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SUPPORTING THE IMPLEMENTATION AND REVISION OF AGRICULTURE DISASTER RISK MANAGEMENT (ADRM) PLAN IN DOMINICA

February 2022

SDGs:



Country:

Dominica

Project Code:

TCP/DMI/3702

FAO Contribution:

USD 196 000

Duration:

15 October 2018 – 14 October 2021

Contact Info:

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Implementing Partners

Caribbean Agricultural Research and Development Institute (CARDI); Climate Resilience Executing Agency of Dominica (CREAD); Dominica Meteorological Service (DMS); Inter-American Institute for Cooperation on Agriculture (IICA); Ministry of Blue and Green Economy, Agriculture and National Food Security (MoBGEANFS); Ministry of Planning, Economic Development, Climate Resilience, Sustainable Development and Renewable Energy; United Nations Development Programme (UNDP).

Beneficiaries

Crop and livestock farmers; fishermen; Ministry of Blue and Green Economy, Agriculture and National Food Security (MoBGEANFS); National Emergency Management Office (NEMO).

Country Programming Framework (CPF) Outputs

Commonwealth of Dominica CPF 2016-2019. Priority Area 2: Risk management, building resilience to climate change and ecological sustainability.



BACKGROUND

Dominica is recurrently threatened by severe natural hazards and disasters, due to its topography and location in the hurricane belt, and because of its mountainous terrain, farming is mainly practiced on steep slopes. Tropical storms often cause high crop losses, landslides and severe soil erosion, as well as nutrient leaching, which in turn results in low soil fertility and low productivity. As the frequency of extreme weather events continues to grow in the Caribbean additional support and preparation is needed to help prevent and mitigate potential damages to the agriculture as well as to other sectors in Dominica.

Following the signing of the Comprehensive Disaster Management Act in 2013, the Ministry of Blue and Green Economy, Agriculture and National Food Security (MoBGEANFS) developed, with the technical support of FAO, its first Agriculture Disaster Risk Management (ADRM) Plan. The ADRM Plan was designed to improve the resilience of agricultural livelihoods, with a specific focus on:

- strengthening the technical capacities and institutional frameworks for disaster risk reduction (DRR) within the agriculture sector, while concurrently fostering efficient and effective restoration of livelihoods through a well-coordinated mechanism;
- improving decision-making and coordination for an enhanced disaster risk management (DRM) among stakeholders at international, national, regional and local levels; and
- establishing a sustainable mechanism for integrated financial resource mobilization that facilitates continued implementation of DRM activities.

With the previous ADRM Plan ending in 2019, the Government of Dominica requested FAO to support in its updating, while also developing an Integrated Mobilization Financial Strategy (IMFS) together with a Hurricane and Storm Preparedness Response Plan (HSPRP). FAO had previously provided support to the MoBGEANFS in developing the ADRM Plan for 2014-2019 and is familiar with the national context of Dominica.

This FAO project was implemented through a close collaboration with several partners, including CARDI, CREAD, IICA, NEMO and UNDP, in order to ensure a coherent integration of the gender dimension and other important aspects of disaster risk reduction and management at sectoral, policy and legislative levels.

The project aligned with the Dominica CPF. It also contributes to some degree to the previous and current Multi-Country Sustainable Development Cooperation Framework (MSDCF) for the English- and Dutch-speaking Caribbean (2022-2026) that aims at strengthening the resilience of food systems, enhancing data capacity for supporting evidenced-based policies and programming on disaster risk management and climate change adaptation and strengthening capacities to develop and implement resilience mechanisms for disaster and climate risk management.



IMPACT

Through its support in ensuring the Government of Dominica has the institutional tools for an enhanced disaster risk management, this FAO project contributed to mitigating and reducing the risk of crop damage and food loss due to natural disasters.

By protecting the livelihoods of farmers and ensuring sustainable food production systems, this project is in line with the second Sustainable Development Goal (SDG 2) that aims at ending hunger by 2030. By strengthening resilience and adaptive capacity to climate-related hazards and natural disaster and improving human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning, this project contributes to SDG 13, which aims at taking urgent action to combat climate change and its impacts.

