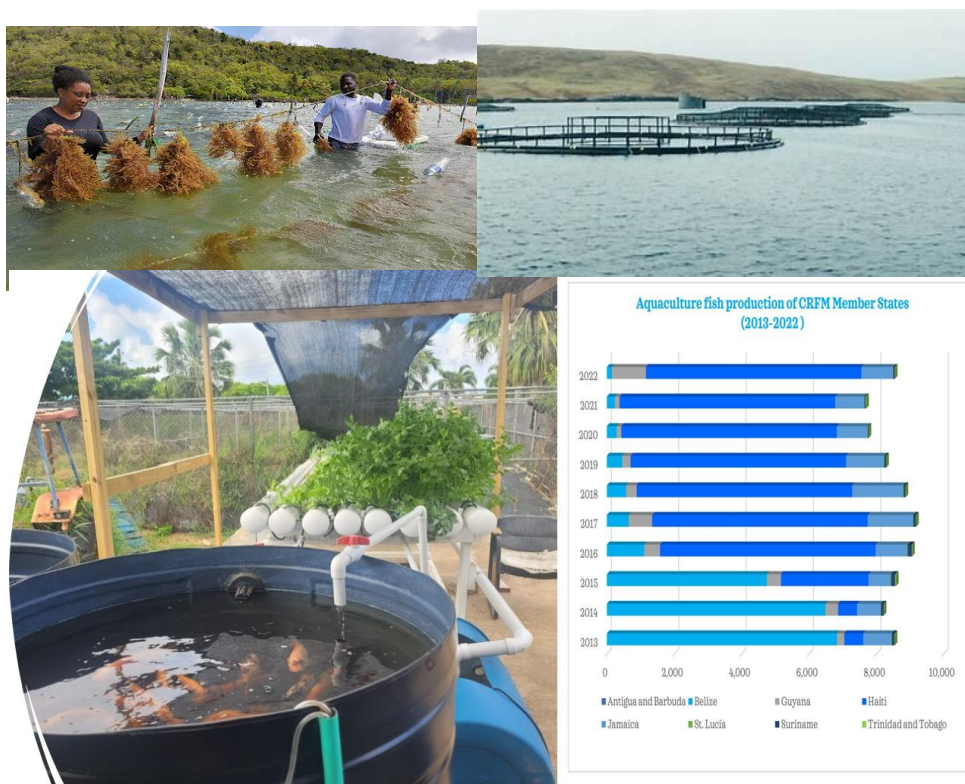


FIVE-YEAR WORK PLAN FOR AQUACULTURE DEVELOPMENT IN THE CARIBBEAN COMMUNITY 2026 - 2030



CRFM Secretariat

Belize

2026

CRFM Special Publication No. 38

Five-year Work Plan for aquaculture development in the Caribbean Community, 2026 - 2030

Prepared by

Peter A. Murray

Advisor, Fisheries Management and Development, CRFM Secretariat, Belize City, Belize.

Email: peter.a.murray@crfm.int

www.crfm.int

www.youtube.com/TheCRFM

www.facebook.com/CarFisheries

www.twitter.com/CaribFisheries

CRFM Secretariat
Belize

CRFM SPECIAL PUBLICATION NO. 38

Five-year Work Plan for aquaculture development in the Caribbean Community, 2026 - 2030

Copyright © 2026 by Caribbean Regional Fisheries Mechanism (CRFM).

All rights reserved.

Reproduction, dissemination and use of material in this publication for educational or non-commercial purposes are authorized without prior written permission of the CRFM, provided the source is fully acknowledged. No part of this publication may be reproduced, disseminated or used for any commercial purposes or resold without the prior written permission of the CRFM.

Correct Citation:

CRFM. 2026. Five-year Work Plan for aquaculture development in the Caribbean Community, 2026 - 2030. CRFM Special Publication, No. 38, 31p.

ISSN: 1995-4875

ISBN: 978-976-8368-07-2

Published by the Caribbean Regional Fisheries Mechanism Secretariat,
Belize and St. Vincent and the Grenadines.

Contents

Acronyms and Abbreviations	iii
Background	1
A chronology of directions	1
The Five-year Work Plan 2026 - 2030	5
Overview:	6
Goal	6
The plan	7
Conclusion	17
Bibliography	17
Appendix 1. WGA6 considerations for the further revision, updating and implementation of the 5-year Work Plan for Aquaculture Development	20

List of figures

Figure 1 Comparison of status of implementation of 5-year aquaculture work plan 2022 v 2025 (% of Member States)	14
--	----

Acronyms and Abbreviations

ACP	African, Caribbean and Pacific countries
CAF	Development Bank of Latin America and the Caribbean
CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum of African Caribbean and Pacific countries
Cefas	Centre for Environment, Fisheries and Aquaculture Science (United Kingdom)
CFF	Caribbean Fisheries Forum (a.k.a. the Forum)
COVID-19	Coronavirus Disease 2019
CRFM	Caribbean Regional Fisheries Mechanism
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FFO	Fisherfolk Organisations
FISHCOM	CARICOM/ CRFM Fisheries and Aquaculture Priority Commodity Working Group (FISHCOM WG)
GEF	Global Environment Fund
GIS	Geographic Information System
GRÓ-FTP	GRO Fisheries Training Programme
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer (French Research Institute for Exploitation of the Sea)
IMTA	Integrated Multi-Trophic Aquaculture
NGO	Non-Governmental Organisation
OECS	Organisation of Eastern Caribbean States
PIF	Project Identification Form
PSA	Public Service Announcement
PY	Programme year
SAP	Strategic Action Plan
SIDS	Small Island Developing State(s)
SME	Small- and Medium-sized Enterprise
TCP	Technical Cooperation Project
UWI	The University of the West Indies
WGA	(CRFM) Working Group to Promote Sustainable Aquaculture Development

