COMOROS:NAPA PROJECT PROFILE

COMOROS

NAPA PRIORITY PROJECT NO. 1

PROJECT SHEET NO. 1

INTRODUCTION OF VARIETIES THAT ARE MORE ADAPTED TO DROUGHT

SECTOR

Agriculture

RATIONALE

Rises in temperatures and early and prolonged droughts lead to a reduction of food-producing crops, which remain the basis of national food and activity. Food-producing crops provide more than half of the agricultural GDP, which represents in itself 44% of the national GDP. In spite of this high percentage, local food production remains insufficient to meet domestic demand, which is constantly growing. Important quantities of cereals are imported every year to compensate for this deficit. The negative economic growth per inhabitant and the subsequent increase of poverty, combined with climate variability make difficult the access to food for the most vulnerable groups. In order to face the reduction of the production of food-producing crops and facilitate the access of the poorest to food, it is necessary to multiply at least by two, the current level of the production of food-producing crops. Considering the low extension capacity of the cultivated surface areas, this increase should normally occur mainly through the increase of the crops productivity. The introduction of varieties that are more adapted to drought will enable to reduce production decrease, indeed increase the local production level. It will also contribute to food security by reducing food shortages and imports, thus lightening commercial deficit.

ZONES OF INTERVENTION

Hagnamoida, Itsamia, Nyoumachoua, Ndrondroni (Moheli); Sdapoini, Magomani, Barakani, Hasinka, Bandani, Sima – Bimbini, Milimajou Hadda, Mlimajou Pangani (Anjouan); Didjoni – Ifoundihe, Djongwe-Zidilher, Funga – Membwadjou, Madjeweni – Bambadjani, Sidjou-Idjinkoundzi, Mtsangadjou Pidjani (Grand-Comoro)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Agricultural strategy, Poverty Reduction and Growth Strategy Paper (PRGSP)

RECIPIENTS

Small farmers and the poorest population from the rural and urban areas.

DESCRIPTION

Objective

To ensure the production and distribution of good quality seeds and varieties of food-producing crops (sweet potato, banana, cassava, tarot, leguminous plants, etc.), which are more adapted to drought.

Activities

The main activities will deal with:

- Supporting small farmers in producing and preserving seeds and varieties of food-producing crops which are more adapted to drought;
- To turn the production of seeds and more adapted varieties into a profitable economic activity.

Implementation

The implementation of the project will require the following inputs:

- Seeds and varieties that are more adapted to drought;
- Multiplication parcels;
- Equipment/set of tools;
- Water and phytosanitary products;
- Seeds preservation and distribution conditions;
- Financial resources, etc.

Short term outputs

The aim of the project is to set-up a bank for seeds and varieties that are more adapted to drought, to train and make producers into specialists, to reduce capacity losses, to increase the production of food-producing crops and facilitate a better access to food, for the most vulnerable groups.

Long term outputs

The project will contribute to food security, poverty alleviation and the lightening of the commercial balance through the reduction of food imports.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee for each island under the supervision of the Environment Ministry of the island, under the national coordination of the Union Ministry in charge of Environment.

Risks and Barriers

The limited technical ability of the actors, the possible delay in the mobilisation of resources, the lack of experience and the weak means of the newly set-up decentralised institutions, which will be in charge of supervising the project could constitute risks and obstacles that may limit the success of the project.

Follow-up and evaluation indicators

- The quantity and quality of the available seeds and more adapted varieties;
- The setting-up of a central buying office for more adapted seeds;
- The development of close-by food crops markets;
- The increase of the production of food-producing crops;
- Easier access of vulnerable groups to food.

COST

USD 420 000

COMOROS

NAPA PRIORITY PROJECT NO. 2

PROJECT SHEET NO. 4

INCREASE OF WATER SUPPLY

SECTOR OF INTERVENTION

Water resources

RATIONALE

Climate variability has a negative influence on the quantity of water resources. Precipitation variations, season gaps and prolonged droughts provoke early water shortages, difficulties in cooking food and the deterioration of the hygiene conditions, particularly in the less watered areas. Moreover, high temperatures increase real evapotranspiration, thus reducing the rate of ground water recharge.

It is therefore imperative for the country to double its efforts in order to improve access to drinking water for the populations that are mostly exposed to the risks of water shortages.

ZONES OF INTERVENTION

Bangoikouni, Pidjani-Mbadjini, Koimbani Oichili et Mbeni (Grand-comoro), Fomboni, Gnoumachioi, Ndrondroni (Moheli), Chaweni, Mutsamudu, Ouani et Sima, Chandra (Anjouan)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

National programme on access to drinking water and water improvement, MDG, PRGSP (Poverty Reduction and Growth Strategy Paper)

RECIPIENTS

Rural populations from the most dried areas.

DESCRIPTION

Objective

The ultimate objective of the project is to enable communities, from the most dried areas, to adapt to drought aggravated by the fluctuations of precipitations related to climate modifications.

The project aims, more specifically, at favouring the development of hydraulic in the villages, in order to face water shortages and reduce water-related diseases.

Activities

- Identification of the sources (surface or underground);
- Development of water harnessing, collection and storage infrastructures;
- Extension of the distribution networks;
- Simple pumping wells equipment (manual, solar, wind pumps);
- Public awareness on hygiene and reasonable water management.

Inputs

The implementation of the project will require the following inputs: water sources that can be exploited, pumping equipment, water mains, construction materials for the storage infrastructures, organisation and management facilities, resources, etc.

Short term outputs

The aim of the project is to increase the availability and access to water as well as to reduce water-related diseases.

Long term outputs

The project will contribute to communities capacity-building, in view of a reasonable management and preservation of the resource. The project could also enable to envisage irrigation in view of increasing agricultural production, thus contributing to food security.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multirsectoral pilot committee for each island under the supervision of the Island Minister of Environment, with the national coordination of the Union Minister in charge of Environment.

