Food and Agriculture Organization of the United Nations

Terminal evaluation of the project "Climate change adaptation of the Eastern Caribbean fisheries sector" (CC4FISH)

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Terminal evaluation of the project "Climate change adaptation of the Eastern Caribbean fisheries sector" (CC4FISH)

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Abstract

This report presents the findings of the terminal evaluation of the regional project "Climate change adaptation of the Eastern Caribbean Fisheries sector" (GCP/SLC/202/SCF, "CC4FISH"). The project was financed by the Global Environment Facility (GEF) and implemented and co-executed by FAO and regional partners from January 2017 to June 2022. The participating countries were Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago.

Evaluation methods to collect data and information included an evaluation matrix, desk reviews of project documentation and outputs, virtual interviews with partners and stakeholders, and an electronic survey. Cancellation of in-person interviews and site visits because of the COVID-19 pandemic was a major limitation.

It was found that the CC4FISH project was highly relevant to the countries, GEF and FAO. Nearly all outputs and outcomes were achieved. Expectations were overall met, and unintended positive developments also took place thanks to the project intervention.

Most notable achievements include greater awareness of climate change impacts, vulnerability and adaptation among fishers, aquaculturists and national fisheries authorities, the uptake of improved safety at sea and utilization of information and communication technology (ICT) by fishers, the rehabilitation of aquaculture facilities and kick-starting of production, and effective mainstreaming of climate change adaptation in national fisheries management.

The project was efficient despite factors such as cumbersome administrative processes, institutional staff changes, extreme weather events and the pandemic. Strategic partnerships and the high level of stakeholder engagement, beyond those who are traditionally involved in fisheries, contributed to successful delivery. It is likely that results will be sustained and long-term impacts achieved but this will require appropriate actions including addressing environmental, social, institutional and financial risks to further the uptake of adaptation at individual, community and policy levels.

Recommendations include actions to be taken by FAO, GEF and project partners and stakeholders to build on the project results to achieve sustainability and long-term impact, thematic areas to pursue in follow-up projects, strategies to widely disseminate outputs, lessons and good practices and to promote climate change and the adaptation agenda in high-level fisheries governance, as well as improvements in institutional arrangements and administrative procedures to design and monitor future projects.

The overall project is rated as Satisfactory.

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The Office of Evaluation (OED) of the Food and Agriculture Organizations (FAO) would like to thank all those who contributed to this terminal evaluation. The evaluation team was made up of three independent consultants: Ms Cecile Brugere, responsible for the evaluation of the "Climate change adaptation of the Eastern Caribbean Fisheries sector" (CC4FISH) project, Mr Jan Voordouw, responsible for the evaluation of the StewardFish project, and Ms Sherry Heileman, evaluation team leader. Ms Kaia Ambrose (FAO OED) was the Evaluation Manager, while Ms Borka Karbic, office assistant (FAO OED), and Ms Cherian Savory, administrative assistant (FAO SLC), provided administrative support. Ms Renate Roels, Evaluation Officer (FAO OED), provided comments on the first draft of the report.

The evaluation was carried out with the invaluable inputs and assistance of the FAO project personnel in the Subregional Office for the Caribbean (SLC), and at FAO headquarters in Rome. Their insights, knowledge and comments helped to ensure the success of the evaluation.

The evaluation benefited from the inputs of many other project stakeholders and beneficiaries, including government officers and representatives of fisherfolk organizations in the project countries, and regional organizations and researchers. Their contributions were critical to the team's work and are deeply appreciated.

Abbreviations and acronyms

AMAT	Adaptation Monitoring and Assessment Tool
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CNFO	Caribbean Network of Fisherfolk Organizations
CRFM	Caribbean Regional Fisheries Mechanism
FAO	Food and Agriculture Organization of the United Nations
FARE	Fisheries and Aquaculture Response to Emergency
GCF	Green Climate Fund
GEF	Global Environment Facility
ICT	Information and communications technology
MTR	Mid-term review
M&E	Monitoring and evaluation
NFP	National Focal Point
NPC	National Project Coordinator
OFP	Operational Focal Point
PCU	Project Coordination Unit
SAS	Safety at sea
SCCF	Special Climate Change Fund
StewardFish	Developing organizational capacity for ecosystem stewardship and livelihoods in Caribbean small-scale fisheries
UWI	University of the West Indies
VCA	Vulnerability and capacity assessment
VHF	Very high frequency
WECAFC	Western Central Atlantic Fishery Commission

Executive summary

Introduction

1. The regional project "Climate change adaptation of the Eastern Caribbean Fisheries sector" (GCP/SLC/202/SCF), hereafter "CC4FISH" or "the project", was implemented from January 2017 to June 2022 in Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago. Financial support for the project amounted to USD 5.46 million from the Global Environment Facility (GEF)'s Special Climate Change Fund (SCCF), and over USD 37 million in co-financing. The Food and Agriculture Organization of the United Nations (FAO) served as the executing and implementing agency while the FAO Western Central Atlantic Fishery Commission (WECAFC), Caribbean Regional Fisheries Mechanism (CRFM), Caribbean Network of Fisherfolk Organisations (CNFO), University of the West Indies Centre for Resource Management and Environmental Studies (UWI-CERMES), and the national fisheries authorities of the seven participating countries were co-executing partners.

2. The FAO Office of Evaluation (OED) carried out the terminal evaluation of the project from October 2021 to April 2022, with the purpose of promoting i) accountability to GEF; and ii) learning, feedback and sharing of results and lessons learned among GEF and its partners. The terminal evaluation assessed i) project performance at the regional and national levels; ii) its results, their sustainability and transformational changes for climate change adaptation in the fisheries sector; and iii) shortcomings and good practices in project implementation. The main intended users of the terminal evaluation findings are GEF, FAO, WECAFC, co-executing agencies and other project partners.

3. The overall objective of the CC4FISH project was "to increase resilience and reduce vulnerability to climate change impacts in the Eastern Caribbean fisheries sector, through the introduction of adaptation measures in fisheries management and capacity building of fisherfolk and aquaculturists". The project was implemented through four components, with five anticipated outcomes:

    i. **Component 1:** Understanding and raising awareness of climate change (CC) impacts and vulnerability. Outcome 1.1: Increased awareness and understanding of climate change impacts and vulnerability.

    ii. **Component 2:** Increasing fisherfolk, aquaculturists' and coastal community resilience to climate change and variability. Outcome 2.1: Improved resilience of fisherfolk and fisherfolk organizations. Outcome 2.2: Improved resilience of aquaculturists and their organizations.

    iii. **Component 3:** Mainstreaming of climate change adaptation (CCA) in multilevel fisheries governance. Outcome 3.1: Climate change adaptation mainstreamed in multilevel fisheries governance.

    iv. **Component 4:** Project management, monitoring and evaluation, information dissemination and communication. Outcome 4.1: Project implemented. Lessons learned and best practices have been documented and disseminated. CC4FISH intended to benefit populations who depend on the Eastern Caribbean fisheries sector at individual, household, community, national and regional levels, and to strengthen regional fishery bodies (RFBs) such as WECAFC and the Caribbean Regional Fisheries Mechanism CRFM.

Methodology and limitations

4. The evaluation team consisted of two independent consultants, who respectively led and oversaw the terminal evaluation of both the CC4FISH and the "Developing organizational capacity for ecosystem stewardship and livelihoods in Caribbean small-scale fisheries (StewardFish)" (GCP/SLC/211/GFF) projects, which were conducted in parallel, collected and analysed data, and wrote the report of the CC4FISH terminal evaluation. The geographic coverage of the terminal evaluation is regional and national. The terminal evaluation covers all aspects of the project, as per FAO and GEF evaluation criteria: design and relevance, effectiveness, efficiency, sustainability, monitoring and evaluation (M&E), co-financing, stakeholder engagement and partnerships, knowledge management and communication (KMC), and cross-cutting issues such as gender, minority groups and Indigenous Peoples. Data and information were collected from a variety of sources through a combination of methods and tools, including an evaluation matrix with key questions, desk review, interviews with key informants and an electronic questionnaire survey. The evidence gathered was triangulated using these different sources. Face-to-face interviews and site visits were not possible due to the COVID-19 pandemic, which represented a major limitation. Instead, the evaluation team relied on virtual interviews and interactions using online videoconferencing platforms in addition to WhatsApp calls, all of which have inherent limitations.

Main findings and conclusions

5. The main findings and conclusions for each evaluation criterion are presented below. The terminal evaluation found the project to be overall satisfactory.

Relevance

6. The project was fully aligned with the GEF's climate change adaptation strategy and in line with FAO programming frameworks and priorities, including its new Strategic Framework 2022–2031. It was also highly relevant to the pressing needs of all project beneficiaries to adapt to the climate change and extreme climatic events challenges faced by the fisheries sector in the Eastern Caribbean. Although overambitious in terms of coverage of countries and breadth of activities, the project was pioneering and its design and interactions with other projects in the region, including the StewardFish project, enabled to reasonably meet expected outcomes and outputs and led to reciprocal benefits in terms of building of experiences and practices. Thus, the project carved a place for climate change adaptation in the fisheries sector in the Eastern Caribbean and affirmed it in the work of FAO in this regard.

Effectiveness

7. The project achieved a high level of results (97 percent) and targets. The project contributed to an increase in the understanding and awareness of climate change impacts, vulnerability and adaptation among fishers, aquaculturists and national fisheries authorities. The most impressive advances were achieved in relation to safety at sea (SAS) and utilization of information and communication technology (ICT) by fishers, which are widely recognized as the area where the project has made a significant difference, supported by evidence of behaviour change. The level of achievement of capacity in business skills, improved food safety and value addition, and development of insurance schemes, varied among the countries in which these activities were conducted. Although the intervention of the project created a strong basis for new developments in several forms of aquaculture, notably through training and rehabilitation of facilities, there is at present little evidence that these are contributing to adaptation and resilience to climate change among aquaculturists and their communities.

8. CC4FISH supported the formulation of a larger number of management plans for fisheries and aquaculture development than was anticipated. The Fisheries and Aquaculture Response to Emergency (FARE) training has created an entry point for disaster risk management (DRM) in national fisheries governance. The project was also instrumental in mainstreaming climate change in regional fisheries policies and, more generally, in bringing special attention to the fisheries-climate nexus in high-level policy fora. Another important advance was the inclusion of fisheries concerns in climate change adaptation priorities at national level in some of the countries. However, more work is required to increase the visibility of climate change issues in the work of regional fisheries bodies and WECAFC.

9. Project implementation was supported by robust management that adapted to fast-changing circumstances. The project was large and complex, and tried to strike a balance between tangible and less tangible activities whilst managing all stakeholders' expectations. While it was catalytic mainly in the concretization of intentions at national level and made an evident contribution to raising awareness about climate change adaptation at community level, the full institutionalization and appropriation of project results at national level will require continued support, and so will the beneficiaries' own capacity to adapt.

Efficiency

10. The Project Coordination Unit (PCU) and FAO Subregional Office for the Caribbean (SLC) responded well to the recommendations of the mid-term review (MTR) and managerial procedures improved as a consequence. The project staffing in FAO was relatively stable throughout the duration of the project, enabling consistency, continuity and satisfactory technical oversight and supervision of the project. The project adapted very well to the COVID-19 crisis by modifying some activities and approach to communication, keeping meticulous track of expenses and revising its budget to adjust spending with evolving requirements. The project no-cost extension enabled the winding down, completion or reinforcement of activities. Some risks to the implementation and execution of the project were however found to have been overlooked. These related to the complexities and particularities of the set-up of national administrations to facilitate project implementation, including the presence (or not) of FAO country offices, in the partner countries, administratively-heavy procurement and contracting procedures, and fishers' behavioural/decision inertia which, together, slowed down implementation, uptake, and could have been better anticipated. Thus, despite the complexity of FAO rules and procedures, agile project management ensured adaptability and seizing of opportunities, and enabled FAO to retain its comparative advantage in acting as both GEF implementing and executing agency.

Sustainability and progress to impacts

11. The project has laid down strong foundations for the sustainability of its results. Opportunities and collaborations with other regional projects and initiatives were harnessed during the project life to further strengthen and continue advancing the project results to, and beyond, a stable stopping point (e.g. for aquaculture activities). Although the project is leaving a strong legacy – it developed stakeholder ownership and capacity, triggered changes in awareness and behaviour, and established innovative partnership models which, together, are likely to increase the likelihood of sustainability – future institutional commitment (in time, USD or priority) of national fisheries authorities to uptake and upscale project results varies among countries and uncertainty regarding GEF funding for projects at the nexus of climate change adaptation, fisheries and small island developing states (SIDS) could compromise the continuity and amplification of CC4FISH achievements and similar projects to follow.

12. The project played an essential role in achieving impacts but other actors and their multiple interactions were also essential to this. The project has made a significant contribution to the broader impact(s) encapsulated in FAO's Strategic Objectives and climate change adaptation focal areas by creating a necessary change in the way climate change adaptation in fisheries was perceived and (un)addressed. However, it is to be acknowledged that the project can only influence the realization of the impact assumptions of its theory of change, and that realizing this will require more time and commitments from multiple partners and actors, at multiple levels, along with the containment or adaptation to major events or crises, should these arise. As such, CC4FISH as a whole was greater than the sum of the work it did in its seven countries. The project was also worth the investment but securing its results and achievements still depends on future funding and commitments.

Factors affecting performance

Monitoring and evaluation

13. Project monitoring, which complied with GEF and FAO requirements, was practical and sufficient for such a project. Particular efforts were made to involve all stakeholders in the reporting and review of progress reports, but these were not always fruitful. The rigidness of GEF's Adaptation Monitoring and Assessment Tool (AMAT) was found not to be fully conducive to the tracking and reporting of the project's progress, all the more so that targets for outputs and outcomes were not consistently defined. This blurred reporting on the overall project achievements.

Quality of execution

14. National partners satisfactorily executed project activities with as much diligence as possible, despite administrative bottlenecks, such as the holding of project funds in national consolidated funds, procurement hurdles and COVID-19 constraints. National teams (National Project Coordinator [NPC] and National Focal Point [NFP]) were dedicated to the project despite variability in staffing and letters of agreement (LOAs) with organizational partners were overall effectively implemented. Engagement with GEF Operational Focal Points (OFPs) and FAO National Correspondents (NCs) at national level was minimal but this did not have any consequence on project execution. Thus, project execution moved forward in line with the re- and proactivity of its institutional partners, notably at national level. GEF OFPs and FAO NCs could have seized opportunities that were given to them to engage with the project to a greater extent.

Financial management and mobilization of expected co-financing

15. On average, 74 percent of the project's co-financing partners' commitments materialized, but this was not found to have particular consequences on project results. Whilst co-financing levels were a good indicator of a country or institution's interest and buy-in in the project, their materialization was difficult to monitor. There was also less evidence of the value of the contribution of some co-financing partners.

Project partnerships

16. The project established strong partnerships with most co-executing partners and other stakeholders who were 'satellite' to the project, such as maritime authorities, thus creating a unique web of partnerships which were essential for the execution of activities at national and regional levels. Letters of agreement were a suitable administrative arrangement to formalize partnerships with organizational partners, despite being administratively demanding. Partnerships with private sector entities was limited to aquaculture-related activities, and to a tuna company in Grenada, and did not bear expected fruits in relation to the provision of vessel

insurance. However, the project created a departure from business-as-usual in the relationships between fishers and fisheries authorities on one hand, as well as between the various stakeholders who are part of the wider fisheries-climate change adaptation ecosystem. The project's organizational partners were critical to the project's advances but there was also mutual learning.

Knowledge management, communication and public awareness

17. The project's knowledge management and communication activities improved after the MTR with the recruitment of a knowledge management and communication specialist. The project produced, in collaboration with its partners, a vast and impressive array of knowledge and communication products, for its target audiences and beyond. These are disseminated through the project webpage on the FAO website, partners' websites and some through social media. Accessibility and the technical level of some of these products remain a challenge for some stakeholders, especially at community level, requiring further efforts in the dissemination of the project's products.

Gender, youth and minority groups

18. The project complied with prevailing gender divisions in fisheries (typically men at sea, women in post-harvest) and did not try to challenge nor redress gender inequality, dynamics or perceptions in this regard. Though women were encouraged to attend, targets regarding their participation in project activities have not been reached. Younger fishers responded particularly well to ICT training. Efforts made to reach the youth/students for aquaponics training and development are promising. The project activities included Indigenous Peoples de facto in the countries where they are present (Dominica and Saint Vincent and the Grenadines) but did not treat them as a specific target group. As such, the project illustrates how addressing gender issues and including minorities in a fisheries project remains a misunderstood topic, and how opportunities for identifying entry points to meaningfully mainstream gender considerations and Indigenous knowledge in project activities and management can be missed to change the status quo regarding gender (in)equality and inclusion of Indigenous Peoples in fisheries.

Environmental and social safeguards

19. While the environmental and social risk classification did not change during the course of the project, environmental and social concerns were not closely monitored.

Recommendations

20. The following recommendations provide guidance for activities to sustain the results of the CC4FISH project, and to improve similar FAO/GEF projects in the future.

To FAO

Recommendation 1. Continue technical support to future fisheries and climate change adaptation interventions in the Caribbean. Priority areas identified by the terminal evaluation are [Conclusions 4, 5, 9]: fisheries data collection and statistics, replication and upscaling of models put in place by CC4FISH; aquaponics, FARE, vulnerability and capacity assessment (VCA), SAS-ICT, insurance for fishers and value chain actors, in the context of social protection in fisheries more broadly, seamoss farming and transformation, legislation and policies and plans. In developing a programme of work on these topics at national levels, it is recommended to synergise activities: [Conclusion 3] (e.g. VCA+FARE, captains'/SAS + business skills training, data collection at all nodes of fish value chains), nurture multi-sectoral, "organic" partnerships across multiple stakeholders from government, private sector, academia and civil society [Conclusions 3, 10], understand fishers' behaviour [Conclusions 3, 7, 10] and tailor interventions

accordingly, and mainstream a gender perspective at all stages of project development and implementation and in all project interventions. [Conclusion 12]. How to go about doing this is detailed in Appendix 7.

