



NATIONAL ADAPTATION PROGRAMMES OF ACTION

Summary of Projects on Education and Capacity Building identified in Submitted NAPAs as of September 2008

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BANGLADESH

NAPA PRIORITY PROJECT No 3

CAPACITY BUILDING FOR INTEGRATING CLIMATE CHANGE IN PLANNING, DESIGNING OF INFRASTRUCTURE, CONFLICT MANAGEMENT AND LAND-WATER ZONING FOR WATER MANAGEMENT INSTITUTIONS

TYPE OF PROJECT

Capacity building (with some policy and research elements)

RATIONALE

The community of climate change scientists and their numerous publications at the international domain have identified the Bengal coast as highly vulnerable to climate change induced water resources adversities (e.g. sea level rise, water logging, and floods). The National Water Management Plan (2001) has also formally identified a gap in knowledge related to this issue and has asked for this gap to be filled for future adaptation. NWMP's demand-supply approach primarily considered the current water resources availability and constraints issues. It left out the sustainability issues that consider climate change related factors in the planning of water resources. From past experience, it can be observed that climate change issues are not adequately considered while designing water resources structures. Lack of proper assessment of climate change in designing and implementing structures make structural interventions more prone to climatic hazards. Consideration of climate change issues and adaptive measures needs to be a regular part of the activities of water sector managers. Engineers and water sector managers can contribute to the sustainable management of water resources if their knowledge can be more contextualized with climate change science and adaptation options. At the same time, institutional and policy development is also essential for facilitating water sector managers in designing multi-objective projects involving all stakeholders. Water resources management in Bangladesh is a multi-stakeholder issue. Different stakeholders and interest groups have their own diverse interests in the management of water and land resources in Bangladesh. This often creates situations of conflict. Moreover, with the increased climatic extremities the areas of conflict between various interest groups (i.e., fishermen and farmers) are expected to aggravate further. Drainage, which is an essential facility for farmers, is often hampered by the activities of fishers. In this situation, the stakeholders need to build their adaptive capacities in multiple ways. One major way would be to build capacity for negotiating sustainable conflict management, particularly in the water sector. Furthermore, the increasing climatic physical changes such as increased sedimentation in tidal rivers etc. also call for measures for sustainable adaptive measures. Considering the above context, land and water zonation is also necessary that considers the interests of stakeholders for the sustainable development of the coastal area. Zonation of land and water will facilitate sustainable management of agriculture, fisheries, mangrove forests, navigation, drainage, flood control, wetland restoration as well as human settlements and livelihood activities.

DESCRIPTION

Objectives and activities

- Incorporation of climate change issues and concerns in water sector policies and plans;
- Capability development and networking of water resources sector planners and professionals to address climate change hazards;
- Develop mechanisms and tools for both analytical purposes, e.g. Integrated Water Resource Management (IWRM), Water Balance Models and negotiation, e.g. Guidelines for Participatory Water Management (GPWM), as well as for consideration of more people friendly traditional drainage systems, e.g., Tidal Basin Management (TBM). The development of such tools for negotiation would benefit agriculture, human settlements, forest and fisheries as well as natural and man-made drainage structures;
- Delineation of land and water zones considering sustainable use of resources in respect to climate change;
- Development of design manuals and identification of vulnerable structures for designing structural adaptation.

Activities

- Filling Climate Change Knowledge Gap for Water Resources Planning;
- Formulation of Land and Water Zonation for Climate Change Adaptation in Bangladesh;
- Development of Conflict Management Instruments/Tools for Sustainable Drainage Systems;
- Development of Capacity Building Tools for Designing Structural Adaptation.

Inputs

- Experts and experienced manpower to provide technical training for planning and design for incorporating CC for water sector and other sectors;
- Design experts for developing the manuals and identification of climate change issues;
- IWRM expert and TBM expert for determining integrated water resource management options;
- Adequate and timely funding for smooth implementation;
- Anthropologist, Conflict Management Experts and so forth;
- Data sets related to climate change and water resources planning;
- Land and water use data sets.

Short-term outputs:

- Trained water sector planner and designer;
- Greater understanding for better planning in the water resources sector considering climate change related issues and probable consequences;
- Trained professionals;
- Design manuals;
- Identified vulnerable structures;
- Local and national level conflicting issues identified and tools and mechanisms to resolve drainage and water resources related conflicts available;

- Resolution mechanism to resolve conflicts and trade-off between local and national interest;
- Land and water zone for human and environment.

Potential long-term outcomes:

- Climate Change related database and planning tools;
- Knowledge development sustainable water resource planning that will consider climate change issues;
- More proactive action towards sustainable resource utilization;
- Practice of more sustainable adaptation measures;
- Better equipped knowledge for adaptation in long term issues on Climate Change;
- Practice of sustainable utilization of land and water considering interest of all stakeholders;

IMPLEMENTATION

Institutional arrangement

Primary implementing Agency : WARPO Secondary implementing Agencies: DoE (Climate Cell) CEGIS, IWM and Universities and research organizations, BWDB, LGED, RHD, MoL, MoWR, MoEF, DAE, DoF, FD, DoLS, CEGIS, CBOs

Risks and barriers

- WARPO is not sufficiently strengthened as per agencies process;
- Lack of cooperation among different agencies in knowledge gap filling;
- Inadequate fund for structural adaptations;
- Lack of trade-off attitude between influential stakeholders;
- Proper implementation of zoning.

Evaluation and monitoring

A committee formed jointly by MoEF, MoWR, MoLG & RD, MoC and MoFDM for evaluation and monitoring.

COST

An indicative and tentative financial resource estimate for the activities provided below:

<p><i>USD 5,000,000</i></p> <p><i>Project design: USD 50,000</i></p>
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BANGLADESH

NAPA PRIORITY PROJECT No 4

CLIMATE CHANGE AND ADAPTATION INFORMATION DISSEMINATION TO VULNERABLE COMMUNITY FOR EMERGENCY PREPAREDNESS MEASURES AND AWARENESS RAISING ON ENHANCED CLIMATIC DISASTER

TYPE OF PROJECT

Awareness raising (with capacity building elements)

RATIONALE

Increase in temperature and change in precipitation and sea level, as well as the possible increase in frequency and intensity of severe climate events will affect human health both directly (e.g. death due to heat stress) and indirectly (e.g. famine resulting from changes in rainfall). Most of these impacts will be negative, i.e. any health benefits from less severe winters for example, will be offset by the rapid changes to the environment to which human biology and culture have become accustomed. This could include changes in the distribution of diseases, impacts on agriculture or changes to conditions in coastal areas, which have large populations, especially in the developing world. Therefore, more awareness about diseases due to climate change and changes in human behaviour will be a feasible solution to protect human health. This will be particularly true for developing countries like Bangladesh that has low technical capability to fight against outbreaks of easily communicable diseases.

DESCRIPTION:

Objectives and activities

- Protect people from climate change related health problems through awareness programmes;
- Development of guidelines for awareness and behavioural change programmes.

Inputs and Activities:

- Environmental Health Experts for identifying climate change related diseases and possible remedial measures;
- Community mobilization expert to develop guidelines of awareness and behavioural change programmes.

Short-term outputs:

- Existing and possible future disease identification;
- Identification of remedial measures;
- Guidelines for adaptation of human health to the impact of climate change.

Potential long-term outcomes

- Improvement of human health treatment facilities;
- Improved preparedness programme for severe communicable diseases.

IMPLEMENTATION:**Institutional arrangement:**

Primary implementing agency : Ministry of Environment and Forest.

Secondary implementing agencies : Directorate of Health, ICDDR, NGOs.

Risks and barriers:

- Respective organizations may not have enough technical capability to identify diseases
- Community may not respond to make change in ethnic / present behaviour

Evaluation and monitoring:

- A committee formed by the MoH and FW

COST

An indicative and tentative financial resource estimate for the activities provided below:

Full project: USD 7,000,000

Project design: USD 50,000

BANGLADESH

NAPA PRIORITY PROJECT No 7.

INCLUSION OF CLIMATE CHANGE ISSUES IN CURRICULUM AT SECONDARY AND TERTIARY EDUCATIONAL INSTITUTIONS.

TYPE OF PROJECT

Awareness raising (with policy elements)

RATIONALE

Climate change will affect large parts of the country over very long periods of time (several decades). Therefore it is imperative that the younger and future generations are made aware of the problem (and solutions) of the climate change impacts by getting such knowledge incorporated into school curriculum at both secondary as well as primary levels.

DESCRIPTION

Objectives and activities

- To incorporate climate change impacts and adaptation into school curriculum at secondary and primary levels

Inputs and Activities

- Develop an appropriate curriculum on climate change impacts and adaptation for primary school students;
- Develop an appropriate curriculum on climate change for secondary school students;
- Incorporate the courses on climate change into the school curriculum.

Short-term outputs

- Climate change course curriculum for primary school students;
- Climate change course curriculum for secondary school students.

Potential long-term outcomes

- Future generations of primary and secondary school students will learn about climate change impacts and adaptation

IMPLEMENTATION

Institutional arrangement

Primary Implementing agency: Board of education

Secondary implementing agencies: Universities

Risks and barriers

The Education Board fails to allow the newly developed courses into the school curriculum

Evaluation and monitoring

A multi-stakeholder review committee will monitor the project activities and evaluate its products.

COST

An indicative and tentative financial resource estimate for the activities provided below:

Full Project: USD 500,000

Project design: USD 25,000

BANGLADESH

NAPA PRIORITY PROJECT No 9

DEVELOPMENT OF ECO-SPECIFIC ADAPTIVE KNOWLEDGE (INCLUDING INDIGENOUS KNOWLEDGE) ON ADAPTATION TO CLIMATE VARIABILITY TO ENHANCE ADAPTIVE CAPACITY FOR FUTURE CLIMATE CHANGE.

TYPE OF PROJECT

Intervention (at community level, involves awareness raising and capacity building elements)

RATIONALE

The agro-ecological regions of the country are very diverse and will be impacted in very different ways. However, in all the ecological regions the poor (including women, elderly and children) are the most vulnerable and likely to also be most adversely impacted by climate change. Hence eco-specific actions for helping vulnerable communities (with emphasis on women, children and elderly) need to be developed and disseminated to the vulnerable communities to allow them to adapt to potential impacts of climate change.

DESCRIPTION

Objectives and activities

- To develop actions in each of the main ecological regions of the country to adapt to the eco-specific impacts of climate change in those regions;
- To disseminate the knowledge on ecospecific adaptation to the most vulnerable communities in each eco-region (with emphasis on women, children and the elderly).

Inputs and Activities

- Selection of main eco-regions (four or five);
- Selection of local partners in each region;
- Development of pilot actions and learning;
- Sharing learning;
- Disseminating action packages to vulnerable communities.

Short-term outputs

- Adaptation packages to be used by vulnerable communities in different ecoregions of the country.

Potential long-term outcomes

- Most vulnerable sections of communities in each eco-region will be able to adapt to adverse impacts of climate change

IMPLEMENTATION

Institutional arrangement

Primary implementing agency: NGO consortium.

Secondary implementing agencies: NGOs, local government.

Risks and barriers

- Failure to develop adequate adaptation packages in each eco-region.

Evaluation and monitoring

- Through a multi-sectoral and multistakeholder review committee.

COST

An indicative and tentative financial resource estimate for the activities provided below:

Full project: USD 5 million

Design phase: USD 50,000

BENIN

NAPA PRIORITY PROJECT 2

P 2- SECTEUR ENERGIE

ADAPTATION DES MÉNAGES AUX CHANGEMENTS CLIMATIQUES PAR LA PROMOTION DES ÉNERGIES RENOUVELABLES ET DES FOYERS ÉCONOMIQUES PERFORMANTS ET AUTOCUISEURS DANS LES ZONES VULNÉRABLES AUX CHANGEMENTS CLIMATIQUES ET DONT LES TERRES SONT FORTEMENT DÉGRADÉES.

OBJECTIF GENERAL

Réduire la vulnérabilité des populations aux effets induits par les changements climatiques par l'amélioration de l'accès aux sources d'énergies renouvelables et la sauvegarde des ressources forestières

CONTEXTE ET JUSTIFICATION

Parmi les causes anthropiques du réchauffement global et du phénomène de la désertification, figure en très bonne place la déforestation généralisée imposée par les besoins croissants des populations en terres agricoles et en divers produits ligneux. Au Bénin, l'agriculture itinérante sur brûlis est restée une tradition qui, dans les zones peu peuplées, a fini par établir un équilibre dynamique entre terres cultivées, jachères et forêt ou savane plus ou moins boisée. La végétation qui s'établit sur les terres en jachère est la principale source de bois de feu pour les populations rurales. De 1990 à ce jour les consommations annuelles de bois de feu ont varié entre 3 et cinq millions de tonnes de bois de feu par an¹. L'approvisionnement des villes est assuré par des coupes de bois vifs opérés en milieu rural, notamment dans les zones situées le long des grands axes. La demande urbaine de bois de feu et de charbon de bois est, de ce fait, un facteur important du déboisement de ces zones. La biomasse constitue donc la principale source d'énergie (soit 59,4% en 2005) utilisée par les béninois pour la consommation domestique contre 38,4% pour les hydrocarbures et 2,2% pour l'électricité². La consommation du bois de feu est en moyenne à 1,2kg/personne /jour. Les ménages à faible et/ou moyens revenus consacrent en moyenne 10,28 % de leur revenu pour satisfaire leurs besoins en bois-énergie. Les besoins en bois de feu, estimés actuellement à 7.630.000 tonnes par an, augmentent proportionnellement au taux d'accroissement naturel de la population (3,2%). La perte annuelle de couverture forestière est estimée à plus de 1000 km²³. De plus, les foyers domestiques traditionnels à bois et à charbons de bois sont les équipements de cuisson les plus répandus au Bénin. Leurs rendements de conversion sont très faibles et varient entre 10 et 13% pour les foyers à bois et 15 à 25% pour les foyers à charbons⁴.

Si aucune action n'intervient pour améliorer l'efficacité énergétique et le niveau actuel de disponibilité des ressources ligneuses affectées à la production de l'énergie domestique, non seulement les besoins des populations ne seront pas satisfaits, mais

¹ Direction Générale de l'Énergie (déc 2006). Tableau de bord de l'énergie au Bénin

² Direction Générale de l'Énergie (déc 2006). Tableau de bord de l'énergie au Bénin

³ Malgré le manque de données précises, et grâce aux travaux récents du Centre National de la Télédétection (CENATEL) qui comble progressivement ce vide, il est accepté aujourd'hui qu'au Bénin, la forêt recule au rythme annuel moyen de 1.000 Km²

⁴ Dossou, B. (1992). Problématique et politique du bois-énergie au Bénin. Université Laval. 414p

en plus une telle situation constituerait de graves menaces pour les réserves forestières déjà insuffisamment protégées qui pourtant continuent d'exercer un effet régulateur sur le système climatique local.

Il paraît donc urgent que des actions soient prises pour freiner ce taux inquiétant d'appropriation de la biomasse forestière pour une meilleure adaptation face aux effets néfastes des changements climatiques qui aggraveront davantage la situation du pays.