Risks and barriers

The limited technical ability of the actors, the level of commitment of the users, the ability to service the infrastructure, the possible delay in the mobilisation of resources, the lack of experience and the weak means of the newly set-up decentralised institutions in charge of supervising the project, could limit the success of the project.

Follow-up and evaluation indicators

- Water volume stored and available during the dry season;
- Water access rate;
- Cover rate;
- Reduction of the prevalence of water-related diseases;
- Degree of mobilisation of the communities around the development of small hydraulic works in the villages;
- Increase of the irrigated agricultural surface areas;
- Cost of the litre of water.

COST

USD 95,000

COMOROS

NAPA PRIORITY PROJECT NO. 3

PROJECT SHEET NO. 5

IMPROVEMENT OF WATER QUALITY

SECTOR OF INTERVENTION

Water resources

RATIONALE

Climate variability has a negative influence on the quality of water resources. Anjouan and Moheli are supplied mainly by river waters The quality of the river waters has been altered by the scarcity of the resource, the overexploitation related to the increasing needs of the populations, the effects of erosion, etc.

Bacteriologic analyses made in Anjouan showed that 60% of the harnessing are contaminated at 100% and only 20% are not. This is the main cause of frequent cases of hepatitis and especially typhoid fever which has been prevailing on the island for several years and which is responsible for many deaths. In Grand-Comoro, the quality of the tank water is not good either. According to a survey on Skills, Attitudes and Practices (SAP) conducted in 1999, out of 1813 households, 29% have uncovered water tanks.

Also, the rise in the sea level increases the salinity of the underground water. Out of 44 reconnaissance wells spread out over the coastal zones of Grand-Comoro, only 24 wells have salinity below 3g/l.

It is therefore urgent to double the efforts to improve access to drinking water through the preservation of water quality and its treatment, in order to improve the health of the populations.

ZONES OF INTERVENTION

Adda, Salimani, Domoni, Ouani, Mutsamudu, Mirontsi (Anjouan) ; Wanani, Fomboni, Miringoni (Moheli) ; Wellah Mitsamiouli, Bangoi kouni, Mtsnagadjou, Ouroveni (Grand-Comoro)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

National Programme on access to drinking water and water improvement, MDG, PRGSP (Poverty Reduction and Growth Strategy Paper)

RECIPIENTS

Rural and urban populations.

DESCRIPTION

Objective

The ultimate objective of the project is to enable communities to have access to drinking water in order to preserve health in a context of precipitation fluctuations and degradation of the quality of the resource, in relation with climate modifications.

Activities

- Setting-up of water treatment infrastructures;
- Training in water treatment;
- Setting-up of protection perimeters around the sources;

- Public awareness on water hygiene.

Inputs

- Exploitable water sources,
- Equipments and treatment products,
- Organization and management facilities,
- Resources
- etc.

Short term outputs

The aim of the project is to supply drinking water and reduce water-related diseases.

Long term outputs

The project will contribute to communities capacity-building, in view of the continuous treatment and preservation of water quality.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee for each island under the supervision of the Island Minister of Environment, with the national coordination of the Union Minister in charge of Environment.

Risks and barriers

The level of public awareness and commitment of the users, the ability to maintain the infrastructure and ensure the regular supply of treatment products, the possible delay in the mobilisation of financial resources, the lack of experience and the weak means of the newly-set up decentralised institutions in charge of supervising the project, could limit the success of the project.

Follow-up and evaluation indicators

- Cover rate in drinking water;
- The number of built filtration and decantation basins;
- Decrease of the prevalence of water-related diseases;
- Degree of mobilisation of the communities for the preservation of water quality.

COST

USD 80,000

COMOROS

NAPA PRIORITY PROJECT NO. 4

PROJECT SHEET NO. 2

DEFENCE AND RESTORATION OF DEGRADED SOILS (DRS)

SECTOR

Agriculture

RATIONALE

The traditional production systems which are still currently applied testify, for most of them, of the efforts made along the centuries by the Comorian peasants to adapt to the various and difficult ecologic conditions. But today, these adaptation efforts are undermined by the fluctuations of climatic conditions characterised by early and prolonged droughts, higher temperatures and accelerated soil erosions caused by sudden heavy precipitations. Out of 112000 ha of cultivable lands, 57,5 % are degraded, with 50 %, 65 % and 52 % respectively in Grand-Comoro, Anjouan and Moheli.

The ratio of the potential of cultivable land per person is of 0,32, 0,2 and 0,6 ha, respectively for Grand-Comoro, Anjouan and Moheli. In 1984, this ratio was respectively of 0,38, 0,25 and 1 acre.

The proportion of cultivated lands in relation with the potential is situated between 61 and 80 % in Grand-Comoro and in Moheli and more than 90 % in Anjouan.

The search for new lands in favour of food-producing crops has led to a massive deforestation of the last forest spaces on strong to very strong slopes, over 60 to 70%.

The introduction of agriculture into the forest massifs has also led to negative impacts on biodiversity, water resources, and (durability of the surface, water flows and natural recharge of sheets of water and on the coastal ecosystems by the flattening resulting from erosion.

The defence and the restoration of degraded soils will contribute to increase the useful agricultural surface area, to fight erosion and reduce agriculture pressure on forests. This action will enable to move towards a level of improvement that includes the management of soils fertility through agro forestry and increase capacities in order to face the decrease of the production caused by climate variability. It will favour access to land for many poor peasants and the reduction of food shortages as well as monetary poverty.

