



# REQUEST FOR CEO ENDORSEMENT/APPROVAL

**PROJECT TYPE: Full-sized Project**  
**THE GEF TRUST FUND**

**Submission Date: 16 December 2010**  
**Re-submission: December 20, 2010**  
**2<sup>nd</sup> Resubmission: February 23, 2011**  
**3<sup>rd</sup> Resubmission: May 16, 2011**  
**4<sup>th</sup> Resubmission: May 31, 2011**

## PART I: PROJECT INFORMATION

**GEFSEC PROJECT ID:** 4080

**GEF AGENCY PROJECT ID:** 4313

**COUNTRY:** Senegal

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

**GEF AGENCY:** UNDP

**OTHER EXECUTING PARTNER(S):** National Ecovillages Agency - ANEV

**GEF FOCAL AREA(s):** Biodiversity; Climate Change

**GEF-4 STRATEGIC PROGRAM(S):** BD SO1-SP3 ‘Strengthening Terrestrial PA Networks’;

CC-SP6 (primary) ‘Management of land use, land-use change and forestry (LULUCF) as a means to protect carbon stocks and reduce GHG emissions’ + CC-SP6 4 (secondary) ‘Promoting sustainable energy production from biomass’

**NAME OF PARENT PROGRAM/UMBRELLA PROJECT:** SPWA – Strategic Programme for West Africa – Sub-component Biodiversity

### A. PROJECT FRAMEWORK

Expected Calendar	
Milestones	Dates
Work Program (for FSP)	Nov-09
CEO Endorsement	Jul-11
GEF Agency Approval	Sep-11
Implementation Start	Oct-11
Mid-term Review	Jun-13
Implementation completion	Sep-16

**Project Objective:** 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.

Project Components	Type	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (\$)
				(\$)	%	(\$)	%	
1. Legal, Policy & Institutional Frameworks	TA	<p>Improved governance framework and capacity for the effective incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy</p> <p><u>Key indicators:</u></p> <ul style="list-style-type: none"> <li>- Number of Environmental Management Plans (EMPs) adopted by pilot sites (baseline = 0; target 8)</li> <li>- Inter-Ministerial Protocol established between Ministry of Ecovillages (MEBRLAP/ ANEV) and Ministry of Environment (MENP/ DPN; DEFCCS)</li> <li>- Improved competence levels and</li> </ul>	<p>1.1 The National Ecovillage Strategy counts on an enabling legal, policy and regulatory framework for enhancing the realisation of global environmental benefits</p> <p>1.2 A framework for Ecological Management Plans for Ecovillages is developed with an overall vision for management and use of community lands, incorporating sustainable natural resource management, biodiversity</p>	200,000	13	1,300,000	87	1,500,000

Project Components	Type	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (\$)
		standards of the institutions responsible for EVs (ANEV, DPN, DEF, GENSEN) measured by 10% increased scores of the Capacity Development Scorecard (oriented towards BD management + CC mitigation); baseline: ANEV 62% DEFC 66% GENSEN 76% DPN 65% (see PRODOC Annex 3 for a complete and disaggregated analysis)	conservation, renewable energy and climate change adaptation  1.3 Increased national and local capacity to implement a functioning and sustainable network of Ecovillages and to replicate an Ecovillage model which incorporates global biodiversity and climate benefits					
2. Community Nature Reserves (CNRs) establishment and strengthening	TA	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, while also mitigating CC by avoiding deforestation and degradation in new land under protection:  <u>Key BD indicators*:</u> - 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 - Increases in METT scores for all CNRs of at least 10% from baseline over 5 years and 20% for sites with starting score < 60%; baseline: [1] Diokoul Diawrigne 64 [2] Bounguien CNR 72 [3] Kak proposed CNR 33 [4] Mbawal proposed CNR 51 [5] Mansadala CNR 73 [6] Dindéfelo CNR t.b.d. [7] Mansarinko CNR 73 [8] Gnargou Comm Forest 74  <i>* appropriate ecological indicators will be established through the BD monitoring system for CNRs</i>  <u>Key associated CCM indicators:</u> - Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from LULUCF at the level of CNRs shows the avoidance of ~900,000 tCO <sub>2</sub> emissions over 30 years (i.e. reducing some 31,729 tCO <sub>2</sub> /yr or ~2 tCO <sub>2</sub> /ha/yr in ~15,000 ha.) through the avoided deforestation of new and extended area of CNRs (15,000	2.1 Community-managed land in pilot Ecovillages includes a CNR managed effectively for biodiversity conservation.  2.2 Ecovillage community lands function to provide resources & alternative incomes based on sustainable management and ecotourism.  2.3 New methods of sustainable intensification of agriculture and livestock rearing reduce pressure on PAs, CNRs and community forests  2.4 Biodiversity monitoring in CNRs and adjacent PAs providing information on natural resources and biodiversity trends for adaptive management of conservation and sustainable exploitation	1,497,680	28	3,942,201	72	5,439,881

Project Components	Type	Expected Outcomes	Expected Outputs	Indicative GEF Financing*		Indicative Co-financing*		Total (\$)
		ha) – departing from a proxy baseline of annual loss of biocarbon of 0.22 tCO2/ha						
3. CO2 Emissions reduction	TA	<p>Reduction in greenhouse gas emissions and increase in use of renewable and efficient energy alternatives in pilot Ecovillages</p> <p><u>Key indicators:</u></p> <ul style="list-style-type: none"> <li>- Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from “<i>terroir villageois</i>” shows the avoidance of 22,830 t CO2 emissions through the increased use of renewable and efficient energy alternatives in pilot Ecovillages</li> <li>- At least 75% of all Project EV households use improved cook stoves</li> <li>- From a baseline of zero, 10,000 litres per year of Jatropha oil is produced locally in the project EVs</li> </ul>	<p>3.1 Changes in domestic cooking-practices reduce GHG emissions and reduce pressure on forests</p> <p>3.2 Appropriate clean / sustainable energy technologies for pilot Ecovillages are identified, adapted and adopted by communities</p> <p>3.3 Promotion of a sustainable model for Jatropha plantations and production of high quality oil for local use</p>	640,740	14	4,048,411	86	4,689,151
4. Carbon Sequestration	TA	<p>Increased biocarbon sequestration in Ecovillage community-managed lands (<i>terroirs villageois</i>)</p> <p><u>Key indicators:</u></p> <ul style="list-style-type: none"> <li>- Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from “<i>terroir villageois</i>” and CNRs shows the sequestration of 92,280 tCO2 in community-managed lands in pilot Ecovillages</li> </ul>	<p>4.1 Biocarbon stocks are increased as a result of community-based afforestation and reduced deforestation in community lands and adjacent PAs</p> <p>4.2 Carbon stocks in soil are increased and the emissions from agriculture are reduced through the adoption of the innovative technology Biochar</p>	253,580	8	2,836,400	92	3,089,980
Project evaluations and support to reporting				120,000	100	0	0	120,000
Project management				168,000	14	1,049,888	86	1,217,888
<b>Total project costs</b>				<b>2,880,000</b>	<b>18</b>	<b>13,176,900</b>	<b>82</b>	<b>16,056,900</b>

## B. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT

Name of Co-financier (source)	Classification	Type	Project	%*
KINOME	Private Sector	In-Kind	200,000	1.5%
Association Echoway	Private Sector	In-Kind	75,000	0.6%
Gamloux Agro-Bio Tech, Phytotechnie Tropicale et Horticulture, Université de Liège, Belgium	Others (specify)**	In-Kind	368,750	2.8%
Senegal Ecovillage Microfinance Fund (SEM-Fund) and EREV (EarthRights EcoVillage Institute)	NGO	In-Kind	1,620,000	12.3%
International Network for Bamboo and Rattan - INBAR	Private Sector	In-Kind	200,000	1.5%

<i>Name of Co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Project</i>	<i>%*</i>
PRO-NATURA International	NGO	In-Kind	300,000	2.3%
Société Pour la Promotion de l'Accès a l'Énergie et a l'Eau Dans le Département de Foundiougne - SOPREF	Private Sector	In-Kind	230,000	1.7%
ANEV	Nat'l Gov't	Grant	6,000,000	45.5%
UNDP	Impl. Agency	Grant	1,350,000	10.2%
PERACOD / GIZ	Bilat. Agencies	In-Kind	183,150	1.4%
Green Senegal	NGO	In-Kind	500,000	3.8%
Plateforme Multifonctionnelle	Bilat. Agencies	In-Kind	1,000,000	7.6%
ASER - Senegalese Rural Electrification Agency	Nat'l Gov't	In-Kind	1,000,000	7.6%
Schneider Electric SAS	Private Sector	In-Kind	150,000	1.1%
<b>Total Co-financing</b>			<b>13,176,900</b>	<b>100%</b>

\* Percentage of each co-financier's contribution at CEO endorsement to total co-financing. \*\* Centre of excellence / Academia.

### C. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<b>Project Preparation Amount (a)</b>	<b>Project (b)</b>	<b>Total c = a + b</b>	<b>Agency Fee</b>	<i>For comparison: GEF and Co-financing at PIF</i>
GEF financing	120,000	2,880,000	3,000,000	300,000	2,880,000
Co-financing	183,200	13,176,900	13,360,100		12,700,000
<b>Total</b>	<b>303,200</b>	<b>16,056,900</b>	<b>16,360,100</b>	<b>300,000</b>	<b>15,580,000</b>

### D. GEF RESOURCES REQUESTED BY AGENCY(IES), FOCAL AREA(S) AND COUNTRY(IES)

<b>GEF Agency</b>	<b>Focal Area</b>	<b>Country Name</b>	<b>(in \$)</b>		
			<b>Project (a)</b>	<b>Agency Fee (b)<sup>2</sup></b>	<b>Total c=a+b</b>
UNDP	Biodiversity	Senegal	1,920,000	192,000	2,112,000
UNDP	Climate Change Mitigation	Senegal	960,000	96,000	1,056,000
<b>Total GEF Resources</b>			<b>2,880,000</b>	<b>288,000</b>	<b>3,168,000</b>

### E. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

<i>Component</i>	<i>Estimated person weeks (GEF Only)</i>	<i>GEF amount(\$)</i>	<i>Co-financing (\$)*</i>	<i>Project total (\$)</i>
<i>Local consultants* [Sub-total]</i>	<i>1421</i>	<i>489,070</i>	<i>976,480</i>	<i>1,465,550</i>
Forestry & Water Engineer	260	173,750	0	173,750
Community Engagement Agents	1040	194,320	0	194,320
Improvement of national EV model (rewriting the EV Strategy with focus on global env. benefits)	20	20,000	0	20,000
Local conventions negotiations	20	20,000	0	20,000
Agro-Sylvo-Pastoral Integration	20	20,000	0	20,000
Project database creation	10	10,000	0	10,000
Improved cook stoves	-	0	25,000	25,000
Jatropha burner experimentation support	7	7,000	0	7,000
Jatropha cultivar identification	10	10,000	0	10,000
Jatropha rollout planning	4	4,000	0	4,000
Green charcoal rollout	10	10,000	0	10,000

<i>Component</i>	<i>Estimated person weeks (GEF Only)</i>	<i>GEF amount(\$)</i>	<i>Co-financing (\$)*</i>	<i>Project total (\$)</i>
Ecological management plan design	-	0	10,000	10,000
Technical partners' in-kind contribution (national collaborators) - rough estimates	-	0	500,000	500,000
Project evaluation national consultants (travel not included)	20	20,000	0	20,000
ANEV Technical Director	-	0	150,000	150,000
ANEV Local technical agents (x6)	-	0	291,480	291,480
<b>International consultants* [Sub-total]</b>	<b>90</b>	<b>270,000</b>	<b>590,000</b>	<b>860,000</b>
Ecological management plan design	-	0	45,000	45,000
Improvement of national EV model	-	0	45,000	45,000
Market based mechanisms sustainable funding capacity building	20	60,000	0	60,000
Value chain improvement and certification of honey	5	15,000	0	15,000
Value chain improvement and certification of nuts and fruits	5	15,000	0	15,000
Agro-Sylvo-Pastoral integration	5	15,000	0	15,000
Participatory bd monitoring	15	45,000	0	45,000
Green charcoal production	5	15,000	0	15,000
Ecotourism pilot project (Dar Salam, Ndick et Lompoul)	5	15,000	0	15,000
Creation of pilot fish, stroke shell farming projects	5	15,000	0	15,000
Technical partners' in-kind contribution (expat collaborators) - rough estimates	-	0	500,000	500,000
Senior M&E advisor: Strategic Planning & Preparation of the PIR	15	45,000	0	45,000
Project evaluation international consultants (travel not included)	10	30,000	0	30,000
<b>Total</b>	<b>1466</b>	<b>664,070</b>	<b>1,566,480</b>	<b>2,325,550</b>

\* Details are provided in Annex C.

#### F. PROJECT MANAGEMENT BUDGET/COST

<i>Cost Items</i>	<i>Total Estimated person weeks/months (GEF only)</i>	<i>GEF amount \$</i>	<i>Co-financing (\$)*</i>	<i>Project total (\$)</i>
<b>Local consultants* [sub-total:]</b>	<b>260</b>	<b>167,000</b>	<b>812,978</b>	<b>979,978</b>
National Project Director + support staff availed by ANEV for 5 years on a part-time basis: (1) Financial Controller; (2) M&E advisor; (3) Accountant; (4) Assistant. (part-time @~70%)	-	0	538,048	538,048
National Project Coordinator	260	167,000	0	167,000
Senior Financial and Administrative Officer	-	0	160,000	160,000
Admin Assistant/accountant	-	0	114,930	114,930
<b>International consultants*:</b>	<b>-</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Office facilities, equipment, vehicles and communications* [sub-total:]</b>		<b>1,000</b>	<b>76,910</b>	<b>77,910</b>
Miscellaneous Expenses		1,000	10,000	11,000
Professional Services: Web design, Editorial and Desktop publishing and Translation		0	22,000	22,000
Vehicles		0	20,000	20,000
Office refurbishing, furniture supplies, etc.		0	24,910	24,910
<b>Travel*</b>		<b>0</b>	<b>160,000</b>	<b>160,000</b>
<b>Other:</b>		<b>0</b>	<b>0</b>	<b>0</b>
<b>Total</b>		<b>168,000</b>	<b>1,049,888</b>	<b>1,217,888</b>

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT?** yes [ ] no [X]

**H. DESCRIBE THE BUDGETED M & E PLAN:**

The project’s M&E Plan is thoroughly described in the UNDP PRODOC. For more detail, refer to Section I, PART IV: Monitoring and Evaluation Plan and Budget. The table below provides a summary

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> <li>▪ Project Manager</li> <li>▪ UNDP CO, UNDP GEF</li> </ul>	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> <li>▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</li> </ul>	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> <li>▪ Oversight by Project Manager</li> <li>▪ Project team</li> </ul>	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> <li>▪ Project manager and team (incl. Senior M&amp;E advisor)</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ UNDP EEG</li> </ul>	Approx. \$40,000	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> <li>▪ Project manager and team (incl. Senior M&amp;E advisor)</li> </ul>	Approx. \$5,000.	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: \$40,000 (includes costs of consultancy, travel and meetings)	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team,</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: \$40,000 (includes costs of consultancy, travel and meetings)	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ local consultant</li> </ul>	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ Project manager and team</li> </ul>	Indicative cost per year: 3,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP RCU (as appropriate)</li> <li>▪ Government representatives</li> </ul>	For GEF supported projects, paid from IA fees and operational budget	Yearly
<b>TOTAL indicative COST</b> Excluding project team staff time and UNDP staff and travel expenses		US\$ 150,000 – as a minimum (+/- 5% of total budget)	

**Note:** Costs presented in this table are indicative and are subject to procurement guidelines and practices of UNDP and Governments. Costs may vary up and down. Some costs remain to be defined either upon project inception or annually. These costs are not over and above the costs presented in the detailed Total Budget and Workplan in the UNDP PRODOC, but are part of it, noting that not all of the costs included here will necessarily be borne by the GEF.

## **PART II: PROJECT JUSTIFICATION:**

### **A. STATE THE ISSUE, HOW THE PROJECT SEEKS TO ADDRESS IT, AND THE EXPECTED GLOBAL ENVIRONMENTAL BENEFITS TO BE DELIVERED:**

For more detail, refer to the UNDP PRODOC, SECTION I - PART I: Situation Analysis and PART II: Strategy. The project context, rationale and strategic approach may be summarized as follows:

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.

**The project's development goal is:** To contribute to the effective incorporation of global environmental benefits in the Ecovillage model being implemented in rural Senegal, with respect to biodiversity conservation and low carbon development.

**The project objective is:** 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.

The barrier analysis (PRODOC Section I, Part I) identified: (i) the threats to biodiversity, natural resources and livelihoods that will be addressed by the project; (ii) their root causes and impacts; and (iii) the barriers that need to be overcome to reduce the threats and to facilitate an integrated approach to sustainable management of natural resources, biodiversity conservation and low carbon development at the village level.

The project is organized into 4 components (partially re-organized from those presented at the PIF stage), corresponding to the following four expected project Outcomes:

#### **Outcome 1: Improved governance framework and capacity for the effective incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy**

Outcome 1 will remove legislative and institutional barriers, at national and local levels, which currently hamper integrated approaches. An inter-Ministerial protocol between the new Ministry of Ecovillages, Reservoirs, Artificial Lakes and Fish Farming (MEBRLAP) and the Ministry of Environment (MENP) and changes to the texts of internal management regulations for PAs will facilitate integration at the level of EVs and community involvement in management of PAs. At the local level, Presidents of Rural Communities will sign conventions detailing the management of CNRs and adjacent PAs. Participatory Ecological Management Plans will be developed for management of all land and water available to and managed or co-managed by EVs (*terroirs villageois* or community lands)<sup>1</sup>. At all levels, from ministerial and agency (ANEV) to EVs and Intervillage Development Committee (CIVDs), capacity will be strengthened – in terms of skills and competencies, integrated working practices, planning and implementation. Capacity development will also include the

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<sup>1</sup> Terroir villageois/ community lands include all land within the control of the community and elected Rural Council including designated Community Nature Reserves (CNRs) or Pastoral Units (PU) in the Ferlo; community forests; ecological perimeters (see Output 1.2); grazing and agricultural lands.

promotion and dissemination of good practice and replication of successful integrated approaches as part of the Ecovillage model throughout the expanding Ecovillages network. Specifically, the project will promote the inclusion of global environmental benefits (through biodiversity conservation and low carbon development) as mainstream, integrated components of the national Ecovillage model and the national Ecovillage Strategy and Programme.

The key global benefit outcome under this component of the project is the catalytic removal of legislative, institutional, land governance and capacity barriers for both the Ecovillage model and National Strategy to have a much more significant impact on biodiversity conservation and low carbon, adaptive development.