ACHIEVEMENT OF RESULTS

The project focused on updating the pre-existing ADRM Plan and integrating the identified new priorities into the work plan of the Government of Dominica. An iterative and multistep review process involving different stakeholders allowed for the design of an updated version of the ADRM Plan and its alignment to the Sendai Framework for Disaster Risk Reduction, the Agriculture and Food Systems Transformation Roadmap (AFSTR) and the relevant SDGs. The revised ADRM Plan was disseminated among the participant organizations (CARDI, CREAD, IICA and NEMO) for final review and subsequent implementation, and follow-up actions were identified.

Before the start of the project, it appeared that an Integrated Financial Mobilisation Strategy (IFMS) was a necessary tool to finance the ADRM Plan. However, a government-launched AFSTR process induced a significant change in the overall framing of agriculture resilience and DRM priorities, which redefined the position of the ADRM Plan as a complementary instrument and thus decreased the need for a dedicated IFMS. Therefore, detailed resource and budget requirements for the ADRM Plan were drafted and will be included in the Transformative Agriculture Roadmap resource mobilization plan, which will act as a broader IFMS for the whole agriculture sector in the country. This change, which also includes an institutional restructuring of the MoBGEANFS, altered the project's goal from establishing an ADRM committee. As such, an ADRM working group was formed instead and the coordinator for MoBGEANFS' DRM and Climate Change Adaptation was appointed as a focal point for the project.

Finally, the project allowed for the preparation of a Hurricane and Storm Preparedness and Response Plan for farmers, livestock keepers and fishermen. This plan, which focuses on the actions the different agriculture sector actors are required to carry out, was endorsed to the MoBGEANFS via a final review workshop in November 2021. With the participation of the Ministry officers from the crops, livestock, and fisheries sub-sectors, a tabletop exercise was conducted and enabled, through interactive discussion-based exercises and the assignments of roles and responsibilities, the analysis of an emergency scenario and review of the developed response procedures.

The project was dynamically adjusted to support the evolving needs of the country, such as the need for a broader sector resilience roadmap and the Ministry's priority to access geospatial technologies and tools for agriculture, and to ensure the project interacted with other FAO and non-FAO projects and initiatives.

It also allowed for the creation of a new partnership with CREAD and strengthened partnerships with other development institutions, such as the Caribbean Agricultural Research and Development Institute, the Inter-American Institute for Cooperation on Agriculture and UNDP.

IMPLEMENTATION OF WORK PLAN AND BUDGET

Movement restrictions and lockdowns imposed to fight the spread of the COVID-19 caused delays in the implementation of the project, particularly during the first six months of the pandemic (April to September 2020). Nevertheless, the organization of virtual workshops, meetings and trainings helped to alleviate the impact of these limitations and to implement the planned activities. However, the training of ministry personnel on the use of drones and related mapping tools could not be carried out virtually; hence, the project was extended to allow for face-to-face training. A no-cost extension also allowed for the repurposing of some financial resources, originally allotted for travel and trainings, to fund other ADRM priorities related to building capacities for and accessing geospatial tools and technologies, such as drone mapping, satellite mapping and participatory geographic information systems (GIS) to the benefit of the MoBGEANFS.



FOLLOW-UP FOR GOVERNMENT ATTENTION

The ADRM Plan and Hurricane and Storm Preparedness and Response Plan are pending approval. While the AFSTR is undergoing a final review, the ADRM and Hurricane and Storm Preparedness Plans (or parts thereof) can be used as living, operational documents as numerous actions in these plans are aligned with existing core functions of the MoBGEANFS.

In order to ensure the sustainability of the Hurricane and Storm Preparedness and Response Plan, the Pre-Disaster Assessment Forms and Post-Disaster Assessment Forms annexed in the plan need to be digitalised, pre-tested and updated accordingly.

Additional capacity-building activities at different levels on disaster preparedness and disaster impacts and needs assessment are also needed. These include trainings of Ministry officers and staff on the latest approaches and methodologies to disaster impacts and needs assessments in line with the Caribbean Damage Assessment and Needs Analysis (DANA) Continuum. Farming and fishing communities also need to be trained on disaster preparedness measures, including actions that can be taken to reduce livelihood damages and losses as well as how to collect pre-disaster and post-disaster information at farm and household levels that can aid in disaster needs and impacts assessment.