Background

A chronology of directions

In 2020, the CRFM Secretariat carried out a survey to determine the status of implementation and achievements to date with regard to the 5-year Work Plan on Aquaculture. The Survey sought to capture all which countries are doing on aquaculture, both government-led and non-government-led activities, to determine if and which elements of the 5-year action plan for aquaculture development were being advanced satisfactorily; and areas of continuing weaknesses. A number of factors were suggested with regard to the status of implementation of the 5-year action plan. Most notable among these remain the inadequacy of the human capacity, including for business planning and implementation; whether by way of numbers of persons or areas of study, within national fisheries agencies to lead and support aquaculture development. The limitations in availability of land and water resources, in a majority of Caribbean SIDS, limits development of aquaculture to the extent required to substitute/replace demand for marine capture species, whether for local consumption or export. Additionally, persons interested in pursuing aquaculture often have challenges acquiring the start-up capital for their ventures.

Notwithstanding the abovementioned, an overview of aquaculture in the region (CRFM, 2024) had shown that a variety of approaches to development of the sub-sector had actually been initiated ranging from addressing issues pertaining to freshwater culture on-land, the development of aquaparks and incorporation of aquaculture in the legislative framework, creating an enabling environment to encourage interest and investment in aquaculture, highlighting mariculture as a pathway to regulate and manage the development of the sector across various entities, implementing management strategies to ensure the economic and environmental sustainability of seamoss production, and encouraging the development of extensive culture of endemic species by small scale farmers and the semi-intensive culture of *Tilapia* spp. by medium sized entrepreneurs.

In keeping with the agreement of the 14th Regular Meeting of the CRFM Ministerial Council that economic models for varying scales and types of aquaculture operations (including multi-trophic aquaculture and aquaponics) should be promoted among Member States, the CRFM Secretariat had incorporated issues related to aquaculture into a concept note that it has submitted to the Development Bank of Latin America and the Caribbean (a.k.a. CAF) for a project on climate change in fisheries, which had informally agreed to provide the funding/resources for development of the Project Identification Form (PIF) for submission to the Global Environment Facility (GEF).

The 15th Regular meeting of the Ministerial Council had called upon the CRFM Secretariat and its donor partners to further develop, revise and support project proposals aimed at addressing the recommendations of CRFM Ministerial Council and the Fisheries and Aquaculture Priority Commodity (FISHCOM) Working Group, with regard to the implementation of the 5-year Work Plan for Aquaculture Development.

The CRFM Secretariat continued to try to mobilise resources in support of implementation of the 5-year Aquaculture Action Plan, including a concept note for demonstrating the feasibility of integrated multi-trophic aquaculture (IMTA) systems, and preparation of a detailed activity implementation plan for the development of IMTA to improve sustainable production; incorporating aspects related to gender, youth, decent work and building resilience in light of the

COVID-19 pandemic as well as, addressing improvement of knowledge management in the region, as it relates to development of aquaculture.⁵

The 23rd meeting of the Caribbean Fisheries Forum acknowledged that special attention needs to be paid to the challenges faced by CRFM Member States to ensure that we can overcome the many challenges to aquaculture development. There is a need for targeted solutions and investments; the actions and support required need to be clearly defined and enunciated and need to be given higher priority than is currently the case; requiring long-term commitment and support to obtaining funding, technical assistance, and assistance in creating the necessary policy environment for aquaculture, including, mariculture to flourish.

The Forum accepted that market-related challenges, including eating habits and food product development, as well as issues related to Sanitary and phyto-sanitary (SPS) and other non-tariff barriers, constrain the growth of seaweed aquaculture and exportation of aquaculture products in general; noting that it is necessary for development partners to provide guidance to Members to access market-based mechanisms that incentivize aquaculture activities such as seaweed farming and which provide ecosystem services, maintain healthy local marine ecosystem functioning, and contribute to addressing climate change impacts.

Given the conviction that the CARICOM approach to aquaculture development will have to be multifaceted to address the range of available natural land and freshwater resources in the region, while incorporating the commercial elements, the CRFM Ministerial Council has acknowledged an urgent need to promote the development of aquaculture in the region in a sustainable manner, to enhance its contribution to food and nutrition security, job creation, trade and blue economic growth, and reducing pressure on nearshore fisheries.

One of the main constraints to aquaculture development in the region is the inadequacy of (primarily human) capacities. Most components necessary for aquaculture development in the region remain underdeveloped, including human and technical resources and the general knowledge required to take advantage of its opportunities. The issue of competition for space to carry out aquaculture activities, whether on land or in the near shore, is also a consideration. In some of the countries on the leeward side, the near shore is actually fairly deep and may not facilitate some types of aquaculture, while on the windward side of some of these countries, because they're fairly high energy, they also pose challenges for certain types of mariculture. In fact, it was opined that because of priorities for the use of marine space, especially the near shore spaces, marine spatial planning is an important consideration for the enabling environment. It has also been found that extreme weather events, such as hurricanes, and even storms that didn't quite make it to hurricane intensity, are also a consideration when seeking to further develop aquaculture. More recently, it has been recognised that the impacts of sargassum blooms on the nearshore environment are also a consideration. The vagaries of climate including and not limited to climate change and climate variability and water resources limitations are also things that need to be considered.