### **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**

Under Outcome 2, pilot project villages will manage their community lands according to their Ecological Management Plan (Output 1.2), to provide multiple services and benefits, including biodiversity conservation in CNRs and adjacent PAs; more intensive agriculture and livestock keeping, sustainable harvests of natural resources including biomass and cultivated products from Ecological Perimeters and other community land. Across the suite of 10 pilot sites, specific activities will be chosen according to village requirements and the ecological suitability of available land and wetlands. New and extended CNRs and EPs (Ecological Perimeters) will be established and reforested both to enhance natural habitats and biodiversity and to provide renewable resources. Agricultural and grazing areas will be managed to increase efficiencies and reduce negative impacts on CNRs and PAs (e.g. encroachment of crop fields, uncontrolled grazing), according to the needs of each CNR / PA and village, as defined in the EMP. Alternative income-generation projects will include new ecotourism initiatives and production and marketing support to sustainable harvests of natural resources. Community-based biodiversity monitoring within CNRs and in collaboration with adjacent PA will provide information on levels of natural resources for managing sustainable harvests, for measuring the success of biodiversity conservation efforts and for assessing the impacts of all activities on reducing pressure on natural resources in adjacent PA.

The key conservation outcome under this component of the project will include management for conservation and sustainable use by Ecovillages' communities of 162,813 hectares of CNRs (147,013 hectares of existing CNRs and the establishment of an additional 15,800 hectares of new CNRs – see PRODOC Table 5). These CNRs are representative of several globally important and biodiversity rich eco-geographical zones of Senegal. They include the Niayes Coastal Ecosystem, the Ferlo Sylvo-Pastoral Ecosystems, the Wetland Ecosystems of the Senegal River Delta, the Eastern Forests Ecosystems (Sénégal Oriental, which includes the larger Niokolo Koba National Park) and the Saloum Ecosystem (see PRODOC Tables 1 and for a reference). In addition, the wider landscape within the villages' territory will also be managed for productive uses in a more sustainable way aiming equally at improving livelihoods (e.g. intensification of livestock rearing and agriculture, reforestation in the Ecological Perimeters and CNRs). Within these landscapes, a total of approximately 200 hectares of Ecological Perimeters will play a key role in the improvement of key productive land uses. Together, these strategies are expected to have a positive impact, although indirect and localised, on reducing the pressure on a number of important and large PAs in Senegal. These lands tally almost 1.5 million hectares of land managed primarily for conservation purposes<sup>2</sup>

Key associated climate change mitigation benefits under this component of the project includes the avoidance of ~900,000 t CO<sub>2</sub> emissions over 30 years through the avoided deforestation of new and extended area of CNRs (15,000 ha). Refer to PRODOC Annex 9.

### **Outcome 3: Reduction in greenhouse gas emissions and increase in use of renewable and efficient energy alternatives in pilot Ecovillages**

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<sup>2</sup> The PNNK (913,000 ha), PNOD (16,000 ha), Delta du Saloum NP (76,000 ha) and the Ferlo Reserve (487,000 ha).

Under Outcome 3, the National Ecovillages Agency will develop a low carbon development approach for Ecovillages (to be included in the national Ecovillage strategy) in collaboration with other institutions. Pilot project villages will implement simultaneous activities at three levels to reduce greenhouse gas emissions: reductions in domestic energy use through increased use of improved cookstoves, mobilization of local renewable sources of energy, in particular solar based solutions, and high quality and sustainable vegetable oil production for local use. This will at the same time stimulate the rural economy.

The project's approach to GHG emission reduction and CO<sub>2</sub> sequestration is to address the 3 main sectors contributing to emissions, mainly through Outcome 3 for energy and Outcome 4 for LULUCF<sup>3</sup> and agriculture. Outcome 3 focuses on the sector of energy with the vision to stimulate rural development and improve quality of life in rural areas. As low carbon development strategies are strengthened and expanded, the project will also experiment with new technologies for GHG emissions reduction and sequestration which are well adapted to the context of Ecovillages and can be scaled up in other villages throughout Senegal with support from ANEV. (Outputs from Outcome 2 also contribute to GHG emissions reduction, especially in the LULUCF sector, in addition to their primary biodiversity conservation objectives).

Across the suite of 10 pilot sites, specific activities will be chosen according to villages' needs and requirements. For example, adapted improved cookstoves will be promoted in Ecovillages, with an integrated approach ranging from production to distribution to training, supported by adequate microfinance. *Jatropha* oil cookstoves will be experimented in Ecovillages that plant *Jatropha* in living fences, and oil production will be experimented for local use. Appropriate safeguards will be adopted in the villages where this activity will be implemented to avoid the risk of direct competition with food production or biodiversity conservation. Also, as per recommendations from the GEF's Scientific and Technical Advisory Panel, these safeguards will include an appropriate risk assessment for invasive species resulting from cultivation of *Jatropha curcas*. Solar solutions will be promoted for domestic lighting and cellular phone batteries. Adapted solar technologies will be installed.

The key climate change mitigation outcome under this project component is the cumulative avoidance of 22,830 t CO<sub>2</sub> emissions after full implementation of the project through the increased use of renewable and efficient energy alternatives in pilot Ecovillages. These avoided CO<sub>2</sub> emissions can be indicatively broken down as follows: (i) 12,000 tCO<sub>2</sub> from the direct utilisation of improved cookstoves; (ii) 7,500 tCO<sub>2</sub> from the application of solar energy in two villages; and (iii) 3,330 tCO<sub>2</sub> from the production and utilisation of 5,000 l/year of *Jatropha* oil. Refer to PRODOC Annex 9 for more details.

**The outputs necessary to achieve all of the above project outcomes are described in the UNDP PRODOC.**

**B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH NATIONAL AND / OR REGIONAL PRIORITIES/ PLANS:**

The text that follows has been extracted from the UNDP PRODOC, SECTION I - Part II: Strategy, Chapter: Project consistency with national priorities/plans.

The project will contribute to the highest-level of national priorities defined in the government's revised Poverty Reduction Strategy Paper (PRSP-II) for 2006-2010, which aims to tackle the joint challenges of poverty and development. The PRSP focuses on four pillars relating to the Millennium Development Goals (MDG) for Senegal: wealth creation; accelerated promotion of access to basic social services; social protection, risk and disaster prevention and management; governance and decentralized and participatory development. Within this framework, the project will address income-generation at local (village) levels; access to more sustainable sources of energy and resource exploitation and improved governance and participatory community involvement in natural resource management.

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<sup>3</sup> Includes forests land, cropland, grassland, wetlands, and settlements.

The project also fits well within the UNDP Country Programme for Senegal 2007-2011<sup>4</sup>, the CPAP' Components 1 (Poverty Reduction and Sustainable Development) and 2 (Strengthening Governance). The Project will contribute in particular to CPAP Outcome 1.1 (Enhanced capacity of the poor to improve their living conditions) and Outcome 1.2 (Creation of national and local capacity for sustainable environmental management and the development of energy services conducive to poverty eradication).

The project will also support and implement aspects of the National Programme for Good Governance and the National Programme for Local Development (the plan which implements policies on decentralization, empowerment of local communities and local authorities - Rural Communities). The project will put into practice elements of this national programme relating to conservation and sustainable use of biological resources in PAs and their buffer zones (through sustainable management by communities of CNRs and other village lands).

The biodiversity conservation focus of the project and the choice of pilot villages in and adjacent to representative and diverse ecosystems support the National Biodiversity Strategy and Action Plan (NBSAP). The project will provide support and training and direct implementation of many aspects of the Plan, relating both to Parks and Reserves and to community-managed CNRs and PA buffer zones. For example, the elaboration of local conventions and agreements relating to sustainable use of biodiversity and benefit-sharing; fire prevention and control in and around PAs; biodiversity monitoring in PAs and buffer zones; alternative income-generation in the periphery of National Parks. In terms of other sectoral plans, the project objectives fit well within the strategic orientations of the Agro-sylvo-pastoral Law and the Policy Charters on Energy and Environmental Policy. The project is also in line with the National Forestry Policy (2005-2025) which has a general objective to contribute to the reduction of poverty through sustainable forest conservation and management.

The project fits well within the framework and the Strategic National Plan to Combat Climate Change. It embraces the recommendations of the plan, including the reduction of GHG emissions by combating bush fires and the promotion of solar and biofuel energy sources. It is equally in phase with the National Strategy and Action Plan for the Fight against Desertification.

### **C. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH [GEF STRATEGIES](#) AND STRATEGIC PROGRAMS:**

The text that follows has been extracted from the UNDP PRODOC, SECTION I - PART II: [Strategy](#), chapter '[Project Rationale and Conformity \[to GEF Policies and Strategic Objectives\]](#)'.

This project is part of the biodiversity component of GEF's Strategic Programme for West Africa (SPWA) and it is accessing funds both from the GEF Biodiversity (BD) window and the Climate Change Mitigation one (CC). The project will contribute significantly to meeting the targets of GEF Focal Area Strategy and Strategic Objectives (SO) for both these two focal areas targeting different Strategic Programmes (SP) under it.

For Biodiversity, the project is in line with the BD-SO1 'Catalyzing Sustainability of Protected Area Systems'. Seven out of ten project sites are adjacent to PAs and one can potentially become a small PA. The contribution to SO1 is primarily based on CNRs' role as the PA support zones for National Parks and Reserves, but also as CNRs being sustainable use PAs themselves that contribute to the expansion of the PA system through a sub-network of PAs. Hence, under BD the project contributes first and foremost to BD-SP3 'Strengthening Terrestrial PA Networks'. Two of the project sites are adjacent to a coastal-marine PA (the PNOD and the Delta du Saloum) A small contribution to BD-SP2 'Increasing Representation of Effectively Managed Marine PA Areas in PA Systems' may also be considered.

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<sup>4</sup> Senegal Country Programme Document. Mai 2006. Draft du Document du Programme pour le Sénégal 2007-2011. Conseil d'Administration du PNUD et du FNUAP, Session annuelle 2006, Septembre 2006 New York, Point de l'ordre du jour provisoire, Programme de Pays et Questions Connexes. DP/CPD/SEN.

Along these lines, the project is aligned with objectives of the Sub-component Biodiversity of the SPWA, in particular its objectives #1 (Reducing poverty among communities residing in and around protected areas) and #3 (Consolidation of protected area networks).

Regarding Climate Change Mitigation, the project will contribute to two SOs/SPs: primarily CC-SO7bis-SP6 ‘Management of land use, land-use change and forestry (LULUCF) as a means to protect carbon stocks and reduce GHG emissions’ and, secondarily, CC-SO6-SP4 ‘Promoting sustainable energy production from biomass’. The background calculations for emission reductions and sequestration are in PRODOC Annex 9, to which a 30-year time horizon applies. Conservative estimates for all 10 pilot Ecovillages point to more than 1 million tCO<sub>2</sub> in total in terms of climate change mitigation benefits. The large majority of climate change mitigation benefits will come from the LULUCF sector, i.e. ~90% will come from avoided deforestation and degradation linked to the creation of CNRs (in particular the ~15,000 ha of new CNRs, which can undoubtedly be argued as additional) and, to a lesser extent, from the sequestration provided by afforestation/reforestation in living hedges, mangroves, bamboo groves and other types of trees. Although improved management of existing CNRs will also contribute (e.g. through reduction in rates of deforestation due to bushfires), this was not included, in an effort to keep CO<sub>2</sub> emission reductions conservative. The remaining 10% of estimated climate change mitigation benefits will come from: (i) directly introducing improved cookstoves in Ecovillages as a new low-GHG emitting energy technology; and (ii) planting *Jatropha curcas* and using its oil in four Ecovillages (start-up phase will target two villages). Together with the innovative, almost experimental biochar and biocarbon sequestration elements in the project’s Component 4, *Jatropha* development and improved cookstoves will make a direct contribution to CC-SO6-SP4. Indirect climate change mitigation benefits from improved cookstoves were not considered – neither were their potential and indirect biodiversity benefits – in order to keep calculations conservative.<sup>5</sup>

The solar energy component of the project strategy, which is 100% co-financed, may be said to contribute to the CC-SO5 ‘Promote the use of renewable energy for the provision of rural energy services (off-grid)’, although this SO is not pursued directly in GEF-4.

The project is also aligned with the Energy Component of the SPWA, which takes a holistic view of the energy sector in the countries of West Africa through a programmatic approach towards meeting the region’s energy needs and development challenges effectively. The programme seeks to enhance the implementation of selected energy projects in a more coherent and effective manner, and promote regional and national level practical and concrete interventions.

In summary, the project will contribute to the achievement of GEF’s outcome indicators under the strategic programming areas as follows:

***Project’s contribution to the GEF’s outcome indicators***

<b>GEF-4 BD and CC Strategic programmes</b>	<b>Expected impact</b>	<b>GEF-4 BD Indicators</b>	<b>Project contribution to indicators</b>
BD SO-SP3 - Strengthening Terrestrial PA Networks	Improved ecosystem coverage of under-represented terrestrial ecosystems areas as part of national protected area systems	Terrestrial ecosystem coverage in national protected area systems	<ul style="list-style-type: none"> <li>- Among project sites at least 15,000 ha of new and extended Community Nature Reserves established and functioning to conserve biodiversity, increasing the total conservation area targeted by the project to 162,813 ha</li> <li>- Increases in METT scores for all CNRs of at least</li> </ul>

<sup>5</sup> Indirect benefits from improved cook stoves also look promising with 30 times the multiplier effect of the direct emission reductions from this technology.

GEF-4 BD and CC Strategic programmes	Expected impact	GEF-4 BD Indicators	Project contribution to indicators
	Improved management of terrestrial protected areas	Protected area management effectiveness as measured by individual protected area scorecards	10% from baseline over 5 years and 20% for sites with starting score < 60%; baseline: [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
CC-SP6 (primary) - Management of land use, land-use change and forestry (LULUCF) as a means to protect carbon stocks and reduce GHG emissions	Reduced GHG emissions from land use, land use change and forestry	Emissions from LULUCF (tons CO2 eq)  \$/ t CO2eq	Carbon footprint (using Bilan Carbone method to calculate GHG emissions/ sequestration) from LULUCF at the level of CNRs shows the avoidance of ~900,000 t CO2 emissions over 30 years through the avoided deforestation of new and extended area of CNRs (15,000 ha)  <u>Note:</u> Carbon price depends on the carbon market. The PPG Technical Report Energy and Climate Change assessed the feasibility of accessing this market and concluded that sequestered carbon from CNRs may achieve rather high prices if its marketed as ‘gourmet carbon’.
CC-SP4 (secondary) - Promoting sustainable energy production from biomass	Reduced cost of selected low GHG-emitting energy technologies	Cost of selected, low-GHG emitting energy generating technologies (\$/ W installed or \$/kWh generated);  \$/ t CO2eq	<u>Note:</u> The scale of low-GHG emitting energy generating technologies is yet too small for the technology uptake to have an impact on costs. However, PPG studies focused on the Capacity to Pay and showed the following, which will be monitored during project implementation:  The “Capacity to Pay” methodology (developed by ADEME and WB) was applied to the project target population. The resulting segmentation is approximately the following: <ul style="list-style-type: none"> <li>• Segment 1 : CAP = 2764 CFA → 25% de la population</li> <li>• Segment 2 : CAP = 5237 CFA → 28% of the population</li> <li>• Segment 3 : CAP = 9981 CFA → 33% of the population</li> <li>• Segment 4 : CAP = 15714 CFA → 14% of the population</li> </ul> ANEV will be trained PERACOD to roll out this approach to all EVs. (Refer to the PPG Technical Report Energy and Climate Change for more information)

#### D. JUSTIFY THE TYPE OF FINANCING SUPPORT PROVIDED WITH THE GEF RESOURCES.

The project objective will thus be achieved primarily through the provision of technical assistance. No loan or revolving fund mechanisms are considered appropriate, and therefore grant-type funding is considered adequate to enable successful delivery of project outcomes.

A justification for this request is provided in the UNDP PRODOC.

#### E. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The text that follows has extracted from the UNDP PRODOC, SECTION I - PART I: Strategy, chapter ‘Coordination and Collaboration between the Project and Related Initiatives’. For further information, see also PRODOC Annex 7. ‘Stakeholder Engagement and Partnerships’ and PRODOC Table 2 Stakeholder Matrix.

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
ANEV’s Programme of Work	<p>The project will be hosted and executed by ANEV. Pilot Ecovillages of the project will also be examples for the national strategy of Ecovillages implementation throughout Senegal. Regular meetings, workshops and field trip will be organised in order to maximise exchanges among Ecovillages. ANEV is implementing a comprehensive and national program of work aimed at transforming a number of rural villages throughout Senegal into ‘Ecovillages’ (see e.g. PRODOC paragraphs 28-31). This programme has been conceived in total synergy with other projects and programs implemented – and to be implemented – by ANEV (e.g. funded by GEF, JICA and others), but also by other implicated government institutions and organisations (MEBRLAP, MENP, GENSEN, among others). The mode of collaboration with ANEV is either through a ‘partnership’ or (direct) implementation by ANEV. In either case, ANEV strives to work together with partners towards a common goal.</p> <p>For the UNDP/GEF project, ANEV incorporates existing and future partnerships into the activities to be financed by the GEF. Thus, the ten villages supported by the GEF are an integral part of the ANEV Programme of Work.</p>
ASER (Senegalese Rural Electrification Agency)	<p>The project will collaborate with the Senegalese Rural Electrification Agency under Outcome 3. ASER will support the project for installation of centralized PV System called “energy Hub” in each pilot ecovillage, select equipment manufacturers through tenders, commission and monitor installation, designate a private local commercial entrepreneur in charge of providing energy services, selling modern energy, providing maintenance and capacity development at village level and training in renewable energy technologies and sustainable energy exploitation</p>
GENSEN’s Programme of Work	<p>The NGO GENSEN is a co-financer of the project and a major partner of ANEV. GENSEN will be invited to join the Project Steering Committee. The project will build upon the long-standing work carried out by the coalition of local NGOs/CSOs involved in the GENSEN initiative and the existing network of 45 Ecovillages. The project will invite the GENSEN director to regular meetings, with the objectives to share experiences and to involve the NGO in the development of the national Ecovillages Strategy. The project will also invite GENSEN to workshops concerning Ecovillages certification, micro-finance, education and rural economy development.</p>
Other relevant UNDP/GEF projects in Senegal	<p>The project will collaborate with at least two other UNDP/GEF projects in Senegal:</p> <p>(1) ‘Integrated Management of Ecosystems in four landscapes representative of Senegal (PGIES)’ The Ecovillages project is partly building on the results of the implementation of the PGIES. In particular, for the CNR establishment and management. The PGIES will share experience and bring assistance to the project in the inception phase. In addition, several PGIES reports were very useful in scoping and shaping the proposed interventions within this project.</p> <p>(2) The regional programme ‘Biological Diversity Conservation through Participatory Rehabilitation of the Degraded Lands of the Arid and Semi-Arid Transboundary Areas of Mauritania and Senegal’. The project will build on the foundations laid by these projects in terms of buffer zone management. The collaboration will be both strategic and operational for the Ecovillage in the Senegal Delta and Valley.</p> <p>(3) PROGERT – ‘Groundnut Basin Soil Management and Regeneration’ – currently reaching its end (as with the previous project). The project was very positively evaluated (project objectives achieved, counterparts and communities genuinely involved, funds well spent on field activities and additional funds mobilised, including from government). The</p>