SUSTAINABILITY

1. Capacity development

A broader capacity-building programme was carried out through workshops and trainings, facilitated by learning-by-doing and knowledge sharing approaches. The project also strengthened the capacity of MoBGEANFS' technical and extension personnel on integrating ADRM measures, such as risk prevention and mitigation, disaster preparedness, and emergency response and recovery, into their work plan. In total, 60 participants from MoBGEANFS and partner institutions benefited from the various workshops and trainings.

Upon the request of the government, the project also supported the capacity building of specific ADRM work priorities, including the establishment and training of a drone mapping and GIS team. Training topics included courses on basic unmanned aerial systems (UAS) operations, advanced UAS operations management, basic GIS for agriculture and participatory GIS.



2. Gender equality

Training activities were carried out to ensure a gender balance, where possible, among the beneficiary groups from both the public and private sectors. The UNDP also assisted with the review of the gender dimensions of the ADRM Plan and Hurricane Preparedness and Response Plan.

3. Environmental sustainability

The project recognised the importance of natural resource management as an approach to reduce underlying risks and vulnerabilities caused by environmental degradation. The principles of natural resource management were thus incorporated into the ADRM Plan and the Hurricane and Storm Preparedness and Response Plans to ensure that actions taken do not create or exacerbate already existing natural resource and environmental challenges. This was done primarily through:

- the establishment and expansion of terrestrial and marine protected areas;
- the promotion of sustainable livelihood activities in key ecological zones through the application of ecosystems and community-based NRM approaches;
- the building of capacities to enable the use of Environmental Impact Assessment principles and tools to inform land development and physical planning decisions as well as private sector developments in agriculture; and
- the development of a programme to strengthen conservation and management of genetic resources in the agriculture sector.





4. Technological sustainability

Drawing on the experience of FAO in other countries and the Organization’s very strong engagement in the global discourse on resilience, the project provided a number of new technical solutions. Tools and technologies, such as drones and user-friendly cutting-edge geospatial analysis software, were introduced and embedded by national institutions. The project was able to quickly and effectively respond to the request of the government to facilitate the introduction and institutionalization of these tools and technologies. Finally, capacity building of the staff concerning these new technologies will ensure their sustainable use.

The close involvement shown by the main stakeholders in all activities will ensure that the outcome and impact of this project are sustainable. The hands-on participatory approaches used in the execution of key activities will ensure credible and robust planning, decision-making and implementation.

DOCUMENTS AND OUTREACH PRODUCTS

Documents

- ❑ **MoBGEANFS.** 2022. Dominica. Agriculture Disaster Risk Management Plan (2021/22 to 2030).
- ❑ **MoBGEANFS.** 2022. Dominica. Hurricane and Storm Preparedness and Response Plan.

Outreach materials

- ❑ **FAO, MoBGEANFS and Marine Spatial Information Solutions (MarSIS) Inc.** 2022. Barbados and Dominica. Advanced agricultural UAS mapping and monitoring (Training curriculum and materials).
- ❑ **FAO, MoBGEANFS and MarSIS.** 2022. Barbados and Dominica. Advanced UAS and GIS analysis (Advanced P-UAS) (Training curriculum and materials).
- ❑ **FAO, MoBGEANFS and MarSIS.** 2022. Barbados and Dominica. Basic participatory UAS and GIS analysis (Basic P-UAS) (Training curriculum and materials).
- ❑ **FAO, MoBGEANFS and MarSIS.** 2022. Barbados and Dominica. Introduction to UAS flying and mapping for agriculture (Training curriculum and materials).
- ❑ **FAO, MoBGEANFS and (MarSIS).** 2022. Barbados and Dominica. Unmanned aerial systems (UAS) policy and operations manual (including flight logs, checklists and metadata reporting templates).