It has been acknowledged that aquaponics can support aquaculture development through impacting sustainability with regard to efficient use of water (aquaponics uses 90% less water than traditional aquaculture and agriculture); and waste management (because it converts fish waste into valuable

⁵ It should be noted that notwithstanding the continued conversation on this, countries are doing other aquaculture models such as production of marine finfish/ crustacean/ seaweed etc

plant nutrients), reducing environmental degradation.⁶ Aquaponics can contribute to economic viability through diversified income streams such as the sale of both fish and vegetables; and local job creation: through opportunities in system design, maintenance, and product sales. Aquaponics can also contribute to climate resilience by being less vulnerable to the impacts of climate change and extreme weather conditions, which often disrupt traditional farming systems in the Caribbean and can be set up in controlled environments, reducing the risk of crop failures due to hurricanes or droughts.

States could explore further how to develop aquaponics mindful that it can also be done with marine species. In some places, not so much in the region, entrepreneurs have already started doing aquaponics farming with conch as well as some marine algae, such as sea moss. It is a view that aquaponics helps address a lot of the main concerns that aquaculture is facing in the region. Thus, aquaponics represents a useful solution to promoting aquaculture, offering pathways to sustainable food production provided there is some strategic investment, training and support to optimize its potential.

The region has a paucity of skilled persons in aquaculture. If the region is interested in developing the different aspects of aquaculture, through the CRFM, it is important to, consider training opportunities for countries that are interested in learning more about such technologies. If there are no sufficiently trained persons then being able to scale up to commercial operations can be problematic. Aquaculture needs to be introduced into school curricula to change the current negative perceptions of the field; and while it may be difficult to change the secondary school curricula, just introducing the sixth and seventh grades to basic concepts of mariculture and facilitating visits to different systems can be a useful beginning to changing the existing perspective of what aquaculture actually is; thus, providing a basis to move on to tertiary education. Consideration should also be given to how the University of the West Indies, including the Centre for Resource Management and Environmental Studies (UWI-CERMES) and the UWI Open Campus, can be supportive of aquaculture in their curriculum to assist in building a cadre of people at higher levels, who can in turn encourage teachers at the other levels.⁷

In order for Member States to actually take advantage of the opportunities that are currently being missed, the region needs to invest in changing the culture of what aquaculture is: putting it into the school system, not only in agricultural schools but within the traditional schools as a Science, Technology, Engineering, and Mathematics (STEM) subject, by way of integrating it into a holistic approach to learning and problem-solving. There is need to start focusing on the aspect of it as a science as well as the business of aquaculture.

The 5th Meeting of the CARICOM Fisheries and Aquaculture Priority Commodity Working Group (FISHCOM) had opined that there is need for strong research-supported business and marketing strategies, with the major output being new and strengthened national and regional

⁶Since training took place in December 2018 under the UN FAO-funded projects: *Towards a Caribbean Blue Revolution as well as the Climate Change Adaptation in the Eastern Caribbean Fisheries Sector Project (CC4FISH)*, the Caribbean Aquaproducers Association has been formed. It is a non-profit association for advancing Aquaculture, Aquaponics & Hydroponics in the Caribbean region; based in Barbados, with the mission “to promote partnerships across aquaproducer businesses, academic institutions, and associated operations that advance safe, secure and sustainable aquaculture development within the Caribbean Basin.”. Additionally at the 16th Special Meeting of the CRFM Ministerial Council it was noted that at least one Member State is doing work on aquaponics

⁷MS participate in aquaculture training at University of Florida, there is also a good programme at University of Miami. Memorial University, Canada has aquaculture courses and they are willing to work with the Caribbean. FAO also offers Ad Hoc training as well. Additionally, Under the FFA Agribusiness degree students complete a practical in practical techniques and tools in agriculture on the University Field Station, Trinidad maybe this can be expanded into aquaculture. Also, there is also the government training programme called Youth in Aquaculture Programme YAP done in partnership with UWI CFTDI NAMDEVCO NEDCO CCLCS

seafood value chains supporting realization of the blue economy opportunities and sustainable development goals. FISHCOM had also recommended that: “in order to support its sustainability and effective technology transfer, and as a fundamental strategy for marine fish and aquaculture commodity and associated industry development, CRFM should establish a commercial Research and Innovation Centre to undertake partnership ventures with existing / new appropriate private or public sector parties. ...”

The WGA5 has proposed a number of recommendations, *inter alia*, that:

- adoption of integrated multi-trophic aquaculture (IMTA) as an agreed regional direction for aquaculture development should be encouraged as being more beneficial to Member States.
- CRFM Member Countries need to consider changing the current focus on land-based aquaculture in large ponds to the creation of inland structures that are hurricane or flooding resistant.
- efforts should be made to ensure that aquaculture is introduced into school curricula of our traditional schools (not just agricultural schools) as a STEM science, including through introducing the sixth and seventh grades to basic concepts of mariculture as well as the business of aquaculture; to engender change in the current perception of aquaculture and also providing a basis for it to be included in curricula of tertiary education facilities.
- investigations should be carried out into how CERMES and other regional tertiary level educational institutions can be supportive of aquaculture in their curricula to assist in building a cadre of people at that level, who can in turn encourage teachers at the other levels.
- while collecting the information to update the fisheries and aquaculture statistics within CARICOM for the CRFM's Statistics and Information report, the opportunity should be seized to update the information regarding the FAO(/CRFM) digitised library of public and private farms.