To FAO and GEF

Recommendation 2. In the design and management of future projects, FAO should consider scaling down the scope of intended large-scale projects to allow for clearer implementation [Conclusions 1, 3, 4], giving due consideration to the governance and geography of partner countries in organizing operational arrangements at national levels [Conclusion 8], promoting flexibility and agility in project management [Conclusion 6], facilitating the creation and sustainability of an ecosystem of stakeholders [Conclusion 9], and pursuing funding partnerships across donor agencies as well as replenishing the GEF SCCF to tackle the multiple facets of climate change adaptation in projects focused on natural resources [Conclusion 7]. These points are expanded upon in Appendix 7.

To FAO

Recommendation 3. With regards to knowledge management, sharing and dissemination of experiences and lessons in the region and beyond, FAO should consider [Conclusion 11]: pursuing efforts to increase the resonance of CC4FISH to the entire Latin America and the Caribbean region, ensuring that new projects' budgets cover a knowledge management and communication expert from project start as well as the cost of publication of knowledge materials after project end, reviewing protocols and permissions for open access of project archives and greater visibility on social media platforms. How to go about doing this is detailed in Appendix 7.

Recommendation 4. Continue promoting climate change issues and the climate change adaptation agenda in the work of regional fisheries bodies [Conclusion 2]. RFMOs and regional fisheries bodies (in the Caribbean and beyond) to raise climate change and climate change adaptation up in their agendas, for example by making it a regular agenda item and/or topic in the Scientific Advisory Groups (SAG) should be encouraged to mainstream climate change in their programmes of work more systematically.

To FAO headquarters and FAO SLC

Recommendation 5. Review, streamline where possible, and provide more guidance on administrative procedures and requirements [Conclusion 6]. Better onboarding and supervision during project staff transition periods, as well as regular orientation of project staff and executing partners is required. Efforts that have been initiated to streamline procedures should be pursued, along with regular review of financial and operational procedures. Practical steps that could be taken to implement this recommendation are suggested in Appendix 7.

To GEF and FAO

Recommendation 6. More flexible reporting mechanisms and future funding should ensure that progress towards outcomes and the multiple dimensions of climate change adaptations are captured in future projects [Conclusions 1, 5, 6, 7]. Incentives should be provided to GEF OFPs to improve their engagement in projects [Conclusion 8]. While acknowledging that GEF has moved from the AMAT to Core Indicators during the life of the project, it should be ensured that the scope of GEF monitoring through the Core Indicators allows reporting on project outcomes and changes, beyond numbers, and that there is space for outcome-oriented indicators that fall without the strict scope of Core Indicators. Project-specific indicators that embrace outcomes should also be systematically developed in projects' documents and results frameworks. Implementing agencies need to find ways to more meaningfully

engage OFPs throughout the project cycle (from development to execution to closing), reciprocally, OFPs should capitalize on their position to provide strategic guidance to projects.

To institutional partners

Recommendation 7. CC4FISH institutional partners (governments and regional organizations) should pursue their efforts to integrate and promote the results of the project in their own programmes and outreach [Conclusions 8, 9], starting with a reflection on how to mainstream the project's results in organizational partners' own activities, and reaching out to wider to 'non-conventional' fisheries project partners who are important components of the stakeholder 'ecosystem'.

GEF rating table

GEF criteria/sub-criteria	Rating[1]	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	HS	Section 3.1
A1.1. Alignment with GEF and FAO strategic priorities	HS	Finding 1
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS	Findings 1 & 3
A1.3. Complementarity with existing interventions	S	Finding 4
B. EFFECTIVENESS		
B1. Overall assessment of project results	S	Section 3.2
B1.1 Delivery of project outputs	HS	Finding 5
B1.2 Progress towards outcomes and project objectives	S	
- Outcome 1	HS	Finding 6, section 3.2.2.1
- Outcome 2.1	HS	Finding 7, section 3.2.3.1
- Outcome 2.2	MS	Finding 8, section 3.2.4.1
- Outcome 3	S	Findings 9 & 10, section 3.2.5.1
- Outcome 4	MS	Finding 11
- Overall rating of progress towards achieving objectives/ outcomes	S	Section 3.2
B1.3 Likelihood of impact	S	Finding 21 & 22
C. EFFICIENCY		
C1. Efficiency[2]	MS	Findings 12, 13, 14, 15, 16
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	ML	Section 3.4
D1.1. Financial risks	ML	Finding 19
D1.2. Sociopolitical risks	MU	Finding 20
D1.3. Institutional and governance risks	ML	Finding 20
D1.4. Environmental risks	L	Finding 20

[1] See rating scheme in Appendix 2.
[2] Includes cost efficiency and timeliness.

GEF criteria/sub-criteria	Rating[1]	Summary comments
D2. Catalysis and replication	HL	Findings 17 & 18
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[3]	S	Finding 2
E2. Quality of project implementation	S	Findings 12 & 14
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	HS	Finding 14
E2.2 Project oversight (PSC, project working group, etc.)	S	Finding 12
E3. Quality of project execution	S	Findings 25 & 26
E4. Financial management and co-financing	MS	Finding 17
E5. Project partnerships and stakeholder engagement	HS	Findings 28 & 29
E6. Communication, knowledge management and knowledge products	MS	Finding 30
E7. Overall quality of M&E	MS	Findings 23 & 24
E7.1 M&E design	MS	Finding 23
E7.2 M&E plan implementation (including financial and human resources)	MS	Finding 24
E8. Overall assessment of factors affecting performance	S	Findings 2, 12, 14, 23 to 30
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	MU	Finding 31
F2. Human rights issues/Indigenous Peoples	MS	Finding 32
F2. Environmental and social safeguards	MS	Finding 33
Overall project rating	**S**	

[3] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

1. Introduction

1.1 Purpose of the evaluation and evaluation team

1. The terminal evaluation has a dual purpose to i) provide accountability to national governments, regional stakeholders, Food and Agriculture Organization of the United Nations (FAO) management and technical staff, as well as to the Global Environment Facility (GEF); and ii) promote learning, feedback and knowledge sharing on results and lessons learned among GEF and its partners as a basis for decision-making on projects, programmes, programme management, policies and strategies; and to improve performance. The evaluation team consisted of two independent consultants: one consultant who oversaw the terminal evaluation and served as team leader for the terminal evaluations of both the "Climate change adaptation of the Eastern Caribbean Fisheries sector" (GCP/SLC/202/SCF), hereafter "CC4FISH" or "the project", and the "Developing organizational capacity for ecosystem stewardship and livelihoods in Caribbean small-scale fisheries" (StewardFish*)* (GCP/SLC/211/GFF) project, conducted in parallel, and one consultant responsible for the data collection, analysis and report writing of the CC4FISH terminal evaluation. Administrative assistance was also provided by the FAO Subregional Office for the Caribbean (SLC).

1.2 Intended users

2. Among the evaluation's main users are the governments of the participating countries and the key participating regional stakeholders including co-executing partners and beneficiaries, GEF, FAO personnel at headquarters and SLC, including Project Task Force (PTF) and FAO-GEF Coordinating Unit, and the Regional Project Steering Committee (RPSC). The terminal evaluation will also be of interest to the members of regional fishery bodies (RFB) such as the Western Central Atlantic Fishery Commission (WECAFC) and the Caribbean Regional Fisheries Mechanism (CRFM), and to fisheries policymakers in the project countries who will be able to use the findings for internal learning and planning or programmatic purposes. Findings will be of indirect relevance to the CC4FISH's direct beneficiaries – fisherfolk, aquaculturists and coastal communities, including all men and women actors in the value chain (e.g. fish processors and vendors) in the participating countries.

1.3 Scope and objectives of the evaluation

3. The terminal evaluation covers all four components of the CC4FISH project, and the seven countries where it was implemented (Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago), as well as nearly the entire period of implementation (January 2017 to January 2022).[4]

4. The specific objectives of the terminal evaluation are to: i) assess the results achieved by the project (including unintended results) during its implementation and the extent to which these results contribute to the project's outputs, outcomes and strategic objectives; ii) assess the sustainability of the project intervention and its potential impact in the long-term; and iii) identify lessons learned from project design, implementation and management. Through recommendations targeted to GEF, FAO, partners and government counterparts, the findings of

[4] The project was extended first until 30 March 2022, then until 30 June 2022. January 2022 was the cut-off date for the evaluation data collection phase.

the evaluation also aim at informing decision-making regarding relevant future activities and initiatives regarding climate change adaptation (CCA) in the fisheries sector.

5. The list of evaluation questions, which are aligned with the GEF evaluation criteria (relevance, effectiveness, efficiency, sustainability, factors affecting performance and cross-cutting issues of gender, minority groups and environmental and social risks) are summarized in Table 1. The full evaluation matrix, with corresponding sources of information and data used to answer each question, is available in Appendix 2, while the GEF ratings table and rating scheme are described in Appendix 3.

Table 1. Overview of the terminal evaluation questions

Relevance

EQ 1.1. Were the project outcomes and envisioned long-term impacts congruent with the GEF focal areas/operational programme strategies, country priorities and FAO Country Programming Framework (CPF), as well as regional and subregional environmental and development priorities?

EQ 1.1a. Was the project design appropriate for delivering the expected outcomes, and in a way consistent with the institutional capacity and time frame for implementation of the various implementing actors (i.e. state-level, civil society, academia)?

EQ 1.2. Were the project activities considered relevant by the project beneficiaries (institutional and local level)?

EQ 1.3. To what extent were the project's interventions complementary to existing interventions and the StewardFish project in the region?

Effectiveness

EQ 2.1. To what extent have project outcomes and outputs been achieved? How well has the project delivered its planned outputs?
EQ 2.2. What evidence is there of:

- The *type of awareness and understanding* of climate change impacts and among which actors in the fisheries sector?
- The extent to which *men and women fisherfolk and beneficiaries* have embraced adaptation technologies and changed their practices (behaviour change)?
- The extent to which *aquaculture initiatives* are supporting livelihood resilience in the face of climate change?
- The extent to which *national institutions* have improved their capacity around the mainstreaming of climate change adaptation in policymaking?

Efficiency

EQ 3.1a. To what extent did FAO respond to the mid-term review recommendations and fulfilled its role of oversight and supervision? (implementation)

EQ 3.1b. How well were risks identified and managed, since the mid-term review?

EQ 3.2. To what extent has the project been implemented efficiently, cost-effectively, and has management been able to adapt to any changing conditions to improve the efficiency of project implementation, (since MTR)?

Sustainability and progress to impact

EQ 4.1a. How sustainable are the project achievements, and what is the overall likelihood of risks to sustainability?

EQ 4.1b. To what extent may the progress towards long-term impact be attributed to the project?

Factors affecting performance

EQ 5.1a. Was the monitoring and evaluation plan practical and sufficient? (M&E design)

EQ 5.1b. Did the M&E system operate as per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? (M&E implementation)

EQ 5.2. To what extent did the executing agencies effectively discharge their role and responsibilities related to the management and administration of the project? (execution)

EQ 5.3. To what extent did the expected co-financing materialize, and how did short fall in co-financing, or materialization of greater than expected co-financing affect project results?

EQ 5.2a. How effective were stakeholder engagement and partnerships?

EQ 5.2b. Were other actors, such as civil society, Indigenous Peoples or private sector involved in project design or implementation, and what was the effect on project results?

EQ 5.3a. How is the project assessing, documenting and sharing its results, lessons learned and experiences?

Gender

EQ 6.1. Was the project implemented in a manner that ensures gender equitable participation and benefits, in accordance with FAO and GEF Policies on Gender Equality objectives? Environmental and social safeguards

EQ 7. To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?

Source: Elaborated by the evaluation team on the basis on the evaluation's terms of reference.

1.4 Methodology

6. During the inception phase, which ran from 15 September to 31 October 2021, key project documentation was reviewed and key FAO project personnel (Regional Project Coordinator, Lead Technical Officer and Funding Liaison Officer) were consulted to refine the scope of the evaluation and determine its approach, tools and methodology. Activities conducted and stakeholders consulted during this preparatory phase are listed in Annex 1.

7. The overall approach to the terminal evaluation was utilization-focused, participatory and inclusive, complexity aware and complying with established United Nations (UN), FAO and GEF evaluation standards and policies. Further information on what this entailed, as well as methodological details beyond those outlined below can be found in Annex 2.

8. The terminal evaluation used mixed data collection methods. Primary data collected was:

   i. Qualitative, through semi-structured key informant interviews (KII) conducted virtually (mainly Zoom) with project stakeholders on all the changes – either positive and negative, intended and unintended – that have happened (or not) thanks to the project; the project's performance, successes and bottlenecks, in alignment with the evaluation questions (Appendix 2) and GEF evaluation criteria (Appendix 3). The interviews followed the template presented in Annex 3. Key informants were selected to represent i) the range of project beneficiaries and partner organizations; and ii) the countries where the project was implemented. A total of 42 people were interviewed, of whom 23 (56 percent) were women (list in Appendix 1). Interviewees represented all the project countries, organizational partners, and key consultants and FAO personnel who had provided specific support or inputs into the project activities. The qualitative data collection phase also included collecting the Regional Project Coordinator and Lead Technical Officers perceptions of the changes brought about by the CC4FISH project (Annex 4) and a virtual outcome mapping-based session with key regional partners and representatives of Saint Lucia and Trinidad and Tobago to validate and refine the outcomes identified by the evaluation team. Fifteen people including ten women participated in this session.

   ii. Quantitative, through a structured online survey to reach the widest range of project stakeholders and beneficiaries possible, and to provide quantitative answers to the evaluation questions and a quantitative estimate of the scale of changes. The

questionnaire, using the Qualtrics software (Annex 5), included a section on fisherfolk organizations, targeted at fishers who had also benefited from the StewardFish project. It was sent to 361 people and had a 44 percent response rate (159 answers), which is higher than what can be expected for questionnaire surveys (Baruch and Holtom, 2008). The data was analysed using descriptive statistics. Where relevant, cross-tabulations were performed to examine answers by type of respondents, or affiliation/occupation or sex, noting that the structure of the questionnaire enabled to disaggregate data per project (CC4FISH and StewardFish) whenever necessary. The e-survey results can be found in Annex 6.

9. Secondary data collection involved reviewing all project documentation made available to the evaluation team in the SharePoint folder, as well as all project outputs disseminated more widely (e.g. news articles and letters, technical papers, videos, training materials, social media pages, etc.). Documents of relevance to the region, such as FAO Country Programming Frameworks (CPF), the 2017–2021 United Nations Multi-Country Sustainable Development Framework (UNMSDF) in the Caribbean, the Caribbean Community Common Fisheries Policy (CCCFP) and its small-scale Fisheries (SSF) Protocol, CRFM Strategic Plan and Climate Change Strategy and Action Plan, and the CLME+ Strategic Action Programme (SAP), were also reviewed.

10. Multiple lines of evidence across different data sources enabled corroborating findings and increasing confidence in the evaluation findings. The evaluation team had frequent email exchanges with the Project Coordination Unit (PCU), mostly to answer/clarify questions that emerged during the evaluation process, or to review specific evaluation outputs, such as the inception report and the preliminary findings. The level of engagement of all stakeholders approached for the evaluation was excellent given the virtual nature of the interactions, as imposed by the COVID-19 pandemic (see section 1.5).

1.5 Limitations

11. A major limitation to the evaluation was presented by the COVID-19 pandemic and associated travel restrictions and human health risks. As a result, the evaluation team was unable to hold face-to-face interviews with stakeholders, do site visits or meet with local communities. Instead, the team had to resort to virtual means of communication. This had drawbacks, including poor connectivity, difficulty to perceive nuances in the interviewee's perspectives and of reaching some beneficiaries in coastal communities who are not well connected and familiar with virtual platforms. To mitigate these constraints, the evaluation team adopted the communication means that the informant was most comfortable with, and adapted its work hours to their availability.

12. The constitution of the sample of respondents targeted by the e-survey was constrained by the availability of contact details provided in project activity reports, and was compiled during the evaluation. As a consequence, it was not possible to determine the extent to which the sample of people who were sent the questionnaire was representative of the overall population targeted by the project, nor if the sample of received answers was representative of the respondents' demographics given the large variety of affiliations of the contacted stakeholders. The affiliation of the respondents nonetheless enabled breaking the survey results down according to each category of stakeholders. Some respondents targeted for key informant interviews were also particularly difficult to reach. This was the case of national GEF Operational Focal Points (OFPs) in the seven countries. To compensate for this, the evaluator of the StewardFish project shared the information he had gathered from his discussions with the GEF OFP in the three countries common to both projects.

1.6 Structure of the report

13. Following this introduction, section 2 presents the background and context of the project. Subsequently, section 3 covers the main findings of the terminal evaluation, presented according to the evaluation criteria and corresponding evaluation questions (see Table 1). The conclusions and recommendations of the terminal evaluation are listed in section 4, followed by lessons learned in section 5.

2. Background and context of the project

2.1 Project information

14. Basic information about the project is summarized in Box 1.

Box 1. Basic project information

- GEF Project ID Number: 5667
- Recipient countries: Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago
- Implementing Agency: Food and Agriculture Organization of the United Nations (FAO)
- Executing Agency: Food and Agriculture Organization of the United Nations (FAO)
- Executing Partners: FAO Western Central Atlantic Fishery Commission (WECAFC), Caribbean Regional Fisheries Mechanism (CRFM), Caribbean Network of Fisherfolk Organisations (CNFO), University of the West Indies Centre for Resource Management and Environmental Studies (UWI-CERMES).
- GEF Focal Area: Special Climate Change Fund (SCCF) – Climate change adaptation (CCA)
- Date of CEO endorsement: 21 January 2016
- Date of project start: 1 January 2017
- Initial date of project completion (original NTE): 30 September 2021
- Revised project implementation end date: 30 March 2022 (extended to 30 June 2022)
- Date of mid-term evaluation: March 2020
- GEF/Special Climate Change Fund (SCCF) allocation: USD 5 460 000
- Co-financing sub-total: USD 37 542 000
- Total project budget: USD 43 002 000

Source: Elaborated by the evaluation team on the basis of the evaluation's terms of reference.

