

ANNEX 1

CLIMATE CHANGE VULNERABILITY, ADAPTATION AND MITIGATION

SUSTAINABLE ENERGY PROGRAMME FOR THE CARICOM MEMBER STATES Programme Outline

Justification

Protection from vulnerability and adaptation to the adverse effects of climate change, as well as mitigation of harmful emissions generated by energy utilization, are priorities established by the governments of the CARICOM Member States. Energy however is a key driver of economic growth, with a significant bearing on education, environment, health and social welfare. Thus, energy and sustainable development need to be integrated and prioritized in national strategic development plans. The CARICOM Member States recognize the need to develop and realize a significant transition to sustainable energy, as well as to pursue a joint regional effort for energy development towards sustainable energy solutions.

To this end, the Sustainable Energy Programme to be funded by the Italian Government intends to strengthen the national energy infrastructure through the development of the local renewable energy potential and to ensure increased access to energy services of the islands' population. The programme shall be community-based and implemented with the involvement and support of the communities, in order to ensure long-term sustainability.

Sub-Programmes

The activities are articulated in the following five sub-programmes. All the activities shall be carried out in the Caribbean States with local participation, as applicable.

1. Development of climate change adaptation measures

The Caribbean region is one of the sites of the most intense and important climate variations that have consequences that impact the whole planet, and is the site of special vulnerability for the small island community and states. The islands are vulnerable to long term climate change, especially sea level rise, land degradation and changes in the intensity, distribution and prevalent paths of tropical cyclones. The sub-programme shall include:

- Assessment of current and future climate changes in the tropical cyclones distribution, intensity and frequency;
- Experimental dynamical seasonal forecasts;
- Expansion of the periodic bulletin of climatic information for small islands – the "Island Climate Update" – to include more information and adding a special "Yearly Climate Assessment" of climate change in the region;

- Setup and strengthen early warning systems.

2. Identification, implementation, reporting and assessment of the Intended Nationally Determined Contributions

3. Assessment of energy requirements and strengthening of energy policies and action plans

- Technology assessment of energy requirements and infrastructure in the mid-and long-term and of the most appropriate renewable energy mix capable of meeting those needs.
- Advice and technical assistance for the development of sustainable transport technologies, including non-motorized solutions, in order to reduce pollutants and GHG emissions.
- Development of human resources specialized in the planning, implementation and management of energy policies, strategies and plans.
- Strengthening the participation of all actors in the design and implementation of renewable energy policies and practices, in particular of rural women.
- Strengthening national capacities for the development of national and regional energy markets, as well as of the appropriate financial instruments.
- Improving the policy measures and a sound regulatory framework.
- Energy Data collection and analysis.

4. Rural Electrification

There is a pressing need to increase access to electricity for lighting, water pumping, telecommunications, medicine cold storage, etc., especially in Haiti's island and remote communities.

- The photovoltaic technology – new installations and rehabilitation of existing facilities – is considered the most suitable technology in those islands where solar energy is the most abundant renewable source;
- other renewable energy technologies – such as mini hydro and wind – shall be developed in accordance with the local potential.

5. Development of renewable energy sources

The Caribbean region has a considerable potential for a variety of renewable sources – biomass, geothermal, hydro, solar, tide, waves and wind. According to each country priorities, the programme shall include the following activities:

- Investigation of the renewable potential.
- Photovoltaic stand-alone electrification in urban areas.
- Photovoltaic integration into the national grid.
- Wind energy data collection and resource assessment.
- Biogas from household waste and waste management.
- Assessment of the geothermal, tidal and wave power generation potential.
- Small Hydropower resource assessment.