Further to this, the 14th Special meeting of the Ministerial Council has noted that the capacity challenges confronting the CRFM Secretariat as well as the Member States need to be urgently addressed to support improvements in the numbers, especially for aquaculture production, which lags behind international levels. Thus, the Council has directed the CRFM Secretariat to make every effort to encourage the introduction of aquaculture into school curricula, to engender change in the current perception of aquaculture and also provide a basis for it to be included in the curricula of secondary and tertiary education facilities. The Council has gone as far as to recommend the establishment of an aquaculture training centre in the region, to support capacity strengthening, skills development and technology transfer, and to provide the requisite support for other Member States to advance aquaculture development, including sea moss farming.

Additionally, the Ministerial Council during its 18th Regular Meeting held in April 2024 prioritized the mandate by the CARICOM Heads of Government at the Thirty-Third Inter-Sessional Meeting held in March 2022, to reduce region's food import bill by 25% by the year 2030. Given that fisheries and aquaculture imports by CRFM Member States was valued at US\$313 million in 2022, fisheries and aquaculture imports will have to be reduced by at least US\$78 million to achieve the 2030 mandate. The 5-year Work Plan for Aquaculture Development is an essential component towards shaping the framework for meeting this mandate along with

other initiatives such as CNFO/CRFM Small-Scale Fisheries Action Plan 2023-2025: Contributing to Achieving the 25% Reduction of CARICOM’s Food Import Bill.

The 19th Regular meeting of the CRFM Ministerial Council called on the CRFM Secretariat to revise the 5-year Work Plan for Aquaculture Development informed, *inter alia*, by the results of the 2025 survey on the status of implementation of the CRFM’s Regional Action Plan for Aquaculture Development (c.f. figure 1) and the deliberations of the Working Group to Promote Sustainable Aquaculture Development (WGA), which latter had also made suggestions (see appendix 1) regarding areas that should be included in the revised work plan for aquaculture development.⁸

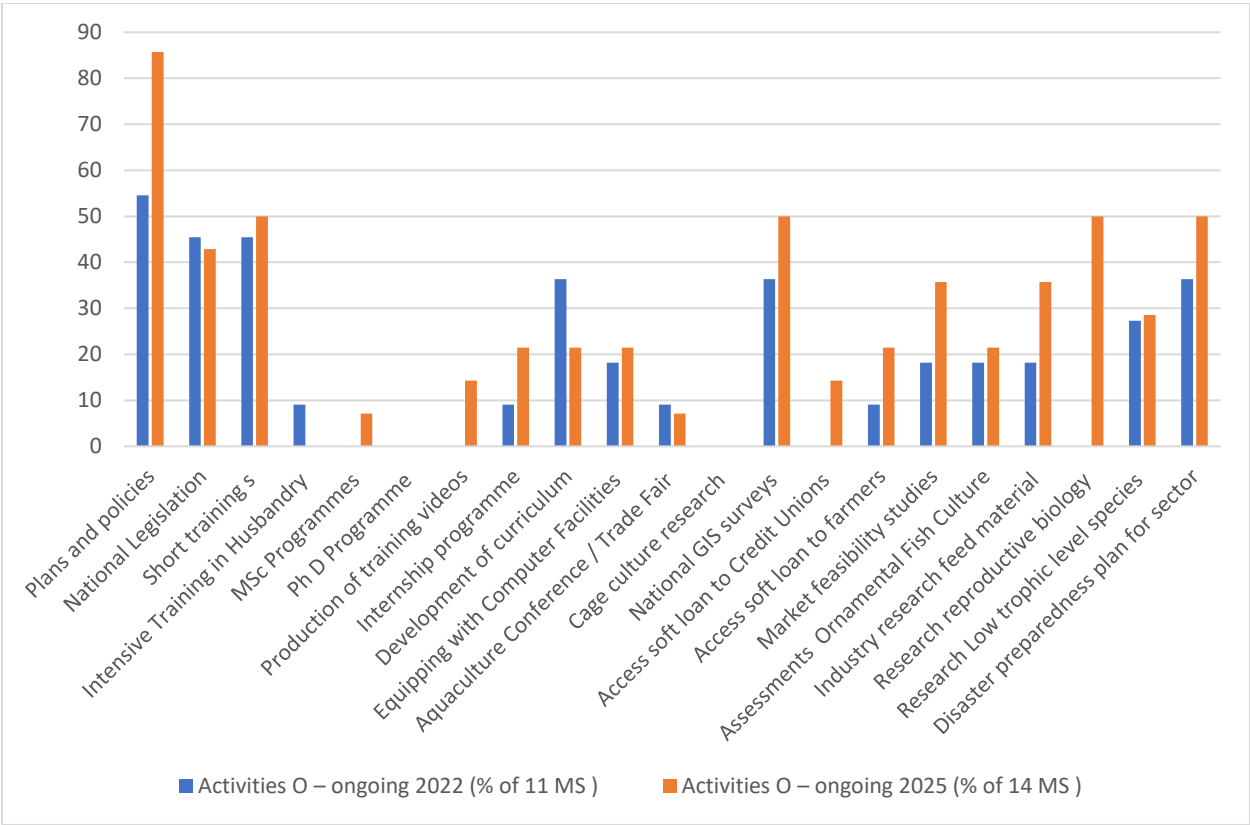


Figure 2 Comparison of status of implementation of 5-year aquaculture work plan 2022 vs 2025 (% of Member States)

Pursuant to this latter directive and mindful of the foregoing chronology, a Five-year Work Plan for Aquaculture Development in the Caribbean Community, for the period 2026 to 2030, is presented.