DESCRIPTION

Localisation

Les départements du Nord et du Centre du Bénin

Groupe bénéficiaire

Population urbaine et rurale des communes les plus vulnérables sur le plan énergétique à savoir : Djakotomey, Kpomassè, Toucountouna, Banikoara, Savalou, Zogbodomey, Aplahoué, Sakété, Karimama, Malanville, Matéri, Tanguiéta, Djidja, Kétou et Dogbo, Kalalé, Bassila, Zogbodomey, Athiémé, Aguégoués, Adjohoun, Ouaké, Ouinhi, So ava, Abomey, Lokossa, Porto-Novo (groupements et producteurs).

Objectif global

Réduire la vulnérabilité des populations aux effets induits par les changements climatiques par l'amélioration de l'accès aux sources d'énergies renouvelables et la sauvegarde des ressources forestières.

Objectifs spécifiques

- Réduire la dépendance au bois énergie dans les ménages;
- Réaliser des plantations communautaires et reboiser les terres avec des essences à croissance rapide à des fins d'exploitation énergétique;
- Amener les ménages et des transformateurs agroalimentaires à adopter des comportements rationnels en terme d'économie d'énergie domestique;
- Promouvoir les foyers économiques performants et autocuiseurs;
- Renforcer les capacités des populations riveraines des forêts naturelles et plantations forestières en matière de prévention et de lutte contre les feux de brousse et les incendies de plantations;
- Assurer un approvisionnement durable et efficace des populations en combustibles ligneux par la promotion de plantation d'arbres à croissance rapide en assurant la réhabilitation et la restauration des forêts galeries, le maintien de leurs fonctions écologiques, économiques et sociales et la responsabilisation des populations riveraines pour leur protection et leur exploitation rationnelle.

Principales Activités et plan de financement

N°	Activités	Coût (USD)
1	Identification des besoins en services énergétiques solaires pour valoriser les potentialités existantes en milieu rural	PM
2	Diversification des activités, recherche de créneaux porteurs et générateurs de revenus	162 000
3	Dynamisation des groupements de producteurs	240 000

4	Elaboration et mise en oeuvre de stratégie de large diffusion des technologies d'économie d'énergie	Très faible 10 000
5	Formation des artisans fabricant les foyers et autocuiseurs	220 000
6	Renforcement des capacités des femmes ménagères, des transformatrices, et producteurs agroalimentaires quant à l'utilisation et à la fabrication des foyers économiques performants et autres équipements	140 000
7	Création/renforcement des comités de gestion des plantations	80 000
8	Identification des essences adéquates à chaque localité et mise en place, gestion et suivi des plantations	340 000
9	Formation sur la production de biogaz et diffusion	340 000
10	Prêt ou crédits d'équipements	80 000
11	Promotion d'équipements adaptés aux besoins spécifiques des communautés: la cuisson, le séchage, la motorisation et l'éclairage, etc	80 000
12	Coordination et Gestion	330 000
13	Suivi évaluation	84 600
	Total	2 106 600

Sources

LDCF 50% (**USD 1,053,300**); Cofinancement 50% (Budget National, coopération bilatérale et multilatérale, populations bénéficiaires) soit **USD 1,053,300** - Coût estimatif global: **USD 2,106,600**.

Impacts

- Amélioration de la croissance économique locale et diminution de la pauvreté;
- Réduction de la vulnérabilité énergétique;
- Réduction des temps de cuisson et Gain de temps pour les femmes pouvant être alloué à d'autres activités;
- Diminution des dépenses énergétiques des ménages et des adoptants.

MISE EN OEUVRE ET EXECUTION

Arrangement institutionnel

1. Agence d'exécution : Direction Générale de l'Environnement (DGE/MEPN) et DGFRN/MEPN;
2. Agence de mise en oeuvre : Direction Générale de l'Energie (DGE/MMEE) en collaboration avec Elus locaux concernés, Organisations non gouvernementales, Organisations paysannes.

Analyse des risques et obstacles

- Solvabilité des groupes pour la diffusion des équipements d'énergie;
- Faible mobilisation des fonds;
- Lenteur administrative;
- réticence probable par rapport à l'appropriation des technologies.

Certaines choses à revoir par l'Equipe consultants

Moyens

Moyens humains: Agronome socio-économiste, Energéticien, Forestier, Biométricien, Spécialiste en bois-énergie, spécialiste genre, Spécialiste de la communication.

Suivi et évaluation**Indicateurs**

1. nombre d'adoptants des technologies promues;
2. niveau de perfectionnement des productions et des technologies énergétiques;
3. niveau de maîtrise des technologies;
4. nombre de ménages utilisant les foyers améliorés et autocuiseurs;
5. nombre de plants mis en terre et suivis.

Mécanisme : il sera mis en place une cellule chargée du suivi et de l'exécution du projet.

- Réunions de concertation,
- Visites de terrain,
- Enquêtes de terrain,
- Évaluations à mi parcours,
- Évaluation finale.

Durée

La durée du projet est de 3 ans.

COÛT

<i>USD 2,106,600</i>

BURUNDI

NAPA PRIORITY PROJECT NO. 9 CAPACITY BUILDING TO PROMOTE ENERGY-WOOD SAVING TECHNIQUES

Translated from original French version

RATIONALE

The Burundian rural area is home to 96% of the population and uses only wood as a source of energy. Demand is very important and increases at the rate of the population growth while wood replenishment does not evolve at the same pace. On the contrary, it decreases.

The Burundian domestic energy sector is dominated by traditional sources of energy, including the wood-energy used in households and peat used in the army. More than 88% is consumed by rural households for cooking, heating and lighting. In the urban environment, the use of wood-energy is focused almost exclusively on charcoal, used mainly for food cooking. Charcoal is obtained by traditional methods of carbonization with an output of about 10% whereas it could be raised to 20% through training and the dissemination of improved techniques of carbonisation supported by the use of improved stoves. The reduction in the quantities of wood consumed will have a consequence on the preservation of trees. Stoves in use have an energy efficiency of only 15% whereas there are some stoves with an energy efficiency of 35%, thus being able to generate a saving of 130%.

In addition to Bujumbura City, the project will cover the provinces of Bubanza, Cibitoke and Bujumbura-Rural.

DESCRIPTION

Global objective

Increase in forest-covered areas.

Specific objectives

The project aims at an increase in forestry cover and an improvement of the forest stock management for the sustainable supply of wood-energy through:

- Forestation of the highly vulnerable natural environments;
- Training on improved stove construction and use techniques and increase their dissemination;
- Training on the improved methods of carbonization and their dissemination.

Activities

- Create new woodlots;
- Create individual woodlots;
- Introduce improved stoves into households;
- Popularise improved methods of carbonization.

Outputs

Short term outputs

- Environmental protection by afforestation and rationalization of the use of wood through the use of the culinary stoves;
- Capacity building in rational management of forest plantations;
- 300 hectares are reforested and protected by fire walls;
- 200 hectares are rehabilitated in the wooded perimeter of Mageyo in the commune of Mubimbi, province of Bujumbura Rural;
- Agro-forestry trees are distributed to the population;
- New prototypes of wood stoves and charcoal stoves are introduced into the project area;
- Households have a wood stove in their households, especially in the 3 provinces;
- 6 technicians are trained on the techniques of carbonization;
- 120 charcoal men are trained;
- Meetings of dissemination of stoves are organised and the charcoal saving stove is adopted in the city of Bujumbura;
- Performing techniques of carbonization and manufacturing of improved stoves are increased and understood by trained users;
- Stove users are made aware of improved stoves and households have adopted their use;
- Seedlings are set up in individual farms on about 50 ha;
- An experience-sharing visit on the improved methods of carbonization and improved stoves is accomplished by a national officer and 2 stove users and one charcoal man.

Long term outputs

- Contribute to the reduction of extreme poverty and hunger by reducing expenditures relating to the acquisition of wood-energy.

IMPLEMENTATION AND INSTITUTIONAL ARRANGEMENTS

In their development programme covering the period 2006-2010, the Government of Burundi indicated in their priorities the fight against poverty, the preservation of the environment, and the diversification of sources of alternative energies.

The project will be carried out within the framework of the national afforestation through the Ministry for Land Management, Tourism and Environment. The project will be carried out by the staff of the Forestry Department working in the provinces concerned by the project, and the project will be provided with an office space in Bujumbura. A National Director will be appointed by the MINATTE to monitor the implementation of the project.

Risks and barriers

The project implementation can be blocked by the insufficiency of qualified human resources, the low level of the effective participation of actors and the late financing of the project.

Project duration

2 years

COST

USD 200,000

Activities	Cost (USD)
Create new woodlots	80,000
Create individual micro-woodlots	40,000
Introduce improved stoves into households	40,000
Popularise improved methods of carbonisation	40,000
Total	200,000

BURUNDI

NAPA PRIORITY PROJECT NO. 11. EDUCATION TO CLIMATE CHANGE ADAPTATION

Translated from original French version

RATIONALE

In Burundi, the impact of climate change will be the lengthening of the dry season leading to increased frequency and intensity of uncontrolled fires.

In the majority of regions, the effects of bush fires are already felt and deforestation has increased in an alarming way in recent years. It is estimated that more than 30 000 ha were destroyed following cases of arson and massive deforestation. Consequently, education and awareness of the population on the dangers of bush fires and deforestation are essential and urgent actions need to be undertaken so that forestation efforts already being carried out in the country are not opposed.

In Burundi, climate change in the past decades caused by increased temperature and heavy rainfall showed that, overall, the terrestrial ecosystems will be able to resist and follow their normal evolution. However, it was noted that anthropogenic actions, in particular close-clearing cuts in farming, overgrazing, bush fires, and anarchistic exploitation of living resources will constitute a dead end in the evolution of the vegetation, under the effect of drought induced by climate change. It was also noted that the length of droughts will worsen the bush fires and thus amplify the degradation of the ecosystems.

These anthropic actions are however related to the way of life of the population. The local communities destroy the ecosystems to ensure their survival. The ecosystems are notably regarded as arable lands and pastoral zones. These are survival issues that make that the problems of ecosystem protection in general and environmental protection in particular are not apprehended in the same way. Certain actions undertaken to stop the famine induced in particular by droughts or floods are not meant to preserve the environment, and very often, do not target the adaptation of the population to adverse effects of climate variability. Solutions often considered like the drainage of marshes in the event of drought, the clearing of forests in the event of land degradation often compromise the protection measures owing to the fact that the majority of the weakened ecosystems are protected and others fall within the State's domain. Regulations to preserve these ecosystems, though incomplete, exist but are not enforced. The political decision makers must understand the adverse effects of climate change and take reasoned measures that are crucial in case of drought and flood.

Description

Global objective

The global objective of the project is education and public awareness on the adverse effects of climate change, bush fires and deforestation so that the population is made aware and is worried about these environmental problems and participates in research of solutions and improved systems of adaptation.

Specific objectives

- Awareness of decision makers and other partners, including the local communities, about the adverse effects of the climate change.
- Fight against bush fires in all the natural areas of Burundi.

Activities

- Training courses of the communal environmental extension workers on climate change;
- Public awareness campaigns of the rural population on the dangers of bush fires and deforestation;
- Work out a national action plan of fighting against bush fires;
- Radio and TV broadcasts on the adverse effects of climate change, the dangers of bush fires and deforestation;
- Produce and multiply tools of awareness and information such as folders, posters, etc in connection with the climate change issue;
- Set up a plan of prevention, preparation and response to emergencies and disasters;
- Meetings to raise awareness of population target groups on the adverse effects of climate change and the effective methods of adaptation, with regard to the natural resources and public health.

Short-term outputs

- The population is informed and made aware of the benefits of forest protection against fires and deforestation;
- Communal environmental extension workers are created and trained;
- Representatives of the population on hills are trained on the methods of bush fire monitoring and control;
- Radio and TV broadcasts on the adverse effects of climate change, the dangers of the bush fires and deforestation are produced;
- Powerful awareness tools for adaptation to climate change are available;
- An action plan of fighting against bush fires taking account of the regional specificities submitted to all stakeholders;
- Bush fire village groupings are put in place.

Long-term outputs

- Bush fires have decreased significantly;
- Deforestation has strongly regressed;
- Hydrological and climate regulation systems are reconstituted;
- Population well adapted to the adverse effects of climate change;
- Increase in the agricultural production.

IMPLEMENTATION

Implementation and institutional arrangements

INECN, the institution responsible for environmental education, is the national implementing agency of the project. Coordination of project activities will be made by a National Coordinator. This project will deal with several sectors, and for this reason, several institutions will be involved in the implementation. INECN will collaborate with the department in charge of woodlots. The planning team will

include representatives from all stakeholders. A Steering Committee will be made up and will include representatives from the NAPA Committee and the National Environment Commission, members of the biodiversity-related activities coordinating body and representatives from institutions responsible for biodiversity.

This project is the consensus of various actors since it contains the various actions identified based on studies at national and local level and approved by all the population during national and regional workshops. Thus, under the responsibility of the institution responsible for environmental education, the involved actors will be all the institutions responsible for ecosystems and woodlots, the population and the local governments, the nongovernmental organizations, etc.

Monitoring and evaluation

Every three months, the Project National Coordinator, jointly with the National Director will submit to the donor an activity progress report. Tripartite reviews will be organized each year to examine the progress achieved by the project and will bring together representatives from the donor, the Government of Burundi and the Implementing Agency. Field visits will be organized on request by the three partners concerned. A final report presenting the work completed, the results obtained and the problems encountered will be also presented for approval to the donor, 3 months before the end of the project.

Risks and assumptions

The project does not present any major risk expect the absence of funding for the realization of all planned activities.

Project duration

3 years

COST

Activities	Cost (USD)
Training courses of the communal environmental extension workers on climate change	45,000
Public awareness campaigns of the rural population on the dangers of bush fires and deforestation	45,000
Work out a national action plan to fight against bush fires	100,000
Radio and TV broadcasts on the adverse effects of climate change, the dangers of bush fires and deforestation	30,000
Produce and multiply tools of awareness and information such as folders, posters, etc in connection with the climate change issue	50,000
Set up a plan of prevention, preparation and response to emergencies and disasters	60,000
Meetings to raise awareness of population target groups on the adverse effects of climate change and the effective methods of adaptation, with regard to the natural resources and public health	170,000
Total	500,000

REPUBLIQUE CENTRAFRICAINE

NAPA PRIORITY PROJECT 1

PROJET DE RENFORCEMENT DES INSTITUTIONS COMMUNAUTAIRES D'ÉCO-DÉVELOPPEMENT (PRICED)

Localisation: Territoire riverain de la forêt de Bangassou (52 000 Km²)

Secteur: Forêt / Foresterie

Domaine: Renforcement du leadership des organes communautaires

Type: Protection de la biodiversité et activités alternatives

Référence au PIP: Projet de développement rural intégré

JUSTIFICATION

La Forêt de Bangassou avec ses 1.600.000 hectares d'étendue non exploitée industriellement constitue un important puits de carbone pour l'humanité. La présente initiative vise à promouvoir un mode de gouvernance de proximité de cette forêt et ce avec comme acteurs le réseau des organes communautaires d'écodéveloppement établi dans la zone. Cette démarche s'inscrit comme une alternative à l'option hautement centralisée privilégiée par l'État jusqu'à un passé très récent.