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
	project was active in the Groundnut basin, where the Mbackombel project site is located. The Ecovillages project will strive to learn lessons from the Groundnut project.
Multifunctional Platform Project	The project will collaborate with the Multifunctional Platform Project funded by Bill and Melinda Gates foundation This project is developing equipment that run on jatropha oil to transform and add value to agricultural products to contribute to reduce women's work. The Multifunctional Platform Project will support the project for installation of transformation units in each pilot ecovillage and capacity development at village level and training in diversification and development of agricultural production technologies
Programme of Work of Direction des Parcs Nationaux (DPN) and Direction des Eaux, Forêts, Chasses et de la Conservation des Sols (DEFCCS)	Both directorates are under the Ministry of Environment and Nature Protection (MENP) and are primarily responsible for the management of PAs and forests. With respect to the biodiversity conservation aspects of this project, these two State institutions will be key. Each one works with a number of partners to ensure the management of Senegal's parks, reserves and classified forests. See for example a list of these in the following links for <a href="#">DPN</a> and for <a href="#">DEFCCS</a> respectively. Through the collaboration framework agreements to be signed between ANEV and MENP (Output 1.1), the roles of each institution and the synergies with existing and planned projects will be specified and agreed.
PERACOD - Promotion des énergies renouvelables, de l'électrification rurale et de l'approvisionnement durable en combustibles domestiques	PERACOD is a strategic partner of ANEV in the low carbon development of the Ecovillages. PERACOD has developed specific technologies and value chain structuring techniques for improved cook stoves; in a similar way, PERACOD is an operational expert for rural electrification and solar energy. Thus PERACOD's mission is to share its skills and engineering with other Senegalese projects. An operational agreement will be signed at the beginning of the project between the National Project Coordinator and the PERACOD director. Training, tools sharing, workshops will be organized in order to collaborate in an effective way. In particular, collaboration will be focused on specific activities (to be further elaborated) under Outputs 1.1, 3.1, 3.2 and possibly also 4.1 and 4.2. More recently, an MOU has been signed between ANEV and PERACOD. Refer to PRODOC Section IV – Part III: Memorandum of Understanding with PERACOD.
PRODAM - Agricultural Development Programme in Matam	The Project for Agricultural Development in Matam will be a partner of the project for the implementation of the Ecovillages of Toubel Baly, Kack and Thiasky. In particular, the PRODAM will share experiences and best practices about agricultural intensification and agroforestry. These activities are in synergy with the project under Outcomes 2 and 4.
University of Liège/Gembloux (Belgium), ENSA Thies – Jatropha Programme	The University of Liège provides co-finance to the project and will be invited to the Project Steering Committee. Their niche is technology transfer for local Jatropha production, transformation and distribution. Its major input will be to identify the most appropriate varieties of <i>Jatropha curcas</i> for the selected regions and to produce a planting model adapted to local constraints and integrated into the overall planting scheme of local farmers so that it comes as a complement and NOT as a competitor to other crops. The co-financier will also bring R&D expertise and equipment. On the other side, the present project will provide experimentation sites and local expertise. The project will become the focal point of Jatropha experiments in Senegal and develop a model which can be rolled out to all relevant vilages.
Schneider Electric	Schneider Electric is a world leading company and partner of the project for access to energy in the Ecovillages. Its contributions are (i) training of villagers for maintenance of infrastructures, (ii) capacity building of ANEV (tools for energy needs assessment), (iii) research and development of innovative business models for replication of access to energy in the Ecovillages, (iv) design of innovative solutions of access to energy, and possibly pilot infrastructure of solution of access to energy.
SOPREEF – Jatropha programme  (Société Pour la Promotion de l'Accès a l'Énergie et a l'Eau Dans le Département de Foundiougne)	SOPREEF is a private sector partner that provides co-finance to the project and will be invited to the Project Steering Committee. They will be engaged in the development of the local Jatropha production and transformation in EVs SOPREEF has been working in the Saloum region for 2 years in order to develop quality vegetable oil for local use (mainly energy). It will bring its expertise to the project and its network of producers. The project will cooperate closely with SOPREEF in Mbam and Massarinko. Coordination meetings will be organised.
Program of Participatory	PROGEDE has performed substantial achievements in Jatropha and energy substitution in

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
Management of Traditional Energies and Substitution (PROGEDE)	Senegal. It also did some interesting work on charcoal. The project will learn from its experience, in particular with regards to the development of the biofuel component.
UNDP/GEF Projects – Jatropha programme	In Mali, Burkina Faso and, to some extent also Niger, programmes focusing on agrofuel from <i>Jatropha curcas</i> are being developed and implemented through UNDP-GEF projects. The consolidation of best practices with Jatropha at the regional level will be done through the WAEMU Secretariat (West African Economic and Monetary Union).
Kinomé	Kinomé is a co-financier in this project and it is also expected to help develop innovative funding for the Ecovillage model development. It will be invited to be a member of the Project Steering Committee. Kinomé is a social business specialised in bringing more value to trees and forests in order to fight against deforestation and encourage local tree planting. In 2009 Kinomé created the Trees and Life movement which connects community-based reforestation and forest protection projects around the world in order to improve local livelihood and to mitigate climate change. Kinomé will bring its expertise in payments for environmental services, with a special focus on carbon projects development. It has displayed a remarkable ability to mobilize finance and partnerships from the private sector, which contribute to improving local livelihoods, enhancing biodiversity and fighting climate change. The project will invite Kinomé to strategic meetings on these topics.
Pro-Natura International	Pro-Natura International is an NGO (one of the first South-based environmental NGOs to be established after the Rio Summit – Brazilian origin). It is a project co-financer for Biochar technology experimentation and it will be invited to be a member of the Project Steering Committee. It aims at promoting this technology within Ecovillages in order to fight poverty and Climate Change. The project will run a Biochar experiment jointly with ProNatura International in the Senegal River Valley Region.
GREEN-SENEGAL	GREEN-SENEGAL is an Senegalese NGO. Its mission is to contribute to promote food security by the promotion of sustainable agriculture and the protection and preservation of the natural resources According to this mission, the GREEN SENEGAL will collaborate to support the project for soil fertility, sustainable forest management, capacity development at village level and training in agricultural and forestry technologie and introduction of drip irrigation system
Programme of Work of ENDA Energie	The NGO ENDA Energy will collaborate under Outcome 3. ENDA will provide support to the project for capacity development at village level and training in renewable energy technologies and sustainable energy exploitation.
INBAR	The Réseau International pour le Bambou et le Rotin (INBAR) is a multilateral government body created in 1994 by the Fonds International de Développement Agricole (FIDA). Its mission is to promote and conserve bamboo and rattan across the world. It has 35 state members, including 15 in Africa but only one (Benin) in West Africa. As bamboo is highly valued and threatened in Senegal, the Senegalese government (MEBRLAP) decided to join the INBAR network The project and INBAR will jointly plant bamboo in EVs (where appropriate) for the benefit of local populations.
Echoway	The Echoway NGO promote solidarity through eco-tourism around the world. Echoway will support local eco-tourism initiatives in selected Ecovillages.
REMEDE (Network of mutual savings and microcredits for the development of the environment) and SEM-funds (Senegal Ecovillage Microcredits).	Micro-financing is a powerful lever for the Ecovillage model roll-out. The project will collaborate with REMEDE by jointly creating REMEDE agencies in selected EVs in order to boost the local economy, in particular the revenue generating activities promoted by the project. SEM-funds works with GENSEN and will also collaborate in this area, bringing along considerable co-financing in the form of micro-loans. SEM-funds provides co-financing to the project in partnership with EREV (EarthRights EcoVillage Institute). They will be invited to be part of the Project Steering Committee.
On-going conservation programmes in the PNOD, PNNK, Ferlo, Delta du Saloum and Niayes - Wula	Several of its initiatives will be complementary to key activities to be carried out under Component 2. The National Coordination, as well as the operational team on the field, will collaborate for natural resource management and biodiversity conservation and monitoring in these eco-regions. Upon inception, the project management unit will re-survey on-going

INITIATIVES / INTERVENTIONS	HOW COLLABORATION WITH THE PROJECT WILL BE ENSURED
Nafaa	projects and contact them (see e.g. lists in the PPG Technical Reports) with a view to renewing or establishing partnerships and coordinating activities.
GEF's Small Grants Programme in Senegal	The GEF's Small Grants Programme has funded many projects that are in synergy with Ecovillages, in particular community development and income generating activities linked with natural resources. Upon inception, the project management unit will re-survey on-going projects and contact them with a view to renewing or establishing partnerships and coordinating activities.
Climate Change Adaptation Initiatives in Senegal	It is likely that funding for adaptation projects in Senegal will become more significant in the coming years (a few projects already exist). It would be particularly important to link up to them, if they either have a thematic overlap with this project (renewable energy, biodiversity conservation under a more variable climate regime) or a geographic overlap.
GEF's Strategic Program for West Africa SPWA (BD+CC)	Collaboration and cross-fertilization with respect to the themes of biodiversity and climate change mitigation will be sought through the UNDP-GEF regional unit.

**F. DISCUSS THE VALUE-ADDED OF GEF INVOLVEMENT IN THE PROJECT DEMONSTRATED THROUGH INCREMENTAL REASONING :**

For more detail, refer to the UNDP PRODOC.

The Project's baseline is described in UNDP PRODOC, PART I: Situation Analysis, Chapter 'Baseline analysis' and the alternative scenario is described in UNDP PRODOC, PART II: Strategy. A summary can be found in SECTION II - PART II: Incremental Cost Reasoning, which is reproduced below.

Outcome	Baseline (BAU without the GEF project)	Alternative (with the GEF project)	Increment (generated by GEF and co-financing)
<b>Outcome 1: Improved governance framework and capacity for the effective incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy</b>	In the baseline scenario, existing and planned initiatives will not lead to the creation of a national architecture enabling a rationalization of environmental programmes in rural areas of Senegal. The various stakeholders are acting in a dispersed and uncoordinated manner. The lack of cooperation and governance framework does not slow down the degradation of biodiversity sufficiently on a national scale. Natural resources continue to be used non-sustainably. ANEV will focus primarily on the social aspects of the Ecovillages programme to the detriment of global environmental aspects of it.	In the alternative scenario, the national architecture allows effective scaling up of the Ecovillages programme with a strong focus on global environmental benefits. The legal, policy and regulatory frameworks translate into practice the will of the policymakers to guide Senegal on the path to raising the bar of environmental standards in rural areas. The framework defined by the Ecovillages programme will result in the proliferation of green development initiatives, whose ecological character will be supported by adequate governance frameworks and implementation capacity at all levels.	Removing barriers to the creation of a governance framework (including policies) will strengthen local initiatives for the Ecovillages Programme and model, which will effectively count on higher environmental standards that effectively incorporate global environmental benefits. The project will enable ANEV's institutional strengthening and the strengthening of key inter-institutional relations. A key tool for the Ecovillage model, the Environmental Management Plans (EMPs), will count on a framework for their development and replication. ANEV will be associated with other relevant initiatives for ensuring that essential policy, legal and regulatory reform to support the implementation of the

Outcome	Baseline (BAU without the GEF project)	Alternative (with the GEF project)	Increment (generated by GEF and co-financing)
			Ecovillage Strategy (e.g. land governance, PA co-management, clean energy, access to carbon market). The project will also provide support for developing the necessary capacity for implementing the Ecovillage Strategy, creating the basis for ensuring its adequate financing in the long term.
<p><b>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</b></p>	<p>In the baseline scenario, the lack of an integrated response to environmental degradation contributes to a reduction in the overall effectiveness of environmental programmes, including the implementation of the Ecovillage Programme on the ground. The lack of a global vision on the part of stakeholders means that anthropic pressures on natural resources, in particular forests and their associated biodiversity, will continue to degrade these resources, releasing GHG. Communities are not sufficiently involved in the management of their land and are not adapting their unsustainable practices in a systematic way.</p>	<p>In the alternative scenario, the integrated and participatory approach of the programme will be consolidated, as well as increased private sector participation. Villagers will become the first stakeholders of sustainable development and will be trained in new business practices that respect the environment. The benefits of the rational management of the village lands extend beyond the actual areas of intervention. The existing CNRs will be expanded and managed better for biodiversity conservation and climate change adaptation (and new CNRs created. IGAs such as eco-tourism and the eco-certification of honey will be implemented to provide incomes in ways which are compatible with biodiversity conservation. Co-management of PAs and CNRs will be emphasized, as well as private partnerships.</p>	<p>The incremental benefits of this component are related to the integrated management of villages' <i>terroirs</i>, which will ensure that new CNRs are created (in ~15,000 ha) and existing ones are strengthened (147,013 ha). Both as community co-managed PAs themselves and as PA support zones, CNRs will lift the pressure on core PAs (National Parks, Reserves), while also ensuring sustainable use within villages' <i>terroirs</i> through good land stewardship. The development of livelihoods alternatives will be complementary to the successful co-management of CNRs by communities and of other initiatives in the villages' <i>terroirs</i> (e.g. the intensification of agriculture and livestock rearing, eco-tourism, aquaculture, apiculture, agro-forestry). Communities will be involved in biodiversity monitoring and surveillance of CNRs/ PAs.</p> <p>The total conservation area targeted by the project is 162,813 ha of CNRs, representative of several globally important and biodiversity rich eco-geographical zones of Senegal – the Niayes Coastal Ecosystem, the Ferlo Sylvo-Pastoral Ecosystems, the Wetland Ecosystems of the Senegal River Delta, the Eastern Forests Ecosystems (Sénégal</p>

Outcome	Baseline (BAU without the GEF project)	Alternative (with the GEF project)	Increment (generated by GEF and co-financing)
			<p>Oriental, which includes the larger Niokolo Koba National Park) and the Saloum Delta Ecosystem.</p> <p>As an associated climate change mitigation benefit, activities under this component include the avoidance of ~900,000 t CO<sub>2</sub> emissions over 30 years through the avoided deforestation of new and extended area of CNRs (15,000 ha).</p>
<p><b>Outcome 3: Reduction in greenhouse gas emissions and increase in use of renewable and efficient energy alternatives in pilot Ecovillages</b></p>	<p>In the baseline scenario, the promotion of alternative energy sources is mainly under private initiatives in the field of solar energy and biofuel. The model of development and distribution of these energy sources is neither that used by the villagers, nor a standardized model in Senegal. Communities' low level of awareness about these energy sources reduces the chances of their effective uptake by households in the villages and increases inequalities in the access to energy. Eventually several villages in Senegal with no access to electricity will be connected to the grid (in a 10-20 year period), but in the BAU scenario this will by and large be through the expansion of existing fossil fuel burning technologies.</p>	<p>In the alternative scenario, the promotion and establishment of a production unit of renewable energy sources is completely integrated into the framework of development defined by the project. Villagers are trained in the production and distribution of renewable energy sources. Controlling energy consumption reduces pressures on ecosystems while making a contribution to reducing emissions at the national scale. In the field of agro-fuels, the initial success of integrated production systems of biofuel from <i>Jatropha</i> has given rise to the emergence of a competitive industry throughout the Sahelian zone. Solar energy is being developed and is the basis of decentralised electricity supply to rural areas that are not currently connected to the grid. The emergence of village-based energy production industries contributes to the fight against poverty and activities may, over time, be a lasting solution.</p>	<p>The incremental benefits are in the model for development of renewable energy in villages. The villagers themselves assess their own needs and produce their energy, on a renewable basis and ensure the sustainability of these solutions. Under this project component, the emission of 22,830 t CO<sub>2</sub> will be cumulatively avoided after the full implementation of the project through the increased use of renewable and efficient energy alternatives in pilot Ecovillages. These avoided CO<sub>2</sub> emissions can be indicatively broken down as follows: (i) 12,000 tCO<sub>2</sub> from the direct utilisation of improved cookstoves; (ii) 7,500 tCO<sub>2</sub> from the application of solar energy in two villages; and (iii) 3,330 tCO<sub>2</sub> from the production and utilisation of 5,000 l/year of <i>Jatropha</i> oil.</p>
<p><b>Outcome 4: Increased biocarbon sequestration in Ecovillage community-managed lands (terroirs villageois)</b></p>	<p>In the baseline scenario, the village land does not become a carbon sink due mainly to the lack of integration of proposed development approaches. Carbon neutrality is not an achieved objective because it has not been pursued.</p>	<p>In the alternative scenario, the implementation of EMPs allows for the rapid sequestration of carbon in the soil and in the trees planted in EPs, living hedges and plantations. This supports other related project activities which can also sequester carbon and/ or reduce GHG emissions (e.g. the intensification of agriculture, ecosystem restoration, production of</p>	<p>Under this component, extensive <i>Jatropha</i>, fruit tree and bamboo plantations will be combined with the use of biochar as a soil conditioner. This will allow the the sequestration of 92,280 tCO<sub>2</sub> in community-managed lands in pilot Ecovillages, while also securing permanence and avoided leakage through the same actions that support good land stewardship under</p>

Outcome	Baseline (BAU without the GEF project)	Alternative (with the GEF project)	Increment (generated by GEF and co-financing)
		fuelwood for villagers' sustainable consumption). Ecovillages then participate in the global fight against climate change, while preparing to eventually participate in the biocarbon market.	Component 2 of the project.. The sequestration-focused activities under this Component are also expected to reduce pressure on land and resources designated for biodiversity conservation and sustainable use. In the same way, the local production of biochar is expected to enhance land use intensification under Component 2. Hence biodiversity and climate change mitigation activities foreseen under Outcomes 2 and 4 respectively are mutually supportive and widely supportive of the Ecovillage model's pursuit of global environmental benefits.

**G. INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS, THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MANAGEMENT MEASURES:**

The following table has been extracted from the UNDP PRODOC, SECTION I - PART II: Strategy, Chapter 'Risks and Assumptions'.