ZONES OF INTERVENTION

Koki, Gege-Hachipenda, Trenani, Majindzani (Anjouan) Kangani, Hagnamoida (Moheli) Ndzouani-Kove, Koimbani-Nioumadzaha, Chezani (Grand-Comoro)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Agricultural strategy, Poverty Reduction and Growth Strategy Paper (PRGSP)

RECIPIENTS

Small farmers with small pieces of land, sharecroppers and the poor from the rural areas.

DESCRIPTION

Objective

To restore the degraded soils, protect soils against erosion in order to increase the useful agricultural surface area and reduce land pressure and limit the introduction of agriculture into the forests.

Activities

The main activities will deal with:

- Identification of degraded soils;
- Training and organising the peasants;
- Circulation of technical package;
- Setting-up of tree nurseries;
- Staking parcels;
- Identification of rapidly growing species with high restitution of organic matter;
- Land development;
- Production, distribution, tree plantation;
- Plantation of plant hedges for multiple usage (green manure, mulch, organic manure) and stone low walls);
- Parcels fencing;
- Ploughing;
- Production of fodder plants;
- Cattle-raisers association, manure and plant residue.

The setting-up of the project will require the following inputs:

- Plant matter (seeds, cuttings);
- Shade nets;
- Set of tools;
- Financial resources.

Short term outputs

The project will enable to reduce land pressure and the access of the poorest to land, in order to limit the introduction of agriculture into the forest, through the increase of the useful agricultural surface area.

Long term outputs

The aim of the project is to ensure the preservation of the management of soils fertility, in order to diversify crops and increase productivity. The project will enable to reduce run-off, to increase the recharge of underground water. It will contribute to roll back poverty, increase food security and improve the access of the poorest to food.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a pilot multisectoral committee in each island under the supervision of the Island Minister of Environment, with the coordination of the Union Ministry in charge of Environment.

Risks and barriers

The possible delay in the adoption of the reform, the land legislation and the weak capabilities to mobilise financial resources, the technical know-how and the limited means of the newly set-up decentralised institutions which will be responsible for the supervising of the project constitute possible risks and obstacles to the success of the project.

Follow up and evaluation indicators

- Number of trained peasants;

- Meters of set-up quickset fences and low walls;
- Number of planted trees (and level of growth);
- Fenced surface areas;
- Surface areas reserved to crops on the degraded areas;
- Number of peasants with access to the land;
- Capacity of the main food-producing crops on the developed lands.

COST

USD 500,000

COMOROS

NAPA PRIORITY PROJECT NO. 5

PROJECT SHEET NO. 6

FIGHT AGAINST MALARIA

SECTOR OF INTERVENTION

Health

RATIONALE

Malaria is a major public health issue in the Union of the Comoros. Malaria which was first a stable endemic in the low altitude area has, because of rise in temperature, expanded to the altitude zones which used to be spared.
It seriously affects the health of the population and remains the main reason for consultation and hospitalisation in the health facilities (31% of the consultations and 25% of the deaths recorded within children under five years). People of all ages have been affected by this disease, but children under 5 years and pregnant women are the most two vulnerable groups. Malaria is characterised by a high prevalence all through the year with attacks according to the seasons and the regions. This prevalence is higher in the rural area (32.6%) than in the urban one (25%). The project should enable rural and urban communities to fight the geographic intensification and extension of malaria caused by climate variability.

ZONES OF INTERVENTION

Grand-Comoro: Hambou, Foumbouni, Mitsamiouli and Mbeni, Anjouan : Domoni, Ouani, Sima
Moheli : Nioumachoua, Wanani

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

PRGSP (Poverty Reduction and Growth Strategy Paper) Strategy axis 4, improving the health status of the population.

RECIPIENTS

Populations from the rural and urban areas with a high rate of malaria.

DESCRIPTION

Objective

Fight against the geographic intensification and extension of malaria caused by climate variability;
Reduce, in a significant way, the possibility of transmission of the vectors of malaria.

Activities

- Eliminating the larva shelters inside and around houses, particularly through the improvement of the environment;
- Reducing the proliferation of mosquitoes in the water mains by introducing larva-eating fish;
- Educating and mobilising communities to promote a behaviour that is conducive to the prevention and the fight against malaria;
- Encouraging the distribution and the use of long lasting impregnated mosquitoes nets.

Inputs

- Running water;
- Covered tanks;
- Sanitary means to collect and treat liquid waste;
- Mosquito nets;
- Treatment products
- Communication media
- Financial resources
- etc.

Short term outputs

The aim of the project is to create conditions for an improved environment, not conducive to the proliferation of the vectors of malaria, educate and mobilise the population on the methods for the prevention and fight against malaria.

Long term outputs

The project will contribute to the reduction of morbidity and mortality due to malaria

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee for each island under the supervision of the Island Ministry of Environment, with the coordination of the Union Minister in charge of Environment.

Risks and barriers

The level of awareness and commitment of the communities, the ability to treat liquid waste and ensure regular supply of treatment products, the possible delay in the mobilisation of resources, the lack of experience and the poor means of the newly set-up decentralised institutions in charge of supervising the project could limit its success.

Follow-up and evaluation indicators

- Level of prevalence of malaria;
- Reduction of the mortality and morbidity due to malaria;
- Degree of mobilisation of the communities around the advocated measures;
- Level of improvement and hygiene of the cities and villages.

COST

USD 175,000

COMOROS

NAPA PRIORITY PROJECT NO. 6

PROJECT SHEET NO. 3

RECONSTITUTION OF THE BASIN SLOPES

SECTOR OF INTERVENTION

Forests

ZONES OF INTERVENTION

Dindrihari, Bazimini, Mirontsi, Dindri, Hamkoko, Hamazia, Région de la Cuvette (Anjouan) ; Gnoumachioi, Fomboni, Itsamia (Mohéli) ; Plateau de la grille, Gnambéni, Mkoudoussi (Grande-Comoro).

