, torches, etc.). They also have a relatively low cost and are easy to maintain.  Biomass fuel are derived from flora. They constitute a renewable and sustainable source of energy for electricity production, among other forms. Some materials used for biomass fuel production are scrap lumber, forest waste, certain crops, manure and other types of biological residues. Biomass fuels are particularly relevant in rural areas, since both biogas and fertilizer can be produced simultaneously from biomass with possibility to use the biogaz for cooking and lighting.  **Cameroon’s Summary Statistics on Energy Coverage**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Series** | **2010** | **2012** | **2014** | **2016** | | Access to electricity (% of population) | 52.9% | 55.2% | 56.8% | 60.1% | | Urban (% of urban population) | 86% | 88% | 89.2% | 91.9% | | Rural (% of rural population) | 17.7% | 18.8% | 22.2% | 21.3% | | Access to clean fuels and technologies for cooking (% of population) | 17.6% | 19.4% | 21.1% | 23.0% | | Population, total | 20.6 Million | 21.7 Million | 22.2 Million | 23.4 Million | | Renewable energy consumption (% of total final energy consumption) | 78.6% | 78.1% | 77.4% |  | | Renewable electricity output (% of total electricity output) | 73.2% | 72.9% | 74.3% |  | | Electric power consumption (kWh per capita) | 258.3 | 245.4 | 274.1 |  |   *Source: World Bank*  Most rural households in northern Cameroon are using firewood for cooking. The traditional cooking system consists of placing three stones, as a structure to hold pots and pans, with low energy efficiency due to large spaces on the three sides between the stones. This configuration allows the escape of large amounts of smoke that are harmful to human health, especially that of women who are most exposed. Artisanal energy-efficient cooking stoves that consume less wood, ensure better channelling of energy and produce less smoke exist. However, their current usage by households is these areas is currently rare.  This proposal prepared by the Cameroonian Ministry of Water and Energy with the support of UNESCO and presented to the India-UN Development Partnership Fund seeks to catalyse the energy transformation of Cameroon through the introduction and promotion of solar energy systems, artisanal energy-efficient cooking stoves and biomass energy sources for efficient-energy use.  UNESCO has conducted from 1996 to 2006 the first worldwide program on renewable energy known as “World Solar Program”. This was followed by adoption at the UN General Assembly of the resolution N°A/RES/60/199 for the promotion of renewable energy and the implementation of World Solar Program in March 2006.  Four years later, in 2010 the UN Secretary General launched the “Sustainable Energy for all (SE4ALL)” initiative, with three global objectives to be accomplished by 2030: to ensure universal access to modern energy services, to double the global rate of improvement in global energy efficiency, and to double the share of renewable energy in the global energy mix. SE4ALL database supports this initiative and provides country level historical data for access to electricity and non-solid fuel. Since December 2015, Cameroon has embarked in the process of developing its national SE4ALL Action Agenda and Investment Prospectus with the technical assistance of the SE4ALL Africa Hub.  UNESCO is at the forefront in tackling the issue of promoting renewable energy. The organization is fully convinced that access to basic, clean and affordable energy services is essential for sustainable development and poverty eradication and can provide major benefits in the areas of health, non-delocalized job creation, socio economic empowerment and equity. This commitment is clearly stipulated in the strategic objective of the UNESCO's Medium-Term Strategy for 2014-2021 (document 37 C/4): Promoting the interface between science, policy and society, and ethical and inclusive policies for sustainable development.    UNESCO has been implementing, for more than 25 years, different programs with the aim to contribute to increasing the capacity at national level to accomplish a sustainable energy development path. The main focus for UNESCO work on renewable energy is provided by the Organization’s programmes in the basic and engineering sciences, and more particularly in its involvement in the scientific underpinnings of efforts for harnessing clean energy sources.  In the actual project implementation areas, UNESCO Yaounde office has already successfully conducted a joint project with AIWO-CAN (African Indigenous Women Organization-Central Africa Network) and UNDP-GEF Small Grant Program entitled “Energy Efficiency and Energy conservation for indigenous women in the Mayo Tsanaga and Dimare Departments of the Far-North region of Cameroon” in 2010.  