15. The Eastern Caribbean region is extremely sensitive to climate change and extreme climatic events. The seven countries participating in the CC4FISH project are highly dependent on the fisheries sector (including capture fisheries and aquaculture) for food security, livelihoods and household income. The sector is expected to be severely impacted by climate change and variability, which exacerbate other pressures such as overfishing, pollution, habitat loss, disturbance of coral reefs, and invasive species. Insufficient understanding and awareness of climate change vulnerability of the fisheries sector at the regional, national and local levels, limited resilience to climate change and ineffective accounting of climate change adaptation in fisheries at multiple levels of fisheries governance variability, make fisherfolk, aquaculturists, and coastal communities (men and women involved in all aspects of the sector) particularly vulnerable to these impacts.

16. To address these challenges, the CC4FISH project was formulated under the GEF Special Climate Change Fund (SCCF) in a participatory manner with its partners and beneficiaries (WECAFC, CRFM, CNFO, University of the West Indies [UWI], CARIBSAVE,[5] The Nature Conservancy – TNC[6]) over several years, and started in January 2017. Its initial end-date was extended to be

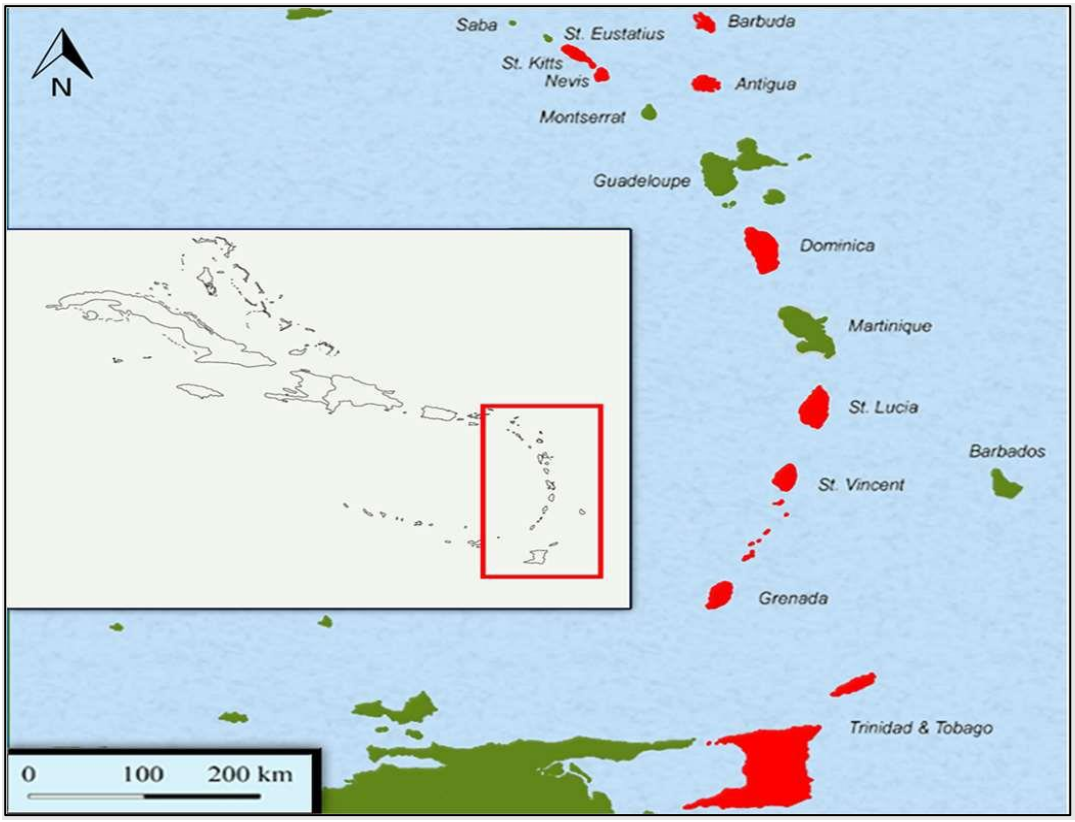
[5] Now defunct.

[6] Not involved in execution due to staff changes.

30 December 2021 to account for delays in implementation due to the COVID-19 pandemic and has since been further extended to 30 June 2022.

17. The chief objective of the CC4FISH project is "to increase resilience and reduce vulnerability to climate change impacts in the eastern Caribbean fisheries sector, through introduction of adaptation measures in fisheries management and capacity building of fisherfolk and aquaculturists" (ProDoc).[7] CC4FISH aims to address the barriers to climate change adaptation in seven countries (Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago – Figure 1). It is intended to benefit the populations who depend on the Eastern Caribbean fisheries sector at individual, household, community, national and regional levels. In addition, CC4FISH also intends to strengthen regional fishery bodies such as WECAFC and CRFM, and to promote regional collaboration. Not all project countries executed the same activities as some outputs were more relevant than to others.

Figure 1. Location of the CC4FISH project countries (in red)



Source: FAO/GEF. 2015. *Climate Change Adaptation of the Easter Caribbean Fisheries Sector (CC4FISH), GCP/SLC/202/SCF. Project Document*. FAO, Rome. Map complies with UN. 2020. *Map of the World*. https://www.un.org/geospatial/content/map-world

18. As detailed in the project results framework (Appendix 4), CC4FISH was implemented through the following four components, from which five anticipated outcomes (as worded in the project document) were anticipated:

    i. *Component 1: Understanding and raising awareness of climate change (CC) impacts and vulnerability*. This component worked on assessing vulnerability to climate change in the fisheries sector at regional, national and local levels; on models that describe fish abundance and accessibility; and on disseminating findings of vulnerability assessments and models at regional, national and local levels.

[7] The project does not have an explicit project development objective (PDO) and global environment objective (GEO).

- Outcome 1.1. Increased awareness and understanding of climate change impacts and vulnerability.

ii. *Component 2: Increasing fisherfolk, aquaculturists' and coastal community resilience to climate change and variability*. This component worked on strengthening the capacity of fisherfolk and Caribbean Network of Fisherfolk Organisations (CNFO)/national fisherfolk organizations (NFOs) in areas such as information and communications technology (ICT), business skills and insurance schemes; on strengthening capacity for full utilization of commercial and underutilized species; on implementing exchange programmes on fisheries co-management and adaptation technology; on rehabilitating and establishing aquaculture centres; and on strengthening the capacity of aquaculturists in climate change adaptation measures and adaptive technologies.

- Outcome 2.1. Improved resilience of fisherfolk and fisherfolk organizations.
- Outcome 2.2. Improved resilience of aquaculturists and their organizations.

iii. *Component 3: Mainstreaming of climate change adaptation in multi-level fisheries governance*. This component worked on strengthening regional and national institutional mechanisms to implement climate change adaptation measures; and on mainstreaming climate change adaptation into policies, plans and associated processes.

- Outcome 3.1. Climate change adaptation mainstreamed in multilevel fisheries governance.

iv. *Component 4: Project management, monitoring and evaluation, information dissemination and communication*. This component worked on implementing the project and on documenting and disseminating lessons learned and best practices.

- Outcome 4.1. Project implemented. Lessons learned and best practices have been documented and disseminated.

19. The project's theory of change (TOC) was revised and elaborated with the Regional Project Steering Committee during the mid-term review (MTR). The reconstructed TOC produced during the MTR (see Appendix 5) is more detailed and identifies two additional intermediate states in the project's progress towards (implicit) high-level goals and impact. This TOC was examined but not re-validated during the present terminal evaluation.

20. The project received USD 5.46 million of cash funding from the GEF SCCF. According to the project document, this was meant to be complemented by USD 37 542 000 of both cash and in-kind contributions from the project countries (90 percent of the co-financing) and partners (10 percent of the co-financing). At the near end of the project (31 December 2021 financial cut-off date), 74 percent of the total co-financing commitments had materialized.

21. At the national level, the project was coordinated by National Project Coordinators (NPC), who are appointed by SLC. The NPCs are supported by National Focal Points (NFP) who are typically senior staff nominated by the national fisheries' authority (NFA). At the regional level, the project was coordinated by the Project Coordination Unit, located within FAO SLC. The PCU comprises the Regional Project Coordinator (RPC) and an Administration and Operations Support person. The PCU was supported technically by the Lead Technical Officer (LTO) and reports to the Subregional Coordinator (SRC), who also acted as the CC4FISH Budget Holder (BH). The PCU was also supported by other international, regional and local FAO personnel, including the GEF FAO Funding Liaison Officer (FLO) and members of the Project Task Force.

22. The project was co-executed by four regional organizations (two out of the six initially planned – CARIBSAVE and The Nature Conservancy – dropped out) and by the seven NFAs of the project

countries. While the main intended beneficiaries described in the project document were fisherfolk, aquaculturists, coastal communities, fisheries policymakers both benefited and enabled the execution of the project. While CC4FISH worked mainly with these stakeholders, the involvement of diverse actors from the fishing, aquaculture and maritime sectors, and other stakeholders from the public and private sectors, civil society, academia and regional fishery bodies, were also key to its implementation.

23. An MTR was conducted in 2020 (FAO, 2020f). It recommended that the project continue to emphasize collaboration with complementary projects, reinforce its internal management and oversight mechanisms, and gender mainstreaming, and strengthen monitoring and evaluation as well as communication and knowledge management. Most of the recommendations were accepted or partially accepted, despite the limited time to manoeuvre and the challenges imposed by the COVID-19 pandemic.

24. The COVID-19 pandemic, which started half-way through the project, has been the biggest challenge to its implementation across all countries. While the project itself adapted to the unforeseen health crisis, restrictions in place nonetheless slowed down activities. In addition, Hurricane Maria destroyed existing aquaculture facilities in Dominica in September 2017. A volcanic eruption in April 2021 brought activities in Saint Vincent and the Grenadines to a stand-still. In Antigua and Barbuda and Saint Vincent and the Grenadines, project funds were held up in the government's consolidated fund, resulting in delays in the execution of activities in these two countries (financial management and procurement issues are dealt with in detail in section 3.3).

25. Apart from an additional nine-month no-cost extension granted to the project until 30 March 2022 to complete the remaining planned activities, no substantial changes have been made to the project design or budget since endorsement by the GEF Chief Executive Officer (CEO).

3. Findings

3.1 Relevance

EQ 1.1. Were the project outcomes and envisioned long-term impacts congruent with the GEF focal areas/operational programme strategies, country priorities and FAO Country Programming Framework (CPF), as well as regional and subregional environmental and development priorities?

Finding 1. The project was overall congruent with GEF and FAO programming frameworks and priorities, and was highly relevant to the fisheries sector of the Eastern Caribbean in particular. The project is also closely aligned with FAO's new Strategic Framework 2022–2031.

26. Alignment with GEF and FAO strategic priorities is rated as highly satisfactory. The project was deemed relevant to GEF and FAO CPFs and national visions and priorities of the MTR. The project has remained fully aligned with GEF's climate change adaptation strategy, which aims at supporting developing countries to move to a climate resilient development pathway while reducing exposure to the immediate risks posed by climate change.[8] The implementation trajectory taken by the project has also firmly anchored it in the Long-Term Vision on Complementarity, Coherence, and Collaboration between the Green Climate Fund (GCF) and GEF, launched in 2021 (GEF, 2021), Although a number of the FAO CPFs are now due for reformulation, the relevance of the project has not changed. The CPFs of all the participating countries include climate change resilience and disaster risk management among the priorities. The terminal evaluation was informed that Trinidad and Tobago-FAO's new CPF, under elaboration at the time of writing, includes fisheries and ecosystem approach to fisheries (EAF) considerations, and covers climate change adaptation, social protection and blue economy development, in line with national development priorities. Disaster risk reduction and climate change and variability are priority areas in the Common Multi-Country Assessment, which provides the basis for the UNMSDF in the Caribbean. The project contributes to the Joint UN Sub-Regional Implementation Plan under the UNMSDF for Barbados and the Organisation of Eastern Caribbean States (OECS) countries, in particular Strategic Priority A: Sustainable and Resilient Caribbean.

27. With the adoption of FAO's new Strategic Framework 2022–2031 – which focuses on four "betters" (production, nutrition, environment, life) and leaving no one behind, formulated during the last years of the project – FAO's Strategic Objectives (SO) along which the project was aligned are now defunct. The objective and work undertaken by CC4FISH remains aligned with FAO's new strategic orientation and it can be anticipated that the legacy of the project (see section 3.4) will, overall, directly contribute to: the Blue transformation priority area under better production; climate change mitigation and adapted agrifood systems priority area under better environment; and indirectly to healthy diets and safe food for everyone priority areas under better nutrition; and resilient agrifood systems priority area under better life.

28. CC4FISH is showcased among FAO's work on climate change in fisheries and aquaculture 2020 (FAO, 2021a; FAO, 2021b), demonstrating its alignment with, and support to, the Organization's priorities in this regard.

29. The project document outlined the multiple policies and strategies related – directly or indirectly – to climate change and sustainable fisheries, and the relevance of the project in supporting their

[8] At the time of writing, details of the new programming strategy for the Least Developed Countries Fund and Special Climate Change Fund for GEF-8, which will run from July 2022 to June 2026 and is expected to be launched in July 2022, were not available.

finalization, review or implementation. The project's relevance to this has since further increased in light of countries' priorities for climate change adaptation and formulation of their nationally determined contributions (NDCs) for the Paris Agreement on climate change. For example, when the project was being formulated, Dominica was the only country to have explicitly mentioned the fisheries sector as highly vulnerable and identified "Promotion of Food Security through Climate Resilient Agricultural/Fisheries Development" among its strategies for building climate resilience in its 2015 intended nationally determined contributions (INDCs) (Government of Dominica, 2015). Since then, Grenada (Government of Grenada, 2020),[9] Saint Lucia (Government of Saint Lucia, 2018a) and Saint Vincent and The Grenadines (Government of Saint Vincent and the Grenadines, 2019) have involved the ministries in charge of the fisheries sector and explicitly included fisheries in their NDCs and National Adaptation Plans (NAPs) – noting that Grenada's NAP even references the CC4FISH project in its 2017–2021 NAP (Government of Grenada, 2017). As such, project relevance to national, regional and global priorities is rated as highly satisfactory.

30. The MTR had highlighted that the impossibility for the project to finance infrastructural improvements (GEF SCCF stipulation), such as safer landing sites, was not fully addressing local and national stakeholders' immediate needs, and this disappointment was expressed again by key informants during the terminal evaluation. The MTR had identified some changes in priorities and trends opening up opportunities for the project to strengthen its work on value chains, public-private partnerships (PPPs), energy resilience, which have since materialized (though less so for those related to gender equality and ecosystem-based management).

EQ 1.1a. Was the project design appropriate for delivering the expected outcomes, and in a way consistent with the institutional capacity and time frame for implementation of the various implementing actors (i.e. state-level, civil society, academia)?

Finding 2. The project was pioneering but overambitious in terms of the large number of countries and activities, the nature of the different activities, and the limited budget and time frame. The project design enabled to reasonably meet the outcomes/outputs stated in the project document but raised expectations beyond what it could deliver regarding the climate proofing of fisheries infrastructure.

31. CC4FISH was the first project funded by SCCF of the GEF projects managed by FAO SLC and was the first of its kind on climate change adaptation in fisheries in the region and thus filled a void at regional and national levels. For example, fishers' safety at sea had long been identified as an urgent need but had difficulties obtaining funding or technical support prior to CC4FISH. The project also broke new ground regarding practical adaptation to climate change impacts in the fisheries sector at various levels (institutional, production and transformation) when there were very few such experiences elsewhere in the world at the time. CC4FISH also enabled the setting of some standards where none existed before, for example regarding sargassum management, communication and linkages across maritime sectors, and the translation of international safety at sea protocols into training materials.

32. The project design was suitable to tackle the multiple facets of climate change within the fisheries sector. While in-country national capacity was sufficient in relation to fisheries management itself, it was weak in relation to understanding climate change impacts on the sector, and lagged behind in relation to aquaculture development and know-how due to the marginal nature of the sector in the target countries.

33. The project design was aligned with the outcomes it set out to achieve. The inclusion of aquaculture activities can only be justified as part of a holistic approach to climate change adaptation and the importance of supporting diversified income streams as part of adaptation.

[9] Noting that fisheries was not included in any form in its 2019 NCD (UNCC, n.d.).

However, as they stood in the project, that is, confined to sub-component 2.2 mainly, aquaculture activities had few connections with the rest of the project. Although they achieved visible improvements (see section 3.2.3), they appeared unnecessary (and a possible diversion of resources and effort) compared to the significant amount of work that had to be covered under the other project components, the breadth of the project, and in light of the very limited aquaculture capacity available (of institutions' staff and farmers) at the start of the project in the countries targeted for aquaculture activities. Added to this were the COVID-19 related constraints. As such, sub-component 2.2 may have been better tackled as a separate project.

34. The number of countries covered by the project (seven) was also large for a project on adaptation, especially given operational challenges, differences in institutional strength of the authorities responsible for fisheries management, in the level of development of their fisheries and aquaculture sectors, as well as in their vulnerability to climate change impacts and adaptive capacity. Under prevailing and challenging circumstances, it turned out to be a difficult balancing exercise to adequately respond to, and account for, the specific needs of each country. Despite this, the project design and readiness are rated as satisfactory.