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Framework law on Environment, PRSP, sustainable management of lands in relation with CDD Plan, Water and Improvement Programme, Convention on Biological Diversity, Agricultural Strategy and Special Programme on food security.

RECIPIENTS

Farmers and the entire population

RATIONALE

Over the last thirty years, the climate of the Comoros has been characterised by instability marked by early and prolonged droughts and heavy rains.

The situation is translated by a shift of the climatic zones and constitutes a threat to the fauna and flora, some species of which are likely to disappear before being identified and listed by the botanists, as well as to the already known medicinal and aromatic species.

Heavy rains, marked dry seasons and high temperatures provoke soils cleansing, retreat cracks, clayey soils and fall of earth, which are the cause of the degradation of 65.335 ha of land e.g (57,5%) of the total agricultural area.

This level of degradation seems to indicate an advanced desertification process and forces the penetration of agriculture into the forest, which disappears at a pace of 438 ha per year (-4,3%).

Between 1974 and 1985 the forest has disappeared from 19 100 to 12 375 ha, e.g a global reduction of 35 %. Clearing has reached 36% in Grand-Comoro (- 5000 ha), 74% on Anjouan (-5950 ha) and 53% in Moheli (- 1800 ha). (AGRAR, 1985). The residual forest is of 33,2% in Grand-Comoro, 16% in Anjouan and 28,6% in Moheli (FAO, 2000).

This situation has resulted in early water shortages, the disappearance of many species habitats, the shortage of firewood and timber, a disturbance of the hydrologic cycle with the drying-up of rivers and sources, a modification of the rivers regime and an increase of the run-off which favours flooding risks, a diminution of the natural refilling of the underground waters and an acceleration of soils erosion with a reduction of the agricultural production and the hydroelectric potential. The restoration of the basin slopes will enable to regenerate the degraded forests, in view of reconstituting the precipitations regime, restoring and stabilising eroded lands.

DESCRIPTION

Objective

To increase the water reserves through the restoration of basin slopes in order to allow communities to face early the shortages of the resource generated by climate variability.

Activities

- Field survey-consultation, towards different categories of actors;
- National workshops around different uses and professions involved in forests improvement, the economic and social value generated by different products from the forest, communities awareness on the importance of the forest field and ensure their renewal and participation in the management of forests resources;
- Identification of the needs in training;
- Definition of the functioning and running rules;
- Improvement and development of plantations for multiple uses;
- Regenerate degraded forests through species that resist drought;
- Integrated development of the basin slopes;
- Plantation of fodder trees on the lands paths;
- Maintenance;
- Setting-up of windbreaks;
- Planning and exploitation of lands and water resources.

Inputs

- Seeds, compost, chemicals, phytosanitary products, watering cans, plastic bags;
- Technical senior executives;
- Shade nets;
- Setting-up and maintenance of nursing trees for the production of plants;
- Set of tools;
- Labour;
- Transport.

Short term outputs

The aim of the project is to increase the availability of water and firewood and its by-products which cover 74% of the domestic energy needs and develop traditional agro-forestry in favour of the production of crops (fruit trees, coffee, vanilla…) associated to forest species. It also aims at reconstituting the hydraulic network in favour of the development of hydroelectric energy.

Long term outputs

The project will enable to reduce soils erosion, develop agroforestry in favour of agriculture, exploit abandoned lands and diversify the economies of the local administrations, in order to fight poverty and increase food security. It will contribute to the reconstitution of the habitat of many species, to the protection of biodiversity and to the fight against desertification through a participative and reasonable management of forest resources. The project will contribute to the reinforcement of carbon shafts and therefore to the fight against greenhouse.

IMPLEMENTATION:

Institutional arrangement

The project will be carried out by a multisectoral pilot committee for each island, under the supervision of the island Ministry of Environment with the support of the forest services and NGOs operating in the sector, under the national coordination of the Union Ministry in charge of Environment.

Risks and barriers

- The limited human resources of the departments in charge of Forests and Environment;
- The lack of real accountability of the local actors towards the forest resource;
- Multiplicity of occupations and uses of the forests which make difficult indeed conflicting a concerted management
- Limited experience in the process of involving local actors in the management of their village;
- Limits in terms of alternative sources of energy and construction materials accessible to modest households and to micro industry;
- Uncertain potential in terms of the intensification of agriculture without extending the cultivated surface area, in a context of rapid population growth.

Follow-up and evaluation indicators

- Increase of the covered surface area;
- Number of regenerated rivers;
- Increase of water availability;
- Flowers occupation rate;
- Reduction of run-off;
- Reduction of the eroded surface areas;
- Number of kilometres of the covered anti erosive lines.

COST

USD 580,000

COMOROS

NAPA PRIORITY PROJECT NO. 7

PROJECT SHEET NO. 7

USE OF NON-METALLIC LOCAL MATERIALS FOR THE CONSTRUCTION OF LOW PRICE HOUSING

SECTOR OF INTERVENTION

Infrastructures

RATIONALE

About 30 to 40%, 50 to 60% and 25 to 30% of the Comorian families respectively in Grand-Comoro, Anjouan and Moheli live in cob or straw houses with a woody framework, which are vulnerable to bad weather (MICS surveys 2000).

The increase trend of the frequency of cyclones and other extremes of climate events recorded over the past few years has already led to significant material losses and is likely to jeopardise the life of many families.

Indeed, 30% of the constructions are made of concrete and semi-concrete and 70% are made of light structure and are therefore precarious. Access to concrete housing is limited to privileged families, due to the high cost of this method of construction. Whereas straw constructions must be renewed every year, concrete ones made of clay materials better resist the rain and have life duration of several decades.

The outcomes of the census conducted in 1991 forecast, between 1991 and 2010, an evolution of the number of houses estimated at 246.977, in relation with the population growth projections for this period.