Risk	Rating	Mitigation Measures
<i>Political</i> Political will is lacking to achieve legal reform and removal of key policy, legal and institutional barriers within the project timescales	High	High-level inter-Ministerial protocol to be signed between Ministry of Ecovillages and Environment will facilitate legal amendments (barrier removal) and working relationships at all levels (National to Ecovillages). The project will support with technical and legal expertise every step of the process, including the consultation process. Current high profile Presidential support for EVs Programme will support launch of Project and national Programme
<i>Financial</i> Project achievements and data gathering at Ecovillage level are not adequate to attract private investment (market-based mechanisms)	Medium	Significant project resources will be devoted to village-level monitoring, training and promotion of new approaches. Specific tools will be developed and expertise brought from outside (refer to PRODOC Annex 7 on partnerships)
<i>Strategic</i> ANEV capacities do not develop sufficiently to achieve ambitious National Ecovillage Programme	High	While building on its existing team and expertise, the Project will strengthen and develop capacities of ANEV – training, resources, capacity development through implementation; extensive technical support from partners and co-financing organisations. Strong political support and annual budget from government to develop Programme
<i>Strategic</i> Village level commitment to change and adopt new methods is not sufficient for the widespread adoption of new forms of energy	Low	Communities are very enthusiastic. During the PPG stage, the team of experts used a list of criteria to select project villages for inclusion in the project. A key criterion was social cohesion and commitment. The evidence of co-financing letters (over \$17 M from communities) demonstrates huge commitment (moral and in-kind – time and

Risk	Rating	Mitigation Measures
use that will achieve low carbon development or changes in destructive land practices despite alternative IGAs, development of EPs, ASP methods etc. and global environmental benefits are not achieved		manpower) which selected villages are prepared to devote to the project. The selection of a small number of pilot villages (10) will allow thorough development of activities which are chosen by all stakeholders in villages and have strong technical and financial support to ensuring their effectiveness.
<i>Strategic</i> Management of national PA system is too weak to ensure conservation objectives achieved within PAs (despite support from adjacent CNRs) and project's global biodiversity objectives not achieved	Medium	The Project will strengthen aspects of national PA system management through extension and improved management of CNRs adjacent to PAs and involvement of PAs staff in training, implementation, co-management, Biodiversity Monitoring Scheme etc. In addition, several other projects support national PAs, including "Appui budgétaire pour l'environnement" (Dutch government): support to all of MENP (biodiversity, forestry, fauna, water etc.); PGIES (UNDP/ GEF): PAs policy and management; GIRMAC (WB) and PRCM (Dutch Embassy/ Spanish government/ FIBA/ MAVIA): training activities – marine and coastal Parks and Reserves – biodiversity and PAs; Programme pour la Lutte contre les plantes aquatiques envahissantes (ADB): training for agents (DPN, DEFCCS) including co-management, working with local communities etc. (see PRODOC Table 12)
<i>Operational</i> Weak capacity of communities is a risk for all project activities proposed at village level – land use planning (EMPs) and management, CNR and PA conservation management, IGAs, wide-scale planting and experiments in Jatropha, mangroves, bamboo etc	High	Large part of project budget devoted to capacity development at village level – stakeholder meetings, training, learning by doing through project implementation. Specific training activities will include ecotourism, biodiversity monitoring, land use planning and management, Jatropha production, biochar and ASP methods. The selection of a small number of pilot villages (10) will allow thorough development of activities which are chosen by all stakeholders in villages and have strong technical and financial support to ensuring their effectiveness

## H. EXPLAIN HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN:

The text that follows has been reproduced from the UNDP PRODOC, SECTION I - Part II: Strategy, Chapter 'Cost Effectiveness'

Several considerations pertaining to cost-effectiveness were analysed during the PPG stage. In broad terms previous experiences across the GEF UNDP portfolio of projects show that working with local communities is generally cost effective because they are the direct beneficiaries of the project. The level of interest and indeed of commitment of the Rural Communities, which provided in excess of \$17 million in co-financing, is a clear sign that this strategy works and a very encouraging signal for the full project implementation stage. PPG field visits all showed the same level of enthusiasm from local villages and Rural Communities.

Choosing ANEV as the executing agency is also a cost effective option, as it will enable the project to benefit from the entire team and associated expertise in the Ecovillage field and share fixed costs with other projects (ANEV's JICA project e.g.). It will also speed up implementation, as ANEV's structure is already in place, with competent national staff. Combined with the use of outside consultants in relevant fields, this approach should produce cost- and time-efficient results in terms of use of human resources.

The present project will operate in 5 villages where ANEV is already present (involvement is very recent in some cases) and 5 villages where ANEV is not present yet (see PRODOC Table 3). The latter villages are part of the PGIES (Programme de Gestion Intégrée des Ecosystèmes du Sénégal) (3), of the Great Green Wall Project (1) and of the GENSEN network (1). The underlying objective is to use existing ANEV and partner resources

and experience as leverage and to expand the list of ANEV villages while bringing additional funding from GEF, UNDP and co-financiers, as well as operational partnerships with other programmes. This is clearly more cost-effective than starting from scratch in Ecovillages with no pre-existing baseline. By investing in Ecovillages where ANEV already operates, the project will be able to capitalize on existing capacity building, complement the expenditure baseline in one given village and increase the focus on biodiversity and climate change mitigation. This will not only considerably increase the chances of success of the project, but it will enhance its incremental and replication aspects.

By developing inter-institutional collaboration protocols / MOUs with Ministries involved in the implementation of the project, and celebrating partnerships with the relevant Directorates, agencies, projects and initiatives – such as SNEF, DPN, PGIES, Projet de développement agricole durable (PRODAD), Grande Muraille Verte (Great Green Wall) etc – the project will maximise its local presence impact, as it will build on invested resources, either the financial baseline or the project’s co-financing. In a similar way, partnerships with social businesses and NGO partners will enable villages to access new technologies and ensure they are adapted to local needs.

Alternative options to the current strategy have been considered during the PPG phase. These included:

- Financial support of GENSEN network
- Investment through ANEV but in different villages
- Adopting a much longer list of Ecovillages
- Supporting not ANEV, but DPN, Services nationaux des eaux et forêts (SNEF) or PGIES.

All of the above options show one or several of the following shortfalls: (1) Lack of focus resulting in a high risk of neither achieving significant benefits to local livelihoods nor to the global environment; (2) Insufficient involvement of local communities and authorities; (3) Absent link to relevant regional and national policies; (4) Difficulties in replicating the model; (5) Lack of market potential and therefore of private investment to support the project; (6) Difficulties in sustaining funding over time.

By harnessing the project’s strategy to everyday village realities, the present project will produce both impacts and therefore be cost-effective. Considering the target sites, the project presents the following cost-effectiveness calculation:

***Further Cost Effectiveness Considerations***

GEF Investment Element	Total	Aprox. GEF investment per unit (\$)
<u>All components</u> : Target population at the village level	8,280 inhabitants	\$348 / villager
<u>Component 2 (BD)</u> : Hectares of CNRs under improved management + new CNRs as a result of the project	162,813 ha	\$9.77 / ha
<u>Component 2 (CC)</u> : Expected emissions reduction from avoided deforestation and degradation / Investments from component 2	948,000 tCO2 over the next 30 years linked to 15,800 ha additional + extended CNRs.	\$1.58 / tCO2
<u>Components 3 and 4 (CC)</u> : Expected emissions reduction from alternatives energy solutions and carbon sequestration in pilot Ecovillages	22,830 tCO2 + 92,280 tCO2 over the next 30 years	\$ 7.77 tCO2

The table above provides a good indication that the costs of obtaining global benefits from the GEF investment in this project are quite reasonable when compared e.g. with other GEF projects for BD, where the costs per hectare of creating and strengthening PAs are often in range of \$5-15/ha, and with the current and average carbon price for CC elements.

As for the cost-effectiveness per inhabitant, the following should be noted:

- The project takes a multi-sectorial, integrated approach at the village scale. GEF funds will therefore support many sectors (natural resources, solar energy, energy efficiency, trees plantation, etc.) for one unit of population. Although it can be argued that an incremental investment of \$348/villager is average to high, this should be put into the perspective: such costs would normally be higher than those of a mono-sector project.
- The project will harness ANEV's capacity to define a strong generic Ecovillages framework, to select future eligible candidate rural communities and to assist their transition to the defined model, as well as the context-specific appropriation by the local population of the new developed activities. Much of this work is foreseen under Outcome 1, and more specifically Output 1.3 (*Increased national and local capacity to implement a functioning and sustainable network of Ecovillages and to replicate an Ecovillage model which incorporates global biodiversity and climate benefits*).
- As such, ANEV's Programme of Work, of which the UNDP/GEF project is an integral part, targets in the long-run, a large portion of Senegal's rural population – currently some 8.2 million inhabitants. This translates into approximately \$0.365/villager. In the shorter term (say, 5 years, which is the duration of the project), ANEV plans to convert some 456 villages into Ecovillages through its various projects (including the present one). These will all benefit from the generic framework developed by the present project. Incremental costs per villager can then boil down to approximately \$8, which is rather low.

### **PART III: INSTITUTIONAL COORDINATION AND SUPPORT**

#### **A. INSTITUTIONAL ARRANGEMENT:**

See section B below.

#### **B. PROJECT IMPLEMENTATION ARRANGEMENT:**

The project's management and implementation arrangements are more fully described in SECTION I - Part IV: Management Arrangements of the UNDP PRODOC. The text that follows provides a summary of the project implementation arrangements:

The project will be implemented by the United Nations Development Programme (UNDP), as the GEF Agency entrusted with GEF funds, under UNDP's **National Execution (NEX)** modality over a period of five years, from the date of PRODOC signature. **The Executing Agency will be the National Ecovillages Agency (ANEV)**, which is institutionally linked to the new Ministry of Ecovillages, Reservoirs, Artificial Lakes and Aquaculture (MEBRLAP).

The project will receive policy guidance and oversight from a **Project Steering Committee (PSC)**, which will be chaired by the Representative of the MEBRLAP. Members of the PSC will include representatives of all Ministries directly or indirectly involved in the Ecovillage model implementation: MEBRLAP, Environment, Finance, Renewable Energies, Hydraulics, Agriculture, among others. Project co-financiers will be invited to the PSC. Project reviews will be made by this group at designated decision points throughout the course of the project (according to M&E Plan and GEF procedures), or as necessary when raised by the Chairman.

ANEV will establish **operational partnership agreements** with key institutions, organisations and individuals that can play a key role in the implementation of the project, as defined within the UNDP PRODOC.

**Project Management Unit (PMU):** At the central level, a simple project implementation structure will be established within ANEV and tasked with both implementing the project and with strengthening ANEV's capacity to integrate global environmental benefits into the Ecovillages model.

The proposed team of the PMU combines staff already hired and paid by ANEV and consultants (long and short duration) hired for and paid by the Project. This will ensure that the project will make best possible use of the existing ANEV structure and team while strengthening it in specific areas which are particularly important to the present project and to the long-term sustainability of the Ecovillage Programme. Refer to PRODOC Table 15 for an overview.

The NPC will be responsible for coordinating the project and delivering on its outcomes on time, on scope and on budget. The NPC will also be responsible for the application of all UNDP administrative and financial procedures, and for the efficient use of funding from UNDP and the GEF. The NPC will be supported by the project team (including ANEV staff and project consultants).

**PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:**

While the overall project design is still fully in line with the PIF, a number of outputs identified in the PIF have, of necessity, been adjusted and/or improved as follows:

Original project design in the PIF	Adjustment/improvement made at CEO Endorsement
<p>Certain activities lacked focus and an adequate sense of scale and ambition. Others needed their relevance confirmed.</p>	<p>PPG implementation allowed for the project to be focused on its goal and objective, which is of simultaneously generating global environmental benefits in BD and CCM through the implementation of the Ecovillage strategy in pilot sites.</p> <p>The final selection of sites is slightly different from what had been initially envisaged internally at ANEV at PIF stage (noting that no precise site list was included in the PIF). Yet, the PIF suggested 7 CNR in the vicinity of important PAs would be targeted by the project covering 50,000 in total. In the proposed PRODOC, 8 CNR sites were retained with 162,813 ha, of which 15,800 ha are new or extended CNRs.</p> <p>Certain outputs were dropped. E.g. PIF output 3.2.2 on the phasing out of kerosene lamps was dropped, as these lamps are no longer in use in Senegalese villages. The same logic also applied to PIF output 3.1.2 on phasing out the production and use of charcoal in villages. PPG assessments showed that Senegalese villages use firewood for cooking, while ‘charcoal’ is primarily an urban and peri-urban problem.</p> <p>Finally, the PES scheme foreseen in PIF Component 2 was dropped, as it was considered too ambitious for the project context.</p>
<p>Total expected co-financing ratio was: \$1 GEF to \$4 from partners.</p>	<p>The confirmed project co-financing achieved the ratio of \$1 from GEF to \$4.5 from partners with slightly different break-down than what had been proposed at PIF stage. Of the total of \$13.2 million in co-financing, \$1.5 million comes from UNDP, \$6 million from ANEV and \$3.6 million from the private sector and partner organizations, including the confirmed engagement from Schneider Electric.</p> <p>Furthermore, there are still good prospects for negotiating additional private sector co-finance from industry. An agreement with OSRAM/Siemens has been under discussion. The company has indicated that it would rather see project results first before deciding on how investments will canalized. This will be more likely consolidated in 2011/12 with the PRODOC CEO endorsed.</p>

Original project design in the PIF	Adjustment/improvement made at CEO Endorsement
<p>The PIF included insufficient funds for project management: only \$100K, although an additional \$100K had been allocated to PIF Component 5 ('Participatory monitoring &amp; evaluation of the project's performance').</p>	<p>The PIF was approved with an unusually low project management ratio. The PPG process included a thorough analysis of proposed activities and inputs needed. It showed that the costs of project management presented in the PIF were insufficient and based on unrealistic estimates of what would be necessary for adequately managing a project of this complexity. This has been corrected at CEO Endorsement stage.</p> <p>PIF Component 5 was dropped and in Part I, Table A (Project Framework) a clear distinction between the project's own management costs (\$168,000 from GEF, which is 5.8% of the total GEF budget) and the evaluation and reporting costs (\$120,000) was also introduced.</p>

**PART V: AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO Endorsement.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
<p>Yannick Glemarec, UNDP/GEF Executive Coordinator</p>		<p>May 31, 2011</p>	<p>Fabiana Issler, UNDP-GEF Regional Technical Advisor, Biodiversity</p>	<p>+27-12354 8128</p>	<p>fabiana.issler@undp.org</p>
			<p>For Climate Change Mitigation: Benoît Lebot, Regional Technical Advisor</p>	<p>+ 221 33 869 06 76</p>	<p>benoit.lebot@undp.org</p>

## ANNEX A: PROJECT RESULTS FRAMEWORK

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of information	Risks and assumptions
<b>Objective -</b> 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 <sup>6</sup> to calculate GHG emissions/sequestration) from energy and land use at the level of village lands (“ <i>terroir villageois</i> ”) (Indicator 9, below, is sub-set of this same Indicator)	Bilan Carbone baseline data exists for some test rural villages; the baseline and “business-as-usual” (BAU) development scenario for comparison will be established (10 pilot villages) at start of project	Application Bilan Carbone for 10 pilot Ecovillages show that these villages have embarked on a low carbon development path: net emissions are at least 30% lower than the BAU development scenario	Project reports – Bilan Carbone repeated as part of project monitoring cycle (baseline; mid-term; end project)	<u>Risks:</u> Weak capacity or lack of commitment at the Ecovillage level means that integrated approaches/ Ecovillage model with global environmental benefits are not achieved
	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	ANEV’s yearly reports  Project site visits and evaluation for verification	ANEV capacities do not develop sufficiently to achieve ambitious National Ecovillage Programme
	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 research):  [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  (see Annex 2 for full SOI tracking tool)	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 < 60%	DPN Rural Communities Village CNR management committees  Project reports – METT analysis repeated as part of project M&E process	<u>Assumption:</u> Political support to national EVs Programme remains very high, supporting national level reforms (removal of barriers) and development of Ecovillage Strategy
<b>Outcome 1 –</b> Improved governance framework and capacity for the effective	4. Inter-Ministerial Protocol established between Ministry of Ecovillages (MEBRLAP/ ANEV) and Ministry of Environment (MENP/ DPN; DEFCCS)	No existing working relationship or agreements	Signed and implemented inter-Ministerial protocol; effective working relationships at all levels, local to national	MEBRLAP; MENP UNDP Capacity Development Scorecard Project reports	<u>Risks:</u> Political will is lacking or processes too involved to achieve legal reform and removal of barriers

<sup>6</sup> Method developed by ADEME (French Agency for Environment and Energy Management).

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of information	Risks and assumptions								
incorporation of biodiversity conservation and low carbon, adaptive development into the National Ecovillage Strategy	<p>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</p> <p>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.</p> <p>Capacity thematic areas:</p> <ol style="list-style-type: none"> <li>(1) Capacity to conceptualize and develop sectoral and cross-sectoral policy and regulatory frameworks</li> <li>(2) Capacity to formulate, operationalise and implement sectoral and cross-sectoral programmes and projects</li> <li>(3) Capacity to mobilize and manage partnerships, including with the civil society and the private sector</li> <li>(4) Technical skills related specifically to the requirements of the [focal area] and associated Conventions</li> <li>(5) Capacity to monitor, evaluate and report at the sector and project levels</li> </ol>	<p>Average scores for all thematic areas and capacity levels of capacity for both PA management and energy efficiency market transformation:</p> <table border="0" data-bbox="667 397 1029 527"> <tr> <td>ANEV</td> <td>62%</td> </tr> <tr> <td>DEFC</td> <td>66%</td> </tr> <tr> <td>GENSEN</td> <td>76%</td> </tr> <tr> <td>DPN</td> <td>65%</td> </tr> </table> <p><i>(see Annex 3 for a complete and disaggregated analysis)</i></p>	ANEV	62%	DEFC	66%	GENSEN	76%	DPN	65%	<p>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.</p>	<p>Capacity Development Scorecards for individual institutions and collectively – to be repeated as part of project M&amp;E process</p> <p>Periodic project reports</p>	<p>within the project timescales</p> <p>Lack of commitment or capacity at Ecovillage level means that land allocation and planning processes (EMPs) cannot be achieved</p> <p>Project outputs, achievements and data gathering at the Ecovillage level are not adequate to attract private investment (market-based mechanisms)</p> <p><u>Assumptions:</u> Capacity of ANEV and working relations with other Ministries can be strengthened to achieve project outcomes and ambitious national EVs Strategy and Programme</p> <p>Demonstration of working methods and results (better land/ resource management, improved energy efficiency, income-generation etc.) and dissemination of results will lead to widespread adoption of an effective Ecovillage model.</p>
ANEV	62%												
DEFC	66%												
GENSEN	76%												
DPN	65%												

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of information	Risks and assumptions
	<p><u>Outputs</u></p> <p>1.1 The National Ecovillage Strategy counts on an enabling legal, policy and regulatory framework for enhancing the realisation of global environmental benefits</p> <p>1.2 A framework for Ecological Management Plans for Ecovillages is developed with an overall vision for management and use of community lands, incorporating sustainable natural resource management, biodiversity conservation, renewable energy and climate change adaptation</p> <p>1.3 Increased national and local capacity to implement a functioning and sustainable network of Ecovillages and to replicate an Ecovillage model which incorporates global biodiversity and climate benefits</p>				
<b>Outcome 2</b> – 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  <i>(* See Table B in Section One of the METT for a non-exhaustive list of Community Managed Reserves and Pastoral Units in Annex 2.)</i>	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	Ministry of Decentralization CIVDs ANEV/ Ecovillage Programme Annual reports Project reports Project BD Monitoring System	<u>Risks:</u> Management of national PA network is too weak to ensure conservation objectives achieved within PAs despite contributions from adjacent CNRs  Community commitment or capacity for management of CNRs is insufficient to achieve BD conservation objectives for CNRs and adjacent PAs
	7. New Ecological Perimeters established and providing village needs through sustainable management (wood fuel/ timber; endemic species for CNR rehabilitation, medicinal plants, bamboo)	Nationally 4 or 5 EPs (the concept is quite new)  Among project sites: 2 established in project villages with <50ha	At least 200 ha of new EPs under sustainable management in all 10 villages	Village development committees ANEV/ Ecovillage Programme Annual reports Project reports/ livelihood surveys	Better management of village lands (EPs, ASP methods etc.) and alternative IGAs do not result in decline in destructive practices of resource exploitation (farming encroachment, poaching etc. in PAs) Rural villages operate at extreme levels of poverty and people may be unwilling to try new approaches when their basic livelihood needs are not being met.
	8. BD Indicators in selected CNR/ PA: <u>Dindefelo</u> : ha of chimpanzee habitat protected / managed  <u>PNNK/ Ferlo</u> migration corridor conservation/ management	<u>Dindefelo</u> 13,000 ha chimpanzee habitat (Wula-Nafa project)  <u>PNNK/ Ferlo</u> Migration corridor exists on maps; little information on animal numbers / movements	<u>Dindefelo</u> Additional 7,000 ha chimpanzee habitat protected and managed as CNR (extension towards Guinea border)  <u>PNNK/ Ferlo</u> Monitoring data on large mammal migration available to improve conservation and management of corridor	Project BD Monitoring System (BMS) ( <i>see explanatory note 4 below</i> ) Other Project reports (Wula-Nafa) Project reports; DPN monitoring (PNNK); Ferlo agreements signed	