ANNEX 2

CLIMATE CHANGE VULNERABILITY, ADAPTATION AND MITIGATION

CLIMATE CHANGE ADAPTATION PROGRAMME FOR THE CARICOM MEMBER STATES Programme Outline

I. CLIMATE CHANGE ADAPTATION

Justification

The SAMOA Pathway calls for support to the efforts of vulnerable countries for building resilience to the impacts of climate change and improving their adaptive capacity, through the design and implementation of climate change adaptation measures appropriate to their respective vulnerabilities and economic, environmental and social situations. As it is well known, climate change increases the vulnerability to and the impact of natural occurrences, such as severe weather phenomena, as well as of anthropogenic activities, such as the unsustainable use of natural resources that causes ecosystem degradation and biodiversity loss.

The Climate Change Adaptation Programme aims therefore at 1) Supporting Disaster Risk Reduction efforts of the CARICOM Member States as a means to decrease their vulnerability to the impact of severe weather occurrences and sea level rise, and increase their capacity to adapt to increasingly extreme situations caused by climate change; 2) Supporting protection and conservation of marine and terrestrial ecosystems and biodiversity as a means to increase the resilience of the CARICOM Member States to the negative impact of anthropogenic activities that are made more severe by climate change.

Sub-Programmes

It is foreseen that the activities articulated in the two sub-programmes below will be carried out in all the CARICOM Member States participating in the programme, as applicable.

II.1 Sub-Programme for Disaster Risk Reduction

One of the most damaging consequences of climate change is the sea level rise, which in recent years has been shown to occur at alarming rates. The Caribbean region is subject to this as well as to other special vulnerabilities, due to intense and important climate variations that have consequences that impact the whole planet, such as long term changes in the intensity, distribution and prevalent paths of tropical cyclones and other extreme weather phenomena. The sub-programme will be consistent with the basic tenets of the Sendai Framework for disaster risk reduction 2015 – 2030 and will include:

- Development of measures to adapt to sea level rise;
- Strengthening early warning systems through collection, analysis, management and use of relevant data, including preparation of risk maps, on the evolution of

weather phenomena and their impact on ecosystems at the social and spatial scale;

- Strengthening disaster risk governance and national capacities for disasters prevention, mitigation, preparedness, response, recovery, and rehabilitation, and fostering collaboration and partnership across mechanisms and institutions for the implementation of instruments relevant to disaster risk reduction and sustainable development;
- Enhancing the resilience of national health systems, including by integrating disaster risk management into health care systems, especially at the local level;
- Development of contingency plans for risk management due to natural disasters;
- Development of adaptation measures for critical facilities, such as schools and hospitals;
- Development of new building codes, rehabilitation and reconstruction practices and standardized building materials;
- Increasing resilience of new and existing critical infrastructure, including water and sanitation, transportation and telecommunications infrastructure.

II.2 Sub-Programme for the Protection and conservation of marine and terrestrial ecosystems and biodiversity

The SAMOA pathway has recognized that the Pacific SIDS have extraordinary marine and terrestrial biodiversity which is fundamental for their livelihood and identity, and noted that this valuable biodiversity and the ecosystem services it provides are at grave risk also due to climate change. Furthermore, the Sustainable Development Goal 14 and its targets have highlighted the fact that the reduction of marine pollution of all kinds (which include invasive species), the sustainable management, protection and restoration of marine and coastal ecosystems, the regulation of ocean resources harvesting and the end of overfishing are key to maintaining healthy and productive oceans for the benefit of millions of people and future generations. In this context the sub-programme will include:

- Development of conservation measures for coastal and marine areas affected by the negative impacts of climate change, especially those that are particularly significant for their biodiversity and for providing ecosystem services;
- Strengthening the national managerial and organizational capacity as well as governance in the areas of protection and conservation of marine biodiversity;
- Development of protected areas;
- Development of programmes and projects that enhance ecosystem resilience and increase the contribution of biodiversity to carbon stocks through conservation and restoration measures;
- Development of measures to minimize and address the impacts of ocean acidification and invasive species.

The sub-programmes, wherever possible, will be community-based and implemented with the involvement and support of the communities so as to ensure long-term sustainability.

