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| 2014 |
| Project Implementation Review (PIR) |
| of |

**PIMS 4313**

**SPWA- Participatory Biodiversity Conservation and Low Carbon Development in Pilot Ecovillages in Senegal**

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# A. Basic Project and Finance Data

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| Executing Agency: | United Nations Development Programme |
| GEF Focal Area: | Biodiversity |
| Country(ies) | (SEN) Senegal |
| Project Start Date: | 24-Oct-2011 |
| Planned Project Closing Date: | - |
| Revised Planned Closing Date: |   |
| Dates of Project Steering Committee/Board meetings during reporting period: | January 2014  |
| Overall Risk rating |  |
| Overall DO rating |  |
| Overall IP rating |  |
| GEF grant amount disbursed so far | $ 1,723,930.05 |

# B. Project Summary

Most rural villages in Senegal are extremely poor and struggle to break out of a cycle of poverty, emigration of young people seeking better lives elsewhere and unsustainable use of natural resources and energy. In order to escape from this cycle, village communities need solutions which allow them to develop and invest in new and sustainable forms of energy supply, more efficient energy use and improved livelihoods and income generation based on integrated and sustainable management of the land and natural resources available to them. The Ecovillages movement in Senegal embraces these concepts of sustainable development but does not yet have a tried and tested model, nor a national strategy for its widespread replication across the country. The project will test innovative participative methods of natural resource management, biodiversity conservation, renewable energy development, coupled with a reduction of carbon emissions and an increase in carbon sequestration, to help develop an Ecovillage model which meets people’s needs and contributes global benefits in terms of biodiversity conservation and low carbon development. This will be achieved through village level land use planning and testing of methods in 10 pilot villages. Within community lands, activities will include community management of natural resources: e.g. forestry for fuel wood and other purposes; biodiversity conservation and sustainable harvests/ income-generation in Community Nature Reserves and national Protected Areas; more efficient agro-sylvo-pastoral systems in farming and grazing lands. Reductions in GHG emissions and increased carbon sequestration will be achieved through, first and foremost, the protection of zones that would otherwise be deforested in the long run, but also from the widespread provision of fuel-efficient stoves for household use, production of alternative energy supplies (Jatropha oil and fuel wood plantations), wide scale afforestation (trees, mangroves, bamboo) and experimental use of biochar in farmlands. Private and public investment in rural energy supply and carbon finance have been committed as part of project co-financing and will be further promoted and incorporated as part of the national Ecovillage model and strategy.

# C. Project Evaluation

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# D. Adjustments

| Project Planning |
| --- |
| **Key project milestone** | **Status** | **Original Planned Date (Month/Year)** | **Actual or Expected Date (Month/Year)** | **Comments, including reasons for delays and their implications** |
| **Inception Workshop** | **on schedule** |  **-**  | **November - 2011** | **The Inception Workshop was convened a month after the signing of the Project Document by UNDP and the Government of Senegal** |
| Mid-term Review | on schedule |  -  | 9 - 2014 |  |
| Terminal Evaluation |  |  -  |  -  |  |

|  |
| --- |
| Critical Risk Management |
| Critical Risks Type(s) | 2014 |

General comments:

# E. Progress toward Development Objective

| **Description** | **Description of Indicator** | **Baseline Level** | **Target Level at end of project** | **Level at 30 June 2012** | **Level at 30 June 2013** | **Level at 30 June 2014** |
| --- | --- | --- | --- | --- | --- | --- |
| To remove barriers to an integrated approach to sustainable natural resource management, biodiversity conservation and low carbon development in rural areas of Senegal through the Ecovillage model. | 1. Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from energy and land use at the level of village lands (“terroir villageois”)  (Indicator 9, below, is sub-set of this same Indicator) | Bilan Carbone baseline data exists for some test rural villages.   [METHODOLOGICAL NOTE added in 2013:]   At PRODOC preparation stage (PPG), the Bilan Carbone had been applied in full for 4 prospective ecovillages: (i) Teyel in Haute Casamance; (ii) Loumbol Samba Abdoul in the Ferlo; (iii) Diadeum 3 in the Delta du Fleuve Sénégal; and (iv) Massarinko in the Delta du Saloum.   Of these, only (ii) Loumbol and (iv) Massarinko ended up being finally selected as project sites.   Through informed extrapolation and based on the results of the Bilan Carbone and other studies, a proxy baseline of for the GHG balance (i.e. emissions minus sequestration) was established in for a total of 4 out of 10 project sites, all of which are net emitters:  Yearly GHG emission / carbon sequestration balance (tCO2): [2] Toubel Baly 3,786 [4] Ndick 2,973 [7] Massarinko 6,345 [10] Thiasky 2,973   PPG technical reports also showed that the most important contributors to the net emissions in prospective ecovillages were the agricultural and livestock sectors, coupled with land use change. | 1a) At start of project, the baseline and “business-as-usual” (BAU) development scenario for comparison will be established (10 pilot villages).   1b) By project end, the application Bilan Carbone for 10 pilot Ecovillages shows that these villages have embarked on a low carbon development path: net emissions are at least 30% lower than the BAU development scenario.   [NOTE on logframe revision: indicator revised to introduce clarity.] | The baseline level of 03 ecovillages is known | 1a) Project start target has been achieved for 11 ecovillages. The baseline is set.   1b) We will inform on the achievement of the EOP target in due course (not due now). Else, the MTR will help review and independently vet the methodology. Achieving the project start target is the basis for achieving the end of project target and for defining the intervention strategy at the village level for what the climate change mitigation components of the project are concerned.  Results for the baseline (1a) can be summarised as follows (tCO2/year):  [1] Lompoul 14,636 [2] Toubel Baly -1,974 [3] Kack 4,048 [4] Ndick 24,290 [5] Darsalam 19,449 [6] Dindefelo 9,464 [7] Massarinko 4,872 [8] Mbam 24,290 [9] Mbackombel 4,048 [10] Thiasky 14,524 [11] Kouar 10,129  See complete summary table and graph at: [https://dl.dropboxusercontent.com/u/97932458/Bilan.jpg] [https://dl.dropboxusercontent.com/u/97932458/Graph.jpg]  Even though the numbers produced differ quite significantly from those obtained at PRODOC stage as the interim baseline, we believe that the current baseline is much more accurate and thorough. Here is why:  The current baseline values were produced as a result of a participatory application of an established methodology on GHG emissions / carbon sequestration at the level of the terroir. At least 10 core ecovillages , one additional ecovillage and various polarised ecovillages were concerned. The study proved quite onerous and time consuming due to the need to also take into account the polarised villages. However, it was worth the effort.   The methodology seeks to involve the local management committees in the entire process as a means to raise awareness on carbon issues.  The main GHG emission and carbon sequestration sectors were identified in meetings and discussions with local management committees.   The contribution of each sector to local development was assessed; so were their emissions / sequestration values;  The ways of rationalising the emissions are discussed so as to retain solutions that seem most relevant and most appropriate to the locality.   The methodology Bilan Carbon at the terroir level, developed by ADEME (French Agency for Development and Energy Management, France) was used to calculate the carbon balance and TARAM (Tools for Afforestation / Reforestation Approved Methodologies) tool developed by the World Bank, for the determination of carbon stored in a 30-year horizon.  An effort to synthesize diagnostic studies at the national and local levels has informed most of the key factors for optimal use of these tools.   It was implemented by two national consultants: Dr. Maguette Cairo and Sheikh Dr. Dieng, specialists in carbon and forest inventories.   During this period, the project supported the training of local agents in monitoring and evaluation and in the assessment of the carbon footprint.   In addition to the teams of agents we had the active participation of technical staff from the Directorate of Water Resources and Forests (Eaux et Forets). We all benefitted from their field knowledge, including ANEV field staff who were trained on the go.  The heart of the project strategy for leading villages on a low carbon development path actually builds on mostly on the carbon benefits that may be obtained, in the long run, from avoided deforestation, in particular through the establishment of new Community Natural Reserves (CNRs) in areas that would otherwise be deforested. Considering the protection of 15,800 ha of new and extended CNRs, the Ecovillages project is then estimated to reduce emissions of 31,729 tCO2/yr, that is 2 tCO2/ha/yr.   Secondly, strategy build on the reduction in GHG emissions from e.g. firewood burning, when suitable and viable alternatives can be adopted.   Thirdly, the strategy also builds on the adoption of a low carbon path in the villages\' transition to modern forms of energy that can support their livelihoods\' development, e.g. by using jathorpha to power essential engines, rather than diesel.   Through a combination of various strategies, the goal is to ensure that most ecovillages become net GHG sinks rather than emitters.  Setting a baseline and estimating a (BAU) development scenario with respect to the carbon balance for comparison is important. The BAU scenario changes significantly from village to village, due to the different ecological and energy supply conditions that they have, coupled with their land-use and land use change patterns. | Good progress towards the target, likely to achieve it in 2-3 years, if all conditions remain favourable.   The estimation of the carbon balance in the Ecovillages is at around 148,532 t CO2 eq/year.   After two years the level of reduction of carbon emissions is estimated at 31,729 t CO2 equivalent, which corresponds to 21% reduction compared to baseline. |