The use of new materials produced locally will lead to a significant decrease of the construction costs and facilitate the access of the poor populations from the risky areas, to more resistant and decent housing.

It will therefore enable to improve the security of these populations and housing comfort as well as the hygiene conditions through the local production of sanitary made of these materials.

The proposed project constitutes one of the actions to be implemented in order to contribute to the security of the population, in the face of extremes of climate events, the preservation of enough forest cover, which is necessary for the preservation of soils and river aquifers and biodiversity, as well as climate balance.

ZONES OF INTERVENTION

Gnoumachioi, Wanani, Siri-Ziroundani (Mohéli); Dadji, Koni, Bandrani (Anjouan); Pimba, Ivoini, Sadani, Dimani/Oichili, Itsandra (Grand-Comoro)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Poverty Reduction and Growth Strategy Paper (PRGSP) (PRSP);
United Nations Housing Programme;
Convention on biodiversity;
Convention on the fight against Desertification;
Environmental Action Plan.

RECI.PIENTS

The entire population living in precarious houses

DESCRIPTION

Objective

Reinforce the resistance of traditional housing in order to increase people security, in the face of extremes of climate events and improve the comfort and the hygiene conditions of the households.

Activities

- Studies on impact on the environment;
- Crushing of puzzolonic materials (the inventory of which had already been made and tested);
- Manufacture of consolidated clay bricks;
- Research and adjustment of relevant technological procedures;
- Training;
- Support to the creation of private enterprises in the sector of ceramics.

Inputs

- Equipment, measuring tools and laboratory equipment (geology, geophysics, geochemistry geotechniques, computer and office materials, calculation software, documentation, vehicles).
- Pool of construction material.
- Crushing equipments, chargers and transportation materials.
- Presses, mixers, shovel tractors and other tools costs;
- Human resources;
- Financial resources.

Short term outputs

- Creation and operationalisation of centres for the production of the materials;
- Creation of units for the manufacture of consolidated clay bricks;
- Increase of the construction in concrete and progressive elimination of traditional housing in cob or straw;
- Reduce or avoid losses in human lives during extremes of climate,
- Reduce the cost of the construction of low cost housing;
- Improve housing hygiene conditions and comfort.

Long term outputs

The project will contribute to:

- Reduce the use of timber for construction and reduce deforestation;
- Reduce sand and coral mining for construction thus reducing coastal erosion;
- Favour the emergence of entrepreneurs in the sector of ceramics;
- Create jobs and ensure training;
- Reduce rural exodus;
- Favour the global equilibrium of the islands.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee in each island, under the supervision of the Island Ministry of Environment, with the support of the national laboratory for Public Works, under the coordination of the Union Ministry of Environment.

Risks and barriers

The lack of enough architects to propose more attractive construction plans, the substantial decrease of the cost of construction and the possible lack of enough dissemination of technical procedures and the education of the population in the use of baked or consolidated bricks could constitute possible risks and obstacles to the success of the project.

Follow-up and evaluation indicators

- Availability of puzzolanic materials for construction;
- Availability of consolidated clay bricks;
- Level of support of the population in the use of local construction materials;
- Number of built houses;
- Diminution of traditional cob or straw housing;
- Spared lives during extremes of climate events;
- Regeneration of beaches and forests.

COST

USD 1,025,000

COMOROS

NAPA PRIORITY PROJECT 8

PROJECT SHEET NO. 12

SETTING-UP OF AN EARLY WARNING AND SURVEILLANCE SYSTEM ON SITUATIONS OF CLIMATIC RISKS

SECTOR OF INTERVENTION

Disaster management

RATIONALE

The Comoros experiences different types of emergency situations particularly of hydro meteorological type, which are exacerbated by climate modifications. These situations are characterised by cyclones such as the one that occurred in 1950 and which claimed 524 deaths in Grand Comoro and losses of the same magnitude in the other islands. In 1996, Storm Doloresse claimed 67 deaths in Moheli whereas Cyclone Gafilo was at the origin of the wreckage of SAM-SON, in 2004, which sank with more than a hundred people on board.

Between 1986 and 1999, seven serious cyclones/storms hit the country. Prolonged droughts are also recorded every year with negative impacts on agriculture and health. The setting-up of an information and early warning system is therefore necessary for better preparedness in order to reduce the negative effects of extremes of climate events.

ZONES OF INTERVENTION

The entire national territory

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

National Plan on preparedness and response to emergency;
IOC/METEO EDF Project which aims at minimising risks related to tropical cyclones;
Convention on the fight against desertification.

RECIPIENTS

The entire population.

DESCRIPTION

Objective

Set up a surveillance network of extremes of climate phenomena to ensure preparedness and a relevant response in order to minimise the negative consequences.

Activities

- Studying the risks and drawing-up the cartography of the risky zones;
- Circulating in real time the warning reports on the destructive events;
- Educating the population in order to enable it to make the necessary arrangements to face climate risks;

Inputs

Material and equipment for data acquisition, information processing and circulation system, financial resources, etc.

Short term outputs

The aim of the project is to prevent and prepare the population, through real-time information, on the risky situations in order to reduce human and material losses.

Long term outputs

The project will contribute to capacity-building in terms of management of climate risks, the creation and the regular updating of a database on the extremes of climate events. It will enable to make a judicious choice, and adapt the cultural calendar in relation with weather forecast.

IMPLEMENTATION

Institutional arrangement

The project will be jointly carried out by the National Directorate of Meteorology and the Directorate for civil security, under the coordination of the Union Ministry in charge of Environment.

Risks and barriers

The level of awareness of the population on climate risks and on support to the provisions to be set up, the limited means of the public services to ensure the regular functioning of the warning system, the limits in the ability to mobilise financial resources could constitute risks and obstacles that may limit the success of the project.