35. The project was approved to include infrastructural improvements at landing sites.[10] Large infrastructural improvements (e.g. safe boat hauling facilities) to climate proof infrastructures were however not permitted under GEF SCCF and would have drained project funds in any case. These infrastructural improvements had been anticipated by fishers, who were disappointed that they could not take place (e.g. Antigua and Barbuda with the exception of Saint Lucia) (see section 1.2). Although not anticipated at project design, procurement of equipment was possible and added during the course of the project to respond to expressed needs by fishers and support the safety at sea (SAS) and ICT training (e.g. safety equipment, 1 100 very high frequency (VHF) radios and six repeater systems).

EQ 1.2. Were the project activities considered relevant by the project beneficiaries (institutional and local level)?

Finding 3. The project activities were considered highly relevant by all project beneficiaries. The project responded well to the needs for support to adapt to climate change and extreme climatic events expressed by fishers in the region.

36. The e-survey confirmed the overall relevance of the project, with 51 percent of respondents (76) considering that CC4FISH activities were "highly relevant" and 32 percent "relevant" towards the realization of the project objectives. In particular, 81 percent of the government partners/fisheries authorities who responded to the e-survey (26) judged project activities to be "highly relevant" and "relevant".

37. The participatory project formulation stage enabled ownership to be built among executing partners, which ultimately enhanced the value of their contribution (in particular for organizational partners) as they saw more than dollars in their partnership with the project (see also section 3.5.4).

38. SAS/ICT/captain's hands-on training, community-based vulnerability and capacity assessment, (VCA) on-farm aquaculture demonstration and sargassum clean-ups were "action-oriented" and

[10] It is clearly stated in the project document that "Investments in boat hauling equipment and development and designation of 'safe harbours' [...] for fishers in case of storms and hurricanes will lead to less economic and financial loss to fishers and their communities." (p.107).

directed at local beneficiaries. While directly responding to immediate needs, they also gave practical visibility of the project benefits at community/ground levels).

39. The link between the project activities and fisher's adaptation to climate change was deemed to be very clear by all stakeholders interviewed, most notably through SAS/ICT activities (e.g. use and maintenance of very high frequency radios, repeater systems, onboard safety protocols, etc.) to face increasingly unpredictable and extreme weather events. This link was also clear in the context of aquaculture, with the rehabilitation of aquaculture facilities destroyed by the hurricane (Dominica) and aquaponics proposed as a suitable, climate-smart alternative to traditional, water-intensive pond aquaculture. The link was considered more indirect in the context of value chain improvement activities, in as much as these would allow strengthening fisheries-dependent livelihoods as part of broader climate change adaptation strategies. As such, the project relevance to beneficiaries' needs is rated as highly satisfactory.

EQ 1.3. To what extent were the project's interventions complementary to existing interventions and the StewardFish project in the region?

Finding 4. The CC4FISH and StewardFish projects operated in relative isolation from one another but had nonetheless an indirect synergistic effect through the work with fisherfolk organizations and regional partners common to both projects. CC4FISH actively pursued interactions with other fisheries initiatives in the region, which led to reciprocal benefits in terms of building of experiences and practices.

40. StewardFish worked on tackling fishers' (dis)organization, which is an important aspect of fishers' adaptive capacity. Although both projects were managed in relative isolation, fisherfolk organizations (FFO) were their anchoring point. For example, FFOs were the conduit through which CC4FISH mobilized fishers to attend safety at sea training, so any strengthening of FFOs from the StewardFish project – in the countries common to both projects, i.e. Antigua and Barbuda, Saint Lucia, and Saint Vincent and the Grenadines – had a positive ripple effect on the engagement of CC4FISH with fishers themselves. Similarly, the interactions of both projects with the same partners (CNFO, CRFM, UWI-CERMES, WECAFC) facilitated crossovers in learning and sharing of practices between the projects and partners. This is exemplified by the work conducted by UWI-CERMES on "leadership profiling" for FFO governance under StewardFish, and shared by CNFO on the CC4FISH Facebook page for CC4FISH fishers and other beneficiaries. It is also exemplified by the manner in which CNFO's own Regional Code of Conduct for Caribbean Fisheries 2020–2025 (CNFO, 2020) – developed under StewardFish and the contents of which were influenced by CC4FISH (i.e. national workshops including CNFO members on climate change) and stemmed from the FAO Voluntary Guidelines on Small-Scale Fisheries – was tailored to Antigua and Barbuda, Saint Lucia, and Saint Vincent and the Grenadines' national contexts and, this way, also seeped through (and benefited) the work of CC4FISH in these three countries. Another noteworthy indication of synergy concerns the raising of awareness about gender equality and women's participation among fishers through FFOs (see section 3.6).

41. As was indicated at mid-term, important efforts had been made to link with other projects and seek additional funds beyond what had been initially envisaged in the project document. These efforts have continued until now – 43 percent of e-survey respondents (69) confirmed that the project was "successful" (and 22 percent "very successful") at linking up with other projects and initiatives of relevance. Additional funds that have been secured have been principally targeted at supporting activities under Component 2 of the project. This has supported the implementation and expansion of CC4FISH activities in countries when other projects and donors contributed their funds, in cash or in-kind, to CC4FISH activities (e.g. the FAO-implemented AMEXCID project in support of aquaculture activities or the Inter-American Development Bank (IADB) in furthering the development of the tuna fishery value chain in Grenada). Reciprocally, it has enabled the

transfer of CC4FISH experience and practices to other countries of the region, not initially included in the project (e.g. Barbados) when CC4FISH staff contributed its expertise to, e.g. the development of fisheries projects). Although opportunistic in nature, these two-way interactions widened the resonance of the project, and took forward some project activities which would have been otherwise short of funds, including laying the ground for their sustainability (see section 3.4). Crossovers with other projects were also stimulated when an executing partner dealt simultaneously with several FAO projects in countries common to CC4FISH. For example, the Caribbean Natural Resources Institute (CANARI) project "Climate Change and Poverty Nexus for Enhancing Resilient Fisheries Livelihoods and Food Security in Three Caribbean Countries: Barbados, Dominica and Saint Kitts and Nevis", 2019–2020,[11] created synergies between the value chain analyses under its responsibility and CC4FISH (CANARI, undated). CERMES did the same with the Norwegian Agency for Development Cooperation (NORAD)-funded project supporting the global implementation of the FAO Small-Scale Fisheries Voluntary Guidelines (SSFVG) (FAO, 2015b).

42. Thus, while the project's complementarity with existing interventions is rated as satisfactory, the overall relevance of the project is rated highly satisfactory based on the above.

3.2 Effectiveness

EQ 2.1. To what extent have project outcomes and outputs been achieved? How well has the project delivered its planned outputs?

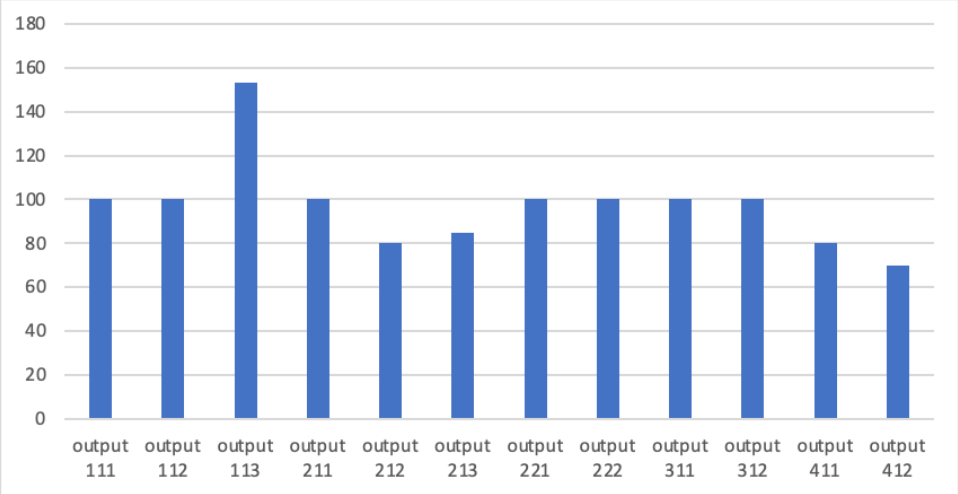
3.2.1 Overview of progress and achievements

Finding 5. The project target outputs have been achieved at an average of 97 percent. The Adaptation Monitoring and Assessment Tool (AMAT) targets, on average, have been exceeded. However, the inconsistency of the reporting of targets for outputs and outcomes in the results framework creates confusion of the overall results picture.

43. Figure 2 summarizes the percentage achievement of the project output targets, while Appendix 4 summarizes achievements according to the project's results matrix. The MTR had suggested reducing the number of beneficiaries under Output 2.1.2 from 4 200 to 3 000. Other targets remained the same. Despite this reduction, this target was not fully achieved. Achievements were also below target for Component 4 (section 3.2.6). However, Output 1.1.3 largely exceeded its target and despite the challenges, the project has been able to achieve all targets under other Outputs (1.1.1; 1.1.2; 1.1.3; 2.1.1; 2.2.2; 3.1.1 and 3.1.2) (see sections 3.2.2 to 3.2.5). This provides an overall achievement rate in project outputs of 97 percent, which is considered highly satisfactory.

[11] Funded by FAO Multi-Disciplinary Fund (MDF).

Figure 2. Achievement of project outputs to targets at project end, in percentages



Note: The latest figures, extracted either from the July 2021 PIR or from the January 2022 PPR are used, even if the figures provided were for outcome (and not output) targets.

Source: Elaborated by the evaluation team on the basis of the Project Implementation Report (PIR) of July 2021 and the Project Progress Report (PPR) up to 31 December 2021.

44. The terminal evaluation was not provided with the AMAT indicators at project end but attempted to compile and summarize them using the last project implementation review (PIR) report (to July 2021) and last project progress report (PPR) to 30 December 2021 (dated 5 March 2022) (Table 2). The majority of targets have been achieved or exceeded. The AMAT indicator 3 had been anticipated as ambitious at the MTR, which had advised to reduce some of the targets for the outputs underpinning it (but not the outcome target per se). This explains the lower percentage achievement (74 percent) at project end.

Table 2. Compiled AMAT indicators, as selected in the project's results framework

AMAT indicator number	Description of AMAT indicator	Percentage achievement
3	Population benefiting from the adoption of diversified, climate-resilient livelihood options	74%
4	Extent of adoption of climate resilient technologies/ practices	91%
5	Public awareness activities carried out and population reached	153%
6	Risk and vulnerability assessments, and other relevant scientific and technical assessments carried out and updated	100%
10	Capacities of regional, national and subnational institutions to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures	100%
12	Regional, national and sector-wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures	no target

Source: Elaborated by the evaluation team on the basis of the PIR of July 2021 and the PPR up to December 2021 (dated 05 March 2022).

3.2.2 Component 1: Understanding and raising awareness of climate change impacts and vulnerability

Key activities under this component: vulnerability and capacity assessment, sargassum activities, communication and dissemination of information to communities on climate change and climate change adaptation.

Finding 6. The project contributed to an increase in understanding and awareness about climate change impacts, vulnerability and adaptation among fishers, aquaculturists and national fisheries authorities. The scope of some outputs was revised, although some (e.g. sargassum management) were found to have over-mobilized resources.

45. The scope of Output 1.1.2 under Component 1 was modified during the project compared to what was outlined in the project document. Lack of baseline data prevented the downscaling of climate models to describe fisheries abundance and accessibility and led to working on improving fisheries data collection and statistics instead. Heavy sargassum influx in the first year of the project led to the re-working of the fisheries modelling initially planned, to focussing specifically on sargassum transport and at the impact of sargassum influxes on the abundance of two key fish species (flying fish and dolphin fish). The work on sargassum transport eventually led to the development of the subregional sargassum outlook bulletins and national sargassum management plans.

46. In partnership with UWI-CERMES, the project took the lead in developing subregional sargassum outlook bulletins, which have been issued every quarter since October 2019 and are freely available on the sargassum webpage of CERMES website (UWI, 2022) as well as through other websites such as UN Caribbean Environment Programme and the Sargassum Information Hub. They are also being distributed through the large networks of the Gulf of Caribbean Fisheries Institute (GCFI) and sargassum network list server (SARGNET), giving them good visibility in the region. However, while confirmed as being relevant to, and used by, fisheries authorities, there appears to have been gaps in their trickling down to other stakeholders, such as park rangers, unless specific measures are taken to directly bring them to their attention. Sargassum adaptive management plans prepared under the project in Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines by CERMES also constitute a significant tool towards the management of sargassum at national/local level. However, it was noted that sargassum management is not the sole responsibility of fisheries authorities since it affects other economic sectors, most notably tourism, and that in this regard too much project funds had been diverted to tackling sargassum when they should have also been provided by other agencies. Project funds were used to provide sargassum beach cleaning equipment (e.g. rakes, barrels, gloves, wheelbarrows) to non-governmental organizations (NGOs) and it was confirmed that this equipment was being used and maintained by a local fishers' cooperatives in Saint Lucia and Trinidad and Tobago.

47. Significant advances have also been made with regard to improved fisheries data collection and statistics under the project, although this was not explicitly planned in the project document. These advances are in fact a good example of how the fisheries data collection and analysis activities undertaken under CC4FISH have emerged out of past projects (e.g. BillFish and Sustainable Management of Bycatch in Latin America and Caribbean Trawl Fisheries - REBYC II LAC) and information systems (e.g. FAO Calipseo v.1, WECAFC-FIRMS)[12] and developed

[12] WECAFC-FIRMS is a specific partnership endorsed by WECAFC for the collation and dissemination of WECAFC stocks and fisheries status reports under the Fisheries and Resources Monitoring System (FIRMS) partnership. The WECAFC-FIRMS regional database project is funded by DG-MARE (European Union) and aims to strengthen reporting capacities among regional and national experts on the status of stocks and fisheries under regional Fishery Management plans (FAO, 2016a).

organically, thanks to the work and connections of the FAO headquarters-based fisheries statistics experts. Together, this has connected topics within the project (e.g. SAS, legislation, disaster insurance), contributing to the harmonization of data collection and the development and piloting of new platforms (e.g. FAO Calipseo v.2).[13] This has also resulted in synergies with initiatives outside the project through complementary funding, training (e.g. other initiatives such as the European Union Blue-Cloud, WECAFC-FIRMS, R scientific community) and capacity building (in Trinidad and Tobago, and Grenada). In addition to the contribution of CC4FISH in these developments, political change in FAO regarding the renewal of the Calipseo platform in 2020 was catalytic in federating these advances. This is significant given the fragmentation of fisheries data and inconsistent capacities for data collection across countries.

48. Vulnerability and capacity assessment, and the development of their methodology were an essential part of Component 1. The community-based, participatory assessment process proved to be as important as, if not more than the actual result, in raising awareness about possible responses to both sudden and long-term climate impacts, including emergencies. The assessments led to the production of useful communication materials informing communities of the results of the assessments (e.g. informative posters and information boards displayed on landing sites as in Saint Kitts and Nevis, and engaging videos summarizing the findings (e.g. Grenada, though not yet public at the time of the terminal evaluation), and to some discrete improvements identified by fishers and communities that could be supported by the project. For example, in Saint Lucia, the VCA helped identify how to make vessel landing sites safer, which was supported by the rehabilitation of a jetty and is now incorporated in the country's safe harbour development plan. In Trinidad and Tobago, although the risk of sargassum influxes could only be followed-up by the supply of equipment for beach clean-ups in some of the communities who had requested it, the identification of coastal erosion as an important risk led to increased discussions with the country's coastal protection unit. In Saint Kitts and Nevis, the project was able to follow-up on two of the five areas for action identified by communities to reduce their vulnerability to climate change (i.e. strengthening of the fishers' cooperative with processing equipment and improved facilities, and promoting ways to use underutilized species to improve their businesses).

49. Despite these positive developments, which could not be anticipated a priori, some VCAs were still under finalization at project end and the extent to which they provided inputs in the preparation of climate-smart fisheries management plans, as was envisaged in the project document, is not clear. However, VCAs constitute a strong baseline for future interventions (e.g. it is planned that Saint Lucia's VCA results will be used in the country's USD 10 million application for the Green Climate Fund, and the common methodology and toolkit (supported by a video) they generated, along with a cohort of VCA trainers, could be replicated in other communities and/or countries (see section 3.4).

3.2.2.1 Evidence of change

50. The outcoming mapping exercise outlined that greater awareness about climate change impacts and adaptation is mostly visible among fishers and their communities and national fisheries' authorities and that contribution of regional partners, through the project, was key in this regard.

[13] FAO Calipseo v.2 is a new platform for rolling-out of National Fisheries Statistics and Management Information System in requesting Member Countries. The objective of the platform is to provide technical solutions to manage administrative data (vessel registries, fishers licenses), exploitation data (landing, catch, effort), biological and socioeconomic data (FAO, 2021e).

51. E-survey results have also highlighted that better controlled and managed sargassum and improved national fisheries data collection and analysis systems were two rather unexpected outcomes emerging out of Component 1, and that both were considered as significant achievements. They also highlighted that the project had a key contributing role in generating greater knowledge in the region and scientific community about how to adapt to climate change in the fisheries and aquaculture sectors. As such, progress towards project Outcome 1 "Increased awareness and understanding of climate change impacts and vulnerability" is rated as highly satisfactory.

3.2.3 Sub-component 2.1: Increasing fisher-folk, aquaculturists and coastal community resilience to climate change and variability

Key activities under sub-component 2.1: SAS and ICT training, business skills, fish handling and value addition of underutilized species, insurance schemes, fishers' exchanges on co-management and adaptation technologies.

Finding 7. Safety at sea and utilization of ICT are widely recognized by stakeholders as the area where the project has made a significant difference. In addition to building stakeholder capacity for SAS, there is compelling evidence of changes in awareness and behaviour in this regard but continuing and strengthening these efforts (training, investment in equipment and facilities) will need to be pursued in the longer-term. The level of achievement of other activities related to strengthening capacity in business skills, food safety, value addition and insurance schemes varied among the countries in which they were conducted.