|  | 2. Number of Environmental Management Plans (EMPs) adopted by pilot sites | No plans are yet developed | At least 8 plans for project sites have been successfully developed and adopted (endorsed) by communities  At least two plans are under implementation | Baseline studies have been conducted in 06 ecovillages | Approaching the target and likely to surpass it, given that EMPs have been prepared for as many as 21 ecovillages, including the 10 core ones.   Baseline studies have been conducted in 21 ecovillages, among them the 10 pilot ecovillages that serve as project sites, and management plans are in the process of being prepared.   More specifically, the socio-economic chapters of the plans have been widely validated by the local communities. What is missing is the integration of METT and Bilan Carbon in them. Thereafter, the package of studies and plans will be submitted to the Ecovillages\' Scientific Committee and the Project\'s Steering Committee. | Target achieved and surpassed, as reported in 2013.   EMPs in are under implementation in all of the 11 core Ecovillages (refer to indicator #1 for a list), as follows:  (i) the development of 11 local conventions of good natural resource management,   (ii) enrichment planting in CNR ;  (ii) transfer of fauna (ORYX algazelle; GAZELLE dama mhore) from Guembeul Fauna reserve to CNR of Lompoul,for ecotourism promotion;  (iv) development actions to fight against bush fires. |
|  | 3. GEF Management Effectiveness Tracking Tool (METT): METT scores for existing and new CNRs show improvements in management and biodiversity conservation effectiveness | Baseline scores for 7 out of 8 CNRs (from PPG METT application in Aug 2010):  [1] Diokoul Diawrigne 64 [2] Bounguien CNR 72 [3] Kak proposed CNR 33 [4] Mbawal proposed CNR 51 [5] Mansadala CNR 73 [6] Dindefelo CNR t.b.d. [7] Mansarinko CNR 73 [8] Gnargou Comm Forest 74 | METT scores for all 8 project CNRs (2 new, 4 extended, 2 existing) show increases of at least 10% from baseline over 5 years and 20% for sites with starting score more than 60% | METT analysis of 03 ecovillages is available | Progress made in establishing a baseline in all 10 villages.   No changes to the baseline and also no progress due to be reported at this stage.  The tool to inform this indicator will be applied three times during the project\\\\\\\'s lifetime: at GEF CEO Endorsement (baseline); prior and in preparation to the MRT (to be validated by it); and at project end, i.e. prior and in preparation to the TE (also to be validated by it). | Steady progress is being made to meet the targets through the operationalization of CNRs.   Refer also to Indicator #6 for more info on this.   The METT questionnaire has been applied and scores for all sites covered at the basile are available.   [we would have added the interim scores but had difficulty with layout]   A study to assess the evolution of the scores is in progress.  A study is being realised for the operationalization of one CNR as a resting and foraging site for Lesser Flamingo near Ndigue Ecovillage. |
| Improved governance framework and capacity for the effective incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy | 4. Inter-Ministerial Protocol established between Ministry of Ecovillages (MEBRLAP/ ANEV) and Ministry of Environment (MENP/ DPN; DEFCCS) | No existing working relationship or agreements | 4a) Signed and implemented inter-Ministerial protocol  4b) Effective working relationships at all levels, local to national | The draft agreements with the Directorate of Water and Forestry and the Directorate of National Parks have been signed and are being implemented | Target achieved for 4a and approaching for 4b.   The agreements with the Directorate of Water and Forestry and the Directorate of 12 others partners have been signed and are being implemented.  The National Ecovillages\' Programme with strategy of implementation is finalized and approved by all key stakeholders in February 2013.  The National Ecovillages\' Programme establishes a framework for ANEV to engage with a suite of partners at various level, not just locally and nationally, but also internationally. | Target achieved during the previous reporting period. We now bring results to another level.   The national program ecovillage has been edited and is about to be translated into English and Arabic for wide dissemination. It is the same for the national strategy ecovillage.  Furthermore, different protocols have been signed during the period covering June 2013 to June 2014. These protocols have facilitated the transfer of gazelles in the Lompoul CNR with the support of experts from the national parks Department for site planning and monitoring process. |
|  | 5. Improved competence levels and standards of the institutions responsible for EVs (ANEV, DPN, DEF, GENSEN) measured by increased scores of the Capacity Development Scorecard  Average scores for all thematic areas (1 to 5 – see below) and levels of capacity (systemic, institutional and individual) for both PA management and energy efficiency market transformation.  [Refer to PRODOC Annex 3 for a list of Capacity thematic areas and baseline scores] | Average scores for all thematic areas and capacity levels of capacity for both PA management and energy efficiency market transformation:  ANEV 62% DEFC 66% GENSEN 76% DPN 65%  (see PRODOC Annex 3 for a complete and disaggregated analysis) | Average scores for all thematic areas and levels of capacity for both PA management and energy efficiency market transformation increase by at least 10% for each of the target institutions. | The project has trained a total of 70 technical agents, 28 ecoguards and 28 rural communities' agents including devolved technical services' officers (Water and Forestry, CADL, SRP, Water and forestry Commissioners, Agriculture and Breeding), Rural Councils officers (Land and Environment Committees) and village ecoguards in biophysical and socioeconomic environment assessment techniques as well as in techniques of elaboration of ecological management plan of village terroirs.Training of one young person in each of the six villages in solar panels and electric installation maintenance | No changes to the baseline and also no progress due to be reported at this stage.  The tool to inform this indicator will be applied three times during the project\'s lifetime: at GEF CEO Endorsement (baseline); prior and in preparation to the MRT (to be validated by it); and at project end, i.e. prior and in preparation to the TE (also to be validated by it).  