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of information	Risks and assumptions
					<u>Assumption:</u> Communities will change behaviour and commit to new practices if provided with alternatives and support to implementation.
<u>Outputs</u> 2.1 Community-managed land in pilot Ecovillages includes a CNR managed effectively for biodiversity conservation. 2.2 Ecovillage community lands function to provide resources & alternative incomes based on sustainable management and ecotourism. 2.3 New methods of sustainable intensification of agriculture and livestock rearing reduce pressure on PAs, CNRs and community forests 2.4 Biodiversity monitoring in CNRs and adjacent PAs providing information on natural resources and biodiversity trends for adaptive management of conservation and sustainable exploitation					
<b>Outcome 3 -</b> 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”) ( <i>sub-set of Indicator 1</i> )	Bilan Carbone exist for some test rural villages; baseline needs to be established for all 10 project pilot villages at start of implementation	Increases in Bilan Carbone for energy sector in 10 pilot EVs (village lands) are at least 30% lower than the “business-as-usual” development scenario	Project reports – Bilan Carbone repeated as part of project monitoring (baseline; mid-term; end project)	<u>Risk:</u> Village level commitment to change and adopt new methods is not sufficient to achieve the widespread adoption of new forms of energy use that will achieve low carbon development
	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 Project Ecovillages households use improved cook stoves	Project reports Socio-economic survey: evolution of domestic cooking practices	
	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	Project reports	
<u>Outputs</u> 3.1 Changes in domestic cooking-practices reduce GHG emissions and reduce pressure on forests 3.2 Appropriate clean / sustainable energy technologies for pilot Ecovillages are identified, adapted and adopted by communities 3.3 Promotion of a sustainable model for Jatropha plantations and production of high quality oil for local use					

Objective/ Outcome	Indicator	Baseline	End of Project target	Source of information	Risks and assumptions
<b>Outcome 4</b> - Increased biocarbon sequestration in Ecovillage community- managed lands ( <i>terroirs villageois</i> )	12. Number of tonnes of CO <sup>2</sup> sequestered in living hedges	0 tonnes	20km living hedges (40,000 trees) in 10 EVs, giving C sequestration of 55 tCO <sup>2</sup> per village/ year  (Project total: 200km hedges (400,000 trees); 550 tCO <sup>2</sup> sequestered per year)	M&E Project reports and CO <sup>2</sup> model	<u>Risk:</u> Lack of capacity/ commitment or technical problems result in failure to achieve planting and Carbon sequestration targets on the scale proposed  <u>Assumption:</u> Project Ecovillages will make available sufficient land and manpower to achieve planting targets and for experimental biochar trials
	13. Number of tonnes of CO <sup>2</sup> sequestered in bamboo plantations	0 tonnes	20,000 bamboo plants in each of 4 project EVs, giving sequestration of at least 27 tCO <sup>2</sup> per year per village  (Project total: 80,000 bamboo plants; 108 tCO <sup>2</sup> sequestered/ year)	M&E Project reports and CO <sup>2</sup> model	
	14. Number of tonnes of CO <sup>2</sup> sequestered in mangroves	0 tonnes	250 ha (2.5M propagules) of mangroves planted in each of 2 project EVs; giving sequestration of 750 tCO <sup>2</sup> sequestered / village/ year)  (Project total: 500 ha (5M propagules) mangroves; 1,500 tCO <sup>2</sup> sequestered/ year)	M&E Project reports and CO <sup>2</sup> model	
	15. Number of hectares of soil improved through Biochar amendment	0 ha	10 ha soil improved in test plots (1 Ecovillage)	Project reports	
	<u>Outputs:</u> 4.1 Biocarbon stocks are increased as a result of community-based afforestation and reduced deforestation in community lands and adjacent PAs 4.2 Carbon stocks in soil are increased and the emissions from agriculture are reduced through the adoption of the innovative technology Biochar				



## ANNEX B: RESPONSES TO PROJECT REVIEWS

STAP Scientific and Technical screening of the Project Identification Form (PIF) – Date of screening: 7 October 2009

### Comment - STAP

#### II. STAP Advisory Response

1. Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency:  
Consent

#### III. Further guidance from STAP

This proposal is well developed. It provides detailed project interventions, and references to support the proposed activities. STAP has the following observations to help strengthen the proposal –

1. The proposal does not state if a risk assessment will be done for invasive species resulting from *Jatropha curcas*. If a risk assessment had not been planned, STAP recommends the project reconsiders doing an assessment.
2. On community/participatory conservation of biodiversity (component 2), the panel will make available its analysis of the evidence base for Community Forest Management impacts on global environmental benefits late in 2009 for reference in developing the full project proposal.

[Footnote: See the brief description at [Link](#) and work in progress at [Link](#)]

3. On testing of Payments for Environmental Services (PES) schemes (component 4), the Panel refers UNDP to its general guidelines on PES projects [Footnote: See [Link](#) and additional notes provided to Council at [Link](#) ] and in particular the need to address the most common barriers to PES effectiveness: (i) non-compliance; (ii) poor administrative selection; (iii) spatial demand spillovers; and (iv) adverse self-selection.

The full proposal should detail how each of these barriers will be addressed and the project design should be capable of assessing whether the pilot interventions were in fact effective.

4. STAP suggests that UNDP considers the guidance it provided on the SPWA programmatic frameworks on biodiversity and climate change. Some of STAP's guidance is valuable to this proposal. STAP's guidance can be accessed through these links –

a. SPWA biodiversity component –

[Link](#)

b. SPWA climate change component –

[Link](#)

5. STAP suggest a baseline in terms of governance framework, biodiversity (e.g. including pressure on key protected area resources), and on energy use for Ecovillages. Such a baseline would help answer several of the basic queries raised in the STAP screens for the programmatic frameworks, which are also applicable for this project. Ideally, comparisons with villages not involved would add great value to the overall results.

### Response - STAP

#### **A response to the five points raised in provided below:**

**1.**

PRODOC paragraph 93 reads:

Appropriate safeguards will be adopted in the villages where this activity will be implemented to avoid the risk of direct competition with food production or with biodiversity conservation objectives. Also, as per recommendations from the GEF's Scientific and Technical Advisory Panel, these safeguards will include an appropriate risk assessment for invasive species resulting from cultivation of *Jatropha curcas*. These safeguards will be elaborated with expert assistance and are included in the process of preparing Environmental Management Plans (EMPs). See e.g. Annex 6.

## Response - STAP

2.

The project design team has been attentive to the existing body of knowledge and GEF lessons available on Community Forest Management. In particular, the design of outputs under component 2 of output 4.1 were inspired by this guidance.

3.

The PES scheme was dropped, as it was considered too ambitious for the project context. Any financial incentives for generating global benefits through the Ecovillage model will be channeled through rural micro-credit scheme, many of which already exist and function in several Senegalese villages. No GEF funds will be used for this. The partnership with Senegal Ecovillage Microfinance Fund (SEM-Fund), EREV (EarthRights EcoVillage Institute) and GENSEN will be particularly instrumental for achieving this. See PRODOC Annex 7 for more information on the partnership.

4.

The links provided by STAP were unfortunately “dead” and the STAP guidance provided on the SPWA programmatic frameworks on biodiversity and climate change could not be found – neither in the STAP’s nor in the GEF’s website. However, UNDP is pleased to confirm that the project design team was attentive to existing STAP guidance on e.g.: (1) [Sustainable Forest Landscape Carbon Management - under LULUCF](#) (First STAP Submission on LULUCF to GEF Technical Advisory Groups on Climate Change, Sustainable Forest Management, Land Degradation and Biodiversity – from April 2009); and (2) STAP Guidance on Sustainable Forest Management: [...] on Implementing the new Work Program (from 2007). Particularly on the later publication, guidance on “*trees in the productive landscape’ as an opportunity to integrate multiple land uses over space and time, providing co-benefits for the global environment and local livelihoods*” was inspiring in the design of components 2 and 4 of the project. Benefits from LUCF under Component 2 are based on avoided deforestation and degradation from new and extended CRNs, while under Component 4 they are based on afforestation/reforestation. Activities under Components 2 and 4 have both a carbon sequestration element and an element on sustainable use of forests (native, restored and plantation), hence generating benefits both under the CC and the BD focal areas. The best available advice and experience on forestry matters will be ensured through partnerships, e.g. with the Ministry of Environment and Nature Protection which counts on an experienced corps of foresters that know well conditions in Senegal (through collaboration protocol to be established under output 1.1) and with a number of other international partners, such as Kinomé, INBAR, Pro-Natura International, GTZ/PERACOD Project, University of Liege, Belgium (See PRODOC Annex 7 for more details on those).

5.

The project’s baseline is generally well described in the UNDP PRODOC (see e.g. Section I, Part I – chapter ‘Baseline Analysis’; and Part II – chapter ‘Incremental reasoning and expected global, national and local benefits’). The business-as-usual GHG emissions scenario for Senegalese villages will still be established during the project inception phase. This was not possible before because of mid-way changes in the selection of project sites during the PPG process.

## Council member France

### Comment - France

#### 32. Senegal

UNDP

SPWA-BD Participatory Conservation of Biodiversity and Low Carbon Development of Pilot Ecovillages at the Vicinity of Protected Areas in Senegal  
(GEF Project Grant: \$2,880,000)

This project tries to provide an integrated approach for the management of Biodiversity and Climate change but the current activities proposed do not result from a detail field assessment.

The project should be improved on the following point:

- The project intends to create 7 Community Natural Reserves (CNR) in the periphery of some protected area to decrease

### **Comment - France**

unsustainable use of natural resource in the park, but is not providing assistance to the cause of mismanagement of these parks.

This is particularly the case of the Niokolo Koba National Park, where a certain abandon from the Senegalese authorities is resulting in the collapse of this park, and this ecovillage initiative seems not at the size of the challenges faced by this National Park.

The outcomes of these CNR are not convincing at this stage.

- The project intends to provide a wide range of alternative sources of energy without relevant technical and economic assessment.

The project is covering an all direction strategy : briquetting and pelletizing of non-woody biomass, improved cooking hearths, development of local agro fuel from Jatropha, etc... the technical feasibility and economic sustainability of all these alternatives are not yet proven in Senegalese rural areas and might probably be not competitive with the current charcoal or wood source of energy.

The project should demonstrate the feasibility before to invest funds on those activities.

- The project might have some social negative effects contributing to impoverishment of rural poor as it proposed to enforce a ban on kerosene lamp and system without providing economically sustainable alternatives.

- The project is also willing to develop some PES schemes in pilot ecovillages, but the PIF includes no details of the service to be paid for or the potential buyers; the full project should include a detailed plan for this PES pilot project.

**Opinion: the above questions and remarks should be taken into account during project preparation.**

### **Response - France**

#### **On the issue CNRs in PA adjacent areas and low management effectiveness of core PAs**

Any investment has an opportunity cost. This GEF project was slated to simultaneously pursue biodiversity and climate change mitigation benefits. Senegal prioritized it to do so through the implementation of the Ecovillage Strategy. As a result there is a lost opportunity to invest GEF biodiversity funds directly into the PA system to deal with PA finance or PA management issues. Having said that, and considering that other projects, programmes and initiatives are dealing with at least PA management issues in Senegal, the project strategy and its replication have been designed to make an important contribution to the conservation and sustainable management of Senegal's biodiversity.

With respect to formal Protected Areas (PAs - National Parks and Reserves) and Community Nature Reserves (CNRs), the project rationale is as follows. The national system of PAs is well established and provides good coverage of most of Senegal's globally important biodiversity and landscapes but it has significant weaknesses in terms of conservation management and capacity. This is recognized in the project Risks and Assumptions and it is mitigated to some extent by the activities of other projects and initiatives supporting the administrations responsible for management of Parks and Reserves (DPN and DEFCCS). This project will work in close collaboration with these other initiatives (see e.g. Tables 12 and Annex 7 in Prodoc). However, the project will also directly support improved biodiversity conservation in and around PAs and increased capacity of the administrations responsible for PAs, as follows:

The project will establish a high level protocol between the Ministry of Ecovillages (MEBRLAP) and the Ministry of Environment (MENP) to facilitate joint working at all levels (legal and policy changes, working relationships between different Ministries and Departments, practical actions on the ground at the level of PAs and CNRs). This will be catered for under output 1.1. The project does not have a specific objective to improve the overall management of Senegal's national system of PAs. However, it will support capacity development in DPN and DEFCCS in the areas of community management and benefit sharing, biodiversity monitoring and staff training and awareness-raising (output 1.3). The project includes the establishment of local level community management agreements where CNRs are adjacent to or within PAs, to allow for community involvement in PA management and benefit sharing (e.g. from ecotourism). It includes the establishment of a Biodiversity Monitoring Scheme and training of ecoguards, ecoguides and DPN/ DEFCCS personnel in biodiversity monitoring (in CNRs and adjacent PAs). The project includes significant investment in training seminars, workshops and exchanges in various aspects of community involvement in land use and natural resource management. All these training elements will include staff from the DPN and DEFCCS as well as communities, NGOs and ANEV to help strengthen capacity and to strengthen working relationships between all government departments, agencies, communities, NGOs etc. involved in Ecovillages and CNR conservation management.

With a longer-term perspective (during and beyond the project), the rationale is that support to effective and well-managed

## **Response - France**

CNRs will in itself achieve improvements in the conservation management and biodiversity conservation objectives of PAs, for the following reasons. Management within Senegal's national PAs needs improvement but one of the greatest threats identified to the integrity and effective conservation management of PAs is encroachment and degradation coming from outside or at the boundaries of PAs. The reasons for this are multiple – a history of people being excluded from and not respecting the conservation purpose of PAs; lack of enforcement of hunting and land use regulations; pressure for more land and more resources from communities living adjacent to PAs; uncontrolled bush fires from farmland or charcoal burning spreading into PAs; unsustainable methods of resource exploitation leading people to seek resources (e.g. firewood and food) illegally within PAs. These threats can only be addressed by working with communities living adjacent to PAs, to increase their understanding and appreciation of the need for and values of biodiversity and sustainable management of natural resources; to help them find better methods of land and resource management which meet their needs for energy, food and other resources without degrading natural habitats and biodiversity; and to find alternative ways of generating income through sustainable uses of resources (natural harvests, ecotourism etc.). The project will address all these issues and develop a model for Ecovillages which includes a CNR managed for nature conservation, Ecological Perimeters managed for sustainable use of natural resources, development based on low carbon options for energy supply, better integrated management and increased production from farmland and grazing lands, alternative income-generation.

Wherever possible, alternative incomes such as ecotourism will be developed through collaboration between communities and government departments and agencies responsible for Parks and Reserves so that communities can benefit directly and financially from improved conservation management of the Parks and Reserves instead of being excluded from these areas. This will engender a change of culture so that adjacent communities value PAs, participate actively in conservation management and benefit directly from this approach. Some CNRs are within designated PAs (within Wildlife Reserves and Biosphere Reserves in the Ferlo and the Saloum Delta for example). Where Ecovillages and CNRs are adjacent to or within PAs, the project will have direct impacts through reduction of external human pressures on PAs and their resources. There would be no purpose in improving management within PAs in the absence of this project initiative because the external pressures would continue to be exerted and to cause degradation around the boundaries and within PAs. The project will develop a model of improved community land and resource management at Ecovillages' level, which will contribute to better conservation in and around PAs, and which can be replicated across Senegal in Ecovillages adjacent to PAs. It is complementary to and necessary for other initiatives which aim to improve conservation management and outcomes within PAs.

Finally, although the PA network in Senegal is comprehensive, it does not cover all key aspects of important biodiversity and no PA network can provide entirely for the needs of migratory species. Even if migratory animals move from one protected area to another they have to cross land, in between, which is not protected. Examples of areas important for resident and migrant faunal biodiversity in Senegal but which are not "PAs" include the corridor between the Ferlo and PNNK used by large migratory herbivores and birds and the area south-east of PNNK, adjacent to the border with Guinea, which has rich Guinea Forest habitats and important populations of chimpanzees and other fauna. Project activities in these areas (CNR conservation, improved management of fire and livestock, afforestation etc.) will enhance habitats and conservation and lead to development of an EV model which also contributes global biodiversity benefits in areas which are not formal PAs.

### **On project activities under Component 3 regarding alternative sources of energy**

Component 3 of the project has been considerably tightened up. Certain outputs were dropped for reasons of necessity and because the knowledge on the baseline situation was expanded through the PPG research (e.g. briquetting and pelletizing were dropped as activity, and biochar introduced). See e.g. the response provided to the STAP on similar issues (section above in this Annex).

Yet, apart from improved cook stoves, where there is already significant experience on the benefits in Senegal and in other parts of the world, it is correct to say that the technical feasibility and economic sustainability of e.g. *Jatropha* are not yet proven in Senegalese rural areas as an alternative form of energy production. PPG research included some key assessment in an effort to clarify the issue. See e.g. PRODOC Annex 10. Feasibility Assessments - Components 3 & 4 (in French). Because of these risks, the scope of these activities were limited and kept with a certain experimental character (i.e. piloting, testing and establishing the feasibility of the alternative).

In addition, the project has forged a number of strategic partnerships with respect to rural energy management, in particular with the GTZ PERACOD project ([www.peracod.sn](http://www.peracod.sn)) and with Gamblox Agro-Bio Tech, Phytotechnie Tropicale et

## Response - France

Horticulture, Université de Liège, Belgium. The PERACOD project has e.g. already successfully distributed 44,000 improved cooking stoves in Senegal and several aspects of this PERACOD activity (including its sustainability) are being closely monitored. These aspects include technology uptake by users, economic feasibility, health impacts and, not least also, the impact on forests. Université de Liège is leading the *Jatropha* PIC programme and the *Jatropha* selection programme in Senegal. These and other partners are very well positioned to assist ANEV and the project in matters of alternative sources of energy.

### **On possible negative social impacts of the ban on kerosene lamps proposed at PIF stage**

PIF output 3.2.2 on the phasing out of kerosene lamps was dropped, as it no longer made sense. PPG surveys confirmed that kerosene lamps are no longer in use in Senegalese villages. Instead, small portable solar table lights (known as “*lampes chinoises*”) sold at affordable prices in several town markets are being widely used in villages.

### **On the PES scheme proposed at PIF stage**

As explained in the response to STAP, the PES scheme foreseen in PIF Component 4 was dropped, as it was considered too ambitious for the project context. Any financial incentives for generating global benefits through the Ecovillage model will be channeled through rural micro-credit scheme, many of which already exist and function in several Senegalese villages. No GEF funds will be used for this. The partnership with Senegal Ecovillage Microfinance Fund (SEM-Fund), EREV (EarthRights EcoVillage Institute) and GENSEN will be particularly instrumental for achieving this. See PRODOC Annex 7 for more information on the partnership.

## Council member Switzerland

### **Comment - Switzerland**

**N°32: MFA-4313; Senegal: SPWA - Participatory Conservation of Biodiversity and Low Carbon Development of Pilot Ecovillages at the Vicinity of Protected Areas in Senegal, (UNDP); GEF: 1.5 million USD; total: 12.7 million USD**

#### **Overall Commentaries**

The Project’s objective appears to respond well to the felt need of a large portion of the population in Senegal which has embarked on unsustainable methods of natural resource use. The situation of unsustainable use of natural resources that is giving rise to this proposal is well described in the proposal. The objective seems therefore justified.