DESCRIPTION

Composantes et activités

Il s'agit ici de contribuer au renforcement du leadership de ce réseau intercommunautaire, héritier des acquis du CAF/95/96/G31-Forêt de Bangassou. L'héritage dont elle a la charge de pérenniser comporte une approche communautaire de gestion des ressources naturelles et un programme de microcrédit dédié au financement d'activités alternatives génératrices des revenus et d'emplois. En effet depuis la clôture du projet CAF/95/G31-Forêt de Bangassou (fin septembre 2004), ce réseau souffre de l'insuffisance de moyens lui permettant de s'assumer avec efficacité sur le terrain.

Objectifs

- Affermir le leadership inter-communautaire en matière de gestion des ressources naturelles;
- Améliorer la contribution des communautés locales dans la gestion et la conservation des ressources naturelles;
- Jeter les bases d'un partenariat entre les communautés locales et les autres acteurs intéressés;
- Protéger, renforcer et capitaliser les acquis existants (aménagement et protection communautaires des ressources naturelles);
- Protéger, renforcer et capitaliser les acquis existants en matière de programme de micro-crédit communautaire (financement d'activités alternatives);
- Utiliser les ressources naturelles sur des bases saines et ce au regard des normes en vigueur.
- Instaurer une synergie intercommunautaire;
- Créer des conditions de transparence, de bonne gouvernance et d'équité.

Activités

- Formation et fourniture d'un appui conseil aux membres d'organes communautaires d'éco-développement et aux populations locales;
- Dotation des organes communautaires d'éco-développement en moyens roulants (Motocyclettes, bicyclettes);
- Appui au fonctionnement des organes communautaires d'éco-développement;
- Suivi et évaluation du programme de micro-crédit communautaire géré par les organes locaux d'écodéveloppement;
- Création des zones cynégétiques villageoises.
- Évaluation de l'impact socioéconomique et environnemental de l'initiative;
- Suivi et évaluation du projet.

Résultats attendus

- Une culture de bonne gouvernance a émergé et contribue à une bonne gestion des ressources naturelles et à une équité dans le partage de bénéfices;
- Le programme de micro-crédit communautaire est préservé et participe à la lutte contre la pauvreté et à la dégradation des ressources naturelles;
- Des zones cynégétiques villageoises sont créées, aménagées et génèrent des ressources financières pour le développement local;
- Les composantes écologiques de la forêt de Bangassou subissent de moins en moins les pressions anthropiques ;
- Le nombre de conflits sociaux inhérents à l'utilisation des ressources naturelles est en réduction.

MISE EN OEUVRE

Arrangement institutionnels

L'initiative sera pilotée par la Direction du programme intérimaire du projet Forêt de Bangassou et associera le Réseau des organes communautaires d'éco-développement du site. Il mettra à contribution des personnes ressources (consultants) et s'appuiera sur des acquis existants:

- Plan d'affectation des terres
- Fonds d'entreprise communautaire (260,000 \$) consacré au financement des micro-crédits communautaires;
- Infrastructures équipements et meubles hérités du projet forêt de Bangassou.

Les risques et obstacles

- Conflits armés aux effets transfrontaliers;
- Conflits sociaux entre les individus ou communautés au niveau local;
- L'intérêt égoïste de certains acteurs locaux.

Indicateurs de suivi évaluation

- Nombres de modules de formation dispensés;
- Nombre d'acteurs locaux formés;
- Nombre de zones cynégétiques villageoises créées et aménagées;
- Montant des recettes générées par les zones cynégétiques villageoises;
- Nombre de promoteurs locaux ayant développés des activités alternatives;
- Augmentation du revenu des ménages;
- Réduction des atteintes contre les composantes de la biodiversité.

Durée

2 ans et 6 mois

COÛT*USD 250,000***Commentaires**

Un tel scénario ne peut être envisagé que si certaines conditions en amont sont remplies. Il est ici conçu pour venir en appoint à un travail d'organisation du territoire (zonage et plan d'affectation des terres, normes d'intervention), de structuration d'organes communautaires d'éco-développement et de promotion de micro finance communautaire préalablement mis en oeuvre. Dans le cas contraire, il conviendra d'agir simultanément sur les deux les fronts afin de s'offrir les chances de réaliser les résultats escomptés qui d'ailleurs, sont inter reliés. Dans la zone d'intervention choisie (forêt de Bangassou), ces préalables sont déjà remplis ce qui justifie le coût moins disant du scénario. On retrouve également ces atouts à différents degrés, au niveau de certains sites des régions forestières couverts par des projets tels que ECOFAC, Dzanga-Sangha et le Projet des zones de chasse villageoises dans le nord du pays dans le site d'intervention du Projet ECOFAC ZCV en zone de savane.

REPUBLIQUE CENTRAFRICAINE

NAPA PRIORITY PROJECT 9

RENFORCEMENT DES CAPACITÉS DES COMMUNAUTÉS (COLLECTIVITÉS) LOCALES SUR LES RISQUES DES BRUSQUES CHANGEMENTS CLIMATIQUES

Localisation: République Centrafricaine

Domaine: Catastrophes Naturelles

Type: Prévention / Adaptation aux CC

Référence: Ministère en charge de l'environnement /Comité National Changement Climatique

JUSTIFICATION

Des catastrophes naturelles liées aux CC peuvent être évitées si les populations sont sensibilisées très tôt et de manière permanente. Car, chaque jour nous entendons parler de décès, de blessures et de destructions dus ou liés à des phénomènes météorologiques, climatiques ou hydrologiques extrêmes. En République Centrafricaine, la variabilité et les brusques changements du climat auront comme impact, l'allongement de la saison sèche avec la prolifération des feux de brousse et l'augmentation de la fréquence et de l'intensité des pluies.

Dans la plupart des 7 régions du pays (fig. 10), les effets se font déjà ressentir où les feux de brousses et les déboisements ont augmenté d'une façon alarmante ces dernières années. L'éducation et la sensibilisation de la population sur les dangers des conséquences des changements climatiques à savoir la sécheresse accrue engendrant les feux de brousses et parfois les inondations, cause des maladies hydriques et saisonnières. Par conséquent, des actions indispensables et urgentes doivent être entreprises afin d'informer et de sensibiliser les populations sur ces dangers. Mieux vaut prévenir que guérir, aujourd'hui, la RCA sollicite la mise en place d'un fonds qui va l'aider à renforcer les capacités des populations locales et à les aider à faire face aux CC en cas d'effets néfastes.

Objectifs spécifiques

- Sensibiliser les Décideurs, les Communautés locales et les Partenaires sur les effets néfastes des changements climatiques;
- Lutter contre les conséquences des variabilités climatiques et des brusques changements climatiques à travers les campagnes d'information, de sensibilisation et d'éducation.

Actions à mener

- Organiser des sessions de formation des Acteurs de vulgarisation des questions environnementales et sur les questions de changements climatiques;
- Organiser des campagnes de sensibilisation des communautés locales et de la population rurale sur les conséquences des changements climatiques;
- Elaborer un plan d'action national de sensibilisation et d'information aux effets néfastes des Changements Climatiques;
- Organiser des émissions radiophoniques et télévisuelles sur les effets néfastes des changements climatiques, les dangers des feux de brousses et de la déforestation;

- Produire et multiplier des outils de sensibilisation et d'information tels les dépliants, les affiches, en rapport avec les questions liées aux changements climatiques;
- Mettre en place un plan de prévention, de préparation et de riposte aux urgences et aux Catastrophes naturelles;
- Tenir régulièrement des séances de sensibilisation des groupes cibles de la population sur les effets néfastes des changements climatiques et les méthodes efficaces d'adaptation, tant en ce qui concerne les ressources naturelles que la santé de la population.

Résultats à court terme

- Information et sensibilisation de la population sur les conséquences des variabilités climatiques et des changements climatiques;
- Création et formation des Acteurs vulgarisateurs des questions environnementales et climatiques auprès des communautés locales;
- Formation des Représentants de la population dans les communautés locales sur les méthodes de surveillance et de lutte contre les effets des CC;
- Diffusion des émissions radiophoniques et télévisuelles sur les effets néfastes des changements climatiques, sur les dangers y associés;
- Disponibilité d'une Banque de données et des outils de sensibilisation performants sur les techniques d'adaptation aux changements climatiques;
- Mise en place d'un plan d'action régionale avec l'implication de toutes les parties prenantes en vue de lutter contre les CC.

Résultats à long terme

- Diminution des conséquences dramatiques des CC;
- Implication des populations locales dans les plans d'actions locaux / régionaux de lutte contre les conséquences des variabilités climatiques et des brusques CC;
- Adaptation des populations locales aux effets néfastes des CC;
- Augmentation de la production agricole.

MISE EN OEUVRE

Exécution et arrangements institutionnels

- Un coordonnateur national exécutera le projet sous la tutelle du Ministère en charge de l'Environnement. Le Comité de Pilotage de la CCNUCC / PANA qui est composé d'Experts multisectoriels vont contribuer à la mise en oeuvre sectorielle du projet.
- Toutes les Parties prenantes impliqués dans l'élaboration du projet seront consultés pour contribuer à sa mise en oeuvre à travers les 7 régions du pays. Les Décideurs, institutions de recherche ainsi que la Société (ONGs) civile seront pleinement impliqués dans le processus.

Suivi et évaluation

- Edition de rapports trimestriels sur l'évolution du projet;
- Vérification des activités du projet sur le terrain;
- Discussion et concertation avec les populations locales en vue de recueillir leur opinion sur l'évolution du projet;

- Présentation d'un rapport final présentant les travaux réalisés, les résultats obtenus et les problèmes rencontrés, 3 mois avant la fin du projet (pour approbation du Bailleur).

Risques et hypothèses

Mis à part un éventuel manque de finance, le projet ne présente aucun risque majeur pour la réalisation de toutes ces activités prévues.

Durée

3 ans

COÛT

USD 250,000

ETHIOPIA

NAPA PRIORITY PROJECT 6

CAPACITY BUILDING NEEDS FOR CLIMATE CHANGE ADAPTATION IN ETHIOPIA

RATIONALE/JUSTIFICATION

Currently there are a number of constraints for planning and implementing climate change adaptation. These constraints include:

- Inadequacy of skilled manpower on climate change issues;
- Weak institutional set up and coordination on climate change;
- Inadequate facilities;
- Lack of specific policies on climate change adaptation;
- Inadequate research

Available studies and research conducted so far on vulnerability and adaptation specific to Ethiopian case are scanty due to lack of capacity. Adequate knowledge and information has to be generated to develop adaptation policies for the country.

Strengthening research in the field is essential. Skilled human resources development on climate change issues is of a primary importance and needs to be given due attention. Unless the country has adequate number of cadres that can spearhead climate change issues, implementation of adaptation will be slow.

DESCRIPTION

Objectives

- To develop capacity that enables to plan and implement adaptation to climate change in the country;
- To develop capacity that enables to conduct research, promote documentation and information on climate change

Activities

Capacity building in terms of development of skilled human resource, infrastructure and facilities including institutional strengthening is a prerequisite for planning and implementing adaptation to climate change.

Specific human resource capacity needs required includes short and long term training including specialization at higher levels (such as MSc, PhD levels) in the areas of:

- Climate change vulnerability and adaptation assessment for sectors of Agriculture, water resources, human health, biodiversity/ecosystems;
- Climate modeling, climate analysis and prediction;
- Environmental economics, environmental management;
- Policy analysis and appraisal focused on climate change;
- Sustainable agriculture;
- Irrigation agriculture;
- Integrated water resource management;
- Natural resource management;
- Land use planning.

Specific needs in terms of infrastructure and facilities/institutions include:

- Vulnerability and adaptation assessment tools such as DSSAT, WEAP;
- Information and research data base, (global, regional, national, local);
- Statistical and GIS Packages such as SYSTAT, ARCGIS, IDRISI;
- Climate data base management systems;
- Integrated assessment tools, economic models;
- Climate analysis tools and Climate prediction tools (regional climate models such as Magic/Sengen, Precip, downscaling methods);
- Risk assessment tools;
- High speed connectivity and high capacity/speed computers;
- Upgrading the current research department to a national center on climate research.

Short-term outputs

- Adequate number of trained manpower to undertake adaptation planning and implementation;
- Adequate facilities and analytical tools and institutional setup put in place

Potential long-term outcomes

The country will be in a better position to meet its obligations and exploit opportunities under the Climate Convention.

IMPLEMENTATION

Institutional arrangement

National Meteorological Agency will lead the coordination of the project Disaster Prevention and Preparedness Agency, Ministry of Capacity Building and Higher Learning Institutions departments, academic and research institutions, and NGOs

Risks and barriers

Lack of finance, lack of technical capacity, legal/institutional

Evaluation and monitoring

A project steering committee composed of representatives from stockholders will oversee the project. Regular progress reports will be submitted to all concerned bodies by the lead institution and field visits will be conducted. as appropriate. Evaluation of the project will be carried out by independent technical experts.

COST

Estimated (indicative and tentative) project cost

Full project implementation: USD 3 million

Project design: USD 100,000

GUINÉE

NAPA PRIORITY PROJECT 4

OPTION III: PROMOTION DES TECHNOLOGIES APPROPRIÉES EN MATIÈRE D'ADAPTATION PROJET 3-1 INITIATION DES POPULATIONS CÔTIÈRES À LA TECHNIQUE D'ÉLEVAGE D'HUÎTRES DE MANGROVE

Localisation: Boffa, Dubréka, Forécariah

Secteur: Zone côtière

JUSTIFICATION

Le littoral guinéen est très riche en ressources halieutiques (poissons, crustacés, mollusques etc.). La pêche artisanale qui procure à la population près de 80% des besoins en protéine connaît aujourd'hui une baisse de rendement. L'élévation de la température de surface et du niveau de la mer consécutive aux changements climatiques accentuera cette baisse de la production et de la productivité en produits halieutiques. La zone côtière recèle des ressources biologiques peu valorisées dont l'huître de mangrove qui est un excellent aliment naturel plus riche en protéine que le poisson. Malheureusement, la forme traditionnelle de son exploitation qui consiste à couper les racines aériennes des palétuviers portant des colonies d'huîtres occasionne la disparition des populations naturelles. Aussi, elle est préjudiciable au développement de la mangrove. La vulgarisation de la technologie d'élevage des huîtres permettra de satisfaire les besoins en protéines des populations tout en préservant la mangrove. Ce projet est en parfaite adéquation avec les objectifs de la LPDA.

DESCRIPTION

Objectifs

Global

Contribuer à l'autosuffisance alimentaire et préserver l'écosystème de mangrove

Spécifiques

- Transférer la technologie d'élevage des huîtres de mangrove aux communautés;
- Accroître la production d'huître;
- Contribuer à la préservation de la mangrove.

Activités

- Information et sensibilisation des populations cibles;
- Constitution et formation des groupements d'exploitants d'huîtres;
- Identification des zones propices à l'élevage des huîtres;
- Création de fermes pilotes;
- Suivi-évaluation.

Resultats Attendues

- Les populations cibles sont informées et sensibilisées;
- Des groupements d'exploitants d'huître sont constitués;
- Les sites favorables sont identifiés;

- La formation des groupements aux techniques d'élevage des huîtres est assurée;
- Trois fermes d'élevage d'huître sont créées;
- Des emplois sont créés et le revenu des populations est rehaussé;
- Suivi-évaluation assuré.