However, we report important progress in achieving the capacity building target embedded in the indicator.   The project has trained a total of 50 technical agents, 30 ecoguards and 90 rural communities\' agents including:   - officers of decentralised technical services , namely of Water and Forestry, CADL, SRP, Water and forestry Commissioners, Agriculture and Livestock;  - Rural Councils officers, in particular those responsible for the Land and Environmental Committees, and   - Village ecoguards and women in biophysical and socioeconomic environment assessment techniques as well as in techniques of for preparing ecological management plan for village terroirs.   - Training of one young person in each of the six villages in solar panels and electric installation maintenance. | No new assessment of progress using the actual scoring on capacity for competence levels and standards of the institutions responsible for EVs has not been applied again.   We question its actual usefulness and wonder if the MTR could shed light into it, by reviewing the work done during the project preparation process.   Instead we would prefer an indicator that related to training e.g.   The project has been training people extensively. We have numbers on this, but wonder if other measures to capture the learning uptake could be applied as a suitable indicator.   40 training sessions were held from June 2013 to June 2014 in all core Ecovillages (i.e a minimum of 4 sessions of technical training in the Ecovillage Center) benefitting 1305 people.  Officers at the central and decentralized level have been trained in the techniques of socio-economic assessments, carbon sequestration studies (inventories, assessment techniques on sequestration) and biodiversity conservation (Score METT); fishing; poultry; soap manufacturing; GIS; etc. |
| Integrated land use, natural resource management and biodiversity conservation provide social benefits in pilot Ecovillages and contribute to global BD benefits in CNRs and adjacent PAs | 6. New CNRs (2); extensions of existing CNRs (4) and existing CNRs (2) functioning to conserve global biodiversity within their boundaries and in adjacent PAs | Nationally:  21 CNRs, 27 UPs, (total 441,000 ha) designated\*  Among project sites: 6 CNRs tallying 147,013 ha  (\* See Table B in Section One of the METT for a non-exhaustive list of Community Natural Reserve and Pastoral Units in Annex 2.) | Among project sites at least 15,000 ha of new and extended Community Nature Reserves established and functioning to conserve biodiversity, increasing total conservation area targeted by the project to 162,813 ha  Evidence of effective management is provided by increases in METT scores for all CNRs | Setting up of 04 CNRs: 01 in Kak (5,000 ha), 01 in Ndick (2,000 ha), 01 in Thiasky (50 ha) and 01 in Mbacombel (30 ha)Extension of 02 CNRs: 500 ha in the CNR of Lompoul and 7,000 ha in that of DindéfeloConsolidation of CNRs: Mbouguiel, Community Forest of Mbam, Missira, Némabah, Dassilamé Socé, Ndiop, Koar, Manssadala, Gandon, Notto, Darou Khoudoss, Loumboul Samba Abdoul and Malandou | Target achieved and surpassed by far with > 52,000 ha of new CNRs added by the project.   During the reporting period, the project has helped establish/expand 3 new CNRs:  - 02 CNRs in Mbam (3,000 ha) - Extension of 01 CNRs: 7,000 ha in Dindéfelo.  The above adds in a cumulative manner to achievements in the previous reporting period. To date, the impact of CNR creation amounts to the following total areas as CNRs:   [1] Lompoul 2,000 ha [2] Toubel Baly 128,576 ha [3] Kack 49,400 ha [4] Ndick 300 ha [5] Darsalam 3,000 ha [6] Dindefelo 13,200 ha [7] Massarinko 935 ha [8] Mbam 1,077 ha [9] Mbackombel 500 ha [10] Thiasky 200 ha TOTAL 199,188 ha  See complete summary table at: [https://dl.dropboxusercontent.com/u/97932458/CNR.jpg]  TOTAL new CNRs created with project assistance is 52,175 ha.  and this show that, in terms of CNR and with the issues that data on surface  The survey (inventaire) of the flora and of the woody grass vegetation is being finalised to support the CNR establishment and management.   As an alternative to poaching of wildlife in AP/CNRs , 300 units of family poultry with powerful breeds including 320 guineas(pintades) and 1500 chickens are available to households and groups of women by CIVD.  500 beehives introduced into the RNC for benefit of villagers\' ecoguards. 120 ha CNR planted with local species. | Target in terms of surface had been achieved in the previous reporting period.   We now take it to another level and report on the actual operationalization of these sites.   A total of 206 353 ha of CNR is available among which 15,800 ha newly created or extended.   The inventory on flora and woody grass vegetation is finalised. We reported it on progress last year.   As an alternative to poaching of wildlife in AP/CNRs, we report the following:  - 100 units of family poultry farming with powerful breeds, including 215 guinea fowls (pintades) and 1480 chicken, were provided to households and groups of women by partner NGO CIVD.   - 7 incubators were installed for larger dissemination of poultry  - 400 beehives introduced into the RNC for benefit of village ecoguards.  - 183 ha CNR planted with local species. |
|  | 7. New Ecological Perimeters established and providing village needs through sustainable management (wood fuel/ timber; endemic species for CNR rehabilitation, medicinal plants, bamboo) | 7a) Nationally, only 4 or 5 EPs existed in 2009 (the concept is quite new)  7b) Among project sites: 2 established in project villages with up to 50ha | At least 200 ha of new EPs under sustainable management in all 10 villages  [Text for the target had been accidently removed from 2013 PIR due to a pasting mistake. We add it back now.] | Creation of 02 operational ecological areas in Dar Salam and Ndick | Approaching the target, though exact surface area measurements are still to be carried out.  Creation of 08 operational ecological perimeters areas in Thiasky, Mbam, Massarinko, Koar, Sintian, Bantancountou, Dassilamé, and Dindéfélo.   Among the 10 pilot ecovillages, a total of 6 are now serviced by an ecological perimeter. The total area needs to be measured.  In addition, we report that:  - 9 micro-projects intensification of production / income generation financed.  - 20 ha of village woodlands are now established. | Target basically achieved.   Within 10 Ecological perimeters was taken to a double vegetable cropping over an area of nearly 20 ha each.   Added to this is the introduction of 20 greenhouse technologies and cultivating. Which has generated nearly 2 million FCFA / year or nearly 100,000 FCFA / household.  In addition, we report that:  - 98 micro-projects aiming at intensification of production / income generation are financed.  - 36 ha of village woodlands are now established.  - 125 eq ha of fruit trees  - one ecotourist camping in lompoul  - three fish ponds in Thiasky  - 6 Agro food processing units  -10 artisanal saponification units |