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Reduced damages and losses from disasters among farmers and fishermen	
Outcome	The ADRM Plan is institutionalized within the Agriculture and Environmental sectors, fostering efficient and effective DRR and management in the agriculture sector through a well-coordinated mechanism	
	Indicator	Policy document confirming the institutionalization of the ADRM Plan.
	Baseline	0
	End Target	1
	Comments and follow-up action to be taken	<ul style="list-style-type: none"> – The government is yet to publish the official document institutionalizing the ADRM Plan. This procedure depends on the status of the on-going Agriculture Food Systems Transformation process in Dominica. – The following significant changes in the policy, institutional, technical and operational context took place during the second half of project implementation: <ul style="list-style-type: none"> – The Ministry of Agriculture and Fisheries (MoAF) was renamed to Ministry of Blue and Green Economy, Agriculture and National Food Security (MoBGEANFS). – The Climate Resilience Executing Agency of Dominica (CREAD) was established. – The Transformative and Resilient Agriculture Process was established, including the following: <ul style="list-style-type: none"> i) the formulation of an updated National Agriculture Policy (NAP); ii) the preparation of an Agriculture and Food Systems Transformation Roadmap (AFSTR); and iii) the development of an Institutional Restructuring and Change Management Plan for the MoBGEANFS. – The process to establish the Global Center for Agriculture Resilience (GCAR) was launched. – The above, in turn, have prompted some modifications in the project activities, approaches and outputs as reported below. It is important to note, however, that these said modifications in the project activities, approaches and outputs did not in any way reduce their relevance, impacts or contributions to overall ADRM resilience. In fact, these changes ensure that the project results would be institutionalized in a more impactful way and would not be treated as one-off, project-based outputs. – Due to the COVID-19 restrictions on travel, some funds were reallocated to support additional priority ADRM capacity building activities.

Output 1	Disaster Risk Management Plan (2014-2019) is updated with appropriate governance mechanisms in place for its implementation		
	Indicators	Target	Achieved
	An updated and approved ADRM Plan document.	1	Yes
Comments	<ul style="list-style-type: none"> – The updated ADRM Plan was endorsed to the MoBGEANFS for approval. Updates to the plan include its alignment to the Sendai Framework for Disaster Risk Reduction and relevant Sustainable Development Goals. The ADRM Plan has also been aligned with the Agriculture and Food Systems Transformation Roadmap. The updated ADRM Plan priority areas include (as endorsed to the government): <ul style="list-style-type: none"> - Priority Area 1: Understanding Disaster and Climatic Risks in the Crop, Livestock, Fisheries and Forestry Subsectors. - Priority Area 2: Strengthening Risk Governance and Institutional Arrangements to Manage Disaster and Climatic Risks in the Crops, Livestock, Fisheries and Forestry Subsectors. - Priority Area 3: Investing in Disaster and Climatic Risk Reduction for Increased Resilience in the Crops, Livestock, Fisheries and Forestry Subsectors. - Priority Area 4: Improving capacities for effective preparedness and response and to build back better after a hazard event or disaster in the crop, livestock, fisheries and forestry systems. - Priority Area 5: Ensuring institutionalization, implementation and investment/resource mobilization of agriculture DRM. – The Dominica Meteorological Service (DMS) was involved in the development of these ADRM priorities, particularly in terms of improving access to meteorological and climate services with agriculture interpretations, as well as how they could be disseminated to farmers and fishers. The DMS was also involved through its attendance at workshops and trainings, where it gave information and guidance on topics such as meteorological and climate datasets and early warning systems. – The ADRM Plan implementation budget estimates were also used as inputs to the budgeting of the AFSTR. 		
Activity 1.1	Launch the project and conduct the inception and validation workshop to review / validate / obtain feedback on the revised plan		
	Achieved	Yes	
	Comments	Activities were carried out and completed during the 1st mission of the project's ADRM consultant.	
Activity 1.2	Complete and disseminate the revised ADRM Plan among the stakeholders for implementation		
	Achieved	Yes	
	Comments	The updated ADRM Plan was shared with stakeholders as part of an iterative and multi-step review process. The first batch of iterations was conducted during three missions led by the project's consultant from October to November 2018, in December 2018, and in June 2019. The 2nd batch of iteration was conducted during a 4th mission on January 2020 and was followed by a series of virtual workshops throughout 2020, and due to the COVID-19 pandemic, until October 2021. The 2nd batch of iteration also marked the start of the alignment of the ADRM Plan with the on-going AFSTR process.	
Activity 1.3	Organize a dissemination workshop		
	Achieved	Yes	
	Comments	A final ADRM review and a dissemination workshop (virtual) were conducted in November 2021.	
Activity 1.4	Organize Closing Workshop		
	Achieved	Yes	
	Comments	Virtual workshops/meetings were conducted during the last 3 months of the project implementation. Follow-up actions were discussed and endorsed for follow-up as part of the TCP/DMI/3703 and TCP/DMI/3801 projects. While TCP/DMI/3703 (D) focuses on strengthening the Governance and institutional mechanisms of the country leading to effective disaster risk reduction and management that will result in a more resilient sector, TCP/DMI/3801 (D) aims to support the design of a census of agriculture methodology and an Agriculture Geo Informatics System as well as support capacity building on and the development of guidelines, tools and other relevant instruments for the management of systemic risk.	

