

CARICOM's Implementation Plan for the Regional Framework for Achieving Development Resilient to Climate Change (2011 - 2021)

**Joseph McGann
Project Coordinator**

SECTOR: AGRICULTURE

OBJECTIVE: Limit The Adverse Effects of A Changing Climate on Agriculture and Food Security

| Outcomes | Elmt. and Goal | Program Project Activity | Activity Level | Lead Agency Collaborators | Country or Location | Time-frame | Estimated Cost (US\$,000) |
|---|----------------|---|----------------------|--|-------------------------------------|--------------|---------------------------|
| Adequate food supplies being produced to meet the region's food and nutrition needs by 2021 | 1.2 | Prepare and implement agriculture sector adaptation strategies for selected countries learning from the Guyana experience | National | CCCC CARDI Ministries of Agric. | OECS countries Jamaica Belize | 2011 to 2014 | |
| | 4 | Varieties of drought and temperature tolerant or resistant of corn, rice, grain legumes and root crops (yams, potatoes, dasheens, etc.) developed for commercial use by 2017 | Regional | CARDI, UWI Natl. Res. Agencies Ministries of Agric. UWI Private sector | All countries | 2011 to 2017 | |
| | 4 | Indigenous and other breeds of cattle, pigs, goats and poultry that are heat tolerant and more feed efficient will be researched and introduced to commercial meat, milk and egg production by 2020 | Regional National | CARDI, UWI Natl. Res. Agencies Ministries of Agric. Private sector | All countries | 2011 to 2017 | |
| | 4 | Grass and grain and forage legume species developed and made available to farmers to complement livestock meat, milk and egg production | Regional National | CARDI, UWI Natl. Res. Agencies Ministries of Agric. Private sector | All countries | 2011 to 2021 | |

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| Adequate food supplies being produced to meet the region's food and nutrition needs by 2021 | 4 | Fiscal and other policies and incentives are enacted and implemented to allow farmers and the private sector to invest in agriculture and food production in the region without infringement of international trade regulations | Regional National | CARICOM Sec. Ministries of Agric. Ministries of Fin. Ministries of Econ. Ministries of Trade, CAIC Farmers organs | All countries | 2011 to 2016 | |
| | 4 | Nutritious and wide variety of products developed through food science and nutrition research supported by governments, the private sector and universities | Regional National | CARDI, UWI, CFNI Natl. Res. Agencies Ministries of Agric. Private sector | All countries | 2011 to 2021 | |
| | 4 | Public awareness and outreach on food, nutrition and health in the climate change context conducted through the region | Regional National | CARDI, CANARI, Ministries of Agric. Private sector CBOs, NGOs | All countries | 2011 to 2021 | |
| | 4 | Develop and implement strategy to secure (store) food supplies for use during low production periods and natural and other disasters throughout the region | Regional National | CARICOM Sec. OECS Sec., CARDI Line Ministries Private sector CBOs, NGOs | Antigua St. Lucia Belize Guyana Trinidad Jamaica | 2011 to 2016 | |

SECTOR: WATER

OBJECTIVE: Limit The Adverse Effects of A Changing Climate on Water Resources

| Outcomes | Elmt and Goal | Program Project Activity | Activity Level | Lead Agency Collaborators | Country or Location | Time-frame | Estimated Cost (US\$,000) |
|--|---------------|--|----------------|--|----------------------------|--------------|---------------------------|
| Water policies and strategies in place for prudent management of water resources | 2.1 | Assessment, quantifying and mapping of ground water resources in CARICOM member states | National | Ministries of Agric. Ministries of Water Ministries of NRM Natl. Water Agencies Private sector | All countries | 2011 to 2017 | |
| | 2.1 | Vulnerability and capacity assessment of the impacts of CC on water in selected countries of the OECS and Barbados | National | Natl. Water Agencies Ministries of Water Ministries of Agric. Private sector | OECS countries Barbados | 2011 to 2017 | |
| | 1.2 2.1 | Prepare and implement water sector adaptation strategies for the selected countries | National | Natl. Water Agencies Ministries of Water Ministries of Agric. Private sector | OECS countries Barbados | 2011 to 2021 | |
| | 2.1 | Develop IWRM strategies and establish water resources management agencies where necessary | National | Ministries of Agric. Ministries of Water Ministries of NRM Natl. Water Agencies Private sector | All countries | 2011 to 2016 | |