However, while the objective proposes to ‘remove barriers’ to the effective application and so on, the sequence of expected outputs and outcomes rather suggests that the establishment of pilot eco-villages may only demonstrate the effectiveness of measures proposed. An effective ‘removal of barriers’ may, therefore only be possible if the experiences, learning, results etc., of the pilot activities are subsequently mainstreamed, an activity that is not part of this proposal.

Leaving the climate change aspect aside, similar projects have been realised in the past in many countries. A central learning from those projects is that the land ownership system, resp. the question of **secured usership** is central to the survival of large land restoration projects. This proposal is not explicit on how the Project intends to address this question.

The Project is ambitious in that it intends to transform domestic cooking practices within a period of 60 months, a target that similar projects (India) have not achieved in decades.

#### **Questions, Concerns and Challenges for the further Project Preparation**

(1) The issues mentioned above need to be clarified in the course of further Project preparation.

(2) The proposal to embark on locally based energy production from *Jatropha* oil is interesting. However, the proposal needs to be more explicit on how to realise this and especially how the recurring investments of such system should be

## Comment - Switzerland

generated.

(3) In outcome 3 the important element of ‘adaptation to climate change’ should be highlighted more clearly. The transformation of domestic cooking practices does indeed reduce GHG through reducing the consumption pressure on woody species so that their sequestration potential and the sequestration potential of soils are maintained. In addition the environmental recovering contributes considerably to strengthening the adaptive capacity of people in the area. This effect is only insufficiently mentioned in the proposal and should be strengthened.

(4) Outcome 4 appears rather vague. It proposes to develop and test PES schemes and suggests that these PES schemes should include the development of plant nurseries, the regeneration of mangroves and the systematic collection and composition of waste. All these activities are rather far from PES schemes. The heart of PES schemes is to identify and develop perceptions on the value of environmental services. Perceptions so developed will then contribute to enacting legal and institutional frame conditions which may reduce the danger of degradation. Only at a later stage (beyond 60 months) may actual payment for environmental services then be realistic.

### Conclusions and Recommendations

As the project addresses important issues for the development future of Senegal, it is recommended to support the Project. However, clarification of the points mentioned above is requested and a more realistic level of outputs and outcomes within the Project period should be developed.

## Response - Switzerland

### **(1a) On the issue of secured land usership in the success of large land restoration projects**

PRODOC para 35 mentions that 3 “[a] key area of policy and law relating to natural resource management and energy supply in rural areas of Senegal is that of land ownership, land tenure and land management.”. Also, para 75 mentions that “the GEF project will play a catalytic role of change. It will join forces with other projects, programmes and initiatives working on legal and policy reforms in themes that have significance for biodiversity conservation, land tenure and natural resource management, energy and carbon finance in Senegal. The project will institute an appropriate planning framework for the management and stewardship of land and associated resources at the village level through the Ecological Management Plans (EMPs)”.

The concept of good land stewardship is the adopted form of ‘land usership’ that the project will seek to implement through the Ecovillage model. Good stewardship generally means to take good care of something that one does not own and being rewarded for achieving good results with it. The letters of co-financing availed by ten different Rural Councils are a token of the engagement of local governments to make land available for the implementation of the Ecovillage model. Good land stewardship will be relevant for output 1.2, which is the framework for the EMPs, but also of all outputs related to land use, i.e. those under component 2, output 3.3 for *Jatropha* and 4.1 for the forestry development.

### **(1b) On the project’s ambition to transform domestic cooking practices within a period of 60 months**

Although the introduction of new cooking techniques may have met difficulties in other parts of the world, the experience in Senegal piloted by the PERACOD project are encouraging (see [www.peracod.sn](http://www.peracod.sn)). The PERACOD project has e.g. already successfully distributed 44,000 improved cooking stoves in Senegal and several aspects of this PERACOD activity (including its sustainability) are being closely monitored, These aspects include technology uptake by users, economic feasibility, health impacts and, not least also, the impact on forests.

### **(2) On the *Jatropha* component and how recurring investments of such system will be generated**

Output 3.3 which deals with the *Jatropha* component of the project has been fully described (refer to PRODOC Section I, Part II), including the collaboration with the University of Gembloux (Belgium) and Ecole National Supérieur d’Agronomie de Thies (ENSA). Another important partnership is with SOPREEF (Société Pour la Promotion de l’Accès à l’Énergie et à l’Eau Dans le Département de Foundiougne), which is a national partner that has been working in the Saloum region for 2 years in developing quality vegetable oil for local use (mainly energy). SOPREEF will bring its expertise to the project and its network of producers. The project will cooperate closely with SOPREEF in Mbam and Massarinko. These partnerships will be essential for overcoming the barriers related to the agronomic uncertainties and difficulties (including of propagation), and of the quality of oil, given that production will be local and initially of limited scale. Annex 10 contains feasibility considerations.

## Response - Switzerland

### **(3) On the adaptation elements in the proposal under Outcome 3**

Climate change adaptation is part of several strategies and policies that orient this project proposal as mentioned in a number of PRODOC passages): (i) the Ecovillages Programme (para 30); (ii) Senegal's NBSAP (para 34); (iii) PRSP-II (para 124); UNDP Country Programme for Senegal (para 125); (iv) Policy Charters on Energy and Environmental Policy (para 127); and finally (v) the Strategic National Plan to Combat Climate Change (para 128). Output 1.2, which aims at establishing a framework for Ecological Management Plans for Ecovillages (EMPs), will also touch upon adaptation (refer to output description in the project strategy (PRODOC Section I, Part II). Also, PRODOC Table 12 (reproduced in Part II, chapter E in this document) mentions possible synergies with climate change adaptation initiatives in Senegal. Hence, adaptation is generally well mainstreamed into the proposal.

Furthermore, PRODOC paragraph 98 describes briefly the adaptation element in the proposal:

*"[...] adaptation benefits will also be pursued, although on a limited and semi-experimental scale. Besides the known habitat restoration benefits and the potentially large sequestration benefits of recuperating mangrove areas, ecologically healthy mangroves (in the Delta du Saloum e.g.) may play a role in counteracting the negative effects of gradual sea-level rise (a known effect of climate change).<sup>7</sup> There is however incipient research on the latter and very little practical evidence on the possible climate change adaptation benefits of this specific type of reforestation. This project will contribute with evidence to this body of knowledge."*

While adaptation is part and parcel of the project (mainstreamed), it is not a main focus. In the future, it will be important to explore this element further.

### **(4) On PES schemes and other elements that were in Component 4 as conceived at PIF stage**

Component 4 of the project has been considerably tightened up. Only two outputs remain (see their description in the PRODOC) and a careful feasibility analysis was carried out (see e.g. Annex 10). Component 4 is now much more focused and the clear outcome is carbon sequestration (beyond the sequestration that will be linked with the establishment of new and extended CNRs tallying 15,800 ha).

The idea of composting (PIF output 4.4) was dropped in favour of biochar e.g. See PRODOC output 4.2.

As explained in the response to STAP and Council member France, the PES scheme was dropped, as it was considered too ambitious for the project context. Any financial incentives for generating global benefits through the Ecovillage model will be channeled through rural micro-credit scheme, many of which already exist and function in several Senegalese villages. No GEF funds will be used for this. The partnership with Senegal Ecovillage Microfinance Fund (SEM-Fund), EREV (EarthRights EcoVillage Institute) and GENSEN will be particularly instrumental for achieving this. See PRODOC Annex 7 for more information on the partnership.

## GEFSEC Review Sheet – March 02, 2010 – in connection with 1<sup>st</sup> submission for CEO Endorsement

Comment – GEF Sec Review Sheet March 02, 2010	Response
<u>Project Design:</u> 8. <i>Is the global environmental benefit measurable?</i> The GHG emissions reductions and the carbon sequestration have to be estimated much more precisely at the CEO endorsement stage.	Annex 9 contains the summary of avoided emissions and carbon sequestration linked to the project's carbon energy solutions. These are also presented in the Part I – Table A in this document and in the description of project outcomes (both here and in the PRODOC).
12. <i>Is the proposed project likely to be cost-effective?</i> Elements of cost effectiveness are proposed in the PIF. However, a more detailed cost-effectiveness analysis will be produced for the CEO endorsement, especially	A thorough cost-effectiveness analysis has been prepared. It contains consideration on the CO2 emissions and carbon sequestration with respect to the GEF funding.

<sup>7</sup> The sequestration potential of mangroves are said to be likely larger than that of forests. See e.g. UNEP (2009) "The natural fix? The role of ecosystems in climate mitigation".

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with regards to CO2.	
<p>15. Does the project take into account potential major risks, including the consequences of climate change and includes sufficient risk mitigation measures?</p> <p>Some project management risks are listed (limits due to decentralization, climate change, mixed results of past community based natural resource management experiences). A comprehensive risk/problem analysis is expected during the PPG and in the CEO endorsement.</p>	<p>The PRODOC contains a comprehensive risk analysis (reproduced in this document; see Part II, section G). Risks that were assessed at PIF have been refined with new risks added. Appropriate mitigation measures are proposed.</p>
<p><u>Justification for GEF Grant</u></p> <p>16. Is the value-added of GEF involvement in the project clearly demonstrated through incremental reasoning?</p> <p>A baseline situation is described. The incremental role of GEF resources is proposed. A more detailed reasoning will be requested for CEO endorsement.</p>	<p>The Project's baseline is described in the UNDP PRODOC in PART I: Situation Analysis, Chapter 'Baseline analysis'. The alternative scenario is described in PRODOC PART II: Strategy. A summary justification for the GEF's value added can be found in PRODOC SECTION II - PART II: 'Incremental Cost Reasoning', which is reproduced in Part II, section F in this document.</p>
<p>19. Is the GEF funding level of project management budget appropriate?</p> <p>Yes under 10 percent (3.4 percent). The GEFSEC appreciates that the management costs stay limited. However, the logical framework is including a separate component on monitoring of \$100,000 (3.4 percent).</p>	<p>This element has changed viz the PIF. Insufficient management costs (only \$100K) had been reserved for project management at PIF stage. An additional \$100K had however been allocated at PIF stage to PIF component 5 ('Participatory monitoring &amp; evaluation of the project's performance').</p> <p>PIF Component 5 was dropped – or it was rather merged into the overall project management and its M&amp;E.</p> <p>Management costs are now at an adequate level, costing no more than \$288,000. This amount is within the threshold of 10% accepted by the GEF. Note that partners are similarly availing reserving ~10% of their co-financing to project for management costs and support. Refer Part I, Table A (Project Framework) in this document.</p>
<p><u>Recommendations at PIF</u></p> <p>26. Items worth noting at CEO Endorsement.</p> <ul style="list-style-type: none"> <li>- Confirm the co-financing;</li> <li>- Confirm the development of partnerships to facilitate the implementation of on-the-ground activities;</li> <li>- Focus on the cost-efficiency and the sustainability of the approach;</li> <li>- Show that a comprehensive and participative risk assessment is well taken into account in the project document.</li> </ul>	<p>The confirmed project co-financing achieved the outstanding ratio of \$1 from GEF to \$10 from partners, of which \$17.7 million was availed by beneficiary communities. A further \$1.5 million comes from UNDP, \$6 million from ANEV and \$475K from the private sector.</p> <p>The project's partnerships are confirmed and new ones will be levered after PRODOC signature. PRODOC Table 2 describes the major categories of stakeholders identified, and the level of involvement envisaged in the project. PRODOC Table 12 provides an overview of collaboration and coordination with related initiatives (including projects, programmes).</p> <p>The partnership engagement with some of the project's partners (including co-financiers) has been carefully crafted with the aim of defining roles and responsibilities with respect to project activities. Several of the co-financing letters spell out the role that co-financiers will play. Discussions with large industry partners is still on-going with respect to renewable energy and negotiations will soon be consolidated. Annex 7 provides an overview of the result of these specific discussions with private and NGO partners / co-financiers.</p> <p>UNDP's NEX modality (i.e. national execution) provides in</p>

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	<p>general a good option with respect to cost-<u>efficiency</u> of aid delivery. The cost-<u>effectiveness</u> analysis for this specific project has, in turn, been expanded and it is both included in the PRODOC and reproduced in this document (Part II, section H).</p> <p>The project’s sustainability is thoroughly discussed in PRODOC Section I, Part II, chapter ‘Sustainability and Replicability’.</p> <p>Finally, the PRODOC contains a comprehensive risk analysis (reproduced in this document; see Part II, section G). Risks that were assessed at PIF have been refined with new risks added. Appropriate mitigation measures are proposed.</p>



GEFSEC Review Sheet – December 27, 2010 – in connection with the 2<sup>nd</sup> re-submission for CEO Endorsement

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<p><u>Resource Availability</u>  6. <i>Is the proposed GEF Grant (including the Agency fee) within the resources available for (if appropriate):</i></p> <ul style="list-style-type: none"> <li>• <i>Strategic objectives?</i></li> </ul> <p>Please check the information available p.1 in the project information. It should be consistent with the focal areas strategies. Biomass is CC-SP4. LULUCF is CC-SP6.</p>	<p>The fit with GEF Strategic Programmes for both Biodiversity and Climate Change remains the same. The reference to them for the Climate Change focal area was slightly amended on page 1 (and in other applicable places in the documentation).</p> <p><u>BD SO1-SP3</u> ‘Strengthening Terrestrial PA Networks’;  <u>CC-SP6 (primary)</u> ‘Management of land use, land-use change and forestry (LULUCF) as a means to protect carbon stocks and reduce GHG emissions’  <u>CC-SP6 4 (secondary)</u> ‘Promoting sustainable energy production’</p> <p>It is understood that, differently from Biodiversity, there is no need to make reference to Strategic <i>Objectives</i> (SOs) for the Climate Change focal area – only the Strategic Programmes (SPs).</p>	<p><u>In the CEO Endorsement Request:</u>  - Page 1 (Part I)  - Table in Part II, section C</p> <p><u>In the PRODOC:</u>  - Table 4 ‘Project’s contribution to the GEF’s outcome indicators’</p>
<p><u>Project Design:</u>  9. <i>Is the project design sound, its framework consistent &amp; sufficiently clear (in particular for the outputs)?</i>  Yes. However, could you please address the following comments:</p> <ul style="list-style-type: none"> <li>- Component 3-1 and 3-2 : PERACOD is a critical partner of the project. The feasibility studies undertaken during the PPG (Annex 10) clearly show that most of the activities on stoves and energy hubs / PV systems will not be successful without a strong interaction with PERACOD. Given this situation, it is surprising to see that PERACOD does not appear as a "cofinanc[i]er" of the project, and that the MoU with them has not been signed yet. A stronger partnership with PERACOD and GTZ before CEO endorsement seems to be necessary to mitigate the high risks of the project.</li> <li>- Component 3-1 : It is unclear who will pay for the stoves production units. Their establishment seems to be critical for the dissemination of the technology.</li> <li>- Component 3-2 : It is unclear who will pay for investment in the centralized PV systems ("energy hubs") and how this technology will be disseminated in other villages.</li> <li>- Component 3-3 : We consider that the comments by STAP (on risk assessment for invasive species) and by</li> </ul>	<p><b>On the issue of the partnership with PERACOD</b>, UNDP is pleased to announce that a MoU between ANEV and PERACOD is soon to be signed and will cover not only activities in the pilot Ecovillages selected for the UNDP/GEF project but other ANEV activities. PERACOD has agreed to provide co-financing to the project, currently amounting to \$183,150. The mentioned MoU will celebrate a partnership that was already under development prior to the first submission of the Project Documentation for CEO Endorsement in December 2010.</p> <p><b>On the issue of rolling out improved stoves’ technology:</b> The introduction and dissemination of improved stoves in Ecovillages will be implemented in the following manner:</p> <ul style="list-style-type: none"> <li>▪ For the villages in close proximity to improved stoves’ production units, which will be established with support of PERACOD (initially in Dar Salam and Ndick), GEF funds are expected to subsidise the purchase of stoves and distribution with up to 50% of retail costs (likely less, depending on the local context). The rest of the funding will be provided by stove users themselves, where access to micro-credit can facilitate the purchase (e.g. through institutions such as REMEDE);</li> <li>▪ In the villages situated farther away from production units, it is expected that, in addition to GEF funding as indicated above, support under the co-financing agreement with PERACOD will facilitate both the establishment of new production units and the conduct of training in stove manufacturing to local artisans.</li> </ul> <p>See also PRODOC Box 8 for additional information.</p>	<p><u>In the PRODOC:</u>  - Tables 9, 12 and 16.  Added: PRODOC Box 8.</p> <p><u>In the CEO Endorsement:</u>  Coordination and Collaboration between the Project and Related Initiatives</p> <p><u>Letters of Co-financing</u>  Letter from PERACOD added and overview table amended</p>

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<p>Switzerland (on how the recur[r]ing investments of the system should be generated) are not fully addressed. Please address them extensively. In particular, the project should provide a clear assessment of the risks associated with invasive species.</p>	<p><b>On the biosafety risks associated with <i>Jatropha</i>:</b>  A seminal publication by FAO and IFAD about <i>Jatropha</i> discusses the matter of the plant’s invasiveness (Brittaine &amp; Lutaladio (2010): <i>Jatropha: A Smallholder Bioenergy Crop - The Potential for Pro-Poor Development</i>. In FAO Integrated Crop Management Vol. 8–2010.); quoting:  “The fact that <i>jatropha</i> can grow and colonize areas that are inhospitable to other plants makes it a potentially invasive species. While some field observers have stated that the plant is not invasive (Henning, 2004a), Australia’s Northern Territory and Western Australia have declared it a noxious weed and have biological control programmes in place for its close relative <i>Jatropha gossypifolia</i>. South Africa bans commercial production of <i>Jatropha curcas</i> due to these environmental concerns. Brazil, Fiji, Honduras, India, Jamaica, Panama, Puerto Rico and El Salvador classify it as a weed.”  See <a href="http://www.fao.org/docrep/012/i1219e/i1219e.pdf">http://www.fao.org/docrep/012/i1219e/i1219e.pdf</a></p> <p>It is worth noting that in the Ecovillages project, the proposal is to adopt <i>Jatropha curcas</i> as the variety of choice, rather than <i>Jatropha gossypifolia</i>. Relevant literature on the issue of <i>jatropha</i>’s invasiveness was studied by project designers. Several sources suggest that <i>Jatropha gossypifolia</i> may have more invasive characteristics than other varieties of <i>jatropha</i>– all depending on the characteristics of the environment where the plant is introduced.</p> <p>Based on PPG studies, it was possible to establish through reports from local villagers that <i>Jatropha curcas</i> has been found in Senegal since several years and that it had been used in live hedges and for medicinal purposes. In the villages where the presence of the plant was reported, the elderly indicated that <i>Jatropha curcas</i> did not show any signs of spontaneous propagation or germination, which are typical characteristics of IAS. Yet, <i>Jatropha</i> cultivation in general has potential environmental risks and benefits which have not been sufficiently identified. Still, it is fair to say that the risks associated with <i>Jatropha curcas</i>’ invasiveness are potential, but not proven. Appropriate safeguards measures should be able control this risk.</p> <p>In line with the precautionary principles in environmental management, the project will put in place protocols for Pest Risk Analysis (PRA) in the planning of activities under Output 3.3 (Promotion of a sustainable model for <i>Jatropha</i> plantations and production of high quality oil for local use).</p> <p>Further to this, the Global Invasive Species Programme (GISP) compiled a number of recommendations for governments when considering the development of biofuels. See e.g. GISP (2008): <i>Biofuel crops and the use of non-native species</i>:</p>	<p><u>In the PRODOC:</u>  Descriptions of Output 3.3 (Promotion of a sustainable model for <i>Jatropha</i> plantations and production of high quality oil for local use) now include clear recommendation on the application of safeguard measures, e.g. the application of Pest Risk Analysis.</p> <p>PRODOC Box 6 was added.</p> <p>Notes and Box 8 were added to Annex 10 (in French).</p>