Output 2	Integrated Financial Mobilisation Strategy (IFMS) for the implementation of the revised ADRM Plan with priority activities		
	Indicators	Target	Achieved
	An IFMS strategy document to support the ADRM Plan document.	1	Yes (contextually)
Comments	During the project implementation, a significant change in the overall agriculture resilience and DRM priorities happened. The government launched an Agriculture and Food Systems Transformation Process which had a Transformative Agriculture Roadmap and updated Agricultural Policy as the overarching instruments. The ADRM Plan is presently considered as one of the supporting or complementary instruments. It was therefore decided that a standalone or dedicated Integrated Financial Mobilisation Strategy (IFMS) for ADRM was no longer necessary. In response to this change, the project produced, as part of the updated ADRM Plan, detailed resource and budget requirements to be inserted into the Transformative Agriculture Roadmap resource mobilization plan (which would function as a broader IFMS for the whole agriculture sector).		
Activity 2.1	Prepare the draft Integrated Financial Mobilization Strategy (IFMS) for the implementation of the revised ADRM Plan with priorities		
	Achieved	Yes, contextually	
	Comments	The project limited its action to preparing an ADRM Plan budget which thereafter informed the budget and resource mobilization plan of the Agriculture and Food Systems Transformation Roadmap.	
Activity 2.2	Finalize the IFMS for dissemination		
	Achieved	Yes, contextually	
	Comments	The project limited its action to preparing an ADRM Plan budget which thereafter informed the budget and resource mobilization plan of the Agriculture and Food Systems Transformation Roadmap.	
Output 3	The ADRM committee is established and functional		
	Indicators	Target	Achieved
	Meetings held over the life of the project, TORs, and work plan as well as Minutes and Reports of the Meetings and implementation plan prepared.	At least 12-15 meetings.	Yes
Comments	Due to the Agriculture Food Systems Transformation Roadmap (AFTR) process which includes an institutional restructuring of the MoBGEANFS, an ADRM committee was no longer established. Instead, the MoBGEANFS DRM and CCA Coordinator was appointed as a focal point and an ADRM working group was formed.		
Activity 3.1	Select the national ADRM committee members and develop ToRs for the committee, including governance mechanisms		
	Achieved	Partially	
	Comments	<p>A group was formed consisting of officers and staff from the different work streams of the MoBGEANFS (crop production, livestock, fisheries, plant protection, agriculture extension, ICT, soils, engineering, community development, food safety and standards, research and development, and others). This group has consistently taken part of the different workshops, meetings and trainings. It was not possible for the project to finalize the name of this group nor the TORs due to the on-going institutional restructuring of the MoBGEANFS. The draft responsibilities of the ADRM Working Group were defined as follow:</p> <ul style="list-style-type: none"> – Provide guidance for elaboration of the key components of resilience; – Act as an advisory body to the Permanent Secretary for development and implementation of the Global Center for Agriculture Resilience. – Technical leadership for implementation of the ADRM Plan. – Preparation of quarterly or annual work plans informed by the ADRM action Plan. – Advocacy to include the interventions the work programmes the MoBGEANFS, Department of Forestry and related partners. – Monitoring and evaluation to ensure optimal implementation of agreed action plans. – Provide leadership for resource mobilization. – Timely reporting to all relevant stakeholders. – Determination of the research agenda for DRM and CCA within the agriculture sector. 	
Activity 3.2	Hold training workshops for the committee members and technical personnel in ADRM		
	Achieved	Yes	
	Comments	Please refer to Activity 4.1 comments.	