The Five-year Work Plan 2026 - 2030

⁸ The 16th Special Meeting of the Ministerial Council supported, in principle, the recommendations of the Sixth Meeting of the Working Group to Promote Sustainable Aquaculture Development and asked Member States, development partners and international donors to support initiatives for implementing the Plan.

Overview:

The five-year work plan for aquaculture development in the Caribbean Community addresses topics such as strengthening governance frameworks, capacity building, strengthening data management and knowledge sharing systems, aquaculture suitability surveys, market support, research and development, and adaptation to climate change. The plan captures activities as posited/requested/agreed by Member States' aquaculture focal points. Specific beneficiary countries have indicated the desire/willingness to be directly involved in/benefit from particular activities and the timeline is indicative of the prioritization of the activities in the context of the five-year time period. Market development and support are seen as important if the region is to improve profitability and sustainability of aquaculture operations. There needs to be on-going evaluation of what research and development issues need attention in the industry, with input from growers, academics, and market actors, requiring constant advocacy, funding, and recruitment; and coordinated to avoid duplication.

CARICOM/CRFM's role is seen as primarily the provision of staffing and logistic support as well as resource mobilisation and facilitating/supporting discussion at national and regional levels, including for capacity building strengthening data management and knowledge sharing. Development partners are seen as providing human and financial resources and advisory support, including for programme development and implementation in collaboration with private sector and academic partners. The Caribbean Community Climate Change Centre is expected to play a supportive role in development of disaster preparedness plans, while CCRIF-SPC can contribute to development of best-practices guidelines for disaster preparedness on which insurance products can be developed.

Goal

The goal of this work plan is to support the sustainable development of aquaculture as a means of assuring supply to Caribbean markets, protecting food and nutrition security, improving income and employment opportunities for Caribbean nationals, and increasing trade and export earnings.

The plan

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
Strengthening governance frameworks	Develop regional strategy for aquaculture development	Staff and logistic support	Human and financial resources support	All	X				
	Preparation or Revision of national aquaculture plans and policies where required	In-Country staff, financial, and logistic support	Advisory support from FAO, GRÓ-FTP	BEL JAM, HAI, SUR, DOM, BAH	X				
	Revision or preparation of National Legislation where needed	In-Country staff and logistic support	Advisory support from FAO, GRÓ-FTP	JAM., DRE, GUY, SUR, HAI		X			
	Continue policy reform, international and regional collaboration, and targeted support	In-country staff and logistic support. Role for CRFM to help unblock countries that are not progressing?	Advisory support from FAO, GRÓ-FTP	All	X	X	X	X	X
	Seek to secure spatial tenure ¹¹ , in the context of mariculture, aquaponics or other areas, to facilitate	Resource mobilisation and in-country support	Advisory support from FAO legal department, GRÓ-FTP	All	X	X	X		

⁹ note: where specific countries are mentioned it is because they have indicated the desire/willingness to be directly involved in/benefit from the activity

¹⁰ The timeline should be seen as indicative of the prioritization of the activities across (in the context of) the five-year time period, namely: short-, medium- or long-term

¹¹ Tenure in this case refers to the conditions under which rights to use of land or sea space are held, occupied, allocated, transferred or managed

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
	sustainable investment								
	Pilot activities related to formation of aquaculture-related stakeholder associations	In-country staff, financial, and logistic support,	Human and financial resources support	All	X	X	X	X	
Capacity Building	Introduction of aquaculture into school curricula, at all levels, as a STEM science	Discussions with curriculum developers at national and regional level, recruitment of aquaculture curriculum specialists to write curriculum; facilitate integration of new lessons into national curricula	Funding and facilitation support to curriculum development	All	X	X	X		
	Establish a commercial Research and Innovation Centre to undertake partnership ventures with existing / new appropriate private or public sector parties	Develop implementation plan with KPIs and timeline for establishment, including Resource mobilisation	Funding and facilitation support, including for partnership ventures	All	X	X	X	X	X
	Short training seminars and	Selection of trainees from private and	Programme developed and	ANB, BAH BEL, JAM, DOM,	X	X	X		

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
	Workshops on (i) Policy Development, (ii) risk analysis, (iii) quality assurance, value chain approach, (iv) fish, shellfish, seaweed, and other marine organism farming as a business, (v) aquaculture extension, (vi) Recirc System /aquaponics short courses (vii) marketing and sales of aquaculture products	public sector and sustaining in-country salary	implemented in collaboration with private sector and academic partners and development partners ¹²	DRE, GUY, TTO, SUR, SLU, SKN, GRE HAI, BAR					
	1 month Intensive Training Programme in Husbandry Practices of tropical aquaculture species.	Selection of Candidates and sustaining in-Country salaries	Programme developed and implemented by Stirling University in Scotland	BEL, JAM, DRE, SUR, GUY, SLU, SKN, DOM. HAI	X		X		X
	1) 1 – 2 yrs MSc Aqua	Recruited from Government Services,	Aquaculture Programme at	BEL, JAM, GUY, HAI, SUR, DRE	X	X	X	X	X

¹² such as GRÓ-FTP, IFREMER, University of Wageningen, University of Ghent, University of Stirling, University of Florida, UWI, University of the Virgin Islands (aquaponics)