MISE EN OEUVRE

Arrangement institutionnel

Le projet sera exécuté par les communautés locales, les organisations non gouvernementales (ONG), les groupements d'intérêts et les services techniques spécialisés. La coordination sera assurée par l'unité PANA au sein du Conseil National de l'Environnement (CNE).

Risques

Risques climatiques extrêmes, pollution marine

Agence de mise en oeuvre

PNUD

Indicateurs de suivi

- Nombre de personnes informées et sensibilisées;
- Nombre de sites retenus;
- Nombre de groupements initiés à la technique d'élevage des huîtres;
- Taux d'accroissement du revenu;
- Rapport de suivi-évaluation.

Duree

2 ans

COÛT

<i>USD 250,000</i>

GUINÉE

NAPA PRIORITY PROJECT 7

OPTION III: PROMOTION DES TECHNOLOGIES APPROPRIÉES EN MATIÈRE D'ADAPTATION PROJET 3-4 PROMOTION DE LA BRIQUE EN TERRE COMPRIMÉE (BTC) EN VUE DE RÉDUIRE LES IMPACTS ENVIRONNEMENTAUX DE LA CUISSON DES BRIQUES

Localisation: Kankan, Kouroussa, Siguiri, Dabola, Faranah, Dinguiraye, Mamou
Labé, Kindia Kissidougou, N'Zérékoré et Macenta

Secteur: Foresterie

JUSTIFICATION

En République de Guinée, la construction de l'habitat est une activité qui concerne l'ensemble des populations et sa gestion pose d'énormes problèmes environnementaux, économiques, sociaux et même culturels. L'utilisation de la brique cuite dans la construction est une pratique traditionnelle qui entraîne la mobilisation d'importantes quantités de bois et contribue à la destruction des berges, voire des lits des cours d'eau constituant des facteurs aggravants les impacts des changements climatiques. Par exemple, l'installation de nombreux fours à briques cuites le long du fleuve Milo et ses environs constitue une activité qui menace même son existence. Dans d'autres zones, des cours d'eaux entiers sont asséchés par l'utilisation de cette pratique. La technique de la BTC, n'utilisant pas de bois, permet de réduire considérablement les impacts environnementaux de la brique cuite tout en améliorant les revenus des acteurs.

DESCRIPTION

Objectifs

Global

Contribuer à la préservation de l'environnement et à l'amélioration des conditions de vie des populations

Spécifiques

Vulgariser une technologie respectueuse de l'environnement; - améliorer le cadre de vie et les revenus des populations.

Activités

- Information et sensibilisation;
- Formation et équipement des acteurs concernés;
- Création des briqueteries dans les zones ciblées;
- Structuration des groupements d'artisans;
- Production et fournitures des documents techniques et de gestion;
- Construction de bâtiments témoins;
- Suivi-évaluation.

Résultats attendus

- Populations informées et sensibilisées;
- Acteurs de la filière formés et équipés;
- Briqueteries de BTC créées dans les zones cibles;
- Emplois créés;

- Nouvelle technologie adoptée par les populations;
- Structuration des acteurs réalisée;
- Maisons témoins construites;
- Couvert végétal, terres arables et ressources en eaux préservés;
- Cadre de vie et revenus des populations améliorés;
- Documents techniques et de gestion produits et fournis - suivi-évaluation du projet réalisé.

MISE EN OEUVRE

Arrangement institutionnel

Le projet sera exécuté par les communautés locales, les organisations non gouvernementales (ONG), les groupements d'intérêts et les services techniques spécialisés. La coordination sera assurée par l'unité PANA au sein du Conseil National de l'Environnement (CNE).

Agence de mise en oeuvre

PNUD

Risques

Conditions climatiques extrêmes, coût par rapport à la brique cuite

Indicateurs de suivi

Pourcentage de la population sensibilisée et informée sur la BTC;
 Nombre de briques BTC produites;
 Nombre des fours à briques cuites abandonnés;
 Nombre de maisons construites en BTC;
 Nombre d'acteurs de la filière BTC impliqués;
 Nombre de documents techniques et de gestion produits et fournis;
 Nombre d'acteurs structurés;
 Nombre d'emplois créés.

Durée

4 ans

COÛT

<i>USD 600,000</i>

GUINÉE

NAPA PRIORITY PROJECT 14

OPTION VI: INFORMATION, EDUCATION ET COMMUNICATION (IEC) PROJET 6-1 DIFFUSION DES AME ET DES TEXTES JURIDIQUES NATIONAUX RELATIFS À LA PROTECTION ET À L'UTILISATION DURABLE DES RESSOURCES NATURELLES

Localisation: Tout le pays
Secteur: Transversal

JUSTIFICATION

La Guinée est partie à la plupart des AME et dispose d'importants textes juridiques et réglementaires bien étoffés qui régissent la gestion durable des ressources naturelles et de l'environnement. Malheureusement, ces textes restent encore peu connus par tous les acteurs concernés. Le respect des engagements pris requiert que décideurs et populations soient suffisamment informés de leurs contenus. Le projet consistera tout d'abord à informer, éduquer et sensibiliser les citoyens sur les Conventions Cadres des Nations Unies sur les Changements Climatiques, sur la diversité biologique et sur la lutte contre la désertification. Ensuite, il sera question de diffuser et d'expliquer les contenus des différents textes nationaux régissant la gestion des ressources naturelles et de l'environnement.

DESCRIPTION

Objectifs

Global

Contribuer à la protection de l'environnement et l'utilisation durable de ses ressources

Spécifiques

Informers, former et sensibiliser les décideurs et le grand public du cadre juridique régissant la gestion des ressources naturelles et de l'environnement;

Améliorer les méthodes de gestion des ressources naturelles.

Activites

- Recensement des différents AME ratifiés et des textes juridiques nationaux en vigueur;
- Traduction des textes dans les principales langues nationales et en caractères N'Ko et arabes;
- Diffusion de ces textes par le biais des créneaux disponibles: ateliers, médias, établissements d'enseignement, théâtres, causeries, etc.;
- Édition, multiplication et diffusion des textes;
- Appui à l'harmonisation des différents codes et l'élaboration de leurs textes d'application;
- Formation et équipement des structures impliquées;
- Édition d'un journal de l'environnement;
- Suivi-évaluation du projet.

Résultats attendus

- AME ratifiés et textes juridiques nationaux recensés;
- Textes traduits dans les langues nationales et en caractères N'Ko et arabes;

- Textes harmonisés disponibles;
- Textes d'application disponibles;
- Textes édités, multipliés et diffusés;
- Structures impliquées formées et équipées;
- Décideurs et populations informés et sensibilisés sur leurs droits et devoirs;
- Acteurs concernés impliqués;
- Projet suivi et évalué.

MISE EN OEUVRE

Agence de mise en oeuvre

PNUD

Risques

Analphabétisme, superposition des droits coutumier, islamique et moderne.

Arrangement institutionnel

Le projet sera exécuté par les communautés locales, les organisations non gouvernementales (ONG), les groupements d'intérêts et les services techniques spécialisées. La coordination sera assurée par l'unité PANA au sein du Conseil National de l'Environnement (CNE).

Duree

Quatre (4) ans

COÛT

USD 300,000

GUINÉE

NAPA PRIORITY PROJECT 15

OPTION VI: INFORMATION, EDUCATION ET COMMUNICATION (IEC) PROJET 6-2 PROMOTION DE L'ÉDUCATION ENVIRONNEMENTALE EN FAVEUR DES COMMUNAUTÉS DU LITTORAL

Localisation: Boké, Boffa, Dubréka, Coyah, Conakry, Forécariah

Secteur: Zone côtière

JUSTIFICATION

La zone côtière guinéenne fait l'objet d'occupation anarchique, de coupe abusive du bois de mangrove, d'extraction des agrégats de construction favorisant l'érosion côtière, l'intrusion saline et la destruction des infrastructures et ouvrages côtiers. Les bordures de mer servent très souvent de dépotoirs d'ordures ménagères et industrielles ainsi que de réceptacle des eaux d'égout non traitées, entraînant la pollution biologique et chimique de l'eau et l'infestation parasitaire et bactériologique des ressources vivantes. L'utilisation de ces eaux polluées et la consommation de ses ressources sont préjudiciables à la santé humaine. Aussi, on constate une baisse progressive des rendements de pêche due essentiellement au non respect des zones de pêche et à l'utilisation d'engins prohibés. Ces mauvaises pratiques sont essentiellement dues à: • L'ignorance du rôle de l'écosystème marin et de ses ressources vivantes. • La méconnaissance des textes législatifs et réglementaires relatifs à la protection et à la gestion durable de l'écosystème marin /côtier et de ses ressources. • l'absence de mécanisme d'information et de sensibilisation des populations riveraines. L'élévation attendue du niveau de la mer consécutive aux changements climatiques viendra aggraver l'érosion côtière, l'intrusion saline et la dégradation des ressources côtières. La Guinée étant signataire des différentes conventions relatives à la protection et l'utilisation durable de la mer et de ses ressources, il est impérieux de procéder à une large information, à la sensibilisation et à l'éducation des communautés concernées en vue d'inverser la tendance.

DESCRIPTION

Objectifs

Global

Contribuer à la préservation de l'environnement côtier et marin

Spécifiques

- Promouvoir un changement de comportement dans la gestion de l'écosystème côtier et ses ressources par les populations;
- Contribuer à la lutte contre l'érosion côtière et l'intrusion saline;
- Améliorer le cadre de vie des populations cibles.

Activites

- Information et sensibilisation du public cible;
- Formation des formateurs;
- Vulgarisation des textes législatifs et réglementaires;
- Enquêtes socio-économiques;
- Identification et diffusion d'activités alternatives génératrices de revenus;

- Edition d'un journal sur l'environnement;
- Suivi-évaluation.

Resultats Attendus

- Populations cibles informées et sensibilisées;
- Formation des formateurs assurée;
- Supports de vulgarisation disponibles;
- Textes législatifs et réglementaires vulgarisés;
- Activités alternatives génératrices de revenus identifiées et diffusées;
- Cadre de vie des populations riveraines amélioré;
- Suivi-évaluation assuré.

MISE EN OEUVRE

Agence de mise en oeuvre

PNUD

Arrangement institutionnel

Le projet sera exécuté par les communautés locales, les organisations non gouvernementales (ONG), les groupements d'intérêts et les services techniques spécialisées. La coordination sera assurée par l'unité PANA au sein du Conseil National de l'Environnement (CNE).

Risques

Conflits, laxisme dans l'application des décisions

Indicateurs de suivi

- Nombre de Communautés, Associations et Groupements touchés;
- Nombre de supports de vulgarisation disponibles;
- Nombre de textes législatifs et réglementaires vulgarisés;
- Nombre de sessions de formation et de vulgarisation organisées;
- Nombre d'activités génératrices de revenus identifiées et diffusées;
- Nombre de rapports de suivi-évaluation fournis.

Duree

3 ans

COÛT

<i>USD 200,000</i>

GUINEA BISSAU

NAPA PRIORITY PROJECT 3

CAPACITY BUILDING IN PREVENTION AND PROTECTION OF SALT-WATER RICE AGAINST HIGH-TIDE INVASION PROJECT

Location: Country's Coastal Zone (Mangrove rice fields)

JUSTIFICATION

Salt-water invasion, driven by high tides into mangrove rice fields, remains the main cause of decrease in rice production in the mentioned ecosystem. On the other hand, protection of those rice fields remains the main obstacle against those fields' enhancement. In the last few years climate changes, especially man-made ones have accentuated worldwide resulting in global warming and a rise in average sea level. This latter aspect embodies concerns by littoral populations regarding physical protection of their ecosystems and biodiversity. Mangrove rice fields are part of this ecosystem and require pressing solutions for its rehabilitation and protection. Almost every year high tides cause enormous damage to dykes and other infrastructure built for the control and protection of rice fields against salt-water invasion. This phenomenon occurs usually at the end of the rainy season, in September-October, after the finalisation of rice sowing and rice transplant. For that reason, any invasion of rice fields by salt in that time of the year may kill the rice plant since the decrease in rainfall makes it difficult to find enough additional water to wash off the salt thus introduced.

DESCRIPTION

Global objective

Improvement of the country's food security

Specific objectives

To improve rice production in mangrove rice fields thanks to the implementation of preventive and protective measures against high-tide invasion.

Components

- Rehabilitation of the country's main meteorological stations;
- Installation of PRESLOG automatic tide-level recording devices in different ports in the country;
- Training national technical staff in processing of meteorology, hydrology and hydrometrics data;
- Systematic dissemination of information on rainfall, temperature and high tides in coastal areas;
- Technical studies (hydraulic and hydrologic) and designing of infrastructure for protection against, and control of, high tides;
- Execution of hydraulic works;

Expected results

1. Hydrologic and hygrometric information is collected and disseminated so as to allow farmers to prepare each September and October (day and time) for the arrival of high tides;

2. Rice fields are protected from the invasion of high tides through the building of enhanced dykes and the learning of new water control and management techniques;
3. Food insecurity associated to rupture in households' rice stocks is reduced thanks to an increase in mangrove-rice production levels (from 500-700kg/ha to 2500kg/ha).

Beneficiaries

Rural communities and Directorate General of Meteorology

IMPLEMENTATION**Institutional Implementation Framework**

A unit will be set up whose role will be to deal with the execution of project activities in strict collaboration with rural engineering services, INPA, regional offices of the Ministry of Agriculture and Rural Development and NGOs.

Monitoring and Evaluation

Monitoring and evaluation will fall under the Ministries of Agriculture and Rural Development, and Transportation and Communications as well as on donors.

Risks and Barriers

Project duration 2 years

COST

USD 600,000

GUINEA BISSAU

NAPA PRIORITY PROJECT 6

EVALUATION OF IMPACT OF CLIMATE CHANGES IN PRODUCTIVE SECTORS' PROJECT

Location: Nationwide (Guinea-Bissau)

JUSTIFICATION

Guinea-Bissau is a country whose coastal area corresponds to 61% of the national territory. Ecosystems in this zone are sensitive and vulnerable to nefarious effects of climate changes.

Negative effects from anthropic actions constitute one of the main factors that accelerate climate changes and, as result, increase natural resources' degradation and deterioration. Factors behind climate changes are visible through the extinction of various species and various problems related to human health are evident.

After independence several programmes, projects and sector development plans were implemented without taking into account environmental and social aspects. As a result, significant infrastructure is at risk and various species, habitats and ecosystems are endangered and degraded.

The country has a serious prospect of finding and eventually exploiting important deposits of minerals (Bauxite, Phosphate and Oil), which justifies the setting up of an early alert system for the prevention and evaluation of risks and the negative effects these activities may imply regarding the acceleration of climate changes.

Prevention is considered as the best way to protect, preserve and guarantee ecosystems' structural and functional equilibrium and related dynamics.

In this context, and aiming at reaching Millennium Development Goals and ensuring a sustainable development as per commitments made both locally and at the international level, the government set up in late 2004 a unit for the Evaluation of Environmental Impact (CAIA).