|  | 8. BD Indicators in selected CNR/ PA: Dindefelo:   (8a) ha of chimpanzee habitat protected / managed  (8b) PNNK/ Ferlo migration corridor conservation/ management | 8a) Dindefelo 13,000 ha chimpanzee habitat (Wula-Nafa project)  8b) PNNK/ Ferlo Migration corridor exists on maps; little information on animal numbers / movements | Dindefelo Additional 7,000 ha chimpanzee habitat protected and managed as CNR (extension towards Guinea border)   PNNK/ Ferlo Monitoring data on large mammal migration available to improve conservation and management of corridor | 7,000 ha added to the Chimpanzees Forest | Target achieved for (8a) Dindefelo, but not yet in (8b) PKNNK/Ferlo  7,000 ha added to the Chimpanzees Forest.   Progress in operationalising the PNNK/ Ferlo Migration corridor, especially in terms of wildlife monitoring data, will require a strong involvement of the Directorate of Parks and Reserves and this is still being worked on.   On a related activity, we report progress in another site:  The RNC Mbam is extended to the rural community of Djilor to form an ecological corridor of 1,500 ha including a marine protected area community serving as a biological corridor for conservation of manatees, dolphin and sea turtles in Saloum Delta Biosphere Reserve | 8a) Target achieved in the last reporting period.   Extension of the area of protection of chimpanzees on an area of 12 000 ha in the forest Dakateli.  300 ha of area designated for the protection of Bamboo plantations in Dindefelo  8a) Nothing to report this year. |
| Reduction in greenhouse gas emissions and increase in use of renewable and efficient energy alternatives in pilot Ecovillages | 9. Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from energy sector at the level of village lands (“terroir villageois”) (sub-set of Indicator 1) | Bilan Carbone exist for some test rural villages; baseline needs to be established for all 10 project pilot villages at start of implementation | The carbon footprint for energy sector in 10 pilot ecovillages are at least 30% lower than the “business-as-usual” development scenario (based on the Bilan Carbone methodology)  [NOTE on logframe revision: formulatin of indicator target revised to introduce clarity.] | The baseline level of 03 ecovillages is known | Approaching the target, but more careful calculations may need to be carried out.  We assess that for 2 ecovillages (Kack and Tiasky) we have a net positive yearly balance for avoided emissions of 9.98 and 9.62 tC02 respectively, which represents between ~320-330% of the BAU emissions for the residential sector (energy production).   For 7 other core villages, if only the residential sector is considered, there are no displaced emissions above the baseline.   We need however to ponder if and how suppressed demand methodology should apply and refine the calculus.   However, we can inform we are progress in reducing the carbon footprint of the energy generation sector in several villages as follows:   1 cold room installed in Mbacombel 6 mini solar power installed 2 Village Bakery running on biogas installed 6 muti-functional platforms (mills and grain huller installed)  About the Cold Room Innovation: The radiative cooling works through an inverse greenhouse effect. The radiative cooling technology is developed by the French company/innovation venture Iterrae. See website  [www.iterrae.org]  Iterrae launched a research program on the radiative cooling in the Niayes, Senegal in partnership with ANEV.   The solution is now operational and allows the storage and preservation of cereals, fruits and vegetables.   The initiative Les Greniers du Sahel (name given to the type of silo that 100% autonomous, with a versatile device developed using radiative cooling) has consolidated it.   It is a new source of energy, renewable, clean and inexhaustible to ensure the preservation of produce.  The world \'s first prototype was actually developed at Mbackombel. See site: [http://www.greniersdusahel.com/?p=316]  Soon it will also be installed in Lompoul, with the support of the project, which enabled the partnership between ITERRAE and Senegalese institutions, including ANEV, Ecole Polytechnique de Thies (ETP ), the Lycée Technique André Petavain de Saint Louis. This will also further develop the prototype.  An entire Research Department on radiative cooling will be set up at Ecole Polytechnique de Thies (ETP).   The Fondation Prince Albert II de Monaco partners ITERRAE intends to finance the deployment of stores in ecovillages Niayes in particular.  See site [www.fpa2.com]  About the village bakeries: The bakeries use a mix of fuels, according to need and availability, but mostly on biogas, butane gas or firewood. The management is entrusted to women, who also recover sludge from the biodigestor to fertilize fields.   About the multifunctional platforms: Multifunctional platforms also use a mix of fuels. They are designed to run on Jatropha oil, but for now with the low level of production they are workin on Diesel on an interim basis. However, experiments with solar mills are being tested. | Progress made but not clear whether target is achieved.   While consolidating the gains, three new bakeries were established, a revolving credit facility for the acquisition of autonomous solar lighting kit in Bam (11 kit is 3% of households) and the Installation of 6 units of agro food processing.  This promotes the use of renewable energies and results in the cumulative reduction 116.1 t CO2 eq per year. T  The level of reduction in some core ecovillages are :  26 t eq co2/ year in Dar Salam 13 t eq co2/ year in Dindéfélo 13 t eq co2/ year in Kak 3 t eq co2/ year in lompoul 22 t eq co2/ year in Mbackombel 4.5 t eq co2/ year in Ndigue 21.6 t eq co2/ year in Thiasky |