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
	Programmes (6 candidates from the Caribbean per year). 2) 3 Year Ph D Programme in aquaculture (1-2 candidates from the region per year)	the private sector and/or regional institutions including national Universities (Univ Belize, Univ Guyana etc)	Wageningen Univ, Univ of Ghent, Univ of Stirling, SAMS, or University in another ACP region offering Master's or PhD in aquaculture						
	Production of series of key (training and lessons learning) videos/PSAs related to Caribbean specific aquaculture placed on online platform.	CRFM will support set up, editing and production of videos	3 x 5-minute videos/PSAs to be produced over 5 years	All	X	X	X	X	X
	Inter and intraregional working internship programme for both private and public sector participants	CRFM to work with member countries and orgs to develop meaningful internships. Support from member countries to offer relevant internships to both inside and outside	Funding and facilitation	All	X	X	X	X	X
	Development of curriculum for	CRFM will coordinate	Funding. Consider	BEL, JAM, SLU, DOM	X	X	X	X	X

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
	basic aquaculture technician course targeting youth	development and recruitment of suitable skill training institutions	collaboration with GRÓ-FTP Iceland and Stirling Univ						
Strengthening Data Management and knowledge Sharing Systems for Aquaculture	Equipping Fisheries Departments & fish farmers associations and selected SME with Computer Facilities, software, and training for collection, processing, storage and retrieval of data	Provide building and staffing and facilities	Funding support to purchase equipment, software, and training ¹³	BEL, JAM, DRE, GUY, SUR, HAI, SLU	X	X	X	X	
	Collection of information to update the fisheries and aquaculture statistics	Support/facilitate data collection	Technical support as necessary/ appropriate	All	X	X	X	X	X
Aquaculture Suitability Surveys. (1 Site suitability surveys including GIS; and Production	National GIS based surveys of biophysical, infrastructural and institutional factors to assess different	Provide staff and lend in-Country logistic support	This could be done with assistance of EU Partner institutions as part of academic training for	BEL, HAI, GUY, SLU, DRE, TTO, SUR	X	X			

¹³ private sector people could get some assistance for start-ups and piloting data collection and sharing schemes.

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
of portfolio of 5 economic viability studies for different prod systems	aquaculture potentials for countries or regions within country		students at partner institutions						
Strengthen Financing regimes, including grants, loans, and investment, for aquaculture entrepreneurs	Access soft loan to Credit Unions or directly to on-lend to farmers. ¹⁴	Identify suitable credit institution such as Credit Union or Agriculture Development Bank and structure agreement	Assist with mobilization of funds from potential funding sources	BEL, JAM, DRE, HAI, GUY, TTO	X	X	X	X	
	Investigate implementation of insurance and other social protection schemes in support of private investment for the development of aquaculture ¹⁵	Identify insurance or other social protection schemes that can be supportive of private investment in aquaculture development	Assist with identification of potential social protection mechanisms/schemes	All	X	X	X		
	Investigate the development of co-investment models and private sector engagement	Provide logistic support	Assist with mobilization of funds from potential funding sources	All	X	X			

¹⁴ This is best done as a revolving credit fund targeting small to medium scale fish farmers with low interest rates

¹⁵ This is important if we are to improve profitability and sustainability of aquaculture operations

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
Market Support ¹⁶	Market feasibility studies for indigenous and locally produced species	Logistic support including government counterpart	Funding support for regional and EU organisations with specialist skills to carry out the studies	BEL, GUY, SUR, TTO	X	X			
	Market feasibility studies for import substitution for the tourism sector ¹⁷	Logistic support including government counterpart	Funding support for regional and EU organisations with specialist skills to carry out the studies	All		X	X	X	
	Market and Technical feasibility assessments of Ornamental Fish and plants/algae Culture	Logistic support including Government counterpart	Funding support for regional and EU organisations with specialist skills to carry out the assessments	DOM, SKN, GRE, JAM, SLU, SVG	X	X			
	Develop a Mariculture/Aqua culture incubator program to help aquaculturalists engage with the private sector and investors, ¹⁸	Logistic support including Government counterpart	Provide funding and/or technical support	All	X	X	X		

¹⁶ Market development is a major factor in developing the industry. Early support of product testing and quality control is essential, as is product development and packaging. Import/export assistance, access to trade shows, development of sales campaigns, development of sales and marketing skills among producers are also essential.

¹⁷ 1) The tourism sector is responsible for a significant promotion of the demand including imports; 2) it is one of the largest market that is readily available; 3) it is a catalyst for growth re food production and value chain development; and 4) in 2019, tourism accounted for 14% of the Caribbean's GDP according to the World Travel and Tourism Council.

¹⁸ Caribbean Export can help encourage investment, how do we get the aquaculture farmers to get involved

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
Research &Development ¹⁹	Establish commercial aquaculture and mariculture production research innovation and training venture(s)	Identify and initiate establishment of appropriate commercial aquaculture and mariculture production, research, innovation and training venture(s)	Provide funding and/or technical support	All		X	X	X	X
	Support advocacy for regional larval biology and physiology program	Logistic support and coordination with research institutions	Tertiary level educational institutions to lead research efforts	All		X	X	X	X
	Industry research local feed material substitution, small scale fish farming	Identify local farmer(s) to conduct feed trials	Government of Guyana. Consider University of Stirling Institute of Aquaculture to lead research efforts. Seek to promote and establish linkage with appropriate European Feed Companies ²⁰	DOM, BEL, JAM, TTO	X	X	X		

¹⁹ It is important to note that there needs to be on-going evaluation of what R&D issues need attention in the industry, with input from growers, academics, and market actors. This needs constant advocacy, funding, and recruitment; R & D efforts should be coordinated to avoid duplication, and research that benefits all should be widely disseminated to help support the industry. There is need for determining the critical research topics that need attention to move the industry forward: answers will change overtime as industry evolves.