Through the creation of this unit the government aims at foreseeing, correcting, preventing, identifying and/or mitigating through environmental evaluation (environmental audits for projects being implemented and socio-environmental impact studies for projects being designed, evaluation of risks and natural and anthropic catastrophes) negative effects that anthropic actions (projects, programmes, plans and policies) cause and/or may cause on the environmental system.

This challenge requires awareness at all levels, an enormous availability of qualified technical and scientific capabilities, legal framework and norms and procedures as well as clear and well defined institutional aspects, material means and equipment.

This project fits into overall efforts to ensure technical, legal and institutional capacity at the national level in terms of environmental evaluation, particularly as regards the impact of climate changes in productive sectors.

DESCRIPTION

Global objective

To ensure national capacity building in the field of environmental and social evaluation of negative effects of climate changes on development sectors and projects, programmes, plans and sector development policies;

Specific objectives

- Strengthening of technical capacity (sensitisation, training, empowerment and specialization) of national technical staff in environmental evaluation;
- Strengthening of a legal and institutional framework that is appropriate, acceptable, credible and stable;
- Setting up of an adequate mechanism for an environmental evaluation and monitoring of negative effects of changes before, during and after the implementation of projects, programmes, plans and policies.

Expected results

- Guinea-Bissau provided with a credible institution in terms of studies of assessment of social and environmental impact;
- Sector guides, Guidelines and Manual of Procedures on environmental evaluation prepared, published and disseminated in all local mass media;
- Permanent mechanism for the monitoring and evaluation of negative effects of climate changes and anthropic actions set up;
- Legal framework set up, published and disseminated in all local mass media;
- Data bank set up and available for users.

Beneficiaries

National cadres and staff, the government, Guinean population, investors, local communities and the international community will be the main beneficiaries

IMPLEMENTATION

Institutional Implementation Framework

The body responsible for the implementation of this project is the unit for Evaluation of Environmental Impact, in joint collaboration with development partners.

Monitoring and evaluation

The project will be subject to a regular evaluation in accordance with the policy and procedures set by donors and the government for the project's supervision and execution.

The project head will submit each year a half yearly report and an annual synthesis. He will submit also a final report at the end of the project. The different reports will be sent to the government, donors and the agency.

Risks and Barriers

The main risk relates to the State's dependence on projects financed from abroad.

Duration

2 years

COST

USD 350,000

GUINEA BISSAU

NAPA PRIORITY PROJECT 11

ENVIRONMENTAL EDUCATION AND COMMUNICATION IN COASTAL AREAS PROJECT

Location: All coastal areas in Guinea-Bissau

JUSTIFICATION

Climate changes are pointed as one of the main threats against our country's sustainable development. Pressure man has been exerting on natural resources to ensure his daily subsistence; the existence of production systems directly associated to widespread poverty situations, which provoke land degradation, coast erosion, an indiscriminate cutting down of large trees for commercial purposes, shortage of potable water, an increasing reduction in underground water, drought in the east and floods on rice fields in the south due to rises in sea level show that Guinea-is very vulnerable to climate changes.

The present project is proposed bearing in mind the low level of awareness about the existing risks and consequences arising from the above-mentioned environmentally-negative practises and the degree of the country's vulnerability to climate changes.

DESCRIPTION

Global objective

To contribute towards raising environmental awareness among Guinean populations, particularly as regards impacts of climate changes on main sectors for the development of economic activity.

Specific objectives

- Strengthening of technical capacities and competences of target groups in adaptation to climate changes through natural resources' management and biodiversity conservation;
- To raise populations' awareness through specific programmes on private and community radio stations focusing on climate changes through a rational management of natural resources and biodiversity.

Components

Environmental education and communication on climate changes through a rational management of natural resources and biodiversity under the fight against poverty.

Expected results

- Training and upgrading sessions held to the benefit of teachers and journalists from private and community radio stations concerning climate changes through a rational management of natural resources and biodiversity;
- Workshops and studies organised aiming at the dissemination of the Convention on Climate Changes and Biodiversity and national communication on NAPA;
- Lectures organised in high schools, universities, training schools on climate changes on a rational management of natural resources and biodiversity;

- Radio debates organised at Environment and Culture Houses and among grassroots communities about climate changes on a rational management of natural resources and biodiversity;
- Debates organised in private radio stations focusing on climate change on a rational management of natural resources and biodiversity;
- Programmes produced in private, public and community radio stations and national TV on climate changes and a rational management of natural resources and biodiversity;
- Advertisement spots and information magazines produced on climate changes and a rational management of natural resources and biodiversity at Rádio Pindjiguiti;
- Photo exhibitions organised about the effects of climate changes on priority national development sectors at cultural centres, Environment Houses and in schools;

Beneficiaries

Populations living in areas most vulnerable to climate changes

IMPLEMENTATION**Institutional Implementation Framework**

ONG GAEC PALMEIRINHA

Monitoring and evaluation

The PALMEIRINHA NGO, in close collaboration with the National Environment Institute, will carry out project monitoring and evaluation.

Risks and barriers

Political instability during the project's implementation and late disbursing of funds after the project's approval.

Duration

3 (three) years

COST

USD 200.000

KIRIBATI

NAPA PRIORITY PROJECT 3
KIRIBATI NAPA SECTION 6.2.4
STRENGTHENING CLIMATE CHANGE INFORMATION AND
MONITORING

RATIONALE

Climate change has far reaching effects on life, land, sea and associated resources. The evaluation of international scientific information on climate change and its implication on Kiribati is important. This information will inform government and the people to adopt appropriate response to climate change issues in the local, regional, and international context. Kiribati considers that IPCC is the authoritative international body to advise on the scientific aspects of climate change and associated issues. The UNFCCC COP and associated processes offer the best forum for international cooperation in addressing the broad range of climate change issues.

DESCRIPTION

Objectives

1. To strengthen the capability of the government to be able to keep abreast of, understand and interpret international scientific information relevant to Kiribati;
2. To establish a central office to access and share information on climate change issues from reliable regional and international sources;
3. To develop endogenous scientific capability for analyzing and reviewing information on, and undertaking research related to climate change;
4. To enhance Kiribati capacity to implement its obligations under climate change international agreements.

Activities

The ECD within the MELAD has a small technical unit through which the Ministry has been implementing externally funded projects that are designed to fulfill the objectives of the UNFCCC and other international environment conventions. This unit will monitor information on climate change as provided by IPCC and the UNFCCC processes, assess their relevance for Kiribati, and be responsible for disseminating them to the Climate Change Study Team, and the GOK. In addition the unit will monitor and document climate related risks such storm surges, and to arrange for a review of any climate change related studies in Kiribati. The unit will need technical assistance from time to time.

Outputs

- Information from IPCC Assessment Reports will be available to the CCST, and CCST will have the opportunities to discuss them;
- Climate related studies in Kiribati will be listed and CCST will be aware of these works;
- Climate related risks as they occur will be documented. Visits to affected sites or a sample these sites on South Tarawa, and on outer islands will be necessary. A format of the report will be agreed to by the CCST. Copies of

such reports will be sent to the regional organizations and other interested agencies or individuals;

- Members of the CCST will increasingly take on these tasks and become more informed on climate change issues.

COST

AUD 317,410 (+10% contingency cost)

Indicative costs (AUD)	Local annual budget (AUD)	Total NAPA Costs Over 3 yrs	Responsible Ministry
227 000	90 410	317 410	MELAD

MALI

NAPA PRIORITY PROJECT NO. 12

OPTION: SENSIBILISATION ET ORGANISATION DES POPULATIONS POUR LA PRÉSERVATION DES RESSOURCES NATURELLES LOCALES (ÉLABORATION DE CONVENTIONS LOCALES) , RÉGLEMENTATION

TITRE DU PROJET: SENSIBILISATION ET ORGANISATION DES POPULATIONS POUR LA PRÉSERVATION DES RESSOURCES NATURELLES LOCALES.

Localisation: Régions de Sikasso, Ségou, Koulikoro, Kayes, Mopti.

Secteur: Ressources naturelles

JUSTIFICATION

L'extension des surfaces de culture du coton, la divagation des animaux, les besoins croissants en bois de chauffe suite à une démographie galopante, la déforestation ont provoqué une grave dégradation de l'écosystème des localités ciblées. Par ailleurs, les sécheresses successives ont provoqué une migration des pasteurs du nord vers le sud faisant ainsi de cette région géographique la zone d'élevage par excellence. Cela constitue une nouvelle pression sur l'écosystème déjà sérieusement endommagé.

Le volume des eaux de surface ainsi que les ressources halieutiques ont aussi considérablement baissé.

DESCRIPTION

Objectif global

Contribuer à responsabiliser les populations locales dans la gestion et la préservation des ressources naturelles de leur terroir.

Objectifs spécifiques

- Réglementer l'exploitation des ressources naturelles;
- Restaurer les peuplements en voie de disparition;
- Enrichir avec des essences locales, les espaces vides des principales forêts du pays;
- Créer et former une brigade de surveillance des forêt et autres ressources naturelles;
- Sensibiliser les populations locales à la préservation de la nature et à l'amélioration de leur cadre de vie à travers une gestion responsable de leur environnement;
- Instaurer un cadre de concertation communal et intercommunal en matière de gestion et de sauvegarde de l'environnement;
- Renforcer les compétences locales en matière de gestion et de préservation des ressources naturelles.

Faisabilité technique

- Existence d'une expertise technique pour l'encadrement des populations;
- Besoins exprimés par les populations lors des consultations locales;
- Les objectifs du projet cadrent avec les orientations du CSLP.

Faisabilité financière

- Appui du FEM;
- Apport de l'Etat;
- Apport des collectivités;
- Existence d'un certain nombre de projets dans la zone dans les zones d'exécution du projet qui pourraient apporter leur synergie.

Résultats attendus

- L'état de productivité des principales ressources naturelles villageoises, communales et inter communales s'est amélioré;
- Chaque village ciblé a une brigade de surveillance de la nature installée et formée aux techniques de gestion et de protection des ressources naturelles;
- 50 % des populations (hommes, femmes et jeunes) sont sensibilisés sur les questions de protection de l'environnement;
- Une carte d'impact est élaborée pour chaque commune;
- Un conseil communal et un conseil inter communal pour la protection des ressources naturelles sont installés.

Activités

- Education environnementale;
- Elaboration de conventions locales;
- Mise en défens et re boisement communautaires;
- Agroforesterie;
- Réalisation de plantations privées;
- Information, Education et Communication;
- Organisation de l'exploitation et des exploitants des ressources naturelles.

Risques liés au projet

Retard sur le décaissement des fonds

Arrangement institutionnel

Le Projet sera exécuté sous la tutelle du Ministère de l'Environnement et de l'Assainissement appuyés par un Comité National de Pilotage composé de toutes les parties concernées.

SUIVI / EVALUATION

Indicateurs de suivi-évaluation

- Nombre de séminaires de sensibilisation organisés;
- Nombre de conventions locales élaborées;
- Superficie de forêts mise en défens;
- Superficie reboisée;
- Superficie des plantations privées.

Mécanisme de suivi/Evaluation

Le suivi interne du projet sera assuré par le superviseur et les animateurs installés sur le terrain et le service local de la Conservation de la Nature. Il sera intensifié au moment des feux de brousse en saison sèche. Les agents seront soutenus dans leurs efforts de suivi par les membres des comités de surveillance.

A la fin de la deuxième année, les activités du projet feront l'objet d'une auto évaluation à travers un atelier. Participeront à cet atelier, les membres des comités de surveillance, les membres de l'association des pépiniéristes et des personnes ressources des villages bénéficiaires du projet. Ceux ci porteront un regard critique sur le chemin parcouru afin d'en dégager les acquis, les faiblesses et de faire des recommandations pour le future. L'atelier sera animé par les structures porteuses du projet.

Durée du projet

Trois (3) ans

COÛT

USD 2,000,000

MALI

NAPA PRIORITY PROJECT NO. 16

OPTION: COMMUNICATION AVEC LES POPULATIONS SUR LES EFFETS DES CHANGEMENTS CLIMATIQUES DANS LE CADRE DE L'ADOPTION DE COMPORTEMENTS POSITIFS EN MATIÈRE D'ADAPTATION

TITRE DU PROJET: COMMUNICATION POUR L'ADAPTATION AUX EFFETS DES CHANGEMENTS CLIMATIQUES

Localisation : Tout le pays

JUSTIFICATION

Les effets présents et futurs du changement climatique rendent nécessaires l'élaboration de stratégies d'adaptation. Toutefois ces mesures quoique indispensables et efficaces sont susceptibles de faire augmenter les coûts de la santé et ceux de la préservation de l'environnement au Mali. C'est pourquoi la démarche du projet vise à privilégier la recherche, la planification, l'information, la sensibilisation et la formation des populations et des décideurs, pour l'adoption de pratiques simples permettant de faciliter l'adaptation aux effets néfastes des changements climatiques.

DESCRIPTION

Objectif global

Promouvoir les mesures de prévention des effets néfastes des changements climatiques

Objectifs spécifiques

- Minimiser les coûts de gestion de l'adaptation aux changements climatiques;
- Assurer une large diffusion des stratégies d'adaptation.

Faisabilité technique

- Maîtrise des techniques d'Information, d'Education et de Communication (I.E.C) par les services techniques;
- Besoins exprimés par les populations lors des missions de terrain;
- Les objectifs du projet cadrent avec les orientations CSLP.

Faisabilité financière

- Appui du FEM;
- Apport de l'Etat;
- Apport des collectivités;
- Apport des communautés bénéficiaires;
- Existence d'un certain nombre de projets dans la zone qui peuvent apporter des synergies.

Résultats attendus

Le projet devra déboucher sur trois résultats concrets:

- Une base de données recensant, les données disponibles et les différentes initiatives en cours pour sensibiliser les groupes cibles du projet est créée;

- Un site Web pour permettre aux individus et aux organismes de consulter facilement l'information et les ressources relatives au changement climatique et aux stratégies d'adaptation est créé;
- Une stratégie d'intervention qui servira à orienter les travaux à venir pour mettre au point, appuyer et renforcer des initiatives de proximité auprès du public au sujet des effets sur la santé et sur l'environnement du changement climatique et de la pollution est conçue et mise en oeuvre;
- Les réseaux des organismes concernés pour encourager la création de partenariats intersectoriels dans le domaine des effets sur la santé et l'environnement du changement climatique et de la pollution atmosphérique sont constitués et/ou renforcés.

Activités

- Études;
- Recherches;
- Constitution de base de données;
- Information Communication formation;
- Atelier séminaires;
- Activités de mobilisation;
- Petite initiative démonstrative en matière de gestion des effets du changement climatique et de la pollution atmosphérique,
- Exposition permanente et stand mobile,
- Création d'au moins un réseau des utilisateurs des données (informations) sur le changement climatique.

Risques liés au projet :

Retard sur le décaissement des fonds.

Arrangement institutionnel

Le Projet sera exécuté sous la tutelle du Ministère de l'Education Nationale à travers le CNRST appuyés par un Comité National de Pilotage composé de toutes les parties concernées

SUIVI-ÉVALUATION

Indicateurs de suivi-évaluation

- Nombre de personnes informées, formées et sensibilisées sur les effets des changements climatiques et les stratégies d'adaptation;
- Nombre de structure et d'institution dont les capacités ont été renforcées;
- Nombre de paquets de formation élaborés.