UNESCO’s actions were focused on:   * Capacity-building activities including summer schools and ‘training of trainers’ sessions, designed to enhance the knowledge of managers, engineers, technicians and trainers on the use, application and management of renewable energy technologies. Aspects addressed include designing, installation, operation, monitoring and evaluation, management, maintenance, rehabilitation, awareness-raising, advocacy, innovation, policy and planning. * Support to the elaboration of a national energy policy and strategic action plan.   In the targeted regions, women and girls are particularly engaged in the collection of wood for household consumption. The ecosystem degradation around human settlements forced women in charge of collecting pieces of wood for cooking to get them increasingly farther away from their villages and subjecting them to safety and security risks.  In this context, women will certainly be very motivated to see their workload reduced and their safety enhanced as the use of renewable energy is strengthened. To achieve this, an inventory of active women's associations in the project area zones will be carried out immediately after the launch of the project with a particular focus on ensuring their involvement in all stages of the project's implementation. |
| **2.4 Impact** | The project’s core impact is that rural populations will gain or expand their access to renewable energy, enabling them to live more fulfilling and productive lives. Hence, the unevenly spread chores and hazards of current unsustainable energy sources will be mitigated, while the effects of electricity and efficient cooking structures will empower individuals to enhance their daily life and productive activities.  This project concerns the far north and north regions of Cameroon known for their high economic, social and environmental vulnerability. The project’s implementation areas are also characterized by the lowest level of households energy coverage. Thus, the project intends to build the capacities of the most vulnerable people from the concerned communities, including women and youths, to use on a regular basis the biomass and solar renewable energy. As a result of project activities, clean renewable energy technologies will represent a higher contribution to the energy mix of these rural areas.  At least 6,000 persons (mainly women and girls) from more than 1,000 households will benefit from the project by directly participating in training sessions. This implies many positive direct effects, including increase in energy coverage; reduction of pressure on the fragile ecosystem due to the use of solar energy and biomass efficient technologies; women's empowerment; decrease of the hard and labour intensive work of wood collection to which women and girls are subjected; and less health issues coming from smokes production by firewood.  Indirect impacts are an increase in access to clean water; better food and pharmaceuticals conservation; new job creation; increase of school attendance by girls; improvement of security level due to lighting and less exposure to potential violence for women while collecting wood far from the villages.  ■Map of the project area  extreme nordnord   1. 2   Map of the Divisions of Far North(1) and North(2) regions. |

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| **Approach** | | | | |
| **2.5 Theory of change and implementation arrangements** | | | This project is grounded on three key premises:   1. That access to energy is key to empowering individuals to live meaningful and productive lives, 2. That unsustainable usage of wood and other biomass resources is a growing source of vulnerability, food insecurity and conflict, and 3. That women and girls are unevenly overburdened by the lack of access to modern energy sources, which is substantially impacting their health, and the productive use of their time.   This project will introduce in a sustainable and contextualize manner the production and use of renewable energy, at times latest technology in the form of photovoltaic solar equipment, at times very simple technologies like cooking briquettes, artisanal efficient stoves or biogas. Through the popularization and support to sustainable adoption of these technologies this project will reduce barriers to access to energy, therefore reversing the poverty/underproductive trap, unsustainable depletion of forest wood, and gender disparities.  The project is located in the Far-North and North regions of Cameroon where the electricity access rate of households’ notably in rural areas is less than 10% and where wood and other biomass covers at least 95% of energy needs. In this context, it will set pilot demonstration sites, where it will introduce:   * solar energy equipment installed in public or community buildings and available for training and capacity building activities; * artisanal efficient cook-stoves production plants; * biodigestors, biogas and biomass production systems.   