52. Under this sub-component, training on safety at sea and use of ICT is deemed by all key informants as the greatest and most tangible realization of the project. Fishers rated the SAS training they received "very highly" (five of the eight fishers who responded to the e-survey [62.5 percent] rated it as "most useful and of highest quality"). There were however delays in the delivery of equipment (e.g. VHF radios) in time for the training due to procurement issues (see section 3.3). The project's training of trainers' approach for SAS training and the establishment of ICT stewards in fishing communities enabled the creation of a sound foundation from which to continue scaling out and reinforcing the knowledge gained to other fishers. However, as highlighted by a key informant, fishers themselves also have a role to play if information bottlenecks are to be lifted: "I can respond to the needs of fishers for [SAS] refreshers, but it is also clear that trained fishers need to pass on the information". Easily-accessible and suitably-packaged information needs to be widely available to be shared easily and support this. To this end, the project designed and published an easily accessible SAS manual for the Caribbean mainly using drawings instead of text to make it easily digestible; 500 copies were distributed in the seven countries to fisherfolk. In Saint Lucia, the project developed and distributed to fishers plasticized pocket cards providing key information on use of VHF radios.

53. Establishment of an insurance scheme for fishers made little headway, despite a promising start (e.g. publication of the *"Assessment of Insurance Needs and Opportunities in the Caribbean Fisheries")* (FAO, 2018) in the early stages of the project. Although insurance had been discussed during the formulation phase of the project, divergence in focus arose in the project's planned collaboration with the Caribbean Catastrophe Risk Insurance Facility (CCRIF), which led to the re-orientation of the development of an insurance scheme for fishers under CC4FISH in countries that were common to both CC4FISH and CCRIF interventions (Grenada and Saint Lucia) towards improved fisheries data collection and statistics. In addition, the alternative route of third-party insurance liability was pursued, with the commissioning of another study making a case for third-party vessel insurance for fishers and focussing specifically on Dominica, Saint Kitts and Nevis, and Trinidad and Tobago (FAO, 2020d). How to embed vessel insurance in national legislation

was considered in Trinidad and Tobago but not in the other countries where capacity to do so lacked and difficulties linked to COVID-19 prevented bringing all stakeholders together to discuss this complex topic. Although important as a baseline for future policymaking and legislation improvements, the two studies were of no immediate benefit to fishers. The policy brief on third party vessel insurance (FAO, 2021d) produced by the project is however an extremely useful product to provide basic information and raise awareness among policymakers on this still relatively unknown, misunderstood and underestimated topic.

54. Post-harvest activities (training, business proposals for the utilization of underutilized species, and development of alternative and improved livelihoods) were not precisely described in the project document, which left room for manoeuvre for the project to tailor them to specific needs and/or circumstances, and to respond to country requests that emerged in this area of work. Fish handling and food safety training was carried out by national entities and by the regional Caribbean Fisheries Training and Development Institute (CFTDI). In Antigua and Barbuda, the training was described as oversubscribed, and in Saint Kitts and Nevis, it was reported to have raised awareness about possibilities to use lobster surpluses, while building on the results of the VCA, and incorporating some business skills training for women processors. Planned hands-on workshops were however affected by COVID-19 restrictions, which resulted in delays in execution in the countries where these activities had also been planned (Saint Lucia, Saint Vincent and the Grenadines). Saint Kitts and Nevis, where the project also supported a feasibility study to assess the potential to transform fish waste into higher-value fertilizer, is an example of response to an expressed need and opportunity.[14]

55. The development of business proposals for utilization of underutilized species did not happen as planned due to the unavailability of required expertise within CRFM, which was being considered for this activity when they were due to be prepared. Following a change in focus, the value chain analyses undertaken by INFOPESCA (which resulted in two draft reports of value chain analyses on "Fish and fisheries products markets and trade assessment in the Eastern Caribbean" and "Opportunities for Fish and Fisheries Products Value Chain development in Grenada and Trinidad and Tobago") identified where value could be added in existing chains in Trinidad and Tobago, but did not focus on the species of prime interest to the country (i.e. tuna and shrimp). Although unpublished, the work done nonetheless provided the basis for a reorientation towards the assessment of three commercially important species with high value addition potential, which is currently underway. In Grenada, INFOPESCA's study laid the basis for the subsequent development of the public-private partnership between the tuna industry, the government and fishers (see further under 3.2.3.1).

56. In addition, the fish value chain analyses carried out by CANARI in Dominica and Saint Kitts and Nevis under another FAO project (see section 3.1), which built on the VCA method developed under CC4FISH, identified areas where additional funding for developing fish market niches was required. Saint Kitts and Nevis's Fisheries Division received such funding from CC4FISH and allocated it to its Fund for Fisheries Development Enterprises, enabling local actors to improve their products. The lobster festival organized in Saint Kitts and Nevis was also part of the same initiative to raise awareness of the quality of local seafood. The Saint Kitts and Nevis example illustrates how the joint action of multiple partners (CC4FISH, CANARI, Fisheries Division of Saint Kitts and Nevis) created a dynamic 'ecosystem of stakeholders' that increased the outreach and resonance of the value chain assessments.

[14] Unfortunately the study showed that it would not be feasible for cost and logistical reasons.

57. The business skills training for fishers took place only in Grenada, Saint Lucia, and Saint Vincent and the Grenadines, with 62 persons trained. However, only two of the fishers (from Grenada) who participated in the training went on to acquire their own boats and agreed to register themselves as a business and keep better records. Reasons for lack of interest were attributed to the culture of fishers who tend not to consider fishing as a "business"/economic activity but as a way of life. This was confirmed by the e-survey results.

58. Exchange visits between fishers (and aquaculturists) of different countries, enabling peer-to-peer learning, were organized under the project. The mid-term evaluation had identified "Fisher exchanges for peer exchange and learning" as one of the project's best practice. While the terminal evaluation is assuming their value still stands (all exchange visits were put on hold due to COVID-19), it was not able to confirm beneficiaries' perspectives on these activities due to the impossibility to meet with fishers (see section 1.5).

59. One activity under this component that the project did not pursue was the development of smart-fish aggregating devices (FAD). The impacts of these on fish movement patterns and ecosystems are still relatively uncertain and require more research. It was felt that it would be premature for the project to promote them without more certainty and knowledge, unless they were included in a wider FAD management plan – which was developed in Dominica.

60. Under this sub-component there were expectations on behalf of fishers that landing sites would be improved.[15] The impossibility to disburse GEF funds for infrastructural improvements (e.g. boat hauling facilities) under the project (despite CEO project approval) led to disappointment and the feeling that their needs were not fully addressed (see section 1.1), with the exception of the improved jetty in Saint Lucia.

3.2.3.1 Evidence of change

61. Evidence of change was discerned from the key informant interview, outcome mapping and e-survey. However, results of the outcome mapping and e-survey should be interpreted with caution since only a relatively small proportion of stakeholder/beneficiaries participated. Furthermore, some of the observed changes may be attributed to a combination of other projects and initiatives in addition to CC4FISH. Nevertheless, the results are a good first indication of the potential impact of the CC4FISH project in contributing to change. The outcome mapping exercise outlined evidence of the extent to which *men and women fisherfolk and beneficiaries* have embraced adaptation technologies and changed their practices to increase their safety at sea (behavioural change) and the contribution of the project in this regard, noting that multiple factors were at stake. The e-survey corroborates that behaviour change has been initiated among fishers. Regarding safety at sea, according to the e-survey results, 61 percent of fishers (18) feel more resilient and more confident to face and adapt to climate change and extreme weather events now, and 22 percent that their resilience and capacity to adapt to climate change and extreme weather events is somewhat better than before the project(s). For fishers who received safety at sea equipment from the project (e.g. VHF radio and other ICT tools) (3), 67 percent feel very confident in using the equipment and 100 percent are very likely to continue using it and safer fishing and seafaring practices. For fishers who had either received equipment or training (8), 62 percent reported that they always take the safety at sea equipment on fishing trips, and 50 percent that they felt less vulnerable when fishing compared to before the project.

[15] It is clearly stated in the project document that "Investments in boat hauling equipment and development and designation of 'safe harbours', and the design and implementation of an insurance scheme for fishers in case of storms and hurricanes will lead to less economic and financial loss to fishers and their communities." (p.107).

62. 53 percent of fishers (19) indicated that they were much more aware now compared to before the project of the importance and benefits of licensing and registering vessel(s), and have (or intend to) do so (most of the other respondents [42 percent] indicated vessel licensing and registration did not apply to them).

63. These signs of behaviour change are encouraging but more support is needed to ensure sustained adoption of adaptation technologies. For example, among all the fishers who responded to the e-survey (23), 61 percent had received SAS training from the CC4FISH project, but the project was able to supply equipment to only 13 percent (equipment provision had not been anticipated in the project document and was organized as a response to expressed needs). For those who had received equipment (3), only one-third felt confident in applying communication protocols for safety at sea that they were trained on, suggesting that regular knowledge and skills reinforcement will be required in the longer run. In follow-up efforts, it will be just as important to account for psychological and cultural factors underpinning behaviour, as technical contents or support. For example, when asked what would encourage them to continue putting in practice what they have learned from the project, fishers (18) ranked the following by decreasing order of importance:

i. seeing my peers adopt safety at sea practices;
ii. my own belief that safety at sea and new skills are important;
iii. more hands-on training, e.g. two-stroke engine use, maintenance of safety at sea equipment, etc.;
iv. that my peers regard me as a fisher who is a model and who has adopted sound safety at sea practices;
v. easier access to equipment;
vi. regular refresher courses;
vii. more easily accessible training resources (ex. factsheets, YouTube videos…); and
viii. more training sessions on topics like business management ('soft skills').

64. These findings were confirmed by key informant interviews. For example, in Saint Kitts and Nevis it was reported that fishers now use VHF radios instead of their mobile phones.

65. However, it is not possible to establish if there has been a reduction in the number of accidents at sea as a result of greater awareness and improved SAS practices. While a reduction in accidents and deaths was noted in Dominica, Saint Kitts and Nevis, and Grenada in recent months, new accidents were reported in Saint Lucia despite SAS equipment being taken onboard. Greater reporting and data analysis are required in the longer-term to monitor the relationship between, and impact of, safer seafaring practices and behaviour and the incidence of accidents at sea.

66. Fifty-three percent of fishers who responded to the e-survey (17) found that they had a better relationship with authorities (Coast Guards, Fisheries Department/Division, Telecoms), but 41 percent that it was unchanged. Fishers' trust of fisheries authorities was largely dependent on the visibility and success of the activities. For example, the limited number of activities in Saint Vincent and the Grenadines due to internal administrative issues in accessing funds resulted in unfulfilled expectations and undermined the relationship between the Fisheries Division and the fishers. In other countries, the relationship improved as a result of project activities.

67. Behavioural changes are also noticeable among fisheries authorities' staff. For example, fisheries extension officers are more committed to engaging, visiting fisherfolk and directly supporting

fisherfolk organizations. High level fisheries officials are now referring to climate change adaptation in their speeches. Fisheries officers consult and network with a wider range of stakeholders, for example telecom, coast guards. Improved collaboration and coordination between Fisheries and Maritime authorities (e.g. coast guards and police) is noteworthy, and an unexpected change that happened thanks to the SAS activities of the project. For example, in Dominica, accidents at sea, which were typically only reported to coastguards and the police, are now also reported to the Fisheries Division that has developed a template to record these incidences. Similar developments have also taken place in Trinidad and Tobago where the installation of repeaters and provision of Digital Selective (DSC) radios – which require the issuance of identification - by the project has brought telecommunication companies and authorities into the SAS-ICT 'ecosystem'. Such developments are indicative of a significant change (transformation) in practices. The same collaboration has also started to happen between fisheries and disaster management authorities: an e-survey respondent noted that "The bringing together of Disaster management Personnel and Fisheries personnel at the same forum to raise awareness and to put mechanism in place for the fisher sector to be included in Post Disaster Needs Assessment" was a significant change brought about by the project.

68. The impact of improved fish processing practices on uptake among beneficiaries, especially women, are not yet clear, even though key informants from Saint Kitts and Nevis credited the project for creating "awareness" of the value of such practices in Saint Kitts and Nevis.

69. In Grenada, the project was influential in establishing a public-private partnership between two fishers organizations (the government and a private tuna processing plant), with ownership partly in the hands of fishers. By moving from exporting headed and gutted tuna (whole tuna) to producing loins (tuna steaks) in April 2022, the plant is now providing substantially higher benefits to the tuna fishers and the national economy, and the arrangement is allowing for the greater inclusion of fishers in the management of this fishery. This development is all the more noteworthy now that the tuna fishery has entered a Fishery Improvement Project (FIP) to achieve Marine Stewardship Council (MSC) certification following the MSC pre-feasibility assessment that took place in 2021 at the initiative of the project (Sieben and Gascoigne, 2021). The public-private partnership developed in Grenada could set forth a model for replication in other countries and/or fisheries of the Caribbean (Clarke, 2021). The e-survey confirmed that the development of the public-private partnership was an unexpected and significant outcome of the project.

70. While the project played a catalytic role in putting things in place for these changes to happen, it should not overshadow the crucial role played by the project's organizational partners (see section 3.4) and 'satellite stakeholders' mentioned above who were brought in and whose new interactions created an enabling ecosystem of actors supporting the project at multiple levels and on multiple fronts. Progress towards project Outcome 2.1 "Improved resilience of fisherfolk and fisherfolk organizations" is rated overall as highly satisfactory.

3.2.4 Sub-component 2.2: Improved resilience of aquaculturists

Key activities under sub-component 2.2: rehabilitation of aquaculture centres, aquaponics, capacity strengthening of aquaculturists.

Finding 8. Although project intervention created a strong basis for new developments in several forms of aquaculture, notably through training and rehabilitation of facilities, there is at present little evidence that these are contributing to adaptation and resilience to climate change among aquaculturists and their communities.

71. The bulk of aquaculture activities took place in Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Trinidad and Tobago (Table 3). The nature of activities was

different in each of these countries, owing to their individual circumstances and needs, which also shaped their overall success under CC4FISH.

Table 3. Overview of the aquaculture activities commenced under CC4FISH

	Rehabilitation of facilities	Aquaponics	Seamoss farming and value addition
Antigua and Barbuda	✓	✓	✓
Dominica	✓ (hatchery)	✓	✓
Grenada			
Saint Kitts and Nevis		✓	✓
Saint Lucia	✓	✓	✓
Saint Vincent and the Grenadines			
Trinidad and Tobago	✓	✓	

Source: Elaborated by the evaluation team.

72. Challenges to the aquaculture component of the project stemmed from the marginal nature of the activity in the project countries (including no baseline of private sector involvement) prior to the start of the project and the limited specific expertise of national and organizational executing partners (especially regarding aquaponics) in most of the countries. This resulted in a longer-than-anticipated time to get activities off the ground on one hand, and high reliance on consultants and FAO's expertise for support and guidance on the other.

73. When aquaponics expertise became available in FAO, the project kick-started aquaponics activities in Antigua and Barbuda, Dominica, Saint Kitts and Nevis, Saint Lucia, and Trinidad and Tobago – a form of aquaculture that was relevant to countries but that governments would not have otherwise had the capacity to invest in. Very detailed assessments of aquaculture and aquaponics potential were carried out (available in the 'back to the office reports' of the FAO aquaponics expert). Critically, the project built the capacity of fisheries officers to maintain facilities and oversee developments, and to grow a relationship with both private operators and schools (e.g. Antigua and Barbuda, Saint Lucia). In Saint Kitts and Nevis, the project had a critical role in enabling and initiating the importation of tilapia fingerlings – unavailable in the country till then – as part of the development of aquaponics. It was noted by one of the key informants from Saint Lucia that traditional pond aquaculture was unlikely to continue (too water-demanding) and that aquaponics – as one of the portfolio of more intensive forms of aquaculture, was most likely to take off. Questions were raised in Trinidad and Tobago regarding the domestic market demand for, and unfamiliarity of consumers with, freshwater fish, although market developments in other countries of the region (e.g. Antigua and Barbuda, Barbados) suggest that consumer acceptability increases once fish is on the market and consumers have tried it. In Dominica, project funds were used to rehabilitate the Belfast prawn hatchery damaged during Tropical Storm Erika (prior to the project) and Hurricane Maria during the first year of project. The hatchery is now functioning, producing seedlings and selling them to other farmers. The project intervention, which happened in synergy with government support for electricity and labour costs, was seen as essential to kick-start the aquaculture sector again, and is a good example of "building back better". The project also enabled climate-proofing other facilities (e.g. reinforcement of concrete ponds, hurricane ties for buildings).

74. Although not anticipated at the start of the project, the scope of the aquaculture sub-component was extended to include seamoss farming and primary transformation (drying), following local demand for assistance. Although the link between seamoss farming and climate change adaptation may seem tenuous, climate change is affecting the natural productivity of wild seamoss, which is over-harvested. Farming it, as a commercial venture, would enable to reduce pressure on natural stocks through propagation as well as provide an alternative, climate-resilient,

source of livelihood income (though the terminal evaluation did not get evidence for profitability). Following a regional workshop on seamoss farming in Grenada in 2017, co-funded by CC4FISH, project-supported seamoss activities generated much interest and have proved more successful in terms of follow-up than those on aquaponics. In Saint Lucia, seamoss harvesting and drying were already done, but were enhanced by the project, although production issues arose with trialling of plastic tube nets that were not sturdy enough to carry the weight of seamoss and a source of plastic pollution. In Dominica, seamoss activities grew organically following the assessment done earlier in the project by the FAO aquaponics expert, and the training of farmers as trainers. These farmers/trainers are now further supported by an FAO Technical Cooperation Project that will outlast the CC4FISH support (TCP SLC 3801 Regional Covid Recovery). Creative communication initiatives were spontaneously developed in Antigua and Barbuda, and Saint Kitts and Nevis to expose communities to aquaculture activities. For example, Antigua and Barbuda ran an advertising campaign among consumers to differentiate Antigua and Barbuda-produced tilapia from foreign imports. Also in Antigua and Barbuda, demonstration sites were open on Sundays to attract visitors after church, and this initiative was copied by the private farm operator with whom the project teamed up in Saint Lucia. Given the nascent nature of aquaculture in the Caribbean, and the rapidity with which word-of-mouth circulates, the potential positive impact of such awareness raising campaigns should not be underestimated.