Mécanisme de suivi-évaluation

- Des missions de terrain seront effectuées périodiquement;
- Des rapports d'avancement intermédiaire et annuel ainsi qu'un rapport final seront demandés.

Une revue à mi-parcours et une évaluation finale du projet seront effectuées.

Durée

Deux (02) ans

COÛT

USD 500,000

MAURITANIA

NAPA PRIORITY PROJECT 17

MAURITANIA NAPA SECTION 7.3 CAPACITY BUILDING FOR AGRICULTURE

TRAINING AND INFORMING OF PRODUCERS, THEIR SPOS AND CPS

Locality	Agricultural Wilayas and Rural
Development	
Sector	Agriculture
Field	Pilot support project for producers and CEs
Type	Agricultural advice
PIP Reference	-

RATIONALE

Given the size of the agricultural sector in the GDP and the provision of employment in the rural community, the training of, and provision of information to, the producers as well as their SPOs and agricultural CEs have proved crucial to the improved efficiency and cost-effectiveness of agriculture in Mauritania.

DESCRIPTION

Objectives

- Training and capacity building of producers, their SPOs and CEs in the field of organisation (Cooperative Using Agricultural Equipment), establishment of seed-bearing trees etc), of farm management and the role of the agricultural adviser, etc;
- Information, by all channels on communication, on technological progress recorded, particularly advances within their reach and immediately applicable to improve productivity, types of successful farming methods;
- Improvement of the producers' and CEs' expertise, particularly concerning the use of agricultural methods respectful of the environment;
- Improvement of the agro-systems productivity and consequently of the standard of living environment of this fringe community.

Activities

- Organization of seminars, workshops, on-the-job training sessions, study trips, covering all the themes mentioned above to the benefit of producers and their SPOs;
- Training of CEs;
- acquisition and the installation of computer and communication equipment to facilitate the access to worldwide information and to improve expertise;
- Execution of research studies to modernize irrigated agricultural studies in order to bring achieve the required diagnostics and to propose efficient and effective solutions within the reach of producers depending on category (small-scale producers, large-scale producers, individuals, private sector, etc);
- Improvement of the productivity of the irrigated systems;
- Increase in producers' incomes through the decrease of costs related to pumping.

Expected outcomes

- Rational management of farming in general but particularly of agricultural equipment and other production factors;
- Updating of knowledge of CEs and producers;
- Reduction of rural exodus and ensuring of the populations' nutritional and food security;
- Contribution to national food security.

IMPLEMENTATION**Administrative arrangements**

The project will be carried out by the Department of Research, Training and Education (DRTE), which will set up a small steering structure following a participatory process. It is also important that a broad, efficient and effective partnership be developed with producers, associations, cooperatives, national and international NGOs involved in the irrigated sub-sector, the central and regional technical departments of MRDE, private sponsors and other stakeholders in development in irrigated zones.

Risks and obstacles

- Reluctance of producers;
- Delay in acquisition of equipment or in obtaining funding.

Monitoring and assessment indicators

- Yield of the various irrigated crops;
- Farmers' income;
- Number of trained farmers and SPOs;
- Zone communities' nutritional and food level;
- Permanent establishment of communities on their land (level of rural exodus).

Duration

3 years

COST

<i>USD 1,180,000</i>

MAURITANIA

NAPA PRIORITY PROJECT 28

MAURITANIA NAPA SECTION 7.2 FOREST

INSTITUTIONAL REINFORCEMENT OF THE STRUCTURE RESPONSIBLE FOR NATURE CONSERVATION

Locality	National: Institution responsible for the protection of forest environment
Sector	Forestry
Field	Institutional reinforcement
Type	Community development project

RATIONALE

Administratively, the protection and sustainable management of the forest ecosystems are the responsibility of the Department of the Environment and Rural Development. The absence of reliable data from this institution and the absence of a direct person of reference at the Department at the level of the Ministry of Rural Development and the Environment (MRDE) regional delegations hinders regular monitoring. The absence of human and financial resources is also responsible for the non-application of the various policies recommended for the sector. The current absence of supervision and control of forest activities shows the necessity to strengthen the institutional capacities of the organs responsible for the protection of the forest ecosystems. It is a question of strengthening the human, material and financial capacities.

DESCRIPTION

Objectives

The general objective is to develop the capacities of the institution responsible for the protection of the environment so as to help it to fulfil its mission.

The specific objective is that the institution responsible for the protection of the environment is able to fulfil its mission

Activities

Considering the legal weapons (forestry code, hunting code) existing in the selected activities:

- To strengthen the human resources (recruiting skilled staff);
- To strengthen material and financial resources (logistical resources and computer and cartography equipment).

Expected outcomes

The main expected result is that the institution responsible for environmental protection becomes operational with skilled and motivated staff, equipped with effective material and financial resources.

IMPLEMENTATION

Administrative arrangements

The project will be carried out with the help of one of the international organizations working in the field of environmental protection.

Risks and obstacles

The risks and obstacles which might be encountered in the project concern the identification of the real needs in capacity building.

Monitoring and Assessment indicators

Project impacts will be evaluated through the decrease in pressure ligneous cover throughout the country. For monitoring purposes, the project will be reviewed midway and at the end, and will be subject to audits and field visits and quarterly and half-yearly reports

Duration

2 years

COST

USD 400,000

MOZAMBIQUE

NAPA PRIORITY PROJECT 2

SECOND ACTION: STRENGTHENING OF CAPACITIES OF AGRICULTURAL PRODUCERS TO DEAL WITH CLIMATE CHANGE

INTRODUCTION

Agriculture continues to be the most important sector for the economy of Mozambique. According to estimates based on the 1997 population census and on the 2001-2005 plan of action to reduce absolute poverty, Mozambique has a little over 17.5 million inhabitants and, according to the same source, about 80% of the economically active population is linked to agricultural production and 70% of them live under extreme poverty conditions.

The results of TIA 2002 show that the agricultural and livestock sector is dominated by small scale agricultural exploration constituting 99.7% of the country's explorations and occupied 96.7% of the cultivated area in 2000/2001. They practice agriculture of subsistence, with low agronomic income. The use of raw-material such as manure and pesticides, the irrigation practice and the use of mechanized equipment in agricultural production are extremely insignificant.

The five year (2005-2009) government programme defines as the objective of the agricultural sector to contribute for self-sufficiency and food security in basic foodstuffs, to increase agricultural productivity, guarantee the supply of raw-material to the national industry, promote and support the development of the family, cooperative and private sector and job creation. Thus, the government intends to stimulate the increase of production in the area of commercial agriculture development and promote agro-industrial development which adds value to the country's agricultural products for the national market and for export, mostly in the rural areas.

One of the main challenges faced by PROAGRI is to provide necessary and sufficient support to a heterogenic group of farmers that continues fighting to produce enough for subsistence, at the same time the march is towards a situation of a more market oriented agriculture.

In addition to previously described aspects, agricultural production is mainly limited by the drought resulting from climate change. The country has experienced deficit of food security in some areas due to drought that has been taking place over the years.

Changes of the standards of precipitation, air temperature, atmospheric humidity and radiation – essential elements for the production of organic matter and for basic activities of plants such as photosynthesis, growth and development have been affecting the country's agricultural productivity. Thus, actions must be taken to revert this situation which competes to aggravate more and more the poverty situation of the rural Mozambican people.

RATIONALE OF THE PROPOSED ACTION

The importance of agriculture in the country can be summarised in two main aspects: The first as a source of food and the second as the basis for development. Despite its

importance, agriculture is practised in unirrigated land and with few investments given to the weak financial capacity of the rural communities.

Support in agricultural instruments and raw-material, construction and/or rehabilitation of irrigation systems will reduce the loss both of animals and of crops during the dry season resulting from climate variability currents and consequently it will increase the capacity of beneficiaries who deal with climate change.

DESCRIPTION

Objective

Develop capacities of agricultural producers to deal with variability and climate change.

Expected Results

Long Term Results I

Loss of crops and animal population reduced in regions prone to drought, floods, cyclones and tropical storms and other climatic events.

Short Term Results I

More availability of agricultural and livestock foodstuffs

Activities to develop

1. Promote associativism among farmers, cattle and goat breeders of the family sector and fishermen for better assistance;
2. Build systems for the collection and conservation of rain waters for subsequent use in the drought season;
3. Drill wells or water boreholes;
4. Install small scale sustainable irrigation systems, exploring the use of renewable energy to feed the system;
5. Build and/or rehabilitate tanks and dynamize vaccinations;
6. Encourage applied research of crops tolerant to drought and plague, and the use of short cycle crops;
7. Promote the value of sacred forests for eco-tourism purposes;
8. Disseminate and encourage the use of crops tolerant to drought;
9. Promote the certification of seeds sold in agricultural fairs;
10. Encourage the local production of seeds;
11. Promote the holding of agricultural fairs mainly in vulnerable areas, increasing their coverage;
12. Promote the use of hays and animal food to feed the cattle;
13. Evaluate quarterly the implemented activities together with communities in the first 12 months by the NAPA Team members.

Long Term Results II

Reduce the degradation of soils due to inappropriate agricultural practices.

Short Term Results II

Reduced degraded areas

Activities to develop

1. Identify, classify, map the solid degraded areas due to inappropriate agricultural practices;
2. Promote the use of renewable energies, mainly biogas close to cattle breeding communities;
3. Encourage the use of conservation agriculture;
4. Monitor the national situation of erosion after the rainy season;
5. Promote community reforest activities aimed at producing bio-mass for energy consumption and along the sensible areas in river basins for their protection;
6. Promote community reforest activities using native species for their conservation;
7. Promote community activities to manage fires;
8. Promote community activities for the fight against erosion in all places.

Long Term Results III

Established alternative subsistence forms

Short Term Results III

Rise in family income

Activities to develop

1. Promote simple technologies on procession and conservation of food and seeds;
2. Encourage the cultivation of cash crops;
3. Promote finance of small scale businesses;
4. Promote the sustainable use of natural resources;
5. Promote the planting of species used in the production of bio-fuels in arid and semi-arid areas.
6. Encourage the practice of extra-agricultural activities (pisciculture, apiculture, art craft, etc.)

Risks and barriers

The following constitute risks and barriers:

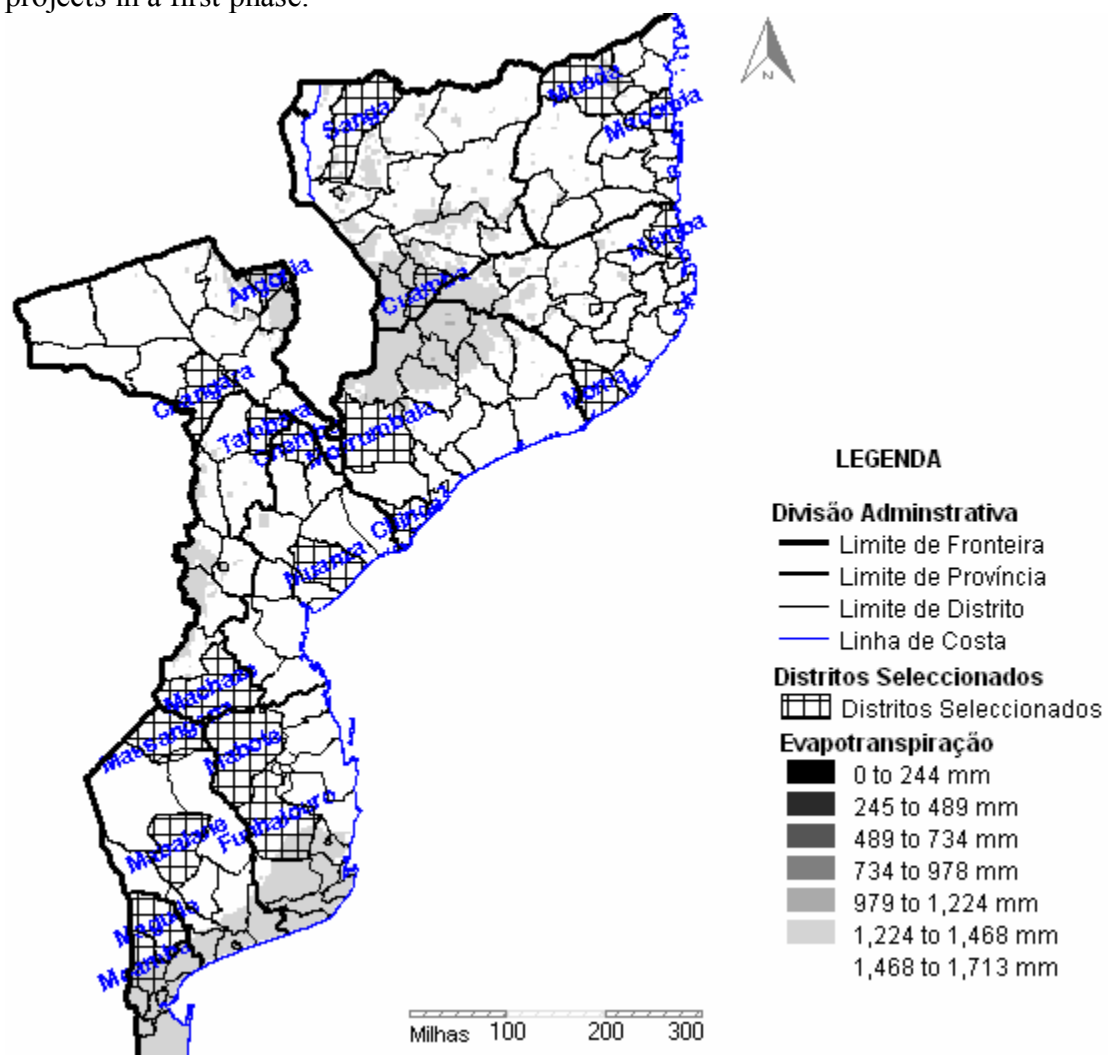
- The weak involvement of local communities;
- The weak coordination among the people involved;
- Delays in allocating funds;
- The weak network of extension services capable of providing technical assistance and the transfer of necessary and adequate technology to the production system;
- The lack of access infrastructure and rural market for the purchase and sale of agricultural tools and products in due time;
- In addition, the agricultural research network needs to be more responsive to the multiple problems of the agricultural sector.