The project will train 6,000 women and youth through capacity building and awareness building activities. In addition, it will train government officials and community leaders and build general awareness on the usage and benefits of these technologies.  The project’s implementation arrangements are as follows:   1. UNESCO is the project’s executing agency. Therefore, the project’s resource will be entirely implemented by UNESCO according to the financial and technical rules and procedures of the organization; 2. Ownership and overall leadership of the project lies with the Cameroonian Government. Hence, a technical team comprised of Ministry of Water and Energy representatives and decentralized authorities representatives at departmental and community levels, will work closely with UNESCO on the regular monitoring of the initiative and its evaluation. Emphasizing the government’s ownership these officials will guide the strategic direction of the project’s implementation; 3. A steering committee will be set up from project inception, comprised of the targeted areas communities’ representatives, representatives of governmental authorities and UNESCO representatives. This committee will meet one a year to monitor project implementation and give further orientation and recommendations for activities to be implemented to ensure success of the project; 4. At the beginning of the project, the pilot sites will be identified and agreed-upon using a participatory approach, in collaboration with the government bodies and the partnering communities’ representatives; 5. UNESCO will recruit an full time Project Manager to be based in Maroua, the Regional capital of the far North. He/she will be located near the pilot sites to ensure the operational implementation of the foreseen activities and the achievement of agreed indicators; 6. A solar energy expert consultant will be recruited for the mapping of the main actors and the drafting of an action plan outlining the main, appropriate, updated and contextualized solar energy technologies to be used by the project in its various sites, along with their quantities and characteristics. S/he will also be in charge of formulating the tailored content of the training (including its objectives and methodology) and the awareness program for the partnering communities; 7. After the identification and equipment of the pilot sites, UNESCO and key partners including universities and research institutions will jointly select trainers of trainers, organize trainings and provide equipment in close collaboration with community leaders. This will enable them to disseminate best practices among the communities and monitor data collection contributing to the projects tracking of progress and impact, and its evaluation; 8. For each item (briquettes of biomass and new cooking-stoves systems), a production plant will be constructed and installed on each pilot site. Practical and theoretical training sessions will be conducted in order to facilitate the ownership and adoption by local communities of the production process of these artisanal energy efficient technologies. A training agenda specific for each targeted actor will be agreed-upon before implementation; 9. A communication plan, including objectives, methodology and target activities, will be developed and will guide communication and sensitization activities for the partnering communities. This will be achieved in a participatory manner in partnership with non-governmental organizations, women and youths associations. Information and awareness-building sessions will be extended to all stakeholders, not only final users of these technologies but also community leaders, local and government authorities; 10. A mid-term evaluation will be undertaken to assess the progress achieved and correct, if needed, the way activities are carried out. A final evaluation will be undertaken and the key partners will jointly approve the report; 11. The project’s visibility including those of the donor and UNESCO will be ensured all through the project duration (see 3.4); 12. The India-UN Development Partnership Fund Board will monthly email bullet points updates, as well as a technical report twice a year. Financial reporting will be undertaken through the quarterly Project Delivery Report system between UNESCO and UNDP. | |
| **2.6 Project timeline** | | | The duration of the project is 24 months (detailed timeline is given in Annex B)*.* | |