Follow-up and evaluation indicators

- Diminution of human and material losses caused by climate disasters;
- Quantity of obtained data;
- Communication, information and education medium;
- Operationalisation of the coordination and disaster management structures;
- Degree of mobilisation of the communities around disaster management.

COST

USD 75,000

COMOROS

NAPA PRIORITY PROJECT 9

PROJECT SHEET NO. 10

INTRODUCTION OF FISH CONCENTRATION MECHANISMS (FCM)

SECTOR

Fisheries

RATIONALE

Oceanic temperature rises have led to high coral mortality. In 1997, the rise from 1 to 1,5°C of the sea water temperature in relation with the normal temperature (26 to 28°C) has provoked the bleaching and the death of almost 60% of the corals on all the islands, 80% of them on the reef plate and 60% at the level of the external slope. Between 1998 and 2005, the rate of the bleaching observed on 20 stations, which follow up the health status of the reefs is of about 10%. (AIDE, 2005). The situation is translated by a regular diminution of the catches and a progressive increase of the access cost. The lack of motorised boats (1500) in relation with the number of fishermen (8000) does not allow access to deep-sea fishing. The introduction of Fish Concentration Mechanisms (FCM) enables to set the fishing zones in order to increase the catches and therefore the availability of fish, in order to face chronic shortages aggravated by climate variability, particularly heavy rains and cyclones, which limit fishing. It also enables to reinforce the country's initiatives and regional cooperation in the fight against poverty and food insecurity.

ZONES OF INTERVENTION

Vanamboini, Ivoini, Itsoundzou, Chindini, Malé, Foumbouni (Grand-Comoro) ; Maraharé, Moya, Ouani (Anjouan) ; Hoani, Ndrondroni, Wallah (Mohéli)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Annual Action Plan on the Fisheries sector;
PRSP and PRGSP;
COMESA fishing programme;
Convention of the Tuna Commission of the Indian Ocean.

RECIPIENTS

Fishermen and fishing cooperatives, the population.

DESCRIPTION

Objective

To increase fish availability in order to allow communities to face the shortages of the resource aggravated by climate variability.

Activities

The activities will deal with:

- The locating of FCM anchorage points;
- Making and assembly of FCM;
- The setting-up and servicing of the FCM;
- Training and education of fishermen on FCM.

The implementation of the project will require the followings:

- Fish Concentration Mechanisms (FCS);
- Renting boats for the setting-up of FCS;
- Ecosounder and GPS;
- Bowls and coding.

Short term outputs

The aim of the project is to increase and improve the availability of fish, in order to allow communities to face the shortage of the resource aggravated by climate variability.

Long term outputs

The project will enable to reduce fishing pressure on the coast, and favour the reconstitution of demersal stocks, reduce risk of disappearance of fishermen at sea, in case of extremes of climate events, and reduce slow development which affects 44% of children. The project will contribute to reduce poverty and increase food security.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee in each island, under the supervision of the Island Ministry of Environment and the technical collaboration of the Directorate for fisheries resources and the national collaboration of the Union Ministry in charge of Environment.

Risks and Barriers

The cyclonic events, the narrowness of the continental shelf, the sea currents and the possible pulling up of FCS by ships could constitute risks for the success of the project.

Follow up and evaluation indicators

- Number of FCMs installed and serviced and the productivity of the boats;
- Reconstitution of demersal stocks;
- Reduction of losses of human lives at sea;
- Reduction of children slow development;
- Number of trained fishermen;
- Setting-up of a critical threshold and follow-up of the evolution of ……

COST

Total: USD 144,000

Obtained: USD 12,000

Amount to prospect USD 132,000

COMOROS

NAPA PRIORITY PROJECT 10

PROJECT SHEET NO. 13

SUPPORT TO EYE, MEDICAL AND SURGICAL CARE

SECTOR OF INTERVENTION

Health

RATIONALE

Over the past years, climate variability has brought about changes in the pathologies in the Comoros.

They remain dominated by communicable diseases, malaria, diarrhoeal diseases etc …There should be noted, however, the emergence of eye affections such as blinding cataract, favoured by the increase of the incidence of ultraviolet rays, following the destruction of the ozone layer.

According to some estimates, the prevalence of blindness in the Comoros rises by between 0, 6 and 0, 8%.

The number of people to be operated on for this disease would rise by between 3240 to 4320; the number of the partially sighted is estimated between 9720 and 1300 peoples. 2300 to 3050 individuals are currently waiting to be operated on, and 540 peoples become blind every year because of cataract, for a population of about 588 000 inhabitants.

Considering the geographic division of the islands, the majority of the population is not well provided at the ophthalmologic plan.

The setting–up of a mobile ophthalmic surgery unit to be placed at the disposal of this population in the islands proves to be necessary and indispensable in order to fight against blinding cataract.

ZONES OF INTERVENTION

The entire national territory.

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

National Health Programme, Poverty Reduction and Growth Strategy Paper, Programme of the Organisation for the Prevention of Blindness (POPB).

RECIPIENTS

Populations affected by blinding cataract.

DESCRIPTION

Objective

To reduce the rate of blinding cataract through surgical care, in favour of the populations which are not well served on the ophthalmologic plan, and increase care in favour of those who are affected by this disease.

Activities

- Setting-up a medical team;
- Ensuring basic training for the different categories of staff, in detecting cases requiring surgery and post surgery check-ups;

- Creating a mobile ophthalmic surgery unit;
- Detecting the cases requiring surgery;
- Informing and educating the population on the pathology.

Inputs

- Portable operating microscope;
- Autoclaves or sterilisers;
- Cataract surgical kit;
- Eyelid surgical kit;
- Intra-ocular lens implants;
- Mountain rolling stocks;
- Financial and human resources.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a specialised national NGO, the Organisation for the Prevention of Blindness in collaboration with the health districts.