IMPLEMENTATION

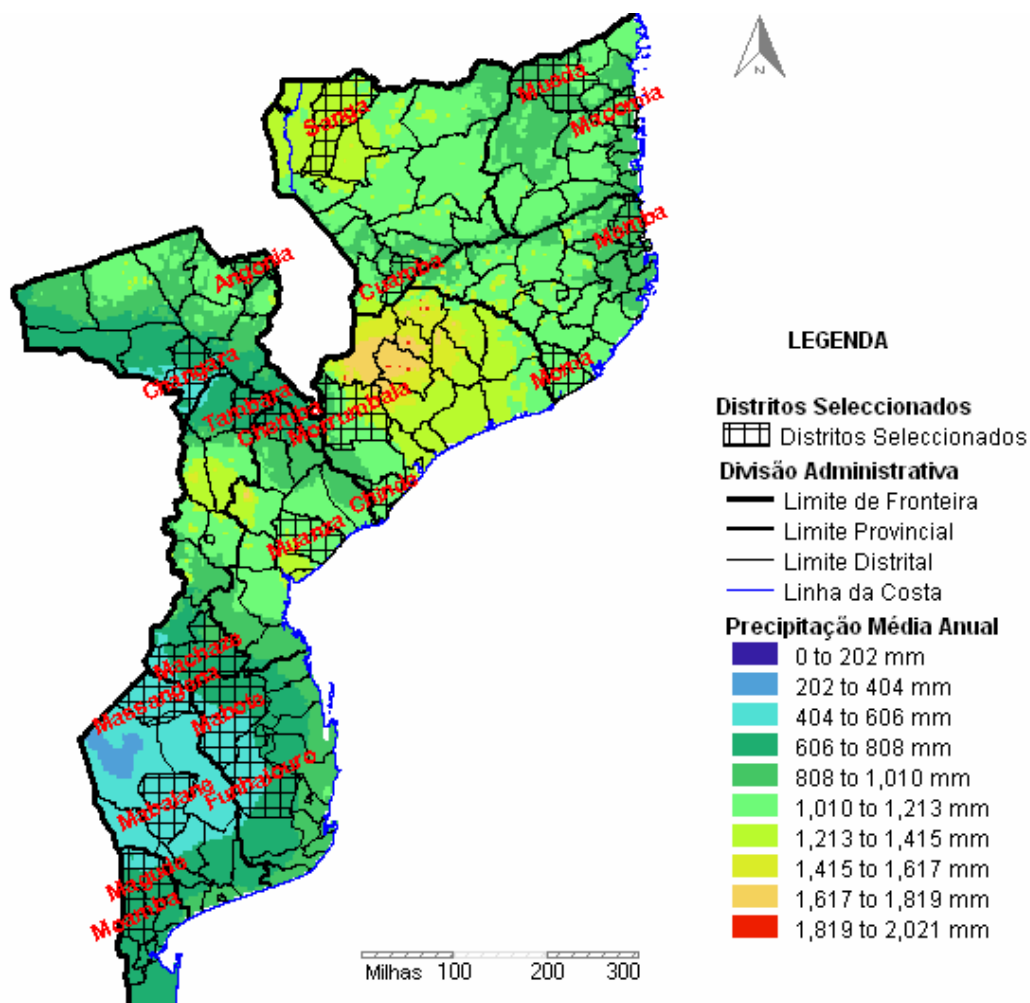
The implementation of activities of this action will be of the responsibility of the following institutions: MINAG, ME, MOPH, DNA, MIC, MF, MIREM, MIDefence, ARA's, INAM, MITUR, MAE, DINAGECA and with the collaboration of the Private Sector and the Civil Society.

In the first phase, it's suggested that these activities be developed in the districts of Magude and Moamba (Maputo), Mabalane and Massangene (Gaza), Funhalouro and Mabote (Inhambane), Chemba and Muanza (Sofala), Machaze and Tambara (Manica), Angónia and Changara (Tete), Mueda and Macomia (Cabo Delgado), Chinde and Morrumbala (Zambezia), Moma and Momba (Nampula) and Sanga and Cuamba (Niassa). The choice of these districts had as criteria: degree of vulnerability to drought (for the most drought-prone provinces), degree of vulnerability to floods (for the most flood prone provinces), the poverty index, availability of extension activities. Thus, it does not mean that all activities will be developed in all selected districts. Depending on the characteristics of each, only activities that will bear more impact in the community will be selected and developed.

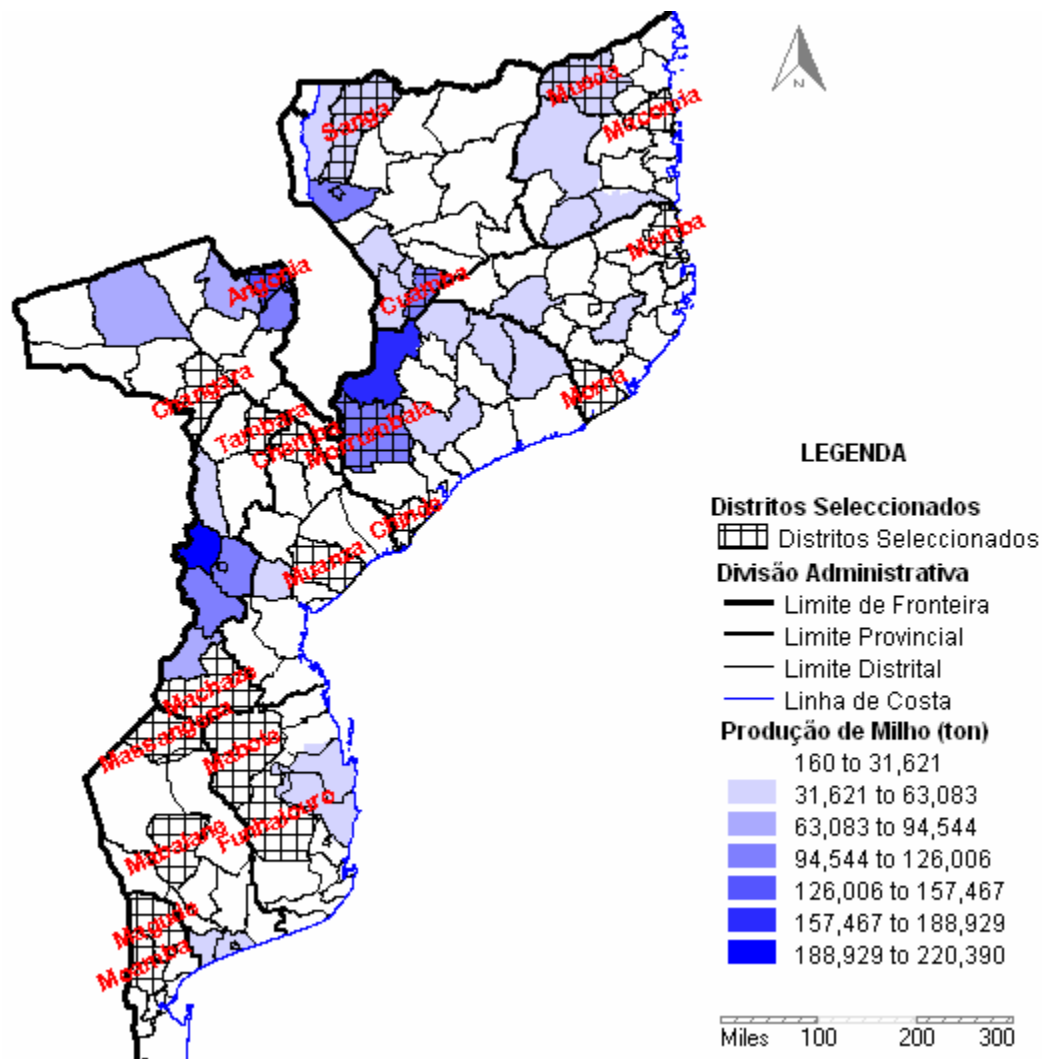
Pictures 7, 8, 9 and 10 show the distribution of the evapotranspiration, precipitation, total production of maize and in the 1999/2000, 2000/2001 and 2003/2004 campaigns per district and also illustrate the selected districts for the implementation of proposed projects in a first phase.



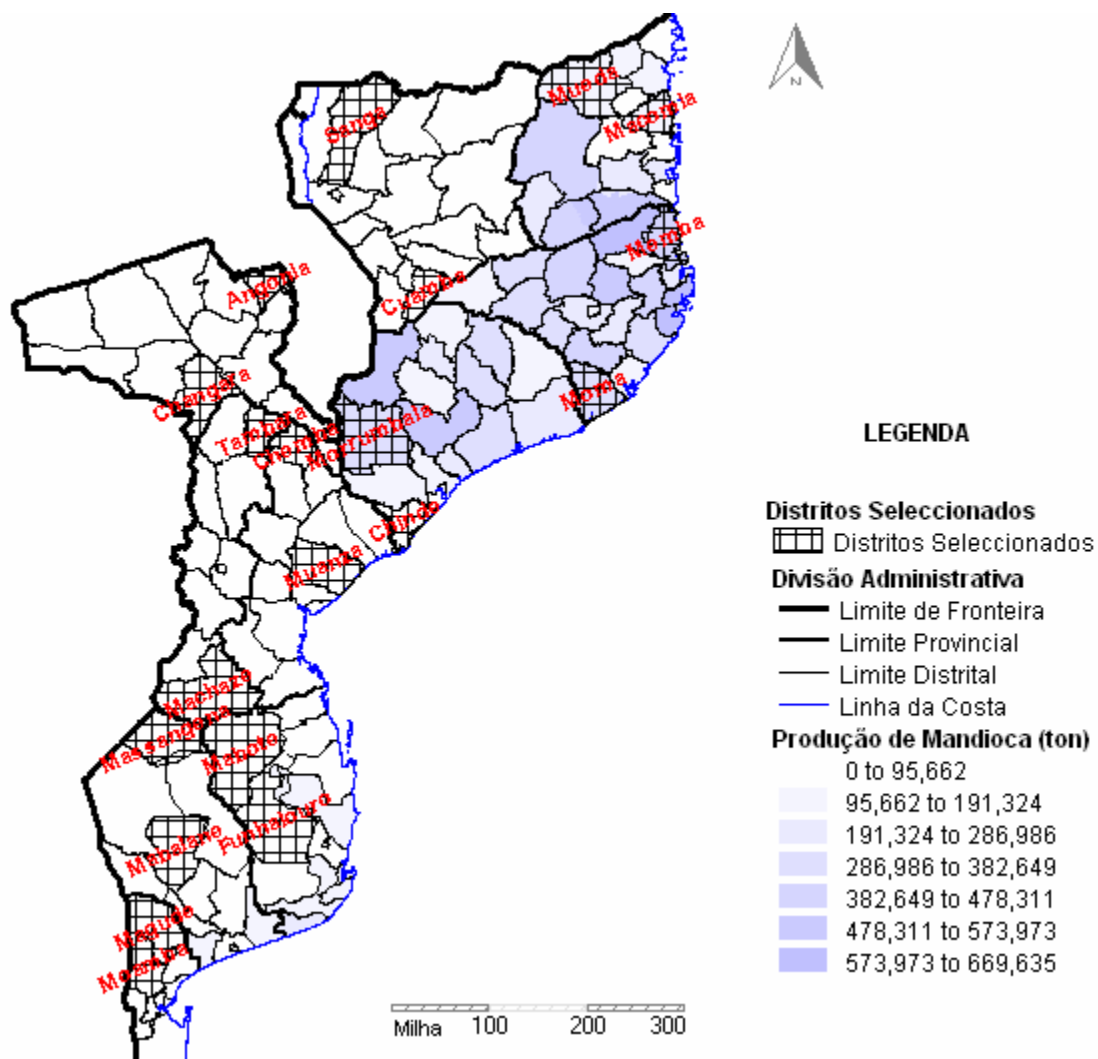
Picture 1: Map of evapotranspiration in the country, indicating the selected districts.



Picture 2: *Distribution map of precipitation in the country and the selected districts.*



Picture 3: *Distribution of total production of maize in the 1999/2000, 2000/2001 e 2003/2004 campaigns per district and of selected districts.*



Picture 4: *Distribution of total cassava production in the 1999/2000, 2000/2001 per district and of the selected districts.*

BUDGET

Estimated at USD 2,500,000

Activities	Estimated cost in USD
Reduce soil degradation due to inappropriate agricultural practices	1 000 000
Reduce loss of crops and animal population in regions prone to drought, floods and tropical cyclones	1 000 000
Establishment of alternative subsistence forms	500 000
Total	2 500 000

NIGER

NAPA PRIORITY PROJECT 14
NIGER NAPA IDENTIFICATION SHEET 14
BUILDING MATERIAL, TECHNICAL AND ORGANIZATIONAL
CAPACITIES OF RURAL PRODUCERS.

PROJECT LOCATION

Village of Issari (Chétimari rural district/ Department of Diffa/ Diffa Region);
 Villages of Edouk I and Edouk II (Kaou rural district/ Department of Tchirozérine/ Agadez Region);
 Tondikiwindi rural district (Department of Ouallam/ Tillabéri Region);
 Aderbissanat rural district (Department of Tchirozérine/ Agadez Region);
 Loga urban district (Department of Loga/ Dosso Region).

SECTOR

Agriculture, cattle breeding , and Forestry.

RATIONALE

In the above-mentioned localities, the rural sector is affected by the climatic restraints (droughts, sandstorms), which led to the lessening of agricultural, forestry and pastoral productions aggravating thus the populations' living conditions. This was emphasized by the weakness of adaptation capacities of rural producers on the material, technical as well as organizational point of view. These producers mainly rely on family production structures and traditional techniques not very productive.

This project aims at remedying this weakness through the organization and training of rural producers in order to deal with the adverse effects of climate changes.

This project "Reinforcement of the material, technical and organisational capacities of the rural producers" is in perfect adequacy with the strategic axis n°3 of the Rural Development Strategy which constitutes the national framework of reference for all the actions of rural development. This axis focuses on the reinforcement of the public institutions and e rural organizations capacities to improve the management of the rural sector.

DESCRIPTION

Overall objective

Build capacities of rural producers in the project zone to achieve a sustainable development.

Specific objectives

- Design and implement, by rural producers, mechanisms allowing them to develop their own strategies for a better management of the rural sector;
- Develop and improve peasants' knowledge;
- Build the capacities of rural organizations.

Technical and financial feasibility

Technical feasibility

- Existing of training organizations (technical services, NGOs);
- Existence of organized structures;
- Needs expressed by the populations during field visits;
- The project objectives match the PRS and SDR orientations.

Financial feasibility

- Support from GEF;
- Contribution from the government;
- Contribution from local authorities;
- Contribution from beneficiary communities;
- Presence of other projects and NGOs (PAC, PADL, PPEAP, LUCOP, COGERAT, AZAWAK project, Care International...).

Expected results

- Infrastructures are rehabilitated, created and developed;
- Processes of decision making for an efficient management of the infrastructures are designed;
- Know-how of rural actors is updated;
- The productivity of agricultural and pastoral systems is improved;
- The incomes of rural producers are increased;
- Farms and other production factors are rationally managed;
- Rural drift is lessened;
- Food and nutritional security of the populations is improved.

Activities

- Rehabilitation and creation of infrastructures;
- Support for Information, Education and Communication initiatives by rural producers;
- Support for the creation of adequate financing facilities;
- Support for physical and economic accessibility to inputs;
- Monitoring and evaluation.

Project-related risks

- Delay in cash flow;
- Mobility of certain parties working with the project.

Institutional set-up

The coordination and the implementation monitoring of the project will be carried out by the National Environmental Council for a Sustainable Development. The implementation will be carried out by the local technical service in collaboration with local management committees.

Monitoring and evaluation:

Monitoring and evaluation indicators:

- Output growth rate;
- Level of producers' income;
- Number of rural producers trained;
- Number of infrastructures rehabilitated and/ or created.

Monitoring and evaluation mechanisms:

- Field visits will be carried out;

- Intermediate and final report will be required;
- A mid-term review of the project will be made.