|  | 10. Percentage of households in project EVs with an improved cook stove | Baseline for all Project villages to be established at start of implementation | At least 75% of all households in the 10 pilot Ecovillages use improved cook stoves | 110 fuel-efficient stoves granted to households are being usedTraining and equipment of X village groups for the dissemination of banco fuel-efficient stoves | Target achievement is now at 34%. Target was surpassed for 4 out of 10 ecovillages, but not overall.   [1] Lompoul 8% [2] Toubel Baly 100% [3] Kack 110% [4] Ndick 100% [5] Darsalam 100% [6] Dindefelo 83% [7] Massarinko 55% [8] Mbam 10% [9] Mbackombel 86% [10] Thiasky 23% Overall 34%  We can report that 1,300 improved cook stoves of banco or metal with ceramic insert installed by households are being used in at least 21 ecovillages.  We provided training and equipment to 21 teams in ecovillages for the dissemination of improved cook stoves.  50 biodigesters for cooking gas and lighting kitchens installed. The effluents produced are used to fertilize vegetable plots | Target achievement is now at 64%. Target was surpassed for 8 out of 10 ecovillages, but not overall.  [1] Lompoul 58% [2] Toubel Baly 100% [3] Kack 110% [4] Ndick 100% [5] Darsalam 100% [6] Dindefelo 100% [7] Massarinko100% [8] Mbam 15% [9] Mbackombel 100% [10] Thiasky 100% Overall 64%  In addition with the 600 units of improved stove of banco one can add 700 metalic improved stove with ceramic insert installed. That gives now an average of one banco stove and one metalic stove/household.  We provided training and equipment to 21 teams in ecovillages for the dissemination of improved cook stoves.  80 biodigesters for cooking gas and lighting kitchens installed. The effluents produced are used to fertilize vegetable plots. The introduction of improved stoves and biogas in order to improve cooking methods avoided deforestation equivalent of nearly 480 ha of forest. It also allowed the reduction of nearly 2 000 t eq CO2 of GHG emission. |
|  | 11. Quantity of Jatropha oil produced locally in project Evs | 0 litres | 10,000 litres / year of Jatropha oil is produced locally in the project Evs | Linear planting of jatropha over 3 km and its cultivation on a surface area of 02 ha for oil production purpose | Target not achieved, but there is progress towards it.  Linear planting of jatropha over 10 km and its cultivation on a surface area of 20 ha for oil production purposes | Target not achieved, but there is progress towards it.  Linear planting of jatropha over 14 km and its cultivation on a surface area of 30 ha for oil production purposes  3 jatropha oil presses were acquired and first oil production is expected in the last quarter of 2014 |
| Increased biocarbon sequestration in Ecovillage community-managed lands (terroirs villageois) | 12. Number of tons of CO2 sequestered in living hedges | 12a) 0 km on new living hedges planted  12b) 0 tCO2 sequestered per year in living hedges | 20km living hedges (40,000 trees) in 10 EVs (12a), giving C sequestration of 55 tCO2 per village/ year – that is at least (12b)  (Project total: 200km hedges (400,000 trees); 550 tCO2 sequestered per year) | Villages are producing young plants in developed plant nurseries towards the planting of a 5 km hedgerow | Target achieved by 2.5% for sub-indicator #12a, but not yet possible to inform the sub-indicator #12b.   5 km living hedges planted and villages are producing young plants in developed plant nurseries towards the planting of 5 more kilometers hedgerow in 2013 rainy season.  Production of 750,000 forest and fruit plants (110 ha ) in 12 nursery for 2013 rainy season to increased biocarbon sequestration in Ecovillage (terroirs villageois) | 12a) Target achieved by 40%  12b) The target achieved is 50% .   100 km living hedges planted. Production of 632 464 forest and fruit plants (225 ha among which 125 ha in block planting and 100 in the household 4 trees/ household) in 12 nursery for to increased biocarbon sequestration in Ecovillage (terroirs villageois).  Regardind carbon sequestration, the total amount of living hedge allowed the sequestration of 275 eq t co2/y.ear |
|  | 13. Number of tons of CO2 sequestered in bamboo plantations | 0 tons | 20,000 bamboo plants in each of 4 project EVs, giving sequestration of at least 27 tCO2 per year per village  (Project total: 80,000 bamboo plants; 108 tCO2 sequestered/ year) | Arrangements are maid, in line with the PNNK commissioner for the collection of 20,000 young plants of bamboo for the purpose of reforestation at the rainy season. As part of the Ecovillage Project co-financing, the training of two experts (01 from ANEV, 01 from the PGIES) in China on Forestry and Bambo Valuation between 11 and 31 July is fully paid by INBAR | Target achieved at ~60% in terms of bamboo seedlings (not plants) and at 50% in terms of number of pilot ecovillages.  Arrangements are made with the PNNK Conservateur for the collection of an additional 30,000 bamboo seedlings (summing a cumulative total of 50,000 seedlings) for the purpose of reforestation at 2013 rainy season. At least 2 ecovillages will benefit (Dindefelo and Darsalam.   A new CNR with 150 hectares of bamboo regeneration is established in Dindefelo.  400,000 seedlings ronier (Borassus) planted in Ngargou CNR and Mbam village land | Target Achieved at ~ 50% in terms of bamboo seedlings.   Added to this is a natural regeneration of 300 ha Dindefelo. It should be noted here that the project was able to negotiate an extension of 150 ha between 2013 and 2014.  200,000 seedlings ronier (Borassus) planted Mbam, Massarinko, Thisky |
|  | 14. Number of tons of CO2 sequestered in mangroves | 0 tons | 250 ha (2.5M propagules) of mangroves planted in each of 2 project EVs; giving sequestration of 750 tCO2 sequestered / village/ year)  (Project total: 500 ha (5M propagules) mangroves; 1,500 tCO2 sequestered/ year) | The collection of young plants and propagulums (Rizophora and Avicennia) towards the reforestation of 350 ha of mangrove is under way | Not yet possible to inform the achievement of the target in terms of tCO2 sequestered/ year.  We can however report that:  100 hectares of mangroves planted and the collection of young plants and propagules (Rizophora and Avicennia) towards the reforestation of 350 ha of mangrove is under way.  The project has initiated the creation of a community marine protected area of 1200 hectares mangrove in Mbam EV in collaboration with rural council , WWF and Directory of Community Marine Areas | Close to achieving the target (at 92%).   230 hectares of mangroves planted. Which allows sequestration near 690 t CO2 eq/ year |
|  | 15. Number of hectares of soil improved through Biochar amendment | 0 ha | 10 ha soil improved in test plots (1 Ecovillage) | Training sessions for women groups in composting techniques are being organized. The enrichment of a 1.5 ha market gardening parcel in Mbackombel is actual | Target achieved by 50%.  In collaboration with National Institute of Pedology (INP), 5 tons of biochar are being tested to improve soil fertility.   The project tests mixture of vegetal biomass and cow dung to improve production of biogas and fertilizer, in collaboration with Institute of Environmental Sciences (ISE) and the National Biogas Programme (PNB) | The testing biochar program is ongoing. We will properly quantify it by the next reporting period. Not possible to fully inform indicator now. |