75. National annual work plans and budgets (AWPB) were adapted to accommodate activities that were recommended following the field visits of the FAO aquaponics expert, which is another good illustration of how well the project 'mechanics' were able to adapt and respond to specific needs.

3.2.4.1 Evidence of change

76. Although the project has helped lay the basis for improved resilience of aquaculturists to the impacts of climate change, evidence that climate-smart aquaculture operations, including aquaponics, are actually supporting livelihood resilience is still scant. Capacity has been strengthened, farms have been rehabilitated, aquaponics demonstration facilities built and the production of prawn hatchlings has been restarted in Dominica but the sector remains, at project end, marginal, owing to the inner challenges of setting up aquaculture business (high capital investment, limited markets, etc.) typical of the early stages of development of the activity.

77. Evidence of step-change in behaviour and adoption of new practices among aquaculturists in the project countries is encouraging but anecdotal. For example, seamoss farmers in Saint Lucia have formed a cooperative and have started lobbying the government for more support. They are also adopting more sustainable production practices (e.g. reduced cutting of trees as material to build rafts). Private aquaculture entrepreneurs and fisheries authorities are also collaborating to a greater extent and young aquaculturists now have an idea about what aquaponics is and where to find information about it. In Saint Kitts and Nevis, the public-private partnership with an aquaculture entrepreneur who allowed his farm to be used for training and demonstration purposes is a significant departure from typical approaches used to promote aquaculture. Also, in Saint Kitts and Nevis, consideration is being given to incorporating aquaculture and aquaponics into school curricula, which will promote change among the new generation. In Dominica, where aquaculture was thriving prior to Hurricanes Erika and Maria, production has been kickstarted again thanks to the project. As for previous components, and confirmed by the e-survey, the project played a critical role in procuring the necessary equipment and facilities, but synergized with other actors (e.g. the AMEXCID project, colleges and schools, national fisheries' authorities, private entrepreneurs) to lay the basis for change. However, key informant interviews and e-survey results also suggest there is not yet sufficient momentum to take these activities beyond the 'proof of concept'/demonstration stage. For example, interest in following-up on the training

received on aquaponics or prawn farming, as an indicator of change, is not evident and uptake was reported as slow in Dominica and Saint Lucia. Although private investment in aquaculture operations was not an objective of the project per se, it is also an indicator of behaviour change, which is not yet manifest (see also section 3.4). What was reported as critically missing to transition from training/increased capacity to entrepreneurship was access to suitable financing, and design of modular aquaponics systems which can be started cheaply and at a scale small enough to attract young, newly trained, entrepreneurs with minimal risk-taking. More needs to be done regarding promotion of uptake, replication of the model of demonstration and collaboration piloted by the project, and upscaling while recognizing that aquaculture activities are not a panacea for all. As such, progress towards project Outcome 2.2 "Improved resilience of aquaculturists and their organizations" is rated as moderately satisfactory.

3.2.5 Component 3: Mainstreaming of climate change adaptation in multi-level fisheries governance

Key activities under Component 3.1: strengthening of institutional mechanisms, ecosystem approach to fisheries, Fisheries and Aquaculture Response to Emergency (FARE), data/statistical courses, climate change mainstreaming in fisheries policies and plans, and vice versa.

Finding 9. CC4FISH supported the formulation of a larger number of management plans for fisheries and aquaculture development than was anticipated, and which would have otherwise been unlikely to see the light. Although the majority of these is still not officially approved by the governments due to the lengthy process involved, they are already being implemented in some countries. FARE training piloted in Grenada carved a place for disaster risk management (DRM) in national fisheries governance.

78. Table 4 summarizes the plans formulated under CC4FISH.

Table 4. Management plans formulated under CC4FISH

	FMP	FAD FMP	Sargassum	Aquaculture
Antigua and Barbuda	*			***
Dominica		✓		✓
Grenada	✓ (Plan for Marine management area)		✓	
Saint Kitts and Nevis	✗ (FMP initiated but not completed)		✓	
Saint Lucia	(✓) FMP not completed but Fisheries Policy elaborated instead	✗ Initiated but not completed (plan to establish a FAD-fisher association instead)	✓	✓
Saint Vincent and the Grenadines	✗ (Conch management plan initiated but not completed**)		✓	
Trinidad and Tobago				***

Notes: FMP: fisheries management plan. FAD-FMP: fish aggregating device-FMP. * Initiated outside CC4FISH but incorporating CCA considerations through fishers' concerns for the protection of mangroves.
** The 2018 Fisheries Policy elaborated outside the project nonetheless includes conch management considerations developed during CC4FISH.
*** Formulation of the plan was initiated prior to CC4FISH.

Source: Elaborated by the evaluation team.

79. Fisheries management plans (FMPs) covered climate change concerns and adaptation as an integral component of fisheries sustainability, thus incorporating the learnings from the regional

training on EAF/CCA/DRM held at the start of the project. Their elaboration was initiated in Grenada, Saint Lucia, Saint Vincent and the Grenadines, and Saint Kitts and Nevis using a bottom-up, participatory process. However, these efforts were not fruitful everywhere (e.g. Saint Kitts and Nevis, Saint Vincent and the Grenadines) due to a combination of factors, which ranged from lack of interest and communication issues and the COVID-19 pandemic hampering community consultations, which resulted in the curtailment of the letter of agreement (LOA) with CERMES who was supporting the FMP formulation. There was also a general reluctance on behalf of the fishing industry to embrace the principles of the ecosystem approach to fisheries and greater interest in tangible short-term project benefits than those arising out of longer-term planning. The relatively lower budget for this Component (see section 3.3, Table 5) also meant that the project had to be focused on activities of influence, namely those that sowed the seeds/prepared the grounds for sustainable fisheries governance, rather than grew them.

80. The project also supported the formulation of four Sargassum Adaptive Management Plans which were discussed in detail in section 3.5.1.

81. The project also supported fisheries authorities in their mandate to formulate aquaculture development plans or strategies in Dominica and Saint Lucia. In Antigua and Barbuda, and Trinidad and Tobago, the initiation of the formulation of these strategies predated the project, which then enabled fisheries authorities to complete them. However, aquaculture activities under the project remained very "hands-on" and it was recognized that experiences from them had not yet percolated through to policies.

82. None of the countries where fisheries, aquaculture and sargassum management plans have been drafted have formally approved them as yet, due to lengthy and bureaucratic approval processes. Yet, key informants confirmed that the lack of formal high-level approval was not an issue impeding implementation, and that the plans were being actively used to guide activities on the ground. Despite the difference between the lifespan of the project and the slow pace of updating or formulating a policy, management plan or legislation at national level, the results obtained by CC4FISH on this front have been beyond what the project had set out in its results framework.

83. The rather loose formulation of Component 3 in the project document gave a chance to the project to respond to emerging opportunities. For example, the fisheries sector was always left out from disaster response, and the project was an opportunity to change this. The FARE training was not initially included in the project, which emerged from interactions between the Regional Project Coordinator and the Fisheries and Aquaculture Officer focal point for FARE at FAO headquarters at the time, and brought together fisheries authorities and disaster management personnel for the first time (ICSF, 2022). The training workshops followed a downscaling approach, starting first at regional level (regional workshop held in Grenada with disaster and fisheries personnel from OECS and other countries) as a training of trainers' workshop, then at national level (in Grenada with Fisheries Division personnel and including representatives from NADMA, ADRA, Red Cross, etc., suppliers, processors, exporters, fishers), then at local level (eight to nine workshops in Grenada in communities with fishers themselves). Key informant interviews in Grenada confirmed that the FARE workshops looked at issues that had not been considered before. They were empowering in this regard and raised awareness about the importance of embedding disaster risk management in the governance of the sector for the first time. The workshops also highlighted both potential threats and capacity to address disaster risks before public assistance would be made available, and thus brought about the inner capacity of fishers and fishing communities to be proactive. It is also interesting to note the synergy between FARE and CC4FISH – the Regional Project Coordinator provided the funds and identified participants, while FARE trainers provided the reciprocal benefits of FARE and CC4FISH: the development of

the creators of FARE brought the trainers and the training contents. Thus, the FARE training used CC4FISH as a 'testing ground' and reciprocally CC4FISH benefited from the training itself.

Finding 10. The project was instrumental in mainstreaming climate change in regional fisheries policies and, more generally, in bringing special attention to the fisheries-climate nexus in high-level policy fora. Reciprocally, it also enabled including fisheries in climate change adaptation priorities at national level in some of the countries. However, more work is required to increase the visibility of climate change issues in the work of regional fisheries bodies and WECAFC.

84. The Development of a Protocol to Integrate Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture into the Caribbean Community Common Fisheries Policy, endorsed by the Caribbean Community (CARICOM) Ministerial Council in October 2018, is a significant achievement and an indication of the influence of the project at regional level. Countries' feedback through CRFM was positive and it was felt that the protocol has enabled countries to "think" about climate change in relation to fisheries and be better prepared – as it became the case when Dominica was hit by a hurricane. CRFM's partnership with the project was deemed instrumental in developing this instrument as CRFM would have not had sufficient funds to do so alone.

85. A Regional Dialogue on nationally determined contributions in the Caribbean on Climate Resilient Fisheries and Coastal Communities was organized by the project in November 2019 (38 participants including fisheries officers, chief fisheries officers and government officials from other departments – e.g. coastal zone or climate change or environment) to improve the incorporation of the fisheries sector into the nationally determined contributions which allows for improved climate financing for the fisheries sector. Important strides have been achieved in Saint Lucia regarding the mainstreaming of climate change in the country's new fisheries policy. Reciprocally, its nationally determined contribution plan makes specific reference to the fisheries sector. There were however contradictory views on the extent to which Trinidad and Tobago's new Fisheries Bill (still under review at the time of the terminal evaluation) was sufficiently incorporating climate change adaptation considerations despite the national project team's efforts in this regard.

86. However, as indicated below with regards to WECAFC, climate change and climate change adaptation are not routinely and still insufficiently discussed in meeting agendas. Despite interest and given the history of exposure to extreme weather events in the region, more awareness and work are needed within the Commission on what can be done to address the gradual impacts of climate change.

3.2.5.1 Evidence of change

87. Among fisheries institutions, there is evidence of the reciprocal strengthening of fisheries representation in national climate change adaptation, and climate change adaptation in fisheries policies and governance. Disaster risk management and climate change adaptation are mainstreamed in Saint Lucia's fisheries policy – one of the first countries of the region to do so, and vice versa, has mainstreamed fisheries in its 2018–2028 National Action Plan by specifically elaborating a "Sectoral Adaptation Strategy and Action Plan for the Fisheries Sector (Fisheries SASAP) (Government of Saint Lucia, 2018b)" – which features aquaculture and aquaponics. As indicated in section 3.1, Grenada references the CC4FISH project in its 2017–2021 NAP (Government of Grenada, 2017). These two examples evidence the project's contribution to raising capacity to both mainstream and make the fisheries sector more visible in national climate change adaptation policymaking. In Trinidad and Tobago, for the first time the national disaster preparedness plan includes fishers, and the Coast Guard vessel is being used in training of fishers, thanks to the project. The e-survey highlighted such advances as one of the unexpected but significant changes brought about by the project.

88. The FARE training of trainers course that was piloted in Grenada eventually led to the development of a three-day training course, a six-day training of trainers, an introductory course and a FARE e-learning course available online since December 2021, through the FAO e-learning Academy (FAO, 2020e). While this demonstrates how CC4FISH supported learning, more monitoring of how these courses benefited participants will be required in the longer-term.

89. There are signs that the awareness about climate change raised during the project among fisheries policymakers is starting to trickle to WECAFC, thanks to CC4FISH's influence. For example, while the commission's previous strategic plan (2014–2021) did not make any reference to climate change, this is being corrected in the 2021–2027 plan with the inclusion of climate change and decent work – a topic directly related to fishers' (and other value chain actors') occupational safety. It is also anticipated that the proposed change in status of WECAFC (from Art. 6 to Art. 14 of the FAO Constitution) will increase the visibility and attention given to climate change issues among members.

90. The key informant interviews suggest that, at country level, people are now starting to connect the dots, displaying a more holistic thinking about the fisheries sector, and are integrating this in their planning for the development of future activities. For example, in Grenada, the synergy between VCA and FARE training is being appreciated and options are considered on how they could be taken forward. Similarly, the connection is being made between fishing vessel inventories maintained by authorities, improved data collection and analysis, and insurance (vessel inventories/localization of assets for compensation in case of damage) as in, for example, Trinidad and Tobago. Overall, progress towards project Outcome 3 "Climate change adaptation mainstreamed in multilevel fisheries governance" is rated satisfactory.

3.2.6 Component 4: Project management, monitoring and evaluation, information dissemination and communication

Key activities under Component 4: project management, knowledge and communication, monitoring and evaluation system.

Finding 11. The management of CC4FISH was robust, and its monitoring complied with reporting requirements. Its knowledge dissemination system improved after the MTR.

91. The project followed the basic monitoring and evaluation (M&E) plan outlined in the project document and complied with GEF and FAO reporting requirements. However, as already highlighted in the MTR, this fell short of evaluating the qualitative impacts of the project on stakeholders, which has not been considered further. This is discussed in greater detail in section 3.5.1 on monitoring and evaluation.

92. Knowledge management and communication had been deemed weak at MTR and were significantly improved after the recruitment of a knowledge management and communication specialist, as per MTR recommendations. E-survey results showed that project stakeholders rated the project's sharing of experiences highly. However, most of the information products do not reach fisherfolk since they are available electronically and online and, furthermore, according to some fisherfolk interviewed, the technical level of the material is not appropriate for them. This underscores the need for the development and dissemination of material that is tailored for different target audiences. The range of knowledge materials and communication products is

highlighted in section 3.5.5. As such, lessons learned and best practices identified from CC4FISH adopted within and beyond the project countries[16] are rated as moderately satisfactory.

93. Eighty-four percent of e-survey respondents (76) estimated that Component 4 was "highly relevant" and "relevant" to the project stakeholders' needs. E-survey results also underlined that the innovative and more flexible management practices (e.g. quarterly Steering Committee meetings, WhatsApp group) set up by the project were significant and something that had not been initially expected.

94. Based on the above, the overall effectiveness of the project in achieving its objectives and outcomes is rated as satisfactory.

3.3 Efficiency

EQ 3.1a. To what extent did FAO respond to the MTR recommendations and fulfilled its role of oversight and supervision? (implementation)

Finding 12. The Project Coordination Unit and FAO SLC responded well to the MTR recommendations: a number of managerial procedures improved as a consequence, but certain challenges persisted at country level. While the technical oversight and supervision of the project were satisfactory, there were gaps in the administrative management of the project.

95. There were significant improvements in the communications and organization of the project post-MTR. The annual programming of activities and budgets became more rigorous which, along with holding quarterly Project Steering Committee meetings (PSCM), efforts to institutionalize the Project Task Force, the creation of a project documentation repository (SharePoint), in parallel to the streamlining of procedures in the FAO SLC office (recruitment of procurement officer who worked closely with general service staff), led to a new dynamic in the project, more systematic tracking of progress, and overall greater coordination of the work.

96. Minutes and reports of project meetings included reports by the Project Steering Committee meetings and national inception meetings. However, minutes by Project Task Force and other meetings held were not made available to the terminal evaluation team and could not be checked.

97. The complexity of FAO procedures and general lack of awareness and knowledge about them at country level were reported in all key informant interviews. A change in FAO SLC personnel half-way through the project enabled the (relative) streamlining of FAO procedures and increased the efficiency of administrative operations. The management and simultaneous oversight of all the large number of letters of agreement issued under the project (27 in total) was a challenge, especially as the partners were not always familiar with the procedures underpinning their elaboration, approval, reporting, etc. This was deemed by some key informants to have created gaps in the coordination by the Project Coordination Unit (see section 3.5.2). While the necessity of multiple letters of agreement amendments stretched FAO SLC staff time, it also enabled them to adapt the letters of agreements holders' activities to changing circumstances – mainly imposed by the COVID-19 pandemic.

[16] This wording is extracted from the theory of change since the results framework did not specify an outcome for Component 4.

EQ 3.1b. How well were risks identified and managed, since the MTR?

Finding 13. The terminal evaluation broadly confirms the validity of the analysis of risks conducted at the MTR, but also identifies that risks related to administrative and procurement complications at national levels, and fishers' behavioural/decision inertia were underestimated and somewhat preventable.

98. For memory, the MTR rated sociopolitical risks as moderately unlikely (all project countries are considered politically and socially stable), financial risks as likely (COVID-19 impacts on national economies and livelihoods), institutional and governance risks as most likely (high staff turnover in national administrations and weak culture of knowledge transfer), climate risks arising from hurricanes/severe weather as most likely. The terminal evaluation found that these ratings still held at project end. Social and health-related risks which were difficult to assess at the time of the MTR due to the uncertain impact of COVID-19, may now be considered as moderately likely due to the response given to the pandemic.

99. Staff retention (NPCs and NFPs) and turnover issues were experienced in most countries (e.g. Antigua and Barbuda, Grenada, Dominica, Saint Vincent and the Grenadines, Trinidad and Tobago). Efforts were not always consistent to ensure smooth staff transitions, and learning curves were steep for those who joined the project mid-way, given the complexity of both the project and – especially – FAO rules and procedures, and the lack of simple, easy-to-share FAO guidance on the Organization's standard operating procedures.