| **2.7 Stakeholders: Beneficiaries and partners** | | | The direct project partners are rural communities in the North and Far North regions of Cameroon, especially women, girls and youths. Mayors and decentralized authorities are also direct beneficiaries of the project which contributes to the realization of their local development plans.  Key partners are:   * Ministry of Water and Energy (Project owner) * UNESCO (Project implementation partner)   To ensure the success of the project, representatives of some other Ministries (Environment, Natural Resource Protection and Sustainable Development, Land management and Decentralization), Indian institutions with renown expertice in applicable fields (Mahatma Gandhi Institute of Education for Peace & Sustainable Development, Barefoot college and/or others), specialized renewable energy teams from Cameroon Universities and research institutes will be consulted regularly or as specialized matters are being addressed.  Some of these partners have already been involved in the project design process. The Division of Renewable Energy in the Cameroonian Ministry of Water and Energy is the initiator of the project with the support of UNESCO. The draft project document was shared with other main authorities namely the Department of Sustainable Development in the Ministry of Environment, and the institution in charge of land management in MINEPAT. This consultative process lead to the choice of the north and far north regions. Universities and research institutions have contributed to information sharing on the most appropriate types of renewable energy to be promoted in the context of these regions. UNWOMEN is already working in those regions that have also been identified in the United Nations Development Assistance Framework (UNDAF) activities by the UN system in Cameroon due to their higher poverty rate and unequal access to basic services.  The other stakeholders who may contribute to project implementation include:   * Ministries of Research and Innovation; and Employment and Vocational Training; * Non-governmental organizations; and * Private sector.   The proposed project stems from the local development plans drawn up by Mayors of the areas of project intervention. It is therefore a response to an issue identified by communities through a participatory approach involving different social groups throughout each step of formulation, as requested by the Cameroonian legislation. During the process of the “Local development plans” elaboration, communities’ representatives, especially women, girls and youth, were involved and have consequently presented their priority issues to be addressed, naming access to energy as a key priority.  The implementation of the project will start with an inception workshop presenting the objectives, activities and expected results of the project. This consultative approach has the advantage of advancing good communication on the intervention characteristics among all stakeholders, benefiting from inputs of the partnering communities confirming the activities and methodologies or guiding modifications as necessary, and ensuring the informed consent and active engagement of all groups.  All along the 24 months of the project's duration, interactions with the partnering communities will be permanent to ensure their full satisfaction. Training of trainers and scaling-up training sessions in the pilot sites will build the capacities of rural populations and give them all the skills, tools and awareness necessary for them to continue to produce (or maintain in the case of solar equipment) and use renewable energy.  Focal Points in the Ministry of Water and Energy and in different decentralized institutions (region and departments) will accompany the implementation of project activities, and will be key actors in monitoring and reporting of progress and challenges. The role of Universities in this project is also highly important, through their introduction in their curricula of the training modules supported by this project that will guide future generations. | |
| **2.8 Risk analysis and mitigation** | | | The areas of intervention of the project have been subject to terrorist attacks from the Boko Haram group. The incursions of fighters from a neighboring country to carry out deadly attacks have greatly faded in recent years. It is however possible that this calm is fragile. In addition, municipal and legislative elections are planned in Cameroon this year. In case the results are disputed and serious troubles occurs, the logical framework will be revised for new timeline and eventually new pilot sites to be presented to the India-UN Development Partnership Fund. If the conflict or lack of support to the project from any key partner reaches a scale where activities could no longer be undertaken, or needed to be postponed extensively, UNESCO will consult with the India-UN Development Partnership Fund on the best approach including shifting the focus geographical area of the project.  The main assumptions is the willingness of the various stakeholders to fully play their roles in the implementation of the project. This project is implemented in a bottom-up and participative approach and thus requires the commitment of all stakeholders, particularly community representatives and partners.  The fact that the idea of ​​this project comes from Local Development Plans underlines its bottom-up approach, which is an effective guarantee to the success of the project because of the early commitment of all the stakeholders for the achievement of the expected results. | |