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	<p><i>Mitigating the risks of invasion.</i> The publication provides guidance on the following topics with respect to Jatropha: information gathering, risk assessment, benefit/cost analysis, the selection of native or low risk species (where these are available), risk management, certification / accreditation processes (<a href="http://www.gisp.org/publications/reports/BiofuelsReport.pdf.pdf">http://www.gisp.org/publications/reports/BiofuelsReport.pdf.pdf</a>).</p> <p>These guiding principles, together with the specific schemes for Pest Risk Analysis and a thorough study of the literature on Jatropha will be considered in the consultancies proposed under Output 3.3 (reference to them in the PRODOC's Total Budget and Workplan includes budget notes "t" and "t6", "t7" and "t8").</p> <p>Guidance on Jatropha's water footprint will be sought from:  <a href="http://www.pnas.org/content/106/35/E92.extract">http://www.pnas.org/content/106/35/E92.extract</a>.</p> <p>The above text was incorporated into different sections of the PRODOC to guide project implementers.</p> <p><b>On the investment risks associated with Jatropha:</b>  Concerning the locally based energy production, the pilot site will be Massarinko. Farmers will form a group that will join the Federation of Farmers of Tabanani de Foundiougne. SOPREEF, which is a Senegalese social enterprise and a project co-financier, will be buying Jatropha seeds at the agreed price of 100 CFA francs per kilo. SOPREEF transforms the seed oil in the locality of Sokone. The investment in Sokone's oil press machine was made by SOPREEF and the plan is to extended production to Massarinko and to sell the oil to the Senegalese Rural Electrification Agency (ASER). An initial contract has already been signed between SOPREEF and ASER for the trading of Jatropha oil to be used in mixed rural units that will produce 100% renewable energy (i.e. both from solar and Jatropha oil).</p> <p>On the one hand, the Ecovillage of Massarinko will benefit from a complementary agroforestry income and, on the other, from expertise to press quality oils (jatropha, but also sesame, peanut, baobab, mango, etc.), as well as from technical supervision by a private organisation ensuring the sustainability of the model.</p> <p>SOPREEF will support the replication of the Jatropha production and consumption model within a short supply chain in other Ecovillages of the administrative department of Foundiougne and may participate in the further replication throughout Senegal. This public-private partnership is an innovative initiative under the project.</p> <p>The above text was incorporated into different sections of the PRODOC to guide</p>	

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<p><i>11. Is the project consistent and properly coordinated with other related initiatives in the country or in the region?</i></p> <p>- See comment on PERACOD.</p> <p>- a statement page 12 says that "exchanges between the project's ecovillages and the ANEV's ecovillages must be maximised". We would like to emphasize again that GEF funding must be mainstreamed in regular activities. Therefore, please explain why some ecovillages have been chosen ou[t]side the regular work program of the executive agency, ANEV.</p>	<p>With respect to the comment on collaboration with PERACOD, refer to thorough response above on point #9 ('On the issue of the partnership with PERACOD').</p> <p><b>With respect to the statement on page 12</b>, the sentence has been corrected to read as follows: "Regular meetings, workshops and field trip will be organised in order to maximise exchanges among Ecovillages." Else, it could lead to misunderstandings (as was the case) on the fit between what the UNDP/GEF project proposes and the project's fit with ANEV's programme of work. The former is definitely an integral part of the later.</p> <p>It is worth noting that ANEV is implementing a comprehensive and national program of work aimed at transforming a number of rural villages throughout Senegal into 'Ecovillages' (see e.g. PRODOC paragraphs 28-31). This programme has been conceived in total synergy with other projects and programs implemented – and to be implemented – by ANEV (e.g. funded by GEF, JICA and others), but also by other implicated government institutions and organisations (MEBRLAP, MENP, GENSEN, among others). The mode of collaboration with ANEV is either through a 'partnership' or (direct) implementation by ANEV. In either case, ANEV strives to work together with partners towards a common goal.</p> <p>For the UNDP/GEF project, ANEV incorporates existing and future partnerships into the activities to be financed by the GEF. Thus, the ten villages supported by the GEF are an integral part of the ANEV Programme of Work.</p>	<p><u>In the PRODOC:</u> - Tables 9, 12 and 16.</p> <p><u>In the CEO Endorsement:</u> Coordination and Collaboration between the Project and Related Initiatives</p>
<p><i>13. Has the cost-effectiveness sufficiently been demonstrated in project design?</i></p> <p>GEF investment of \$3M will target a population of 8,280 inhabitants, which translates into \$348 / villager (page 82 of the prodoc).</p> <p>This very high ratio can be acceptable only if the project is replicated at much larger scale. However, the document is quite short on this particular point. In the prodoc, the section on replicability (paras 138-140) is very vague. It says that a successful demonstration in 10 villages will "almost certainly translate into greater attention by authorities..." and that "other groups will probably be motivated to initiative conservation and sustainable management actions on their own...".</p>	<p><b>On the issue of the replication strategy and cost-effectiveness:</b></p> <p>The project takes a multi-sectorial, integrated approach at the village scale. GEF funds will therefore support many sectors (natural resources, solar energy, energy efficiency, trees plantation, etc.) for one unit of population. Although it can be argued that an incremental investment of \$348/villager is 'average to high', this should be put into the perspective. Such costs would normally be higher than those of a mono-sector project.</p> <p>Furthermore, The project will harness ANEV's capacity to define a strong generic Ecovillages framework, to select future eligible candidate rural communities and to assist their transition to the Ecovillage model. ANEV will equally support the context-specific process of local population becoming 'owners' of project activities – i.e. fostering 'ownership'. Much of this work is foreseen under Outcome 1, and more specifically in Output 1.3 (<i>Increased national and local capacity to implement a functioning and sustainable network of Ecovillages and to replicate an</i></p>	<p><u>In the PRODOC:</u> - Part I, Section II – Project Strategy, chapters 'Cost-Effectiveness' + 'Sustainability and Replicability' - Table 16</p> <p><u>Letters of Co-financing</u> Letter from PERACOD added and overview table amended</p>

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<p>The project should have a much stronger replication strategy. Such strategy should include long-term public and private funding for replication. The outputs are in line of what was decided at PIF level. We note three differences:</p> <p><b>1- Private partners.</b> When the PIF was approved, serious discussions had been engaged with Danone and Siemens to fund the project. \$3M cofinancing from the private sector was identified. Now at CEO endorsement, although a very strong work has been done to mobilize relevant partners, it appears that these industrial partnerships have not been confirmed. We consider this as a missed opportunity, especially regarding Siemens/Osram, a leading company on the issue of "energy hubs". Such a partnership could still be secured before CEO endorsement in order to ensure stronger sustainability to the project.</p> <p><b>2- Structure of the cofinancing.</b> Even if the cofinancing is supposed to have increased, in fact the cofinancing in cash has clearly dropped. We especially regret that the bilateral funding has not been confirmed. Given the fact that a large part of the project is dependant / linked to Peracod (funded by GTZ), we expect a more concrete engagement by GTZ in this project. See other comments on this point below.</p> <p><b>3- Project management.</b> Given that some costs listed page 5 under the PM budget are not acceptable (see comment below), the project management costs should return to something closer to what was agreed in the PIF.</p>	<p><i>Ecovillage model which incorporates global biodiversity and climate benefits).</i></p> <p>Thus, ANEV's Programme of Work, of which the UNDP/GEF project is an integral part, targets in the long-run a large portion of Senegal's rural population – currently some 8.2 million inhabitants. This would translate into approximately some \$0.365/villager. In the shorter term (say, 5 years, which is the duration of the project), ANEV plans to convert some 456 villages into Ecovillages through its various projects (including the present one). These will all benefit from the generic framework developed by the present project. Incremental costs per villager can then boil down to approximately \$8, which is rather low.</p> <p>A note on this was added in the 'Cost-Effectiveness' chapter. The paragraphs on the replication strategy (PRODOC Part I, Section II, chapter 'Sustainability and Replicability') were expanded to include a much more thorough discussion of the replication strategy. See PRODOC para #140.</p> <p><b>On the engagement of large industry (bullet 1):</b> UNDP was informed that high level discussions took place between representatives of both Danone and Siemens private sector groups, the GEF Secretariat and the office of the President of Senegal. This was before the project was transferred to UNDP. The talks resulted in some general statements on collaboration, but no concrete partnership could thereafter be secured with respect to the UNDP/GEF Ecovillages project. Although these partnerships remain potential, at the time of completion of the project documentation for CEO Endorsement, the finalized document was submitted without input from either Danone or Siemens.</p> <p>UNDP noted that in 2009 Danone decided to finance others projects in Senegal than the Ecovillages Programme: e.g. a mangrove restoration project managed by a local NGO, and a local dairy production unit (Laiterie du Berger). UNDP was informed that Danone has no immediate plans on making other investment in Senegal.</p> <p>With respect to Siemens, discussions resumed between company representatives and ANEV in December 2010, however this was after the first submission of the project documentation for CEO Endorsement. More specifically, a teleconference was held between OSRAM / SIEMENS (the former is a subsidiary of the later), the UNDP GEF Regional Unit in Dakar and ANEV. The company showed its readiness to establish a partnership to provide in the short and medium term technical assistance, expertise and capacity building to introduce the concept of energy hubs in the Ecovillages programme in Senegal.</p>	<p><u>In the CEO Endorsement Request:</u> Part III, Section H. On how cost-effectiveness is reflected in the project design</p> <p>Part I, Table B.</p>

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	<p>Still, this renewed contact with OSRAM involving ANEV’s new management has not yet resulted in written commitments from the company with respect to co-financing the project. The company expressed that it would rather see the project start and show some results before a firmer commitment can be confirmed. In connection with it, a study tour to Kenya involving ANEV and ASER (the Senegalese Rural Electrification Agency) is expected soon with the aim of better appreciating the accomplishments of OSRAM in that country in the establishment of energy hubs. Also, a visit by OSRAM’s management in Senegal is also envisaged.</p> <p>Hence, UNDP firmly believes that the partnership between OSRAM and ANEV has strong chances of materialising. It may involve large amounts of funds, but it will not be immediate. In order not to delay the project upstart and the production of initial results, UNDP suggests that the GEF considers endorsing the project without the co-financing from OSRAM, also recalling that the approved PIF did not make any mention to specific companies providing co-financing.</p> <p>Finally, UNDP is pleased to report that the prospects of the GEF project have created much interest in ANEV’s Ecovillages Programme. Besides the PERACOD MoU (under preparation), other partners are in discussions with ANEV towards firming collaboration frameworks, including: the NGOs GREEN Sénégal and Carbon Credited Farming (CCF), the French company Jardin Tropical et Semences (with offices in Senegal and Niger) and the UNDP project Multifunctional Platforms.</p> <p><b>On the structure of co-financing (bullet 2):</b> There is often a certain degree of confusion among co-financiers between what constitutes ‘in-kind’ co-financing and ‘partner-managed’ co-financing. The latter may or may not be in kind.</p> <p>The co-financing from UNDP and ANEV will obviously be administrated in conjunction with the UNDP/GEF budget and were hence classified as ‘grants’.</p> <p>Yet, it is worth noting that partners such as Gamblox Agro-Bio Tech, SEM-Fund/EREV, INBAR, PRO-NATURA International and (to some extent also) SOPREEF are all implementing grants in connection with the offered co-financing. Within the current framework, these grants will be managed directly by these partners. Yet, because several of these partners chose to use the term “in-kind” their letters, UNDP had no choice but to classify their co-financing as ‘in-kind’. This was not the case for PRO-NATURA and SOPREEF.</p>	<p><u>In the PRODOC:</u> Total Budget and Workplan and Table 15</p> <p><u>In the CEO Endorsement Request:</u> Part I, Table A (Project Framework) in this document Part II, Table F. Annex C.</p>

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	<p>Amendments were made in the CEO Endorsement request and in applicable section in the PRODOC and CEO Endorsement Request to correct for the actual ratio of ‘in-kind’ and ‘grant’ co-financing.</p> <p>Else, UNDP is pleased to announce that a co-financing contribution from PERACOD has been obtained, amounting to \$183,150. Refer to the response to point #9 above.</p> <p><b>On project management costs (bullet 3):</b> UNDP invites the GEF to note that a justification was provided on why the ratio of management costs seemed to increase. Refer to CEO Endorsement Request, PART IV, chapter ‘Alignment of project design with the original PIF’ (now amended and expanded).</p> <p>Although the PIF was approved with an unusually low project management ratio, UNDP recognizes that the costs of project management presented in the PIF were insufficient and based on unrealistic estimates of what would be necessary for adequately managing a project of this complexity. This was a simple mistake that clearly needed to be corrected at CEO Endorsement stage.</p> <p>When implementing the PPG, UNDP carried out a thorough analysis of: (i) the proposed activities; (ii) what co-financiers were willing to cover (refer to descriptions in the co-financing letters); and (iii) how the co-financing contributions would be effectively managed (note that, with the exception of UNDP’s and ANEV’s co-financing, the remainder of the co-financing is partner-managed). Based on this analysis, UNDP is convinced that management costs much too below the usual cap of 10% would be unrealistic.</p> <p>UNDP invites the GEF to note there were amendments to the project management budget in order to address the GEF’s concern on management costs. Yet, it is also important to note that the PIF Component 5 (‘Participatory monitoring &amp; evaluation of the project’s performance’), which was previously budgeted at ~\$100K, has been dropped at CEO Endorsement stage. A clear distinction between the project’s own management costs (\$168,000 from GEF, which is 5.8% of the total GEF budget) and the evaluation and reporting costs (\$120,000) was also introduced. See e.g. CEO Endorsement Request, Part I, Tables A and F.</p>	
<p><u>Justification for GEF Grant</u> <i>19. Is the GEF funding level of project management budget appropriate?</i> We remind that ten percent is the maximum authorized for management costs, and certainly not a norm.</p>	<p><b>On management costs:</b> A justification on why the ratio of management costs changed was provided in the CEO Endorsement Request PART IV (Alignment of project design with the original PIF). This explanation is now expanded and amended in response to comments.</p>	<p><u>In the PRODOC:</u> Total Budget and Workplan, Tables 13 and 15</p>

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<p>Using GEF grant to finance Ecovillage Agency drivers (\$96,000) is not relevant. This should be covered by the cofinancing. Similarly, \$20,000 are identified for "project evaluation" and \$30,000 for "international consultant - project evaluation" but at the same time you have already dedicated \$80,000 to evaluation under the M&amp;E budget. The GEF will not pay the same activity twice. Please remove from the PM budget the costs of the drivers and the cost of consultant on evaluation (total to be removed from GEF funding = \$146,000). The management costs will then be back to the ratio approved at PIF level. We take note of the financing of an accountant, some travels, and some miscellaneous.</p>	<p>Although the PIF was approved with an unusually low project management ratio, UNDP recognizes that the costs of project management presented in the PIF were insufficient and based on unrealistic estimates of what would be necessary for adequately managing a project of this complexity. This was a simple mistake that clearly needed to be corrected at CEO Endorsement stage.</p> <p>Further to explanations under point #13 above (On project management costs), it is important to note that project drivers are now covered by the co-financing. Other changes to the project management budget were also made (all highlighted). The costs of drivers and evaluation consultants are not being charged to the PM budget. Another change including the introduction of a clear distinction between the project's own management costs (\$168,000 from GEF, which is 5.8% of the total GEF budget) and the evaluation and reporting costs. See CEO Endorsement Request, Part I, Tables A and F, and Annex C.</p> <p><b>On the costs of M&amp;E</b> Changes and explanations were added PRODOC Table 13 (reproduced in the CEO Endorsement Request Part I, Section H).</p> <p>Furthermore, UNDP would like the GEF to note the following:</p> <ul style="list-style-type: none"> <li>▪ Costs presented in PRODOC Table 13 are simply a different way of presenting general M&amp;E costs of a project in a structured manner. They are <b>NOT</b> over and above the costs presented in the CEO Endorsement tables (e.g. Part I, Tables E and/or F and in Annex C), nor in the PRODOC's Total Budget and Workplan (TBW), where all items are described in detail. Hence, the GEF will not in any way pay for the same activity (or costs) twice.</li> <li>▪ Costs presented in PRODOC Table 13 are indicative and are subject to procurement guidelines and practices of UNDP and Governments. Hence, these costs may vary up and down. Also, some costs remain to be defined either upon project inception or annually.</li> <li>▪ The costs of a typical mid-term or final evaluation include not only the costs of consultancies, but also travel and meeting costs. Hence, the mismatch noted by the GEF. A note on this was added to the table for the sake of clarity.</li> </ul>	<p><u>In the CEO Endorsement Request:</u> Part I, Table A (Project Framework) in this document</p> <p>Part II, Table F and Section G.</p> <p>Annex C.</p>
<p>22. Are the confirmed co-financing amounts adequate for each project component? Please provide a matrix with the source of cofinancing (from each cofinancer) for each output. Letters of cofinancing from the rural council of the ten villages. The total targeted population is 8280. We would like to understand what it means that ten villages,</p>	<p><b>On co-financing per output:</b> Co-financing letters to this project contain a wealth of detail on the contributions from each of the project's co-financiers. UNDP invites the GEF to refer to this detail.</p> <p>Upon request from the GEF, an analytical matrix showing which project outputs each co-financier will contribute to is now included in PRODOC's Section III,</p>	<p><u>Added to the PRODOC:</u> SECTION III, chapter 'Indicative overview of co-financing per project output'</p> <p>Annex 11. Background</p>