100. The risk of insufficient capacity within the country to execute the project effectively identified in the project document materialized only in countries where weaker institutional capacity was pre-existent. Key informant interviews revealed that running CC4FISH and StewardFish simultaneously in the countries common to both had not been an issue, mainly because the two projects operated in isolation (see section 3.1) and project personnel were different. Equally, executing partners demonstrated adequate capacity to deliver on their expected contribution and inputs to the project, although there were signs that some of the executing partners might have become overstretched across their multiple activities, especially during the COVID-19 crisis, and that the collaboration with INFOPESCA was not up to expectations.

101. The complexity and rigidity of FAO's rules and procedures superimposed on that of national administrations proved to be an underestimated risk at project start, and a hurdle in the smooth implementation and execution of a project as large and complex as CC4FISH. In Saint Vincent and the Grenadines, the impossibility to access project funds from the government's consolidated fund led to high levels of frustration among the national project as well as the regional teams, which inevitably trickled to fishers and local service providers, undermining the credibility of the project. As a result, for example, the government did not pay a local consultant whom they had hired for his/her services which jeopardized the preparation and delivery of Saint Vincent and the Grenadines' national communication plan. In Saint Lucia, it was noted that the costly administrative error on behalf of FAO in the purchase of very high frequency radios for fishers, which was covered by the project, had nonetheless dampened the changes in practices brought about by the project. Having to resort to service contracts (in Antigua and Barbuda to circumvent the consolidated funds issue, and for the development of private aquaponics facilities) turned out to be more expensive and cumbersome to execute activities than initially planned and was described as "a set-back – but we had no choice". As discussed below, the careful consideration of these as potential risks could have prompted to explore alternatives from the outset.

102. The importance of fishers' culture, mindset and behaviour in shaping their decision (reluctance) to attend training (mainly due to the opportunity cost of their time fishing), to consider fishing as a business, to adopt safer seafaring practices, to be open-minded about the regeneration of the

sector (e.g. with the entry of younger fishers and women), was also underestimated. This, combined with the difficulty to move to virtual platforms for training sessions during COVID-19 as well as meeting fatigue, made the mobilization of fishers through these new platforms initially difficult, and lowered the outreach anticipated.

103. The amount of staff time required for organizing technical expertise and executing the procurement required for the project components needing equipment (e.g. aquaculture and SAS-ICT under Component 2) was grossly underestimated at the time of project formulation, resulting in an underestimation of the risk of diverting the energy and attention of the Project Coordination Unit away from coordination and other technical matters to addressing these.

104. The risk of a pandemic could not have been anticipated, but the project and executing partners and beneficiaries demonstrated a remarkable capacity to adapt their methods (e.g. small groups, repeated sessions, etc.) and practices (e.g. getting used to virtual communications) despite the constraints and hardship imposed by COVID-19. Risks from natural extreme events such as hurricanes and volcanic eruptions materialized, with Dominica, and Saint Vincent and the Grenadines particularly affected. As a result, the project had to make certain adaptations to the activities and work plans in these two countries. The reactivity of the Project Coordination Unit and FAO SLC helped mitigate some of these risks by finding alternatives as and when needed, or choose whatever would work best (e.g. direct procurement through FAO SLC office or service contracts) in order to get the work going. The management of these risks added a lot of pressure and demands on the Project Coordination Unit to keep the project on track. Risks to the sustainability of the project results are discussed under section 3.4.

EQ 3.2. To what extent has the project been implemented efficiently, cost-effectively, and has management been able to adapt to any changing conditions to improve the efficiency of project implementation, (since MTR)?

Finding 14. Project staffing in FAO was relatively stable throughout the duration of the project, enabling consistency and continuity.

105. The change in Lead Technical Officers (three over the duration of the project) could have hampered the project's consistency. But by remaining in contact with the various Lead Technical Officers and seeking their specialist advice when required by the project activities, the Project Coordination Unit diminished the negative impacts this could have had on the project.

106. Although the functioning of the Project Task Force was moderately satisfactory as an advisory body (it only met three-four times), the Project Coordination Unit also interacted with its members on an individual basis to a great extent, and obtained the technical advice required when necessary (e.g. on aquaculture, on disaster risk management, on gender). These personal connections made up for the limited technical and strategic guidance of the Project Task Force as an advisory body. Aside from the change in the Lead Technical Officer, stability and consistency in the Project Coordination Unit and Project Task Force staff were important for the creation (and preservation) of the project memory. Thus, the overall project oversight provided by the Project Steering Committee, Project Task Force and Project Coordination Unit is rated as satisfactory.

107. The Project Coordination Unit was responsive to countries' requests, both technical and for the solving of administrative issues, and provided the necessary day-to-day guidance on an individual basis ("held our hand"). It was also proactive in seizing opportunities to expand the project outreach (see section 3.4). For example, the Regional Project Coordinator sought and mobilized additional funding (in-kind and cash) from other initiatives in the region, and strategically created opportunities for actions that would benefit the countries (either individually or as a group) and

their fisheries sector whenever these arose (e.g. Grenada's tuna public-private partnership and FIP). This not only added weight and momentum to ongoing activities but also paved the way for both their sustainability and amplification (see sustainability section 1.4). For all the above reasons, the quality of project implementation by FAO is rated as satisfactory.

Finding 15. The project adapted very well to the COVID-19 crisis by modifying some activities and approach to communication, but was implemented with moderate efficiency. The budget revisions (although not all inserted in the system) enabled adjusting spending with requirements. The total 21 months extension of the project has enabled a gradual winding down of activities and a chance to complete outstanding ones and reinforce past ones. Procurement, especially for Component2, was cost-ineffective.

108. Table 5 shows the disbursement rates per project component. It indicates that by the time the COVID-19 pandemic hit, more than three quarters of the budgets for Components 1 and 2 was already spent. This is corroborated by Figure 3 on the annual budget and expenditures. In conjunction with the high adaptability of project partners to adapt activities (section 3.5.4), in particular regarding the implementation of training activities to the new circumstances, this meant that some momentum could be maintained despite inevitable slow-down, and activities pursued.

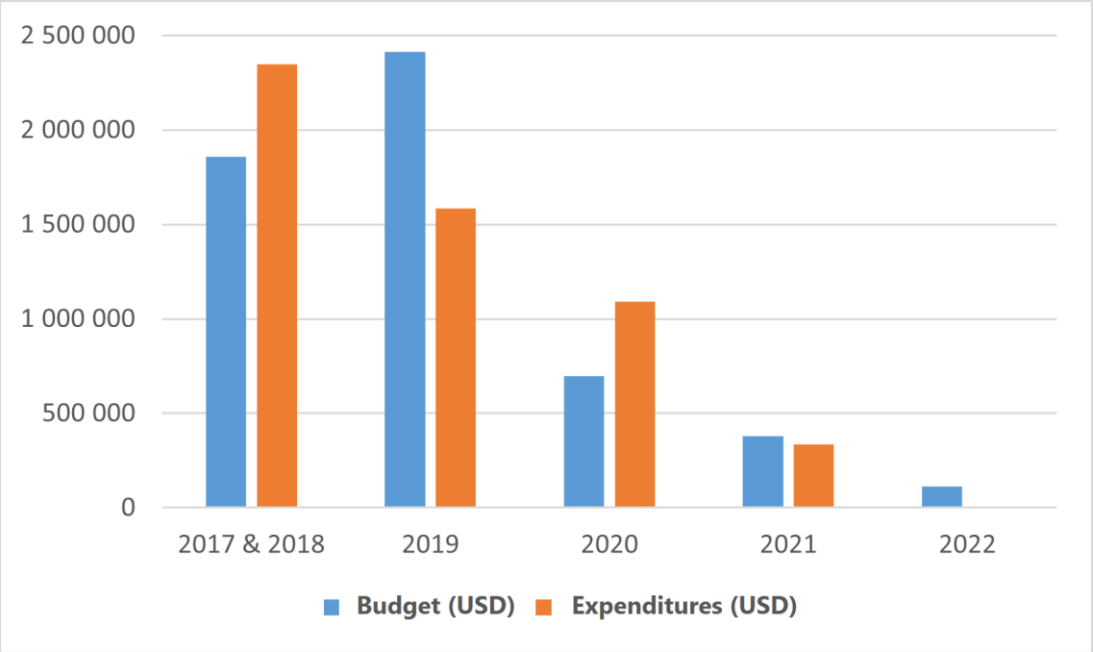
109. The discipline imposed by the preparation of annual work plans and budgets, as per the MTR recommendation, also helped figure out how to adapt when the COVID-19 pandemic hit and was at its worst in 2020. For example, funds were reallocated to different activities following the decrease in travel, although no savings were made. Similarly, more funds were dedicated to sargassum management than initially planned, in response to the influxes, though it was felt that other sources of funding should have also been mobilized to tackle this issue (see section 3.2.2).

Table 5. CC4FISH project expenditure by component, as a percentage of the budget for each component after the first budget revision (September 2017)

	Up to end 2019	Up to end 2020	Up to end 2021	Up to 30 Jan 2022 following budget review
Component 1	79%	83%	84%	100%
Component 2	80%	106%	115%	100%
Component 3	46%	60%	65%	100%
Component 4	80%	108%	126%	100%
Project Management	42%	70%	79%	100%
TOTAL GEF	72%	92%	100%	100%

Source: Elaborated by the evaluation team on the basis of the project's AWPB.

Figure 3. CC4FISH annual budgets and expenditures



Notes: Budget figures are extracted from the project's AWPB produced from 2019 onwards. Budget figures for 2017 and 2018 were obtained by subtracting the budgets for the years 2019 to 2022 from the total GEF grant. Expenditure includes actuals and commitments. Expenditure for 2022 includes USD28 298 returned to the project (consultants, LOA, expandible procurement).
Source: Elaborated by the evaluation team on the basis of AWPB and project's budget revisions spreadsheets.

110. The first nine-month extension to 30 September 2021 was justified because of the impact of COVID-19, although activities were already winding down at country level by that time. The additional no-cost extension until 20 March 2022 has made it possible to complete and also reinforce some of the activities (e.g. refresher SAS course for trainers held in January 2022).

111. The first budget revision took place in the third quarter of 2017, once activities were underway and it became apparent that a higher budget was needed for expendable equipment (for Component 2 mainly). Other budget revisions took place and were recorded and approved, but were not inserted in the Field Programme Management Information System (FPMIS). The last budget revision, at the beginning of 2022 (under approval at the time of writing), will enable to rebalance lines before financial closure (e.g. more funds needed for Professional Salaries due to the second nine-month extension, recovery and reallocation of letter of agreement funds (under contracts) to other budget lines following de-commitments in several project countries (see consolidated funds issue, section 1.5), significant proportion of trainings and workshop costs ending up being covered by the project directly instead of through letters of agreement as is the usual practice (e.g. Saint Vincent and the Grenadines, and Trinidad and Tobago through the field budget allocation or FBA), the request of countries for more expendable procurement (for equipment) and less non-expendable procurement, as well as the higher cost and more frequent travel, than originally planned).

112. Although FPMIS was not regularly updated, meticulous monthly tracking of expenditures and disbursal of funds enabled adequate monitoring of the budget and reallocation of funds across budget lines as necessary and in view of budget revisions. For example, the line for travel, which is very expensive in the region, had been underestimated (prior to COVID-19) in light of the number of regional meetings and training workshops to be held. Training costs in Saint Vincent and the Grenadines, and Trinidad and Tobago were not covered by letters of agreement because of the LOA/consolidated fund issue and channelling of funds through a field budget allocation in Trinidad and Tobago. LOA funds (under contracts) could be recovered following de-commitments

in Antigua and Barbuda, and Saint Vincent and the Grenadines (consolidated fund issue) and reallocated for procurement of SAS training and of a repeater system in these two countries instead. Project countries requested more expandable procurement for equipment, and less non-expandable procurement than originally planned.

113. While some of these adjustments were inevitable to circumvent administrative blockages as well as meet beneficiaries' needs, they were not all cost-effective. The resorting to service contracts and direct procurement from FAO SLC for Component 2 activities (e.g. SAS equipment, construction and rehabilitation of aquaculture facilities) proved very costly, in particular for the latter, owing to FAO's tight procurement procedures. While both the value of FAO's rules in this regard and the importance of procurement in a project such as CC4FISH are acknowledged, this decreased the overall value-for-money of the project and suggests that some fine-tuning of FAO procurement procedures may be required (e.g. increase the percentage allowed for procurement under LOAs). Time taken to address these issues also reduced efficiency.

Finding 16. Greater attention should have been given to the particularities of the set-up of national administrations, including the presence (or not) of FAO country offices, in the partner countries, to prevent delays and inefficiencies in the execution of activities at national level. Letters of agreement worked well with organizational partners, but are overall administratively demanding.

114. How national administrations operate, including their preferences and protocols for channelling project funds (e.g. LOA to the targeted ministry or to the government consolidated fund, field budget allocation through the FAO country office) should have been more carefully considered during the formulation of the project using available knowledge from the countries themselves and/or experience from other donors/initiatives. This would have prevented unnecessary and protracted discussions which delayed the start of activities on the ground (e.g. Trinidad and Tobago) or simply prevented them all (e.g. Antigua and Barbuda, Saint Vincent and the Grenadines). It then proved challenging for the countries to catch up once alternatives were put in place (Trinidad and Tobago being an exception). Difficulties and higher costs of equipment procured directly by FAO in accordance with its rules could have been better anticipated (see also section 3.5.2).

115. Even if letters of agreement are essential in FAO's arsenal of institutional arrangements to collaborate with non-profit entities and enable prudent financial allocation of donor resources, they are administratively burdensome to prepare, approve, sign, oversee and amend when necessary (which was often the case due to adjustments in project activities under COVID-19 restrictions). The recruitment of a new international procurement officer, in response to the MTR recommendation, supported their faster delivery and smoother oversight from then on.

116. Service contracts, which are commonly used as an institutional arrangement with private entities (mainly under Component 2) were reported by some key informants as slower, cumbersome and more expensive, and constituting a significant setback in the execution of activities at national level. In addition to being cost-inefficient, this procedure also placed an additional burden on the Project Coordination Unit and wider FAO SLC office staff. These unforeseen and underestimated complications were discussed above (question 3.1b).

117. Based on the above, project efficiency is rated as moderately satisfactory.

3.4 Sustainability

EQ 4.1a. How sustainable are the project achievements, and what is the overall likelihood of risks to sustainability?

Finding 17. The Project Coordination Unit began the preparation of an exit strategy towards the end of the project. In addition to the project's own built-in mechanisms laid as the foundation for the sustainability of its results, opportunities arose during the project life to develop external additional support that will be key to continue advancing the project results to a stable stopping point (e.g. aquaculture) and beyond.

118. In late January 2022, the Project Coordination Unit had not yet produced an exit strategy, although it was recommended by the MTR and project exit has been discussed with partners in the Project Steering Committee and Task Force meetings since 2020 and its preparation was under discussion. This meant leaving, at the time of writing, the shaping of the project legacy open to chance. The terminal evaluation was later informed that an exit strategy had been drafted in March 2022. Given the new project extension (to 30 June 2022), its contents will allow it to consolidate achievement and draw the trajectory for capitalizing on the project's legacy more clearly.

119. Training and capacity building, mainstreaming of climate change adaptation, production of training manuals, etc. can be seen as internal mechanisms through which the project built the foundation for the sustainability of its achievements (for example, the ICT training developed by CC4FISH is now included in the Caribbean Fisheries Training and Development Institute training). A number of partnerships also emerged during the project and will make it possible to take activities forward post-project, but this strategy for sustainability was not built into the project per se although sustainability is discussed in the project document.

120. It is clear from the AMEXCID project document[17] that this new project precisely builds on the basis laid out by CC4FISH and will take further aquaculture and aquaponics activities initiated in Saint Kitts and Nevis, Dominica, Grenada, and Trinidad and Tobago. This will ensure the continuity of climate-smart aquaponics and aquaculture activities once CC4FISH funding is exhausted, and the continuous strengthening of human capacity in aquaculture. Although Saint Lucia is not covered by AMEXCID, the new Green Climate Fund project will enable aquaculture activities initiated there (seamoss farming and rehabilitated facility) to be pursued. In Grenada, which has not experienced the same expansion of aquaculture under CC4FISH but where wild seamoss is traditionally harvested as a family activity for supplemental income, the AMEXCID project is replicating learnings from Saint Lucia under CC4FISH and providing solar dryers to increase seamoss post-harvest value, generating much enthusiasm for the activity and attracting many new intrants in the business.

121. Similarly, the co-financing and interactions secured with other initiatives in the region (see Annex 7), some of which will outlast the project, are important assets to continue activities, but their opportunist nature has not enabled the strategic planning of the project's withdrawal.

[17] Mexico-CARICOM-FAO Initiative: Cooperation for Adaptation and Resilience to Climate Change in the Caribbean. COMPONENT 1: Strengthening the institutional capacities of the CARICOM member countries in aspects related to resilient livelihoods and wellbeing through South-South cooperation. TITLE: 03 Resilient aquaculture for food security and well-being in the Caribbean.

122. Some countries (e.g. Saint Lucia) are now in a good position, thanks to the basis laid by the project through the completion of a VCA , to access funds from the Green Climate Fund[18] with the support of FAO. Despite FAO SLC's strengthened procurement procedures and experience with managing large projects, as well as capacity to draw expertise from headquarters, overly complex procedures may present a risk for compliance with, and access to, the GCF.