| **2.9 Sustainability and exit strategy** | | | UNESCO recognizes that one of the fundamental ways to ensure sustainability of a given project’s impacts, even after completion of activities, is to actively foster ownership of the project by stakeholders and community partners in each step and activity. To this regard, communities will be part of the project design from the outset, will ultimately select the specific activities to be undertaken in their area, and will be a key vehicle for the implementation of project activities.  Women, girls and youths NGOs and associations will be supported in order to enable them to adopt the project’s approach and gain an interest in supporting renewable energy activities beyond this project’s duration.  The purpose of setting up pilot sites is to call upon partners and other donors for scaling up at a larger scale the best practices and lessons learned from this initiative. The final report of the project will be explicit in this regard.  Stakeholder engagement, including national institutions, relevant Ministries, and the private sector will also be proactively nurtured throughout each phase of project implementation. The capacity of the Ministry of Water and Energy, that of the Ministry of Environment will be strengthened during the project implementation to continue to provide support to community partners even after the end of the project funding.  Local Universities will be involved for better designing and contextualization of efficient energy technologies equipment (notably artisanal efficient cooking-stoves and briquettes). Besides contributing to the sustainability of the project gains, their engagement and these technical outputs can be further used even at university level for training.  Finally this is a climate resilience project for people living in the fragile ecosystem belonging to the Lake Chad Basin and therefore its results will be watched by many partners for duplication and scaling up. | |
| **3. Project Management** | | | | | |
| **3.1 Project management and implementation** | | The project will be advanced through a participatory approach benefiting from the inputs of the various stakeholders outlined above in the discussion on management arrangements. The two key operational and management partners and their distinct roles and responsibilities are outlined in the chart below: | |
| |  |  |  | | --- | --- | --- | | **N°** | **Key Delivery Partners** | **Role** | | 1 | Ministry of Water and Energy , Cameroon | ***Project Owner***: Monitoring, leading the steering committee, evaluation documents validation, ensuring regular communication | | 2 | UNESCO | ***Implementing Partner***: carrying out and coordinating the execution of activities, participating to the steering committee, liaising with India-UN Development Partnership Fund Board | | | | |
| **3.2 Monitoring** | In order to ensure that the project is implemented according to the approach adopted and with respect to the validated plan, a monitoring action plan outlining the roles of various project stakeholders will be adopted at the inception workshop and will remain effective for the duration of the project.  The UNESCO project manager and the partners, particularly the Ministry of Water and Energy will regularly monitor the implementation of the project under the overall supervision of the regional advisor in science and the coordination of the Director of the UNESCO Regional Multisectoral Office in Yaounde. Monitoring will focus on the budgetary, financial and substantive aspects of project implementation, keeping in mind the need for possible corrective measures.  Twice a year, a technical narrative report summarizing progress achieved during the project implementation will be submitted to the India-UN Development Partnership Fund through its Secretariat at the United Nations Office for South-South Cooperation. Financial reporting will be exchanged quarterly between UNESCO and UNDP through the Project Delivery Report modality. In addition, every year the project Steering Committee will meet to assess the activities carried out and make recommendations for a successful achievement of the remaining outputs.    Multi-stakeholder missions in the project sites will be regularly carried out. The India Consulate in Cameroon (Douala) will, at least one time in the duration of the project, be invited to join such a mission.  Meetings with implementing partners and group discussions will be held for project community partners to determine the status of implementation. The information obtained from these missions will be included in the progress reports to the fund’s Board of Directors.  In addition, UNESCO uses a platform called SISTER to assess the progress of projects. The acronym SISTER stands for information system on strategies, tasks and evaluation of results. SISTER has become the main platform for Result Based Management of UNESCO projects and provides qualitative project monitoring. The completion of monitoring information in SISTER on a semi-annual basis is mandatory. In SISTER, project officers are required to monitor expected results, challenges and lessons learned in implementation, measures of cost-effectiveness and efficiency and the project's contribution to the expected results of UNESCO's major programs. | | | | |