Activity 3.3	Support the development and signature of a MoU between the MoBGEANFS and MECRDMUR and other relevant implementing partners		
	Achieved	No	
	Comments	A memorandum of understanding (MoU) was considered no longer relevant/needed given the changes in the two Ministries and on-going AFSTR process. This also considers the notion that whether an MoU is the appropriate instrument since such responsibilities and collaboration could also be adopted within a multi-sectoral resilience plan, for instance.	
Output 4	The ADRM related work is integrated in the annual work plan of the MoBGEANFS and MECRDMUR		
	Indicators	Target	Achieved
	A MoU and/or similar signed official agreement among the two Ministries and key stakeholders.	One MoU.	No
Comments	The MoU was considered no longer required given the changes within the two ministries and in the on-going AFSTR process.		
Activity 4.1	Build capacity of MoBGEANFS technical and extension personnel on integrating ADRM-related work into their work plan		
	Achieved	Yes	
	Comments	<ul style="list-style-type: none"> – A broader capacity building programme was carried out and achieved as part of the different project workshops and trainings leveraging on a learning-by-doing and knowledge sharing approach. – As additional value-added project activities and upon request of the government, the project also supported the capacity building of specific ADRM work priorities including the establishment and training of a UAS/drone mapping and GIS team. Main capacity building topics include: <ul style="list-style-type: none"> (i) basic unmanned aerial systems (UAS) operations; (ii) advanced UAS Operations; (iii) basic Geographic Information Systems (GIS) for Agriculture DRM and NRM; (iv) participatory GIS. 	
Activity 4.2	As part of the training, conduct one simulation exercise in ADRM		
	Achieved	Yes	
	Comments	A combination of tabletop and software-based simulation and modelling were carried out.	
Output 5	Hurricane and Storm Preparedness and Response Plan for farmers, livestock keepers and fishermen		
	Indicators	Target	Achieved
	One Hurricane and Storm Preparedness and Response Plan document covering the key sub-sectors and a simulation exercise in collaboration with UNDP.	1 document.	Yes
Comments	<p>The Hurricane and Storm Preparedness and Response Plan was endorsed by the MoBGEANFS. Only one tabletop simulation during preparedness and response planning meetings was conducted due to the COVID-19 restrictions and the incapacity to carry out field activities, including field simulation exercises. The Hurricane and Storm Preparedness and Response Plan for the agriculture sector consisted of two Volumes. Volume 1 of focused on different sets of actions to be carried out by the different agriculture sector actors (Ministry, farmers, and fishers) across the following DRM phases: Prevention and Mitigation, Preparedness and Response and Recovery/Reconstruction. Volume 2 featured a set of functional annexes including guidelines and templates on the preparation of a Pre-Disaster Report, Initial Impact Assessment form, Rapid Agriculture needs assessment form, Commodity Damage Assessment Report and Post Disaster Needs Assessment Report.</p> <p>To ensure the sustainability of the Hurricane and Storm Preparedness and Response Plan, the operational forms contained in the plan shall be updated and digitalized as part of the new TCP/DMI/3801 project. Capacity building activities on disaster impacts and needs assessment will also be carried out as part of the said project, which builds on the outputs of the TCP/DMI/3702 and TCP/DMI/3703 projects.</p>		
Activity 5.1	Conduct capacity building for extension and key actors in the implementation of the Hurricane and Storm Preparedness and Response Plan		
	Achieved	Yes	
	Comments	Please refer to Activity 4.1 comments.	
Activity 5.2	Conduct a simulation exercise with each of the three sub-sectors		
	Achieved	Yes	
	Comments	One tabletop and consolidation simulation were carried out during the last two review workshops.	

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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