Project duration

Two years

SÉNÉGAL

NAPA PRIORITY PROGRAMME 4: SENSIBILISATION ET EDUCATION DU PUBLIC

CONTEXTE

Il ressort au cours des rencontres avec les populations, un besoin réel d'avoir plus d'informations sur les changements climatiques, leur cause et impacts sur leur environnement immédiat et le milieu naturel.

Un constat est certes faits par tous les participants à ces ateliers sur la vulnérabilité et l'adaptation, des modifications du milieu sont notées, à savoir une variation des cycles pluviométriques, de leur durée et intensité. Une avancée de la mer avec des phénomènes d'invasions marines, cas de Mbao, Rufisque par exemple, on assiste à des destructions d'habitations, d'infrastructures hôtelières.

Par ailleurs, au niveau de l'agriculture, fortement dépendante de la pluie, la variabilité pluviométrique non encore maîtrisable rend difficile la planification agricole. Le problème de l'insécurité alimentaire est présent en cas de déficit pluviométrique, les agriculteurs et les populations pauvres étant les premières victimes.

Face à ces impacts variables suivant les secteurs de développement, plus d'informations sur les changements climatiques sont à mettre à dispositions des populations.

DESCRIPTION DES ACTIVITÉS

Il s'agira:

- De développer et mettre en oeuvre une stratégie d'éducation, d'information et de communication suivant les catégories d'acteurs;
- De renforcer les rencontres et réflexions techniques et scientifiques sur certains secteurs, notamment, le secteur de l'Agriculture, de l'hydraulique, de la pêche, du tourisme, de la Santé;
- D'adapter les informations scientifiques fournies par le groupe d'experts intergouvernemental sur le climat au contexte des acteurs concernés;
- D'intégrer la dimension changement climatique et adaptations aux changements climatiques dans les politiques sectoriels de développement au Sénégal.

Résultats

- meilleure intégration de la dimension changement climatique dans les stratégies nationales de développement;
- limiter les coûts d'atténuation, grâce à la prévention et à l'information;
- renforcer dans le long terme la capacité d'adaptation des décideurs et population face aux impacts néfastes des changements climatiques.

MISE EN OEUVRE

Les institutions concernées par l'exécution de cette activité sont:

- DEEC,
- Chercheurs et Universitaires,
- Journalistes

- ONGs
- Ministère de l'Education

COÛT

80 000 millions FCFA, soit USD 160 000

Sources de Financement

FEM, Etat du Sénégal, Autres Organismes

Durée

Deux (2) ans

SIERRA LEONE

NAPA PRIORITY PROJECT NO 3

CAPACITY BUILDING OF THE METEOROLOGICAL DEPARTMENT THROUGH TRAINING OF PERSONNEL FOR THE COUNTRY'S ADAPTATION TO CLIMATE CHANGE

RATIONALE/JUSTIFICATION

The Meteorological Department used to have five (5) WMO Class I meteorologists, seven (7) Class II Meteorological forecasters, seven (7) Class III and sixty (60) Class IV observers manning the country's Climatic/Meteorological data monitoring and management. The Department lost most of these to the war or thought retirement from the service. At the moment we have only three (3) WMO Class I meteorologists, one (1) Class II forecaster, six (6) Class III MET Assistances/superintendents and Twenty (20) Class IV observers. This leaves the department in a very strenuous position which greatly limits it in meeting its obligations in NAPA. Thus the fast-track training of the various personnel to meet the formal level will therefore greatly enhance the Department. It is hoped that the extra training needs not included here will be provided by the government as local contribution.

DESCRIPTION

Objectives

The main objective of the Project is to recruit and/or train meteorological personnel at the various levels in order to capacitate the department in its National adaptation program of action of the perceived climate change effects.

To meet this objective, the following specific objectives will be achieved by the end of the project phase:

- The training of two (2) WMO Class I Meteorologists externally within the sub region;
- The training of six (6) Class II Meteorological forecasters;
- The training of two (2) Class III personnel;
- The training of forty (40) meteorological observers;
- The training of four (4) instrument technicians.

Activities:

- The training of two (2) WMO Class I Meteorologists externally within the sub region;
- The training of six (6) Class II Meteorological forecasters;
- The training of two (2) Class III personnel;
- The training of forty (40) meteorological observers;
- The training of four (4) instrument technicians.

Input

Human, Material and Financial Resources

Short-term output

Improvement of meteorological/climate data collection, storage and analysis

Potential long-term outcomes

Meteorological staff recruited trained and capacitated to deal with climate change related issues. The expected outcome of the project is that by the end of the project phase, which is two (2) years, the department would have enough meteorological personnel for Climate/Meteorological data collection, analyses, storage or dissemination to end-users.

IMPLEMENTATION

Institution Arrangements

The Meteorological Department of the Sierra Leone will be the lead executing agency. It will collaborate with other agencies which include the Water Resource Department, Environment Department, Faculty of Environmental Science, Njala University, Guma Valley Water Company, Sierra Leone Water Company (SLWACO).

The Potential Regional/International Partners will include the World Meteorological Organization (WMO) United Nations Environmental Program (UNEP) and the Mano River Union Basin Organization.

Risks and Barriers

Some of the risks involve are the remoteness of some of the stations where the observers will be based since there is a general drift of young people towards the cities. The recruitment of personnel from the station surroundings will remove this risk. The sustainability of the project is certain as after the provision of the various components mentioned, the simple task of running of these stations, salary payment to staff, maintenance and daily administration cost of these stations could be met from that of the department's annual allocation from the central government.

Monitoring and Evaluation

The project will be monitored by competent national agencies. A set of criteria will be developed to be used as tools for project evaluation.

COST

The Total cost of the project one hundred and sixty-eight thousand and eighty US dollars (\$168,080.00) only and will last for two (2) years

This project is estimated to cost USD 152,800

Budget Breakdown

	Year 1	Year 2	Year 3
The training of two (2) WMO Class I Meteorologists	16 000	17 600	19 360
The training of six (6) Class II Meteorological forecasters	66 800	73 480	80 828
The training of two (2) Class III personnel	12 000	13 200	14 520
The training of forty (40) meteorological observers	39 000	42 900	47 190
The training of four (4) instrument technicians	19 000	20 900	22 990
Total	152 800	168 080	184 888

SIERRA LEONE

NAPA PRIORITY PROJECT NO 4

SENSITIZATION AND AWARENESS RAISING CAMPAIGNS ON CLIMATE CHANGE IMPACTS ON WOMEN RELATING TO THE THREE CONVENTIONS OF BIODIVERSITY, DESERTIFICATION AND UNFCCC.

RATIONALE/ JUSTIFICATION

It is accepted that anthropogenic activities of the last hundred years have greatly contributed to global warming. This trend can be mitigated if the general public and establishments who are the contributors and or abettors are sensitized enough on using mitigating/adaptive options. The ignorance of individuals and groups/organizations on the various United Nations Conventions on (a) Climate Change, (b) Desertification, and (c) Biodiversity is also a contributing factor for their undue influence and activities contributing to climate change.

Women who are usually the most vulnerable in time of disasters need special attention during such sensitizations and should be properly educated on adaptive and mitigative options and procedures in the implementation of the above conventions. In achieving this, various organizations/groups involving both governmental and non governmental, will be equally involved in carrying out the project.

DESCRIPTION

Objectives

The main objective of the Project is to make the public, especially the women and children aware of the three conventions on Climate Change, Desertification and Biodiversity and how to work together in meeting our obligation as enshrined in these conventions.

To meet this objective, the following specific objectives will be achieved by the end of the project phase of two (2) years:

- Educating the entire populace on the three conventions through: (a) various grass root organizations (CBOS) and NGOS, (b) Various government institutions and (c) individual in the form of expert advice and knowledge.
- The provision of public learning materials in the form of chart, demonstrations and seminar/workshop logistics etc during the sensitization process.
- The provision of simple information dissemination logistics such as TV/Radio air time, News paper columns etc
- The involvement of the project beneficiaries especially the women and children on appropriate warning signs and signals together with actions required that they need to know or do to either adapt or mitigate the effect of climate change.
- The provision the necessary tools and office logistics for the collection, analysis, storage and dissemination to end-users of weather/climate data and information especially those needing urgent attentions.

Activities

There are three (3) Components to this project viz: (a) Education of the project beneficiaries on the components of the three conventions (b) Identification (possibly in seminar/workshop) of vulnerable targets for special attention/address by the project.

- (c) Identification of adaptive procedures and option for the above venerable targets.
 (d) Identification of likely mitigative options with respect to the Provision of logistics for the above options. (e) Using the various information dissemination tools of radio, TV, News Paper, public Lectures etc to meet the objectives of the project.

Input

Human, Material and Financial Resources

Short-term output

Improvement of public knowledge and awareness on the conventions of biodiversity, desertification and climate change.

Potential long-term outcomes

Public educated on the conventions on biodiversity, desertification and climate change.

IMPLEMENTATION

Institution Arrangements

The Meteorological Department of the Sierra Leone will be the lead executing agency. It will collaborate with other agencies which include the Water Resource Department, Environment Department, Faculty of Environmental Science, Njala University, Guma Valley Water Company, Sierra Leone Water Company (SLWACO).

The Potential Regional/International Partners will include the World Meteorological Organization (WMO) United Nations Environmental Program (UNEP) and the Mano River Union Basin Organization

Risks and Barriers

Some of the risks involve are the remoteness of some of the rural areas especially the sea side and farming villages where most of the country's women/children are based. Also the high rate of illiteracy especially among the women makes information dissemination a bigger task. The involvement of women and children who are the most vulnerable will make the project sustainable since they make more than 80% of the population. The involvement of the local people of the areas in the identification of either vulnerable target or adaptive procedures will remove the risk of the area's remoteness. Their involvement of the local communities in executing identified procedures of adaptation and mitigation will foster compliance of accept norm of the project. The sustainability of the project is certain as after the provision of the various components mentioned the simple task of maintenance and daily administrative cost of the various components could be met from that of the department's annual allocation from the central government which will be accordingly adjusted to reflect the task adaptive and mitigative options of the project.

COST

The Total cost of the project Nine hundred and fourteen million ,nine hundred and fifty-six thousand Leones only (Le 914,956,000, { i.e. Three hundred and four thousand nine hundred and eighty-six Dollars (\$304,986)}

<i>This project is estimated to cost USD 132,000</i>

Budget Breakdown

	Year 1	Year 2	Year 3
Educating the entire populace on the three conventions	20 000	22 000	24 200
The provision of public learning materials	60 000	66 000	72 600
Media sensitization	12 000	13 200	14 520
Public meetings, conferences, workshops etc.	40 000	44 000	48 400
Total	132 000	145 200	159 720

ZAMBIA

NAPA PRIORITY PROJECT 9

APPENDIX II: NAPA OPTION 9

CAPACITY BUILDING FOR IMPROVED ENVIRONMENTAL HEALTH IN RURAL AREAS

RATIONALE/JUSTIFICATION

In rural Zambia today, the main health risk factors, responsible for the current heavy burden of disease, include inadequate safe water supply, poor sanitation and nutrition. According to the Fifth National Development Plan of Zambia (2006–2010), access to safe water supplies was estimated at 37% of the population in rural areas, while the sanitation coverage was only 4%. On the other hand, 70% of the population is food insecure. Shifts in temperature and precipitation regimes under climate change can influence the distribution and magnitude of the burden of climate-sensitive diseases in given localities. However, climate change affects human health through complex causal pathways which include water supply, sanitation and agricultural systems. Hot temperatures favour the multiplication of pathogens. Droughts reduce the quantity and quality of water supplies causing food shortages, reductions in personal and domestic hygiene for the people and reduction of the dilution capacity of raw water supply sources for pathogens. Sanitation facilities become sources of infection through reduced personal hygiene and proliferation of excreta-contaminated flies. On the other hand, floods wipe out food crops and wash away faecal matter from sanitation facilities into drinking water sources. Under-nutrition weakens the immune response system of the affected individuals and thus makes them susceptible to infectious diseases.

The NAPA vulnerability assessment revealed that hot and dry conditions were associated with increased clinical cases of diarrhoea, non-pneumonia respiratory infections and dysentery. Additionally, the report of the Zambia Vulnerability Assessment Committee revealed that a total population of 1,232,661 persons was in need of food assistance in the drought-hit districts during the 2004/05 drought, while 43 and 48.8% of the children in these areas suffered from diarrhoea and cough, respectively. On the other hand, the 2006/07 floods left over 400,000 persons in need of food aid for a period of over 8 months and in 78% of the affected areas with a population of 1,012,540 persons, there was water contamination from faecal matter because the floods had led to the collapse of toilets and flooding of unprotected domestic water sources. In the rural settings of Zambia, where rain-fed agriculture is the main source of income and food, extreme weather events result into a simultaneous deprivation of water, food and health, including income for the purchase of medicines and transportation to health facilities. The situation is further compounded by the fact that rural communities are currently devoid of any mechanisms for climate risk management and have to depend on government and other external agents for emergency assistance, which is usually short-lived.

The additionality costs due to this adaptation measure stem from the following:

- Developing community-based institutional mechanisms for the implementation of climate-resilient sanitation, water and food supply systems.
- Modification or replacement of existing sanitation, water and food supply practices with climate-resilient options.

- Simultaneous introduction and expansion of climate-resilient sanitation, water and food supply options into rural communities. This is because in the context of human health in Zambia, climate variability negatively impacts water, sanitation and food systems simultaneously and a single intervention in isolation may result in a negligible reduction in overall disease burden.

This NAPA project is intended to be a “no-regrets” adaptation option, implying that it has multiple benefits that can make the affected sectors more resilient to today’s climatic conditions and thus can help in adapting to future changes in climate.

DESCRIPTION

Overall Objective

To improve the health, water and food security of rural populations.

Activities

- Assess the climate variability-health risk factor interactions with regard to health, food and water security;
- Develop strategies for improving health, water and food security under climatic extremes in the affected areas;
- Empower communities with knowledge, skills and technologies required for integrated and sustainable health, food and water security.

Inputs

Inputs include research personnel, water and agricultural engineers, technologists, medical personnel, community leaders, laptops, GIS software, training manuals, workshops, participatory research packages, water supply and food production technologies

Short-Term Outputs

- Develop and strengthen the organisational frameworks in the affected communities;
- Knowledgeable and skilled rural personnel and improved water supply and food production technologies.

Potential Long-Term Outputs/Outcomes

Reductions in morbidity and mortality of the affected populations, improved and sustainable access to water and food and increased resilience to climatic hazards.

IMPLEMENTATION

Institutional Arrangement

The lead organization will be the Ministry of Tourism, Environment and Natural Resources (MTENR) and the project can be incorporated into the ongoing Natural Resources Management activities either in the Natural Resources or Forestry Departments. However, the project is community-based and MTENR must coordinate and mobilize all the necessary resources and possibly introduce the project in one pilot area.

Risks and Barriers

The main barrier anticipated can be the difficulty of changing cultural beliefs and behaviours; however, this can be overcome with the necessary training and advocacy.

Evaluation and Monitoring

The lead organization will establish monitoring and evaluation protocols based on indicators for assessing the performance and impact of this multi-phased project

COST

To be sourced from donors, UNFCCC agencies and/or Government budget

USD 3,000,000