| **3.3 Evaluation** | As foreseen in UNESCO's guidelines in the context of the project implementation, a mid-term and a final evaluation will be carried out by an external expert. | | | | |
| **3.4 Visibility** | The visibility of the project will be ensured by a comprehensive communication plan implemented by UNESCO jointly with the other project partners.  This strategy will benefit from the financial support of the government of India through the India-UN Development Partnership Fund. The project’s successes will be featured with the support of UNESCO's Sector for External Relations and Information, the Natural Sciences Sector and the Africa Department, with the support of colleagues from UNESCO's office in Yaounde.  The honorary consul of India in Cameroon will be invited to attend and contribute to the project's events and activities. Links between the UNESCO website and those of the Ministry of Water and Energy and Indian delegations will be established and UNESCO will share with partners all press releases and communication materials published in order to maximize their dissemination.  Outreach activities will be maximized through the UNESCO website and social media, with news, featured articles, photographs, computer graphics and multimedia published as part of the communication activity coordinated by the UNESCO Regional Office in Yaounde. In addition, the management team will work in close coordination with the UNESCO web team to disseminate news and information on the project on the Organization's official accounts on Facebook (+640,000 people) and Twitter (+3.08 million people). A project documentary of all activities will be produced for radio and TV programmes to showcase the impact of the project activities.  Other visibility activities will include the installation of billboards at observation points at the entrance of the project coordination site and at specific project intervention and pilot sites. These billboards will announce the project and bear the logos of the India-UN Development Partnership Fund, UNESCO and the seal of the government of Cameroon. During the workshops in the country, electronic, television and print media will be invited to cover the events. Radio talk shows with telephone segments will be broadcasted.  The equipment, training and communication documents provided along the project will bear the logo of the India-UN Development Partnership Fund affixed before distribution. | | | | |

**Annex A: Results Framework**

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| **Impact:** At least 1,000 households (approximately 6,000 people) have access to clean energy, empowering them to live more fulfilling lives and contributing to lifting themselves out of poverty. | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Income generation opportunities linked to access to energy are increased. | To be determined during inception, pilot sites identification and mapping of stakeholders | Project surveys | + 15% |
| **Outcome N° 1: Adoption and use of renewable energy technologies is increased** | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Renewable energy’s share in energy mix | Renewable energy currently represents less than 1% of the energy mix at national level | Annual reports of Ministry of Water and Energy | At least 1% increase in the areas of project intervention |
| **Output N°1:** Stakeholders capacities to produce and/or use renewable energies are strengthened | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of households benefiting from project training sessions | 0 | Project reports | 1,000 households |
| **Activities:**   * Training of trainers on solar equipment management and maintenance; * Workshops on artisan efficient cook-stoves production; * Workshops on cooking briquette production; * Workshop on biomass and biogas production and usage. | | | |
| **Output N°2:** Demonstration and learning sites are established | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of pilot sites established | 0 | Project reports | At least 3 pilot sites |
| **Activities:**   * Specification, purchase and installation of solar energy equipment; * Localized design of plant for production of cooking briquettes, biomass and biogas. Construction and equipping of demonstration sites for small-scale production; * Localized design of plant for production of artisan efficient cook-stoves with locally available materials. Construction and equipping of demonstration sites. | | | |