SECTOR: FORESTRY

OBJECTIVE: Use of forests to support sustainable development while reducing GHG emissions

| Outcomes | Elmt and Goal | Program Project Activity | Activity Level | Lead Agency Collaborators | Country or Location | Time-frame | Estimated Cost (US\$,000) |
|---|---------------|---|----------------|--|---|--------------|---------------------------|
| Policies and legislation are based on scientific assessments | 5.1 | Development and utilization of management plans to guide protection/conservation, harvesting, processing and marketing of goods and services produced by forests and protected areas | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| Protocols and manuals are used as part of management plans to guide operations within forests and protected areas | 5.1 | Protected areas mapped and demarcated using GPS aided surveys and boundaries gazetted and made permanent | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| | 5.1 | Enact legislation as necessary to support implementation of management plans | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| | | | | | | | |

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| Policies and legislation are based on scientific assessments | 1.3 5.2 | Information sharing and coordination between countries at COP MOP on CDM, REDD plus and other forest related initiatives | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2012 | |
| Protocols and manuals are used as part of management plans to guide operations within forests and protected areas | 5.2 | Selected countries will develop country specific positions to support a joint platform for negotiations on the forest agenda | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2016 | |
| | 5.2 | Pursue common resource mobilization strategy based on an integrated REDD plus program for the Caribbean | National | Natl. Forest Agencies Ministries of Agric. Ministries of NRM Private sector NGOs, Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| | 5.2 | Participate in the carbon trade market through the development and implementation of CDM forest projects | Regional National | Natl. Forest Agencies Ministries of Finance Ministries of NRM Private sector NGOs | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |

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| Value added to timber through production and processing of wood products in-country | 5.1 | Policies and legislation in place to prevent or reduce the export of logs | National | Natl. Forest Agencies Ministries of NRM Ministries of Finance Ministries of Trade Private sector | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| | 5.1 | Investments made in transformation of logs into wood, furniture and other products | National | Natl. Forest Agencies Ministries of NRM Ministries of Finance Ministries of Trade Private sector | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| Research programs in place to support forest and protected areas management | 5.3 | Quantitative determinations of carbon stocks and their economic valuation to support carbon trading and other investment opportunities | National | Natl. Forest Agencies Ministries of NRM Ministries of Finance Ministries of Trade Private sector | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |
| | 5.3 | Expanded laboratory research into medicinal plants for pharmaceutical and other purposes | Regional | UWI National Universities | Guyana Suriname Belize Dominica Jamaica | 2011 to 2021 | |

SECTOR: Coastal Zone and Marine

OBJECTIVE: Limit The Adverse Effects of A Changing Climate on Coastal and Marine Resources

| Outcomes | Elmt and Goal | Program Project Activity | Activity Level | Lead Agency Collaborator | Country or Location | Time-frame | Estimated Cost (US\$,000) |
|--|----------------------|---|------------------------------|--|---|---------------------|----------------------------------|
| Coral reef research programme institutionalized and providing data to guide scientific research by 2021 | 1.1 | Network of Coral Reef Early Warning Systems (CREWS) established and functioning in selected countries. In addition to Jamaica stations are to be installed in Belize, Barbados, Tobago and Saint Lucia | Regional | CCCC NOAA CMS/UWI University of Belize CZM Agencies | Jamaica Belize Barbados Trinidad St. Lucia | 2011 to 2021 | 1,000 |
| | 1.1 | Coral reef monitoring in OECS countries and Tobago institutionalized between CMS and national agencies | Regional National | CMS/UWI National Agencies Ministries of Agric. Ministries of Fisheries | OECS States Tobago | 2011 to 2021 | |
| Increased output of peer reviewed and published research for contribution to teaching of climate science and to IPCC use | 1.1 | Implementation/institutionalization of coral reef research programme at the CMS and CERMES | Regional National | CMS/UWI CERMES/UWI | Jamaica Barbados | 2011 to 2021 | 300 |
| | 1.1 | Continued research in coral nursery to identify species that are adaptive to warming sea temperatures in selected countries | Regional National | CARICOM Sec. Ministries of Agric. Ministries of Fin. Ministries of Econ. Ministries of Trade, CAIC Farmers organs | Regional | 2011 to 2016 | |