Short term outputs

The aim of the project is to enable people affected by cataract to recover their sight, to increase the ability to intervene and improve patients' care.

Long term outputs

The aim of the project is to favour the promotion of eye care through the integration of its activities in the different medical centres, at the service of the population, which are not well provided with ophthalmologic cares.

Risks and barriers

The lack of enough trained personnel and the limited abilities in cataract surgical care are the predictable risks and obstacles that can undermine the project.

Follow-up and evaluation indicators

- Number of consultations per month and per centre;
- Number of peoples operated on cataract per month and per eye surgery centre;
- Number and percentage of intra ocular lens implants prescribed or distributed;
- Reduction of the curable blindness for the operated patients.

COST

USD 122,000

COMOROS

NAPA PRIORITY PROJECT 11

PROJECT SHEET NO. 11

SHORT CONSERVATION OF FISH UNDER ICE TO REDUCE LOSSES AFTER CATCHES, DUE TO HIGH TEMPERATURE

SECTOR

Fisheries

RATIONALE

The increase of temperature (1°C) provokes the deterioration at sea of about 30% of the catches. Moreover, the lack of means of conservation, from the unloading moment to the distribution of fish aggravates the deterioration of the quality of the product and diarrhoea diseases linked to the consumption of rotting fish.

This situation leads to considerable losses of income for the fishermen and reduces the availability of the resource on the market, thus affecting health.

The access to the product becomes more and more difficult particularly for the poorest due to its high cost (4,5 USD/kg), in the face of an incidence of 44,8% of the total poverty of the individuals.

The short conservation of fish under ice will contribute to preserve the quality of the fish, to reduce diseases and to increase tidal times, and therefore the catches. It will allow to reduce the problem related to the poor's access to the resource and to support the efforts made by the authorities to this end.

AREAS OF INTERVENTION

Vanamboini, Mitsamiouli, Bouni (Grand-Comoro); Nioumachioi, Fomboni, Wanani (Moheli) ; Domoni, Ouani, Sima (Anjouan)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Master plan on fishing
Annual Action Plan of the fishing sector,
PRSP and PRGSP
COMESA Fishing Programme
Convention of the Tuna Commission of the Indian Ocean

RECIPIENTS

Fishermen and women retailers; The fishing cooperatives; The population

DESCRIPTION

Objective

To ensure the refrigeration procedure, from the place of catches to the place of distribution, in order to reduce or avoid the deterioration of the fish after catches, because of temperature rises.

Activities

- The making of ice silos and isotherm trays;
- Assembly;

- Ice production;
- Supply of isothermal trays with ice;
- Training of fishermen and women retailers on the techniques of conservation under ice and the servicing of the machines;
- Dissemination of the conservation techniques.

Inputs

- Ice machines;
- Ice Silos and isothermal trays;
- 10 cm wide isotherm panels for the silos;
- Isothermal doors;
- Human resources
- Financial resources.

Short term outputs

The aim of the project is to reduce losses after catches, increase the availability of fish and ensure a good quality of the product, to improve fishermen income, health and access to the product by the destitute.

Long term outputs

The project will enable to ensure the availability of fish for a long period of the year and reduce shortages, in case of extreme s of climate events preventing fishing. The project will contribute to ensure food security, reduce poverty, and secure employment for fish women retailers who, most of the time, are heads of one-parent families and, to consolidate actors' know-how of the techniques for the conservation and hygiene. It will enable to reduce children slow development, the current rate of which is of 44%.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee in each island, under the supervision of the Island Ministry of Environment, with the technical collaboration of the Directorate for fisheries resources and the national coordination of the Union Ministry in charge of Environment.

Risks and Barriers

Frequent power cuts constitute factors that can limit the success of the project.

Follow-up and evaluation indicators

- Rate of the reduction of the losses after the catches
- Quality of the product sold on the market;
- Increase of the availability of fish on the market ;
- Increase rate of the fishermen income;
- Accessibility of the product by a larger number
- Degree of appropriation of the technique of conservation under ice
- Number of towns and fishermen who benefit from the services.

COST

Total: 336.000 USD

Obtained: 28.000 USD

Amount to prospect : 308.000 USD

COMOROS

NAPA PRIORITY PROJECT 12

PROJECT SHEET NO. 9

PRODUCTION OF PROVENDER FOR POULTRY FARMING

SECTOR

Poultry farming

RATIONALE

The geographic position of the Comoros predisposes the country to tropical cyclones. The evolution of climatic conditions has led to an increase of their frequency, moving from one cyclone every two years to an annual tendency since 1987. This situation, combined with the distance of the international markets and the high transportation costs, leads to sea links difficulties and is likely to aggravate food shortages, particularly meats, whereas the local production covers only 40% of the needs in animal proteins.

The production of provender favours the development of intensive poultry farming in order to reduce the shortages in animal proteins linked to the irregularity of boats, which are due, in their turn, to the increase of frequent extremes of climate events. It will enable to develop employment through production and marketing.

The creation of a provender production unit, although it will rely on imported raw materials (corn, Soya, mineral, vitamin and protein complements), will enable a competitive cost price compared to the local production of the same raw materials. Indeed, corn competes with the consumption needs of the population. The storage of imported raw materials will enable to reduce shortage risks linked to the disturbance of the sea and air links which are caused by cyclones or other extreme of climate events and will thus favour the continuous production of chicken and eggs.

ZONES OF INTERVENTION

Island of Ngazidja (for the supply of poultry exploitations in the three islands)

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Support Programme to Professional Organisations in the Comoros (PAOPAC);
Support Programme to the Development of Cattle-raising in the Comoros (PADEC);
Comoros Local Development Programme;
Arab Authority for Investment and the Development of Agriculture (AAIAD);
Poverty Reduction Strategy Paper (PRSP);
Special Food Security Programme (SPFS).