| **Outcome N° 2:** **Production of biomass energy efficient technologies is scaled-up** | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of communities members sustainably using energy efficient technologies | To be determined during inception, pilot sites identification and mapping of stakeholders | Project surveys  Project reports | At least 6,000 |
| **Output N° 3:** Localized biomass energy technologies are designed and their production is rolled-out | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of localized energy technologies designed | 0 | Project reports | At least 4 new localized technologies designed |
| Number of renewable energy equipment produced at demonstration sites and by partnering villages | 0 | Rate of production at demonstration sites  Project reports | 3000 cook-stoves  2500 biogas m3  6 5000 kg briquettes |
| **Activities:**   * Survey and development of specifications for localized technology production of biomass briquettes, biogas and artisanal cook-stoves; * Formulation and production of demos; * Testing and refinement of localized technologies; * Production at demo-sites; * Support to production of renewable energy technologies at collaborating villages. | | | |
| **Outcome N° 3:** **Lessons and challenges on the introduction and scale-up of renewable energies are documented and shared** | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Stakeholders informed of good practices, and knowledgeable about methods, materials and challenges in the production and usage of renewable energies | To be determined during inception, pilot sites identification and mapping of stakeholders | Project surveys  Project reports | 10% of people in the project’s area of intervention. |
| **Output N°4:** Energy efficiency is promoted | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of public/community/village officials possessing the skills necessary to facilitate usage of renewable energy technologies | 0 | Project reports | At least 200 representatives/ community/village partners |
| **Activities:**   * Training of governmental representatives/ community/village partners in management, supervisory and community support functions on: * solar equipment applications, management and maintenance; * artisan cook-stoves production and advantages, * biomass usages, * briquette production and * biogas applications. * Extension support to application of solar equipment and other renewable energy simple technologies; * Advisory, public information and policy support through project governance arrangements and multi-stakeholder coordination. | | | |
| **Output N°5: Project accomplishments are broadly disseminated** | | | |
| **Performance indicator:** | **Baseline:** | **Source and means of verification**: | **Target:** |
| Number of media content produced and published (web sites, newsletter, and TV program) | 0 | Project reports | At least 2 per quarter |
| **Activities:**   * Monthly bullet point updates and bi-annual report to the India-UN Development Partnership Fund; * Drafting and publishing of online stories; * Audio-visual materials, video/TV programme production; * Outreach at and through demonstration sites; * Multi-stakeholder field visits and exchanges among project community partners. | | | |

**Annex B: Timeline**

| **Key Activities** | **OUTCOME** | **Quarters (Trimesters)** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
| Recruitment of a consultant for the identification of pilot sites and operational actors | 1 | XXX |  |  |  |  |  |  |  |
| Inception phase /Pilot sites identification and mapping of actors | 1 |  | XXX |  |  |  |  |  |  |
| Recruitment of a consultant to in charge of the elaboration of training documents | 1 | XXX |  |  |  |  |  |  |  |
| Recruitment of a consultant to draft the technical specifications of solar equipment | 1 | XXX |  |  |  |  |  |  |  |
| Procurement and installation of equipment | 1 |  | XXX | XXX |  |  |  |  |  |
| Organization of trainings and workshops | 1 |  | XXX | XXX | XXX | XXX | XXX | XXX |  |
| Commission studies by local universities | 1, 2 |  | XXX |  |  |  |  |  |  |
| Workshops preparation | 1 | XXX | XXX | XXX |  |  |  |  |  |
| Workshops on solar equipment management and maintenance | 1 |  | XXX | XXX | XXX | XXX | XXX |  |  |
| Recruitment of a consultant to draft the technical specifications of biomass equipment | 2 | XXX |  |  |  |  |  |  |  |
| Development of technical specifications for briquettes production equipment | 2 |  | XXX |  |  |  |  |  |  |
| Procurement and installation of pilot sites equipment and inputs | 2 |  | XXX | XXX |  |  |  |  |  |
| Trainings for Trainers for the production of briquettes | 2 |  |  | XXX | XXX |  |  |  |  |
| Workshops preparation | 2 |  |  | XXX |  |  |  |  |  |
| Training workshops for briquettes production | 2 |  |  |  | XXX | XXX | XXX | XXX |  |
| Awareness workshops on energy efficiency and biomass | 2 |  |  |  | XXX | XXX | XXX | XXX |  |
| Steering committee | 4 |  | XXX |  | XXX |  | XXX |  | XXX |
| Mid Term Evaluation | 4 |  |  |  |  | XXX |  |  |  |