²⁰ such as Skretting, Biomar, Coppens, Legouessant

Objective/ Thematic Area	Activities	CARICOM/CRFM Contribution	Development Partner Contribution	Beneficiaries ⁹	Timeline ¹⁰				
					2026	2027	2028	2029	2030
	Institutional research reproductive biology, bio-security, invasive and introduced species, indigenous and local species.	Logistic support and coordination with research institution	University of Stirling Institute of Aquaculture, IFREMER and UWI to lead research efforts	BEL, GUY, TTO	X	X	X		
	Institutional Research Low trophic level species (sea urchin, sea cucumber, blue land crab)	Logistic support and coordination with research institution	University of Stirling Institute of Aquaculture to lead research efforts	SLU, SKN, DOM, JAM	X	X			
Adaptation to Climate Change	Development of disaster preparedness plan for sector	Logistic support, financing plan development.	Independent consultancy ²¹	All	X	X	X		
	Development of best-practices guidelines for disaster preparedness on which insurance products can be developed	Logistic support	Independent consultancy ²²	All	X	X			

KEY to countries:

²¹ Possibly supported by Caribbean Community Climate Change Centre

²² CCRIF-SPC can support this activity

ANG – Anguilla	BAR - Barbados	DRE – Dominican Republic	HAI - Haiti	SLU - Saint Lucia	SUR - Suriname
ANB – Antigua and Barbuda	BEL - Belize	GRE - Grenada	JAM - Jamaica	SKN – St. Kitts and Nevis	TTO – Trinidad and Tobago
BAH – The Bahamas	DOM - Dominica	GUY - Guyana	MON - Montserrat	SVG – St. Vincent and the Grenadines	TCI – Turks and Caicos Islands

Conclusion

This 5-year action plan seeks to enable significant development of the aquaculture / mariculture industry in CARICOM Member States with a focus on food security, sustainable livelihoods, and export.²³ CRFM had been given responsibility by CARICOM to lead the development of the marine capture and aquaculture industries. In response, the CRFM had established the CARICOM/CRFM Fisheries and Aquaculture Priority Commodity Working Group (FISHCOM WG) in 2016 to oversee development and implementation of a strategy and action plan for development of marine fish and aquaculture. FISHCOM WG had recommended that CRFM should establish commercial aquaculture and mariculture production research innovation and training venture(s) in partnership with existing/new appropriate private or public sector parties as a fundamental strategy for development of this sub-sector and for CRFM's own sustainability, with CRFM's equity being sourced from international development agencies and philanthropic entities. However, it may be more practicable to action national efforts and build to the regional level. Given that smaller or "experimental" countries will require more technical mentorship, consideration would have to be given to a tiered capacity-transfer system between advanced and less developed Member States. In terms of capacity development, given the growing recognition that students need to be exposed to such opportunities much earlier than initially thought, consideration should be given to a major emphasis on K-12 as a focus for training and capacity building efforts.²⁴ It is also important to engage with the private sector and investors. While entities such as Caribbean Export may be ready to encourage and support investment, it is crucial get the aquaculture farmers involved.²⁵ CRFM's Working Group to Promote Sustainable Aquaculture Development (WGA) is also addressing commodity development issues²⁶. Consequently, both the WGA and the FISHCOM WG are expected to support value chain management and business networking issues, as well as market and trade development, including as they relate to aquaculture development

Bibliography

CRFM, 2014. Study on the Potential of Fish Farming in the Caribbean. CRFM Technical & Advisory Document No 2014 / 2. 78p.

²³ while recognising that there is need to be realistic about expectations and start small and grow.

²⁴ K-12 education includes [primary education](#) starting in [kindergarten](#), and [secondary education](#) ending in grade 12.

²⁵ Caribbean Export is the regional trade and investment promotion agency "focused on building a resilient Caribbean by providing cutting-edge and high-impact support to the private sector." They assist businesses that have the export potential or are already exporting to increase their capacity and competitiveness, to boost export earnings and create precious jobs. They serve the 15 countries of the Caribbean Forum of African, Caribbean and Pacific States (CARIFORUM).

²⁶ There is a recognition that while we may be able to culture species like Tilapia, often these enterprises are not viable on their own since they are often competing with cheaper imports, hence commodity (species) selection is important.

CRFM, 2020. Report of the Fifth Meeting of the CRFM/CARICOM Fisheries and Aquaculture Priority Commodity Working Group (FISHCOM WG)

CRFM 2020. Report and Proceedings of the Fourteenth Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, (Electronic), Belize City, Belize, 25 June 2020. Volume 2. CRFM Management Report – PY 2020 / 21. 90p.

CRFM, 2020. Status of Member States' implementation of the 5-year work plan for aquaculture development in CRFM. CRFM Special Publication, No. 30, 34p.

CRFM, 2020. Summary Report of the Third Meeting of the Working Group to Promote Sustainable Aquaculture Development (Electronic Meeting), 24 November 2020. *CRFM Technical & Advisory Report* No. 2020 / 12. 33p.

CRFM, 2021. CRFM Strategic Plan 2022 – 2030, Caribbean Regional Fisheries Mechanism, Belize City. 22pp.

CRFM 2021. Report and Proceedings of the Fifteenth Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, (Electronic), Belize City, Belize, 21 May 2021. Volume 2. CRFM Management Report – PY 2021 / 22. 131p.

CRFM 2021. CRFM Resource Mobilization Strategy, January 2022 to December 2030. CRFM Administrative Report.