# F. Progress in Implementation

|  |  |
| --- | --- |
| Outcome 1 | Improved governance framework and capacity for the effective incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy |
| Outputs Reported The ecovillage guidelines are taken into account by the laws in force  A national ecovillage strategy validated/approved is available and is being edited. There is also a document on the ecovillage national programme that is published  11 EMP have been developed and being implemented with 21 studies baseline and 11 local agreements |
| Outcome 2 | Integrated land use, natural resource management and biodiversity conservation provide social benefits in pilot Ecovillages and contribute to global BD benefits in CNRs and adjacent PAs |
| Outputs Reported A total of 206 353 ha of CNR is available among which 15,800 ha newly created or extended.  biological recovery is noted both animal plant plan. |
| Outcome 3 | Reduction in greenhouse gas emissions and increase in use of renewable and efficient energy alternatives in pilot Ecovillages |
| Outputs Reported The emission level associated with the energy is 48 167 t CO2 eq throughout ecovillage / year Quantities of GHG avoided per year are in average 1518 t CO2 eq which represents 3% of the baseline |
| Outcome 4 | Increased biocarbon sequestration in Ecovillage community-managed lands (terroirs villageois) |
| Outputs Reported the level of carbon sequestration is 31 729 t eq cO2 |

General comments:

# G. Ratings and Comments on Project Progress

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| --- |
| Progress toward Development Objectives |
| Project Manager/Coordinator | Satisfactory |
| The challenge to build a multifocal areas project conservation of biodiversity and the fight against climate change through carbon sequestration and reducing greenhouse gas emissions. in the context of promoting sustainable livelihoods by empowering village communities, is being achieved in ecovillages.  Also demonstrated that significant in the pilot project UNDP / GEF Ecovillage results are currently being multiplied by the National Agency of ecovillages which supervises the project. Also the important results demonstrated by the pilot project UNDP / GEF Ecovillage are currently being multiplied by the National Agency of ecovillages which supervises the project. |
| UNDP Country Office Programme Officer | Satisfactory |
| The project implementation is on good track to achieving the overall expected mid-term results due this year. A UNDP and UNDP-GEF field visit was conducted from March 01 to 07 to help prepare the mid-term review mission. The BTOR was sent to concerned parties. Overall, the project will even exceed the targets particularly on CCM aspects. |
| Project Implementing Partner |  |
|  |
| GEF Operational Focal point |  |
|  |
| Other Partners |  |
|  |
| UNDP Technical Advisor | Satisfactory |
| This Ecosystem and Biodiversity (EBD) RTA has played a key role in the development of this project, together with the RTA then responsible for the climate change mitigation focal area (now the EITT cluster – or Energy, Infrastructure, Transport and Technology).  The PRODOC was signed in Oct 2011 with a fully and well translated version available in French.  The project was instrumental in helping the 'Ecovillages Programme' of the newly established ANEV take off in Senegal, with clear targets and metrics for at least 10 pilot ecovillages, which were selected as representative of the countries' landscapes and in the vicinity of important protected areas or ecological complexes.  This RTA handed over the lead supervision to another EBD RTA in Jan 2012, but assumed it again in Jun 2013, as that RTA had left the team.   This RTA is well impressed with the general level progress made by the project so far. The project's progress towards its objective is rated S, same rating provided by the project manager and the UNDP CO.  The S rating means that, after approximately 2 years of nominal implementation, the project has made some progress with the four aspects embedded in the expected outcomes: (1) governance framework (2) demo EBD activities; (3) GHG emission reductions; and (4) Carbon sequestration. The project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.  This is the third PIR produced by the project. The quality of reporting against indicators has improved, but there is still room for being more specific and to show more details in some places, while in other to focus on the big picture.   The project has spent 85% of its grant by June 2014. There has been a significant jump in expenditure when compared to the last reporting period, when cumulative delivery was only 34%. This acceleration in implementation has also from all accounts also translated into results. There has been a wide dissemination of training, studies and deployment of equipment and goods to the sites. The project is very well anchored in on the ground.   However, the project proposes to have its closure in Sep 2016. This might not be possible, if the current level of spending continues and if new resources are not injected into the programme.   The MTR is still due but should start soon.   A visible shortcoming that been pointed out during the last reporting period was the project’s gaps in the communication results and in sharing products. Today, we note with joy that ANEV has a site (ecovillages.sn) and that it is kept lively  The project is low risk (not risks are critical) and the response to existing risks is adequate. An emerging risk could be the shortage of funds.   With respect to progress in achieving the project's development objectives we count 17 indicators and sub-indicators and note the following:  Target achieved for 5 indicators / sub-indicators Target very close to being achieved (92%) for 1 indicator Target partially achieved for 4 indicators / sub-indicator (at 65% for 1, 40% for another 1 and 50% for 2)  Progress made towards achieving the target for 5 indicators / sub-indicators 2 indicators not informed, but other aspects reported for 1 and nothing reported for another  This is a general picture of significant achievements, but which would still require 2 years to be consolidated.  The problem is that with the current level of spending, the project will not be able to remain active for all this time.   Also, we have previously commented that the scorecards are important, but it was even more important to make progress in the activities that will lead to improved scores in PA management capacity, in PA mgt effectiveness and capacity. Yet, the scores are missing this year and they were due. This should be addressed soon.   The project should continue to consider the engagement of a qualified one or more technical assistants with international exposure and experience to assist the team and ANEV with the things that are difficult (M&E, carbon methodologies, PA planning and ecological monitoring) – and above all resource mobilisation.   Finally, we would urge the project to take GENDER issues seriously. This is one negative aspect requiring concerted attention in the upcoming period. From all accounts, the project has so far failed to highlight the conundrum gender and Ecovillages in Senegal. There are a large number of reasons why this aspect is very important and why it is not acceptable that a project like this, with a central role in local development and establishing a benchmark for best practices in this respect simply ignores gender issues. All questions in the Gender Tab had a negative answer. This is disappointing to say the least. There is no excuse not to make an effort to mainstream gender in the Ecovillages programme. This could start with a study. |

General Comments

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| Progress in Implementation |
| Project Manager/Coordinator | Satisfactory |
| The establishment of a competent, dedicated team and the development of an operational and effective partnership and the effective mobilization of co-financing, enabled the project to carry out correctly the planned activities in ecovillages. Therefore, all the expected mid-term results were achieved, excepted the production of jatropha oil, which plantations are still growing. |
| UNDP Country Office Programme Officer | Satisfactory |
| The project overall delivery and achievements through its AWP implementation are correct. At this stage, some of the project overall results regarding for instance emission mitigation have already been exceeded. |
| Project Implementing Partner |  |
|  |
| GEF Operational Focal point |  |
|  |
| Other Partners |  |
|  |
| UNDP Technical Adviser | Satisfactory |
| The project counts on a dedicated and competent project manager and team and is well anchored on the ground.  Implementation is progressing well and is rated Satisfactory. The project displays adequately levels of delivery against the plan.  Adjustments are introduced in a timely manner without disruption.  The planning process follows a well established methodology and calendar. The internal information flows and established templates allow for planning, implementation and reporting to achieve results without too many hiccups.   We have previously commented on the need to improve the communications element. We note with joy that there is progress.   Figures for delivery against the plan for the 2013 financial year (Jan-Dec) are 67% against. This is below target and it is possible that a multi-year budget revision rephrasing funds would how that the project actually have more funds that it appears to have. For the 2014 financial year (Jan-Sep) the current delivery 82%. This may will require ASL adjustments very soon.  Else, the project strategy, its achievements and the pace of implementation all seem adequate. The project is fostering the type of change that takes time to be achieved. Yet, progress seems rapid.  For the period under review, the following can be highlighted:  \* Under Outcome 1 (Governance frameworks), the project made good progress on the Ecovillages' National Strategy and on training   \* There is steady progress under Outcome 2 (Demo EBD activities), where community-based land management is actual through the creation of CNRs, ecological perimiters and other activities linked to fauna management. These are very good achievements.   One aspect we commented upon is that the project claims that income is rising, but we do not see metrics to confirm this.   \* Under Outcome 3 (GHG emission reductions), the project shows progress (solar, jathropha, improved stoves and biodigerstors, but it is still not clear what this represents in terms of reduced or avoided GHG emissions.  \* Under Outcome 4 (Carbon sequestration), the project mentions extensive reforestation efforts.   Else, implementation is generally progressing well. Risk is low, well managed and regularly monitored. Actions are carried out in a cost-effective manner. The project team is small, but the local base co-supported by partners impressive. |

General Comments

Le projet sera à mesure d\'atteindre les produits et effets attendus si la mise en oeuvre se poursuit dans la meme lancee.