| Submission of Progress Report for the donor | 4 |  |  | XXX |  |  | XXX |  |  |
| Monitoring workshop and Final Report and Evaluation | 4 |  |  |  |  |  |  | XXX | XXX |
| Communication/visibility | 3 | XXX | XXX | XXX | XXX | XXX | XXX | XXX | XXX |
| Recruitment of a project officer | 4 | XXX |  |  |  |  |  |  |  |
| Purchase of a vehicle and equipment | 4 | XXX |  |  |  |  |  |  |  |
| Project Coordination | 4 |  | XXX | XXX | XXX | XXX | XXX | XXX | XXX |

**Annex C: Risk Analysis and Mitigation**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Risk** | **Likelihood:**  **Low, Medium, High** | **Impact:**  **Low, Medium, High** | **Mitigation Measure** | **Risk Owner** |
| 1 | Insufficient commitment by relevant stakeholders | Low | Low | Intensify project’s inclusive participatory approach, including self-selection in the identification of project sites, consultations on choices of pertinent technologies and seeking engaged guidance from all members of the project steering committee. | UNESCO & Ministry of Water and Energy |
| 2 | Heightened insecurity. Renewed intrusions by Boko Haram insurgents or other violent fighting in the project areas. | Medium | low | Depending on timing, if need be, alternative sites could be selected to undertake or relocate project activities.  Local communities may freely implement the scaling-up phase with very limited continuous support if project trainings are advanced enough and villages so desire.  Training of trainers can be conducted outside of project sites.  Heightened insecurity increases the costs of operations. Therefore, the scale of activities either on-site or off-site might have to be reduced. | Ministry of Water and Energy |

**Annex D: Budget (attached)**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |
| **Outputs** | **Responsible Party (Implementing Agent)** |  | **UNESCO BL** |  | **Atlas Budgetary Account Code** | **ATLAS Budget Description** | **Amount (USD) Year 1** | **Amount (USD) Year 2** | **Total (USD)** |
| **Output 1. Stakeholders' capacities are strengthened** | UNESCO |  | 10' |  | 71600 | Travel national | 25,000 | 20,000 | **45,000** |
| 30 | 75700 | Trainings/workshops | 40,000 | 40,000 | **80,000** |
| 11 | 71200 | International Consultants | 20,000 | - | **20,000** |
| **TOTAL OUTPUT 1** | | | | | | **85,000** | **60,000** | **145,000** |
| **Output 2. Demonstration sites are established** | UNESCO |  | 20 |  | 72100 | Pilot sites establishment | 50,000 | - | **50,000** |
| 40 | 72200 | Equipment and furniture | 175,000 | - | **175,000** |
| 30 | 75700 | Trainings of traineers | 20,510 | - | **20,510** |
| 11 | 71200 | National Consultants | 10,000 | - | **10,000** |
| **TOTAL OUTPUT 2** | | | | | | **255,510** | **-** | **255,510** |
| **Output 3. Biomass energy technologies are designed and rolled-out** | UNESCO |  | 40 |  | 72200 | Equipment and furniture | - | 153,341 | **153,341** |
| 50 | 74500 | Miscellaneous expenses | - | - | **-** |
| 11 | 71200 | International Consultants | - | - | **-** |
| 10' | 71600 | Travel national | 20,000 | 20,000 | **40,000** |
| 20 | 72100 | Contractual services companies | - | - | **-** |
| 13 | 71300 | Service contract for basic engineering | 10,000 | - | **10,000** |
| 30 | 75700 | Trainings for trainers\briquettes production | 25,000 | 43,000 | **68,000** |
| **TOTAL OUTPUT 3** | | | | | | **55,000** | **216,341** | **271,341** |
| **Output 4: Energy efficiency promoted** | UNESCO |  | 30 |  | 71300 | Training | 30,000 | 30,000 | **60,000** |
| 11 | 74500 | International consultants | 15,000 | - | **15,000** |
| 11 | 71200 | National Consultants | 10,000 | - | **10,000** |
| **TOTAL OUTPUT 4** | | | | | | **55,000** | **30,000** | **85,000** |
| **Output 5: Project accomplishments are broadly disseminated** | UNESCO |  | 40 |  |  | Communication Audio\Video | 4,000 | 4,000 | **8,000** |
| 20 |  | Publications and printed | 2,000 | 2,000 | **4,000** |
| 50 |  | Internet platform | 1,500 | 1,500 | **3,000** |
| 20 | 71300 | Communication support | 3,000 | 3,000 | **6,000** |
| 11 | 71200 | Consultants services for the elaboration of Communication plan | 3,000 | - | **3,000** |
| 30 | 71600 | Monitoring and advisory missions | 6,000 | 6,000 | **12,000** |
| 11.2 | 75700 | Governance meetings/workshops | 6,820 | 6,820 | **13,640** |
|  | |  |  |  | **TOTAL OUTPUT 5** | **13,500** | **10,500** | **49,640** |
|  | UNESCO |  | 13 |  | 60000 | Project manager (local personnel support cost) | 33,000 | 39,600 | **72,600** |
| 11 | 71200 | Evaluation (Midterm and final) | 15,000 | 15,000 | **30,000** |
|  |  |  |  |  | **TOTAL** | **48,000** | **54,600** | **102,600** |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | **SUB-TOTAL** | **512,010** | **371,441** | **909,091** |
|  |  |  |  |  |  | Indirect costs (7% UNESCO+ 3% UNOSSC) | 51,201 | 37,144 | 90,909 |
|  |  |  |  |  |  | **TOTAL** | **563,211** | **408,585** | **1,000,000** |

1. National Institute of Statistics, 2014. [↑](#footnote-ref-1)