CRFM, 2022. Summary Report of the Fourth Meeting of the Working Group to Promote Sustainable Aquaculture Development (Electronic), 30 June 2022. *CRFM Technical & Advisory Report* No. 2022 / 04. v 38p.

CRFM, 2024. Overview of CRFM Member States' aquaculture (as at July 2024). Presented at the Fifth Meeting of the Working Group to Promote Sustainable Aquaculture Development (Electronic), 11 September 2024. 10p.

CRFM, 2024. Report of the Fifth Meeting of the Working Group to Promote Sustainable Aquaculture Development (Electronic), 11 September 2024. *CRFM Technical & Advisory Report* No. 2024 / 05. 45p.

CRFM 2024. Report and Proceedings of the Forty-third Meeting of the Executive Committee of the Caribbean Fisheries Forum (Electronic Meeting); Belize City, Belize; 20 September 2024. Volume 1 – Supplement 2. CRFM Management Report – PY 2024. 47p

CRFM 2024. Report and Proceedings of the Fourteenth Special Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, (Electronic), Belize City, Belize, 8 October 2024. Volume 2. CRFM Management Report – PY 2024. 68p.

CRFM 2024. Report and Proceedings of the Forty-fourth Meeting of the Executive Committee of the Caribbean Fisheries Forum (Electronic Meeting); Belize City, Belize; 5-6 February 2025. Volume 1 – Supplement 2. CRFM Management Report – PY 2025. 96p

CRFM 2025. Report and Proceedings of the Twenty-third Meeting of the Caribbean Fisheries Forum (Electronic); Belize City, Belize; 25 – 27 March 2025. Volume 1. CRFM Management Report – PY 2025. 267p

CRFM. 2025. Status (2025) of Member States' implementation of the 5-year work plan for aquaculture development in CRFM. CRFM Special Publication, No. 31, 46p.

CRFM, 2025. Report of the Sixth Meeting of the Working Group to Promote Sustainable Aquaculture Development (Electronic), 10 June 2025. *CRFM Technical & Advisory Report* No. 2025 / 01. 48p.

CRFM, 2025. Report and Proceedings of the Nineteenth Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, (Electronic), Belize City, Belize, 4 July 2025. Volume 2. CRFM Management Report – PY 2025. 90p.

CRFM, 2025. Report and Proceedings of the Sixteenth Special Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, St. Kitts and Nevis, 30 September 2025. Volume 2. CRFM Management Report – PY 2025.

FAO 1993, Status Report on Caribbean Aquaculture. GCP/RLA/102/ITA, AQUILA II Project, Field Document No. 6. Food and Agriculture Organization of the United Nations, Mexico City available at <https://www.fao.org/4/AB490E/AB490E00.htm#for>. <accessed 15 October 2025>

Royes, J-A, R. Morris, S-A. Gray, S. M. Williams, M. Avril, C. Phillips Savage, A. Moss, L. Morris Bennett, R. Gutierrez-Corley, 2023. Promoting Opportunities and Solutions in the Caribbean Through Building the Capacity of Women Scientists in Aquaculture. Latin American & Caribbean Aquaculture 2023. April 18 - 21, 2023, Panama City, Panama <https://www.was.org/Meeting/Program/PaperDetail/161146> <accessed 15 October 2025>

Appendix 1. WGA6 considerations for the further revision, updating and implementation of the 5-year Work Plan for Aquaculture Development

The Sixth Meeting of the CRFM Working Group to Promote Sustainable Aquaculture Development (WGA6):

Recognised that feed production remains an important action item for the region's aquaculture development

Lauded Guyana for its willingness to use its best endeavours in assisting other Member States to mitigate the challenges associated with the provision of requisite feed for aquaculture once its feed processing facility is up to the required capacity.

Recognised that capacity building activities such as attachments and internships should remain an integral part of the 5-year work plan for aquaculture development

Considered whether recurring challenges such as larceny and marine predation should be incorporated into the 5-year work plan.

Suggested that insurance and similar social protection schemes are important for the development of the industry, the absence of which is a huge barrier to private investment, including for aquaculture

Agreed that investigating mechanisms/means of providing insurance for aquaculture should be incorporated into the revised work plan.

Agreed that given the importance of disaster plans for aquaculture, whether developed specifically for the aquaculture sector or not, this item should remain in the revised 5-year work plan

Recognised the importance of securing tenure, whether in the context of mariculture or in other areas, to facilitate sustainable investment.

Suggested that efforts should be made, particularly in the marine context, to give marine spatial zones legislative protection.

Recommended doing a periodic KAP study to capture perspectives related to the action items, especially where Member States cite actions as being non-applicable, to assist in clarifying this issue

Suggested that activities related to formation of seamoss farmers' associations should be upscaled or piloted

Acknowledged that the importance of product development, marketing and visibility should be looked at more closely

The CRFM is an inter-governmental organization whose mission is to “Promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region”.

The CRFM consists of three bodies – the Ministerial Council, the Caribbean Fisheries Forum and the CRFM Secretariat. CRFM members are Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands.

CRFM Secretariat | Headquarters

Email: secretariat@crfm.int

Tel: (501) 223-4443

Belize City, Belize

CRFM Secretariat | Eastern Caribbean Office

Email: crfmsvg@crfm.int

Tel: (784)-458-4269/456-4628

Kingstown, Saint Vincent and the Grenadines

www.crfm.int

www.youtube.com/TheCRFM

www.facebook.com/CarFisheries

www.twitter.com/CaribFisheries