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| Coral reef research programme institutionalized and providing data to guide scientific research by 2021 Increased output of peer reviewed and published research for contribution to teaching of climate science and to IPCC use | 1.1 | CERMES provided institutional support (building and equipment) to allow for expansion of teaching and research functions. | Regional | CERMES/ UWI | Regional | 2011 to 2021 | 300 |
| | 1.1 | Development of new research and teaching areas alternate energy, waste management, resource economics and GIS/remote sensing by CERMES | Regional | CERMES/ UWI | Regional | 2011 to 2021 | |
| | 1.1 | ERI University of Belize provided institutional support (building and equipment) to allow for expansion of teaching and research functions. | National | ERI/UB | Belize | 2011 to 2021 | 300 |
| | 1.1 | Development of new research and teaching areas alternate energy, waste management, resource economics and GIS/remote sensing by CERMES | Regional | CERMES/ UWI | Regional | | |

SECTOR: Energy

OBJECTIVE: Reduce GHG emissions through the promotion and use of renewable and alternative energy sources

| Outcomes | Elmt and Goal | Program Project Activity | Activity Level | Lead Agency Collaborator | Country or Location | Time-frame | Estimated Cost (US\$,000) |
|---|----------------------|--|-----------------------|--|----------------------------|---------------------|----------------------------------|
| Renewable energy provides up to xx percent of energy supply in CARICOM countries as group by 2021 | 3.1 | Hydro in Guyana at Amaila Falls to generate 154 MW | National | Govt. of Guyana Sithe Global LLP IDB China Dev. Bank Private sector | Guyana | 2011 to 2017 | 650,000 |
| | 3.1 | Bio-fuels project (sugar cane) | National | Guyana Energy Agency | Guyana | | |
| | 3.1 | Hydro in Suriname | National | | Suriname | 2011 to 2017 | |
| | 3.1 | Co-generation in Surinam | National | | Suriname | 2011 to 2021 | |
| | 3.2 | Expansion of wind farm in Jamaica | National | PIOJ Private sector | Jamaica | 2011 to 2021 | |
| | 3.1 | Sustainable energy project in Barbados (IDB funded) | National | Govt. of Barbados | Barbados | 2011 to 2021 | |
| | 3.3 | Solar for government buildings in Belize | National | Govt. of Belize | Belize | 2011 to 2021 | |

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| Policies and legislation in place to remove barriers and promote investment in renewable and alternative energy | 3.1 | Review of current legislation, policies and agreements that limit or restrict investment in or the use of renewable energy technologies | Regional | CARICOM Sec. OECS Sec., CARDI Line Ministries Private sector CBOs, NGOs | Regional All countries | 2011 to 2012 | |
| | 3.2 | | National | | | | |
| | 3.3 | | | | | | |
| | 3.4 | | | | | | |
| | 3.5 | | | | | | |
| | | Enable legislation to promote use of and investment in renewable energy | National | Ministries of Energy. Ministries of Finance Ministries of Econ. Ministries of Trade Private Sector | All countries | 2012 to 2016 | |
| | 3.1 | Finalization and adoption of the CARICOM Energy Policy Review/update/develop and approve national energy policies focusing on increased efficiency and increased use of renewable and alternatives | Regional | CARICOM Sec. | Regional All countries | 2011 to 2012 | |
| | 3.2 | | National | Ministries of Energy. Ministries of Finance Ministries of Econ D Private sector Regulators | | | |
| | 3.3 | | | | | | |
| | 3.4 | | | | | | |
| 3.5 | | | | | | | |
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OBJECTIVE: Expanded knowledge base to support planning, policies and decision making
 Build partnerships with international development partners for financial resource mobilization to execution of the Implementation Plan

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|----------|---------------|---|----------------|---------------------------------------|---------------------|--------------|---------------------------|
| | 1.1 | Meteorological service support: Equipment and technical assistance provided to national meteorological services to ensure production of meteorological data to support climate modeling, etc. | Regional | CCCCC CIMH National governments | All countries | 2011 to 2021 | |
| | 1.2 | Sector vulnerability assessments: Sector specific vulnerability and capacity assessments conducted in all countries to support development of sector adaptation strategies. | Regional | CCCCC National governments | All countries | 2011 to 2016 | |
| | 1.3 | Climate change negotiations: Support provided to develop harmonized policies and positions for expanded participation of all countries in UNFCCC and other climate change related negotiations. | Regional | CCCCC National governments | All countries | 2011 to 2021 | |