# H. Communications and Knowledge Management

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| The Story of This Project |
| Management of natural resources in ecovillages has improved significantly livelihoods of populations. For example, in Kak before project implementation the school stopped two months before the official date because of transhumance. With the implementation of the project, people may have sufficient stock of animal food so that the last 2 years the amount reach complete their school year and this resulted in improved educational outcomes. On the other hand, with the use of gum arabic, populations Kak could buy nearly 4 tons of food as welding. Finally note that with the introduction of hives, people begin to produce honey and improve their income.  The implementation of light library has improved access to lighting in villages polarized by core ecovillages. The objective was, if not afford to install solar minigrid , to enable students to study at home at night. The initial results have led to:  • children learn about one hour more per night  • Parents save money by reducing expenses for batteries / candles (about 4% of household income is saved).  • the actual results, performance and even the students\' motivation have improved since the implementation of the light library project. |
| Adaptive Management this Reporting Period |
| Rigorous monitoring of the implementation of activities has allowed inconclusive results that have created new needs in coherence with the actions developed at the populations. Good adaptive management has allowed by co-financing and synergy with other partners, taking into account new needs expressed by the population. With the experience and support of the project, some polarized villages by centers villages began to multiply the improved cook stoves to create green jobs and equip all households concerned. This has allowed to realize a substantial reduction of the collection of firewood wood in the forest. The ensuring coherence of the inter-village planning space and resource management, has conducted the project to take into account all the villages having access to these resources. As such, the management plan and consensus chart natural resource management are implemented through inter-village committee.  The difficulty of obtaining biochar because of closure of the company PRONATURA, which has made pyrolysis of typha into biochar, oriented the project to use the biodigestat (effluents produced by biodigesters), excellent organic fertilizer. |
| Lessons Learned |
| The project has registered good results that have undoubtedly contributed to a better knowledge on the preservation of biodiversity, but also to the implementation of effective best practices for revegetation and reducing greenhouse gas emissions. The community nature reserves (CNR) installed by people with ecovillage project support are another excellent way for revegetation. The application of the participatory approach by the project in the context of integrated development allowed people ecovillage improves their capacity to communication, negotiation and implementation of activities. The partnership developed by the project for the implementation of activities was really appreciated by all partners. Mutual knowledge on needs, expectations and potential of each player allowed a better rationalization of resources to serve local populations. |

General Comments

# I. Partnerships

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| --- | --- |
| Partners | Innovation and Work with Partners |
| Civil Society Organisations/NGOs | With the support of NGOs, the project works to improve access to water in the villages next to core ecovillages. For example, the project works with the NGO “Vivre en Brousse” to implement 4 drilling equipment with a solar pump drainage in villages near Mbackombel ecovillages for a total amount of 200 millions FCFA. In Toubel Bali, with the support of ADOS NGO, the project is now implementing one drilling well for a total amount of 200 millions FCFA.. |
| Indigenous Peoples | Populations in relation to the project have been able to implement a program of assisted natural regeneration to improve soil fertility and also measure of preservation of natural resources through local charters. Furthermore through the resources generated by the payment of ecosystem services, people have had to finance public gardens and coconut groves to the beautification of villages |
| Private Sector | The private sector in relation to the project enabled the realization of mini solar power units for energy access in Massarinko (Station ernergyà for a total amount of 40 million of FCFA.and in Dindefelo (COSEER for a total amount of 166 millions FCFA). More through social and environmental responsibility of the private sector, it has been implemented a drilling well in Kak (CSE) for atotal amount of 200 million FCFA and a drinking water production station in Ndigue (RAZEL) for a total amount if 40 million FCFA |
| GEF Small Grants Programme |  |
| Other Partners | In collaboration with ongoing projects and programs, the project was able to establish a rice production, a fish program, agri-food processing units and animal transfer program. One can add the collaboration with ARBONUT for a submission of a project in Bandafasi with Nordic Fund (2 000 000 us$). The project is already approved. |

General Comments

# J. Progress toward Gender Equality

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| --- | --- |
| Findings of gender/social needs assessment |  |
| Changes in targeting women/girls |  |
| Additional information on the project's work on gender equality |  |

General Comments

COMMENTS FROM RTA:

 From all accounts, the project has so far failed to highlight the conundrum gender and Ecovillages in Senegal. There are a large number of reasons why this aspect is very important and why it is not acceptable that a project like this, with a central role in local development and establishing a benchmark for best practices in this respect simply ignores gender issues.

 More importantly, we invite the project manager to actively take measures to incorporate gender in their planning, implementation and reporting.

 Rural women contribute to the household by collecting wood and water, weeding the fields, planting garden plots, doing the cooking and cleaning, and looking after the children. Some of these activities have an impact in the management of land, biodiversity. They are immediately exposed to noxious fumes from rudimentary cooking ovens. There are so many reasons why a positively biased gender approach would be important for the project. It can no longer ignore it.

# K. Environmental \ Social Grievances

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| --- | --- |
| Related environmental or social issue | Grievance was not related to an environmental or social issue. |
| Status |  |
| Significance |  |
| Detailed description |  |

# L. Project Contacts and Links

|  |  |  |
| --- | --- | --- |
| Partner | Contact Name | Email Address |
| Project Coordinator / Manager | Moussa Diouf | mdiouf580@gmail.com |
| UNDP Country Office Programme Officer | Adama Ly | adama.ly@undp.org |
| Project Implementing Partner |  |  |
| GEF Operational Focal Point |  |  |
| Other Partners |  |  |
| UNDP Technical Adviser |  Saliou Toure | saliou.toure@undp.org |

|  |  |
| --- | --- |
| Project website, etc. | www.ecovillages.sn |
| Links to media coverage | http://www.sn.undp.org/content/senegal/fr/home/ourwork/environmentandenergy/successstories/-l\_ecovillage-de-mbackombel-sort-de-lombre/ http://www.sn.undp.org/content/senegal/fr/home/ourwork/democraticgovernance/successstories/gouvernance-reserves-naturelles-coomunautaires/ http://www.sn.undp.org/content/senegal/fr/home/ourwork/environmentandenergy/successstories/perimetres-ecologiques/ |

# M. Annex 1 - Ratings Definitions

**Implementation Progress Ratings Definitions**

*Highly Satisfactory (HS):* Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as 'good practice'.

*Satisfactory (S):* Implementation of most components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.

*Moderately Satisfactory (MS):* Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.

*Moderately Unsatisfactory (MU):* Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.

*Unsatisfactory (U):* Implementation of most components is not in substantial compliance with the original/formally revised plan.

*Highly Unsatisfactory (HU):* Implementation of none of the components is in substantial compliance with the original/formally revised plan.

**Development Objective Progress Ratings Definitions**

*Highly Satisfactory (HS):*  Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as 'good practice'.

*Satisfactory (S):* Project is expected to achieve most of its major global environmental objectives, and yield satisfactory global environmental benefits, with only minor shortcomings.

*Moderately Satisfactory (MS):* Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modest overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environment benefits.

*Moderately Unsatisfactory (MU):* Project is expected to achieve of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.

*Unsatisfactory (U):* Project is expected not to achieve most of its major global environment objectives or to yield any satisfactory global environmental benefits.

*Highly Unsatisfactory (HU):* The project has failed to achieve, and is not expected to achieve, any of its major global environment objectives with no worthwhile benefits.