RECIPIENTS

The main recipients are the small poultry farmers; the unemployed; the population.

DESCRIPTION

Objective

To increase the production of chicken and eggs.

Activities

The main activities will deal with:

- Constitution of a national grouping of Comorian Poultry farmers (GNAC) from 3 existing groupings: Association of Comorian Poultry farmers (ASAVIC Ngazidja), Union of Groupings of Anjouanese Poultry farmers (UGAA) and the Association of Producers of Poultry farming of Mwali (ASPAVIM);
- Construction of a provender unit;
- Purchase and installation of equipments;
- Training of technical staff;
- Launch of the production.

The implementation of the project will require the following inputs:

- Infrastructure;
- Equipments;
- Training;
- Acquisition of the first stock of raw materials;
- Financial resources.

Short term outputs

The aim of the project is to ensure the availability of the necessary food for poultry farming (eggs, meat and poultry) and to reduce the risks of shortages related to the disturbances of sea links by the extremes of climate events, which have become more frequent.

Long term outputs

The project will allow to improve the productivity of intensive poultry farming and the supply of eggs, meat and poultry to the population. It will also enable to develop proximity jobs, fight poverty and reduce children slow development and difficulties for the poorest to have access to animal proteins.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee in each island, in partnership with the groupings of poultry producers under the supervision of the island Ministry of Environment, and under the technical supervision of the Department of Cattle-raising, in collaboration with NGOs specialized in the sector, under the national coordination of the Union Ministry of Environment.

The possible degradation of climate conditions can lead to delays in the supply of raw materials and reduce poultry production. The weaknesses of the country in mobilizing costs could also constitute an obstacle to the realization of the project.

Follow-up and evaluation indicators

- Quantity of produced provender;
- Level of local production compared to imports;
- Quantity of meat and chicken produced every year;
- Number of poor households with access to poultry products.

COST

USD 90,000

COMOROS

NAPA PRIORITY PROJECT 13

PROJECT SHEET NO. 8

FODDER PRODUCTION FOR GOAT BREEDING

SECTOR

Cattle-raising

RATIONALE

Early and prolonged droughts accelerate soils degradation and lead to the diminution of the quantity and the deterioration of the quality of fodder as well as to changes in the areas of geographic distribution of a certain number of fodder species, in response to the evolution of climatic conditions. Moreover, in some regions, the unreasonable use of the wood and plant cover (intensive cut of leafy branches, logging for the reinforcement of fences) has accentuated the degrading of pastures and soils.

This situation particularly affects goat breeding which constitutes the main source of income for the peasants and makes more and more difficult the access to meat, particularly for the poorest.

The increase of the quantity and quality of fodder enables to improve the productivity of traditional intensive and extensive breeding in the villages.

This action also allows to protect the woody and herbaceous covers of the existing pastures, regenerate degraded soils and limit the physical degradation of sloppy soils through the defence and a reasonable management of pastures, trees and small fodder trees plantations (leguminous and others) around the goats pen enclosures, and parcel of fodder grasses.

ZONES OF INTERVENTION

Island of Ngazidja: Hambou region;
Island of Ndzuwani : Kangani and Pomoni;
Island of Mwali: Itsamia.

LINKS WITH ONGOING OR PROJECTED PROGRAMMES AND MULTILATERAL AGREEMENTS

Support programme to the development of cattle-raising in the Comoros (PADEC);
Comoros Local Development Programme;
Arab Authority for Investment and Agricultural Development (AAIAD);
Poverty Reduction Strategy Paper (PRSP);
Special Food Security Programme (SFSP).

RECIPIENTS

The main recipients are the small goat breeders and the population, to whom goat meat will become cheap and have better quality.

DESCRIPTION

Objective

To increase the availability of fodder and improve the quality of the pastures as well as the productivity of goat breeding.

Activities

The main activities will deal with:

- Constitution of groupings of goats breeders exploiting the same pasture ;
- Training of goat breeders to the techniques of defence and reasonable management of community pastures;
- Plantation of fodder trees around the goats pen enclosures and in the natural pastures;
- Seedbed of improved fodder grains in the natural pastures to be regenerated.

The implementation of the project will require the following inputs:

- Plant materials (tree stumps, fodder grains, plants, cuttings);
- Set of tools;
- Trainers;
- Human resources.

Short term outputs

The aim of the project is to increase the quantity of fodder and improve its quality, which are affected by the modifications of climatic conditions. It will also enable to improve the productivity of goats breeding, in order to reduce difficulties by the poor populations to have access to animal proteins.

Long term outputs

The project aims at limiting the impact of climate variability on goats breeding through the regeneration of degraded soils, the fight against erosion and the disappearance of plant cover. It will enable to increase farmers' income and food security and to reduce children slow development and dependency towards imports.

IMPLEMENTATION

Institutional arrangement

The project will be carried out by a multisectoral pilot committee in each island in partnership with the groupings of goat producers, under the supervision of the island Ministry of Environment and the technical supervision of the Department of cattle-raising, in collaboration with NGOs specialised in the sector, under the National Coordination of the Union Ministry of Environment.

Risks and Barriers

The possible degradation of climate conditions can limit the regeneration of pastures; the strong demand in goat meat is likely to lead breeders to neglect the reasonable management of the pastures, because of immediate and significant gains. As the joint management of pastures between breeders is a little bit common, it might bring about difficulties as for the reasonable management of the pastures.

Follow-up and evaluation indicators

- Number of acres of the regenerated plant and woody cover;
- Quantity and quality of the available fodder;
- Number of goats produced every year;
- Number of trained breeders.

COST

USD 100,000