Comment – GEF Sec Review Sheet December 27, 2010	Response	Document Reference
<p>for a total population of 8280 people, commit to cofinance the project for \$17,732,000. This means \$2150 per villager. Although we consider these letters as a strong signal that the project is owned by the local communities, we certainly cannot consider these \$17,732,000 as a credible amount - especially as it represents 63% of the whole cofinancing. Please provide a more realistic estimate and a more balanced cofinancing package.</p> <p>Please explain precisely what UNDP will fund.</p> <p>Please explain precisely what the NGOs SEM-Fund and EREV will fund and how concretely they will contribute to the project.</p> <p>Please secure the coordination with PERACOD through a letter of engagement and/or cofinancing.</p> <p>Please confirm cofinancing from Siemens/ Osram.</p>	<p>chapter ‘Indicative overview of co-financing per project output’.</p> <p><b>On the co-financing from Rural Councils:</b>  UNDP confirms that co-financing from Rural Council indeed represents the \$17,732,000, as previously reported in the CEO Endorsement documentation. More specifically, as indicated in the letters from Rural Councils, this co-financing corresponds to: (i) labour by community members; (ii) infrastructural support (by both Rural Council and communities themselves); and (iii) land.</p> <p>The latter element means that concerned communities in pilot Ecovillages are surrendering land to project activities, in particular for the establishment of CNRs and Ecological Perimeters. This land would otherwise be cleared or put into traditional/unsustainable production uses. The total the land surface availed by communities amounts to several thousand hectares (PRODOC Table 3 provides an overview).</p> <p>The co-financing calculus considered that the act of surrendering land has an opportunity cost. In fact, approximately 90% the co-financing from Rural Councils corresponds to this opportunity cost. There are all indications that this cost is not over-estimated as presented, as it is explained below.</p> <p>UNDP has now added a new Annex to the PRODOC (Annex 11) presenting an overview on how the co-financing from Rural Councils has been calculated. This information had been prepared by ANEV together with Rural Council representatives back in September 2010. For the sake of simplicity, this was not included in the previous version of the CEO Endorsement documentation—the PRODOC was already a rather long and dense document.</p> <p>UNDP invites the GEF to note that the opportunity cost of land in this overview was estimated through a simple and undiscounted calculus, which assumed a cost of \$200/hectare per year over a 5-year period. The land is obviously expected to be maintained under conservation/sustainable use for longer than 5 years. The “REDD” component adopts e.g. a 30-year time horizon.</p> <p>Within this context, the proposed co-financing from Rural Councils is not necessarily over-inflated.</p> <p>Although a more sophisticated estimation of the opportunity cost of land could have been presented, UNDP prioritized the presentation of the estimates made by Rural Councils themselves together with ANEV.</p>	<p>calculus for the estimation of co-financing from Rural Councils (in French)</p>

Comment – GEF Sec Review Sheet December 27, 2010	Response	Document Reference
	UNDP hopes that the GEF will find these explanations adequate.	
<p>24. Does the proposal include a budgeted M&amp;E Plan that monitors and measures results with indicators and targets?</p> <p>There is an issue with the table page 5-6 of the CEO endorsement request. Currently, only the mid-term evaluation, the final evaluation and annual audits have been budgeted for a total of \$95,000 (40k+40k+3*5k). However the total M&amp;E budget is \$187,000. Please correct this table.</p>	<p>As explained in the response to point #19, the costs presented in PRODOC Table 13 are indicative and are subject to procurement guidelines and practices of UNDP and Governments. These costs may vary up and down. Also, the costs of the Senior M&amp;E Advisor had been previously omitted, but are now included (+\$45K).</p> <p>In addition, some costs remain to be defined either upon project inception or annually; e.g. the costs of producing data on the means of verification of project results.</p> <p>The total M&amp;E costs estimate (min. \$150,000) is at an adequate level for a FSP of the complexity of Ecovillages project, but may increase slightly when all costs are properly defined. The mentioned costs include: Inception \$10K; support to reporting \$45K; evaluations \$80K; audit \$15K.</p> <p>Refer to the response to point #19 under topic ‘On the costs of M&amp;E’ for more information.</p>	<p><u>In the PRODOC:</u> Total Budget and Workplan, Tables 13 and 15</p> <p><u>In the CEO Endorsement Request:</u> Part I, Table A (Project Framework) in this document</p> <p>Part II, Table F and Section G.</p> <p>Annex C.</p>
<p><u>Secretariat’s Response to various comments from: STAP:</u> <i>Please see comment on invasive species.</i></p>	Refer to the response to point #9 under topic ‘On the biosafety risks associated with Jatropha’) for a thorough response to STAP’s comment on invasive species.	
<p><u>Secretariat’s Response to various comments from: Agencies’ response to Council comments:</u> <i>Please see comment from Switzerland on jatropha.</i></p>	Refer to the response to point #9 under topic ‘On the biosafety risks associated with Jatropha’) for a thorough response to Switzerland’s comment on invasive species.	
<p><u>Recommendation at CEO Endorsement</u> 27. Is CEO Endorsement being recommended? Could you please address the preceding comments ?</p>	All changes to the PRODOC and the CEO Endorsement Request that address GEF Secretariat’s comments are highlighted. Thorough explanations and references are provided in this matrix.	

GEFSEC Review Sheet – March 10, 2011 – in connection with the 3rd re-submission for CEO Endorsement

Comment – GEF Sec Review Sheet from March 10, 2011	Response	Document Reference
<p><u>Project Design:</u>            9. <i>Is the project design sound, its framework consistent &amp; sufficiently clear (in particular for the outputs)?</i>            [...]            JMS/AL/LSH/March 9, 2011.            - We note that an MOU is to be signed with PERACOD/GIZ. However, there are still questions related to some strategic choices and the sustainability of the approach. It is not clear why stoves are so expensive, and whether it would be reasonable and sustainable to subsidize them. Do you have other examples where microfinance has been successful to support purchase of the stoves? Please clarify.</p> <p>- The evidence of partnerships with ASER and SOPREF is notable. Value chain development is important for Jatropha. We need to see clarifications and specifics in the inception report or the first PIR on the whole sub-component with Jatropha (sustainability of the whole approach, attractivity for farmers, availability of seeds before trees are mature, costs of energy hubs and generators, Infrastructure and market access...).</p> <p>- The additional information on the use of Jatropha indicates that possible risks on the use of invasive species have and are being addressed. We note in particular that information was provided on how safeguard measures will be mainstreamed; that Jatropha</p>	<p>On improved cookstoves, the project will build on the experience and success of previous programmes, like PGIES and the Project for the Rehabilitation of degraded lands (PROGERT) where up to nine (09) Local Microcredit Institutions have been established with the aim of assisting local communities with access micro-finance to, among other items, acquire the cookstoves. In Senegal the culture of cooking with charcoal in open grill burners is very ingrained and several models of such grill are widely available in at very inexpensive price. Changing this culture has been very difficult. Yet, this is changing slowly, as people perceive the long-term advantages of efficient cookstoves in the form of savings when purchasing charcoal (in urban and periurban areas) or through less time spent gathering increasingly scarce firewood.</p> <p>PERACOD reports that different models of efficient cookstoves have been tried, but had incipient acceptance in the Senegalese market. The particular model developed by PERACOD that has been selected for distribution in Ecovillages is widely accepted by Senegal’s rural population. It is slightly more expensive than the very cheap improved stove models; hence the need to address this through incremental cost. Yet, it is cheaper than the most expensive models and above all, highly efficient</p> <p>As evidence of the sustainability of the approach, PERACOD/GIZ already spread around 100,000 of such improved cookstoves and demand is rising.</p> <p>The collaboration with ASER is now established through a direct cofinancing of the Ecovillage project. With the ASER collaboration, eight mini solar energy hubs will be installed in complement to the two mini solar hubs planed by ANEV.</p> <p>Management of these mini solar hubs will be done by local committees that will ensure the sale of electricity. The revenue generated will serve as the management of recurrent costs and financing of network expansion.</p> <p>Careful thinking has already been applied for the development of Jatropha for the local production of agrofuel. Jatropha is to grow as a windbreak and in degraded land. There is no competition between food production and agrofuel production, and biodiversity safeguard measures will be put in place.</p>	<p><u>In the PRODOC:</u>            Description of Outputs 3.2 and 3.3.            Table 12 (Collaboration matrix)</p> <p><u>In the CEO Endorsement:</u>            Part II, Section E. Outline the coordination with other related initiatives</p>

Comment – GEF Sec Review Sheet from March 10, 2011	Response	Document Reference
<p>will be used as hedges, which is already the situation on the ground; there will not be any large areas of monoculture.</p>	<p>Senegal has opted to cultivate 1,000 hectares of jatropha in each of the 420 rural communities in the production of agrofuel.</p> <p>The following provisions have been taken:</p> <ul style="list-style-type: none"> <li>• Senegalese Institute of Agricultural Research (ISRA) is responsible for generating plants needed to meet the objectives mentioned above.</li> <li>• All due safeguard measures will be taken to avoid potential negative impacts on biodiversity. The PRODOC contains extensive guidance on this.</li> <li>• In addition to these provisions, ANEV has signed a cofinancing letter with the SOPREEF who will provide quality seeds, training to producers for the production of seed and planting as well as supervision of producers in the oil seed processing</li> <li>• The micro-finance system established with the Senegalese Ecovillages Microfinance Fund (SEM-Fund) will allow women’s association to acquire oil press.</li> <li>• ANEV obtained co-financing commitment from the Multifunctional Platform (MFP) Project funded by UNDP and Bill and Melinda Gates Foundation. The MFP project is developing equipment that runs on jatropha oil to transform and add value to agricultural products to contribute to reduce women's work.</li> <li>• At the regional level, to date, almost 35 MFPs run on Jatropha oil: 30 in Mali and 5 in Burkina Faso.</li> <li>• In fact, we know that it takes 3 years for jatropha trees to start producing oil. But their lifetime is about 50 years.</li> </ul> <p>Finally, during the project’s inception phase, more thorough cost-benefit analysis on jatropha with specific focus on the Ecovillage sites will be carried out. Elements such as sustainability the attractiveness of jatropha cultivation for farmers in ecological perimeters, the availability of seeds and the costs of purchasing and operating energy hubs and generators will all be taken into consideration in this study. The results will be part of the Inception Report and/or will be available in the Senegal Ecovillages Website.</p>	
<p>13. Has the cost-effectiveness sufficiently been demonstrated in project design? [...] JMS/March 9, 2011 We take note of the reasoning on the cost-effectiveness. We understand that the use of the GEF grant will be catalytic, and that UNDP is very optimistic about how the Ecovillage approach will change the way to address</p>	<p>The co-financing from the villager communities is a clear token of the level of their engagement and motivation with respect to the Ecovillages project. This ownership will be an important factor that is expected to contribute to project success.</p> <p>In light of the GEF’s comment, the current project iteration includes the letters from Rural Councils as support letter, rather than letters of co-financing.</p> <p>As this would impact the overall level of project co-financing, there has been a</p>	<p><u>In the PRODOC:</u> Tables 9 and 16 Letters of Co-financing file was updated (Section IV, Part II). Annex 11 (title and note)</p>

Comment – GEF Sec Review Sheet from March 10, 2011	Response	Document Reference
<p>environment issues in villages. However, we are still not convinced by the method to calculate the baseline financing from the villagers. The opportunity cost reasoning is probably accepted in other arenas, but it is a risky antecedent for GEF cofinancing issues. For the sake of simplicity, and hoping to find a solution, we are again asking to UNDP to reduce this cofinancing to more reasonable values. Otherwise, we will not be in a situation to recommend the project to the CEO and the Council.</p>	<p>concerted effort in the past few weeks to seek additional co-financing.</p> <p>Four new co-financing letters are added to the previous list of partners.</p> <ul style="list-style-type: none"> <li>• ASER: \$1,000,000</li> <li>• Plateforme Multifonctionnelle: \$1,000,000</li> <li>• Green Sénégal: \$500,000</li> <li>• Schneider Electric: \$150,000</li> </ul> <p>Along with the previously presented co-financing from other partners, the total co-financing for the project is now \$13,76,900. This is in line with the amount proposed at PIF stage and in fact a little bit above it.</p>	<p><u>In the CEO Endorsement:</u> Par I, Tables A, B, C, E and F</p>
<p><i>14. Is the project structure sufficiently close to what was presented at PIF?</i></p> <p>JMS/March 9, 2011</p> <p>- Thank you for the confirmation of partnerships with PERACOD/GIZ.</p> <p>- We note the agency has moved ahead with OSRAM/Siemens. However, this partnership/cofinancing was one of the founding principals of the project, please bring them back in the loop with a cofinancing letter. We understand that they have started to work in Senegal.</p>	<p>As explained, interest from Osram/Siemens to invest in energy hubs through the Ecovillages programme in Senegal remains, but the company expressed that it would rather see the project start and show some results first, before a firmer commitment from the corporation can be confirmed.</p> <p>A novelty is though that a co-financing commitment from Schneider Electric has been confirmed, as well as from ASER and the Multifunctional Platform Project.</p> <p>Schneider Electric SAS is an international private sector company. The contacts have been through their Paris office. Their participation in the Ecovillages project will focus on Energy hubs: training, design innovative solutions adapted to local villages aimed at creating the conditions for energy hubs to thrive in pilot demonstration sites. At some point actual hubs may also be granted. Refer to letter for more detail.</p>	<p><u>In the PRODOC:</u> Tables 9 and 16 Letters of Co-financing file was updated (Section IV, Part II).</p> <p><u>In the CEO Endorsement:</u> Par I, Tables A, B, C, E and F</p>
<p><u>Justification for GEF Grant</u></p> <p><i>22. Are the confirmed co-financing amounts adequate for each project component?</i></p> <p>[...]</p> <p>JMS/March 9, 2011</p> <p>- We take note of the partnerships with PERACOD/GIZ, the explanation about the UNDP's role, and the role of different partners.</p> <p>- See cell. 13 for the cofinancing from villagers.</p> <p>- The point related to OSRAM/SIEMENS has made progress, but cannot considered addressed.</p>	<p>Reference is made to responses provided under points 13 and 14. These should be able to address the concerns raised under this point.</p>	<p>As above</p>
<p><i>24. Does the proposal include a budgeted M&amp;E Plan that monitors and measures results with indicators and targets?</i></p>	<p>Refer to Annex 6. TOR for the development of the Ecological Management Plans (EMPs). The following text is extracted from it:</p>	<p>N/a.</p>

Comment – GEF Sec Review Sheet from March 10, 2011	Response	Document Reference
<p>[...] LSH/March 9, 2011 The M&amp;E budget table has been modified, however, be clear that M&amp;E will include measurements/sampling of aboveground carbon sequestration or carbon stocks in the field. Defaults such as those given in a tool such as "Bilan Carbone" are acceptable for planning purposes but need confirmation through measurement.</p>	<p>“The biocarbon baseline for avoided emissions linked to deforestation and degradation will also be re-established (see discussion on this in the description of output 1.2). This specific activity will apply only for the five EVs where additional and new CNRs will be created; noting that for the CNR Senegal Oriental, the ‘interim baseline’ established for the project with data from Linkering may be well suited.”</p> <p>Establishing a complete and thorough carbon baseline will be carried out during project inception will be done (see e.g. PRODOC Table 6, the discussion on indicator #1). Appropriate methods that complement the Bilan Carbone and have stronger focus on biocarbon may be used.</p>	
<p><u>Recommendation at CEO Endorsement</u> <i>27. Is CEO Endorsement being recommended?</i> [...] JMS/March 9, 2011. We thank UNDP for the progress made on the revision. 1) Some points have fully been addressed. 2) We propose to discuss some of these review comments on a bilateral basis. 3) However, key concerns stay valid and have not been addressed in the updated document, notably on cofinancing from villagers, the absence of partnerships with OSRAM/SIEMENS, and the nature of monitoring activities on the ground. More details are provided in the review above. LSH/March 09 2011: I concur.</p>	<p>All changes to the PRODOC and the CEO Endorsement Request that address GEF Secretariat’s comments are highlighted. Thorough explanations and references are provided in this matrix.</p>	<p>As above</p>

## ANNEX C: KEY CONSULTANTS TO BE HIRED FOR THE PROJECT USING GEF RESOURCES

### Terms of reference for key project positions:

<i>Position Titles</i>	<i>\$ person week*</i>	<i>Estimated person weeks**</i>	<i>Tasks to be performed</i>	
<b>For Project Management</b>				
<i>Local</i>				
National Project Coordinator	642.30769	260	Refer to UNDP PRODOC Section IV – Part I Terms of References for key project staff	
<i>International</i>				
-	-	-		
<u>Justification for Travel, if any:</u> Travel will be necessary for the coordination team (for visiting pilot sites as per project workplans to be prepared), as well as for other members of the Core project personnel and project consultants.				
<b>For Technical Assistance</b>				
<i>Local</i>				
Forestry & Water Engineer	668.26923	260	Refer to UNDP PRODOC Section IV – Part I Terms of References for key project staff	
Community Engagement Agents (x3)	186.84615	1,040		
Improvement of national EV model (Strategy)	1000	20		
Local conventions negotiations	1000	20		
Agro-Sylvo-Pastoral Integration	1000	20		
Project database creation	1000	10		
Jatropha burner experimentation support	1000	7		
Jatropha cultivar identification	1000	10		
Jatropha rollout planning	1000	4		
Green charcoal rollout	1000	10		
Project Evaluation	1000	20		
<i>International</i>				
Market based mechanisms sustainable funding capacity building	3000	20		
Value chain improvement and certification of honey	3000	5		
Value chain improvement and certification of nuts and fruits	3000	5		
Agro-Sylvo-Pastoral integration	3000	5		
Participatory bd monitoring	3000	15		
Green charcoal production	3000	5		
Ecotourism pilot project (Dar Salam, Ndick et Lompoul)	3000	5		
Creation of pilot fish, stroke shell farming projects	3000	5		
Senior M&E advisor: Strategic Planning & Preparation of the PIR	3000	15		
Project Evaluation	3000	10		
<u>Justification for Travel, if any:</u> Domestic travel to the project sites will be necessary for several technical assistance consultants. International travel to TA consultants will be necessary in order to bring them into the country. Refer to UNDP PRODOC Total Budget and Workplan for more details.				

\* Provide dollar rate per person week (included with 5 decimals for some lines to avoid rounding-off errors).

\*\* Total person weeks needed to carry out the tasks.

## ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

### A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

The PPG objective has been achieved in full:

- The GEF Project Document, and accompanying CEO Endorsement documentation, has been prepared and submitted to the GEF; and

More specifically, the following PPG outputs have been achieved:

- Baseline data collected; information gap analysis and mainstreaming capacity assessments carried out;
- Full project scoped and prepared in a participatory manner, with appropriate institutional arrangements, budget and M&E Plan
- Co-financing mobilized and formally confirmed
- Full project widely endorsed by relevant stakeholders

For more detail on the stakeholder engagement during project preparation, please refer to the PRODOC Annex 7. Stakeholder Engagement and Partnerships’.

**B. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:**

There are no findings that would fundamentally affect the project design. During project preparation, meetings were held with the project partners to clarify the roles and responsibilities in implementation of project outputs.

**C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:**

<i>Project Preparation Activities Approved</i>	<i>Implementation Status</i>	<i>GEF Amount (\$)</i>				<i>Co-financing (\$) *</i>
		<i>Amount Approved</i>	<i>Amount Spent to date</i>	<i>Amount Committed</i>	<i>Uncommitted Amount</i>	
1. Pilot Site Selection, Socio-economic Analysis and Community Engagement Strategy Development	Completed	43,000.00	43,000	0	0.00	41,200.00
2. Baseline Data Collection and Information Gap Analysis	Completed	40,000.00	30,000	10,000	0.00	13,000.00
3. Analyses of Policy and Legal Frameworks and Capacity Gaps	Completed	4,000.00	4,000	0	0.00	0.00
4. Consolidation of the Ecovillage Model and Industry Engagement Strategy	Completed	25,000.00	25,000	0	0.00	16,000.00
5. Project Costing, Risk Assessment and M&E Planning	Completed	8,000.00	8,000	0	0.00	113,000.00
<b>Total</b>		120,000.00	43,000	0	0.00	183,200.00

\* Of which \$150,000 was in cash co-financing from UNDP and has been totally spent or committed.