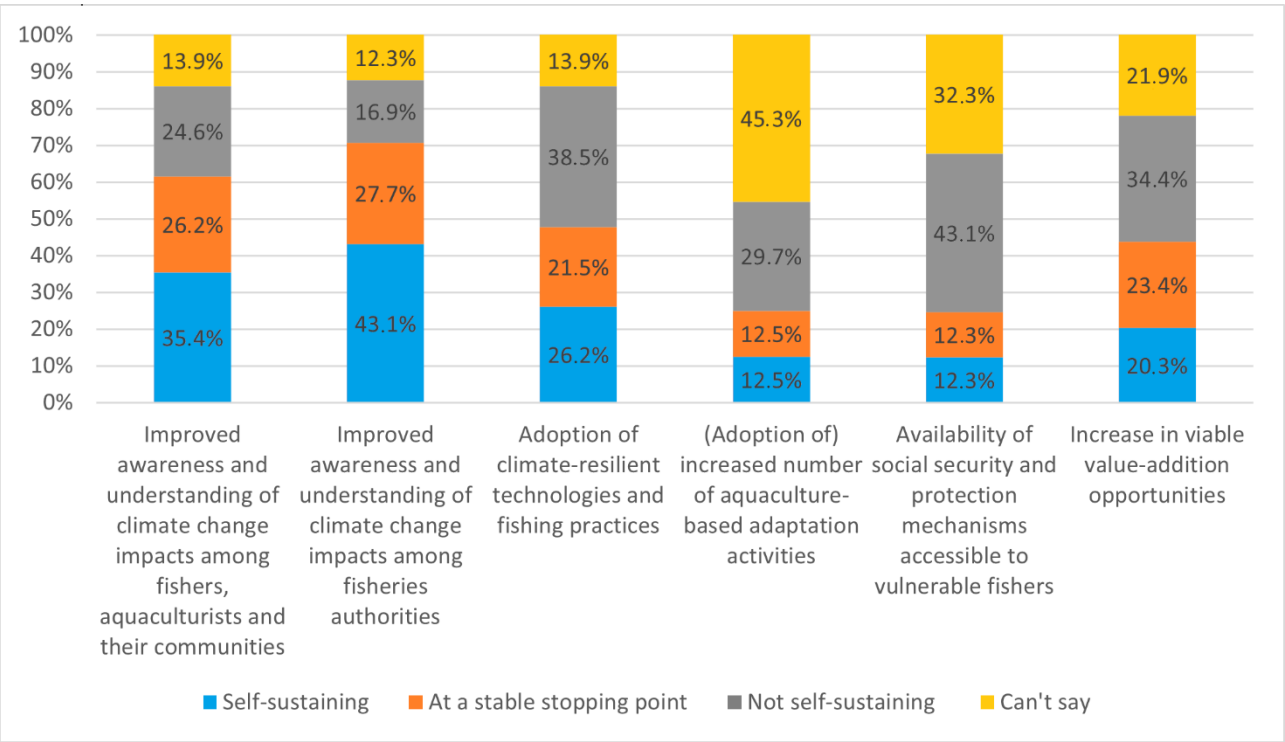
123. The likelihood that the climate change adaptation awareness and knowledge generated by CC4FISH will percolate to other GEF initiatives is also relatively high with, for example the inclusion of climate change adaptation considerations in the Blue Economy-CLME+ project (The CLME+ Hub, 2022a) and the ProCaribe+ project (The CLME+ Hub, 2022b), although the actual focus of adaptation in these initiatives is likely to be different from that of CC4FISH.

Finding 18. The project is leaving a strong legacy. It developed stakeholder ownership and capacity, triggered changes in awareness and behaviour, and established innovative partnership models which, together, are likely to increase the likelihood of sustainability of some of the project's achievements. However, some activities have not reached a stable stopping point. Future institutional commitment (in time, USD or priority) of national fisheries authorities to the uptake and upscaling of project's results also varies among the countries.

124. Figure 4 clearly shows the variations in levels of sustainability of the project's outcomes (as per its TOC), according to the perceptions of the e-survey respondents. While there are clear signs that awareness about climate change impacts among fishers and fisheries authorities will sustain in the future, and that the adoption of improved climate-resilient technologies and fishing practices will last with some support, there is more uncertainty regarding the sustainability of aquaculture-based adaptation activities, social security and protection mechanisms for fishers and viable value-addition opportunities. The general sentiment portrayed by Figure 4 regarding the sustainability of the project outcomes could be triangulated with information gathered from the key informant interviews.

[18] The Green Climate Fund (GCF) – a critical element of the historic Paris Agreement - is the world's largest climate fund, mandated to support developing countries raise and realize their Nationally Determined Contributions (NDC) ambitions towards low-emissions, climate-resilient pathways. https://www.greenclimate.fund/ FAO is an accredited entity of the GCF. Accredited entities work alongside countries to come up with project ideas, develop funding proposals and submit them to the GCF Board to approve for implementation.

Figure 4. Sustainability of the project's theory of change outcomes



Note: Percentage of answers (n=64). Self-sustaining = the outcome will sustain itself or go to scale after the project has finished; At a stable stopping point = the outcome has not yet been achieved but progress can be put on hold without reversal; Not self-sustaining =more funding or external support is required to maintain or scale out the outcome.

Source: Elaborated by the evaluation team on the basis of e-survey data.

125. In relation to aquaponics, the project has developed an innovative model involving private aquaculture entrepreneurs and secondary schools (e.g. Saint Kitts and Nevis), and is targeting students instead of fishers as a priority. Embedding aquaponics training in secondary/vocational school curricula would however require further collaboration with ministries in charge of education (potential for continuity may be higher with the involvement of university students), as well as a mechanism of rotation of mobile aquaponics demonstration systems around schools and openings during school holidays. However, there is at present no evidence as such new private investments in aquaculture activities (see section 3.2.3), and this is an important risk to the sustainability of the project achievements so far in this regard.

126. In Grenada, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Trinidad and Tobago, CANARI trained government officers in the use of its VCA toolkit, which will enable the approach to be replicated in other communities. A future collaboration with CANARI is planned outside the CC4FISH project, in this regard.

127. In relation to ICT and safety at sea, the project's emphasis on the training of trainers model, and the establishment of ICT stewards in fishing communities, will help in spreading SAS and related knowledge and practices. The project ICT results were deemed "*as sustainable as they can be*". In Trinidad and Tobago, the strong ties established between the Fisheries Department and the fishers, including ICT stewards, along with the strong buy-in of fishers who paid for their own radios licences and indicated their willingness to continue to do so after training, are encouraging signs for the sustainability of the project results there. However, ICT is not an end in itself and needs to be considered as part of an overall ecosystem functioning seamlessly on one hand, and supported by continuous building of the capacity of its key actors on the other hand: ICT stewards to provide ongoing, *in situ* support, CNFO in its communication and coordination means (website,

administration), fishers (especially early adopters) and key agents who will remain in place when the project ends, such as government (authorities in charge of fisheries and telecommunications) and private companies. This will be all the more needed as the technologies are in constant evolution. It is also important to note that the responsibility for sustainability does not lie with one particular actor, but with the 'ecosystem' itself, although the commitment of ICT stewards and actors on the ground will be pivotal.

128. Apart from these very practical considerations, it is also important to consider the wider ICT 'ecosystem' for the sustainability of results and new practices. Procedural aspects that underpin the good functioning of the ICT 'ecosystem' (e.g. communication channels to use, clarity on the role and function of each organization/member of the 'ecosystem') are essential to bringing all stakeholders together and to the sustainability of improved practices. These were deemed to have been put in place by the project in the countries covered under the partnership with UWI-Caribbean ICT Research Programme (CIRP) (Dominica, Grenada, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Trinidad and Tobago). However, gaps remain regarding fishers' access to radios, along with insufficient clarity about governments' supporting roles in this regard, and understanding of their obligations under the international conventions for safety at sea – e.g. UN Safety of Life at Sea (SOLAS, 2004) and Search and Rescue (IMO, 1979) Conventions and reporting to the International Telecommunication Union (ITU). Greater efforts are thus needed to strengthen the ICT 'ecosystem' functioning as a whole and it is encouraging that UWI-CIRP will continue building on the precursor work of CC4FISH and help fill these identified gaps under the ITU project "Smart Seas Toolkit (SST) for Disaster Resilience" in three of the project countries (ITU, 2011).

129. The project also leaves behind a vast amount of valuable resources, such as the VCA toolkit, the safety at sea and aquaponics manuals, guides (e.g. sargassum uses) which can be uptaken by other projects and organizations and tailored to local circumstances and needs.

130. Implementation of policies and plans outputs of the project is now in the hands of countries. There are encouraging signs that this will be pursued (e.g. inclusion of basic fisher training in Saint Kitts and Nevis Fisheries Division's annual work plans), but commitments of national fisheries' authorities need to be demonstrated, according to the e-survey results. More capacity building in fisheries institutions/institutional strengthening to include climate change in fisheries and aquaculture management, and more policy support to mainstream fisheries and aquaculture in national and regional climate change adaptation plans were also deemed the two most important areas where follow-up would be required beyond the project by e-survey respondents. Similarly, aside from the exception of the Inter-American Development Bank's funding support provided to the tuna public-private partnership in Grenada (USD 400 000 available from 2023), and signs of independent fishing group activities and marketing initiatives in Saint Kitts and Nevis, there is overall little evidence that the post-harvest activities initiated (regardless of whether they were planned in the project document) are sustainable. Concerns were expressed that expertise is still lacking to pursue value chain analyses, such as those carried out by CANARI in Dominica and Saint Kitts and Nevis, because of insufficiently trained personnel, and the majority of key informants agreed that post-harvest was an area of work where more future support would be required.

131. The intention to replicate VCA to other fishing communities was expressed by some key informants, using the videos and toolkits produced by the project. Similarly, there is intention to incorporate the FARE training into policy in Grenada, and to continue training of local fishers and disaster personnel at community level, to address gaps, set up documentation centre, etc. However, funding to do this and a robust and lasting relationship between fisheries and disaster management authorities are still to be secured. This raises doubts as to the extent to which this

will be taken forward by fisheries authorities alone, without outside assistance, despite the replication potential of both VCA and the Grenada model for FARE training.

132. With regard to advances in fisheries data collection and statistics, the government will need to continue to invest in information systems, but budgets have been earmarked for data collection and analysis (whether this is done to standard is another issue, but one where follow-up projects can intervene). It was noted that in Trinidad and Tobago, and Grenada, where most of the fisheries data collection and statistics took place, "there is an overall good information base as well as motivated staff – if they are given the means to do their job". In Trinidad and Tobago, mandatory registration of vessels under the Shipping Act, 1987 (and optional licensing depending on boat size) provides an additional incentive for developing comprehensive fisheries data sets (on vessels, effort, capture, socioeconomics, etc.). Continuously increasing both expertise and autonomy of fisheries statisticians in the Caribbean will however remain a challenge unless models of learning exchange and a regional 'community' of experts and analysts is created.

133. The continued implementation of management plans (fisheries management plans, sargassum management plans and aquaculture strategies) developed during the course of the project, along with training schemes, remains dependent on governments' commitments (financial and other) to these. These are highly variable. Some countries have already committed resources to pursuing implementation of these plans or to continue and/or scale out some project activities by including them in their work plans (e.g. Trinidad and Tobago, and Saint Vincent and the Grenadines with regard to SAS-ICT fishers' training). Others (e.g. Saint Kitts and Nevis with regard to sargassum management plan, Grenada with regard to sargassum and management plan of action) expressed doubt to be able to do so in the absence of committed government funds. In Saint Lucia, the Fisheries Division is holding a fish aggregating device fishers consultation to formalize fish aggregating device management plan, thereby increasing its likelihood of sustainability.

134. While many assessments have been produced under the project, a key informant indicated that "adaptation itself still needs to happen". Insufficient interest and prioritization of the project activities in fisheries' administrations future work plan will jeopardize advances, and make them more susceptible to future changes in government. For example, institutional interest in aquaponics varies depending on the country, and would likely stop if it were not for the AMEXCID project. Equally, the proactiveness of countries will have a major influence (e.g. Saint Lucia's efforts towards accessing GCF funds). The sustainability of project results is likely to be very country-dependent in this regard.

135. It is important to note, however, that the responsibility for sustainability of project activities should not be solely placed within national fisheries authorities. The implementation of sargassum management plans is a case in point: sargassum influxes are an environmental issue and good sargassum management largely benefits the tourism industry. This means – echoing the sentiment of fisheries officers, that sargassum management falls under the responsibility of multiple ministries (e.g. tourism and shipping), as well as the private sector, and should thus naturally require these to support the implementation of these plans.

136. The project indirectly strengthened the capacity of its executing organizational partners (e.g. CRFM, CNFO) who are now in a better position to encourage their member countries to continue building on what CC4FISH laid down and support the members elicit their priority areas for development. More should be done on how each project partner could incorporate the results and learning from the CC4FISH in their activities. Low hanging fruits exist; for example, the CC4FISH results could be woven into the courses of CNFO's Leadership Institute (launched under StewardFish, thanks to the framework and means this project provided to concretize an idea that

had been discussed long before) though at the time of the terminal evaluation, no reflection on this seemed to have been undertaken.

137. Finally, the global rise of ocean issues in the United Nations Framework Convention on Climate Change (UNFCCC) and Conference of the Parties (COP) agenda which now recognizes the importance of the agriculture (and by extension fisheries) sector – the 2015 Paris Agreement on climate change explicitly mentions the importance of oceans, provides the enabling environment for the issues that CC4FISH addressed to continue receiving attention in the years to come, especially as project countries (as small island developing States, SIDS) have been keen and vocal participants to COPs and their Ocean Days. The 2021 Glasgow Climate Pact explicitly mentions the ocean (albeit only once) and places a strong emphasis on adaptation, with potential cascading effects on international donors' agendas and priorities.

Finding 19. The current landscape of ocean and fisheries-related projects in the Caribbean region presents many opportunities for the CC4FISH project wisdom to live on. The future GEF funding landscape for projects at the nexus of climate change adaptation-fisheries-SIDS looks however more uncertain and may compromise the continuity and amplification of results that could be given to CC4FISH and similar projects to follow suit. Access to other large-scale funds such as the Green Climate Funds may not be straightforward.

138. The current landscape of ocean and fisheries-related projects in the Caribbean region is dynamic and already engaging some of the CC4FISH project partners in a number of initiatives enabling to further replicate and advance the results and learnings from the project. For example, UWI-CIRP is currently furthering the ITC-SAS model under the Smart Seas Toolkit project (cf. above), and CERMES is participating in the SARG-ADAPT project (UWI, 2022) in Dominica, Grenada, Saint Lucia, Saint Vincent and the Grenadines, and Barbados, enabling both to continue and amplify the sargassum work initiated under CC4FISH.

139. The future GEF-8 (to be announced in 2022) will include a USD 10 million start allocation for SIDS and least developed countries (LDC), which will be an opportunity for projects with an adaptation focus on Caribbean SIDS. The International Waters Programme, as well as the Blue-Green Islands Integrated Programme should enable to increase this allocation in each country. However, this fragmentation and potentially diverging focus and priorities of these funds and programmes may not be conducive to addressing climate change adaptation in the sectoral but holistic way enabled by SCCF.

140. Accessing the large amounts of funding available under the GCF (USD 30-40 million) may prove challenging for the project countries due to the complexity and cost of the preparation process, even though CC4FISH has started to prepare the grounds for this, for example in Saint Lucia. As such, the likelihood of financial risks to the sustainability of the project is rated as moderate.

Finding 20. The main risks to the sustainability of the project results and benefits are the lack of prioritization of climate change concerns in fisheries and aquaculture in national development agendas and fisheries authorities' work plans on the one hand, and the prevailing 'project by project' mentality/approach on the other.

141. One of the main risks to sustainability is institutional, stemming largely from those that were preidentified or that emerged during the project. A key concern is the insufficient prioritization of the climate change adaptation in fisheries concerns in national development objectives and changing priorities and, as a consequence, insufficient financial resources for fisheries authorities to include climate change adaptation actions and support in their work plans. Staffing turnover, as well as capacity in national fisheries administrations is also a risk that the project advances may

stall after withdrawal, with inadequate succession planning and transfer, and the fact that new knowledge/capacity is not systematically put to use. As such, the likelihood of institutional and governance risks to the sustainability of the project is rated as moderate.

142. Executing partners also tend to be opportunistic and rely to a great extent on external donor funds, which shape and may orient their activities away from those they undertook, and would like to continue, for CC4FISH. This not only raises risks for these organizations' sustainability, but also for sustainability of work and support in beneficiary countries. As stated by a member of an executing organizational partner: "our dependence on projects is problematic as the sustainability of partners is key to the sustainability of CC4FISH (and StewardFish) project results."

143. Environmental and extreme weather risks, exacerbated by climate change, will continue to be ever-present and to threaten infrastructures (e.g. demonstration farms) and fishing-based livelihoods, even though are supposed to have become more resilient (e.g. prawn hatchery in Dominica rebuilt with concrete). As such, the likelihood of environmental risks to the sustainability of the project is rated as likely. The engagement of fishers and their uptake of results due to insufficient incentives and demonstration of concrete benefits is another risk related to the social sustainability of the project, although the likelihood of broader sociopolitical risks on the sustainability of the project achievements is moderately unlikely.

144. Based on the above, the sustainability of the project is rated as moderately likely.

3.4.1 Progress to impact

EQ 4.1b. To what extent may the progress towards long-term impact be attributed to the project?

Finding 21. The project tried to strike a balance between tangible and less tangible activities and outputs. The impact of the former is evident, while that of the latter is less clear due to the time lag. The project played an essential role in achieving this but other actors and their multiple interactions were also essential.

145. Undoubtedly, hands-on capacity building, participatory activities and equipment deliveries targeting primary beneficiaries had an immediate and visible impact. For those less tangible ("paper") project activities – such as studies, formulation of management plans – impact is less evident at the end of the project due to the time lag and time requirement for other influences to turn outputs into observable outcomes. Some national stakeholders and beneficiaries have expressed disappointment with the project in the countries where procurement issues have prevented the full realization of tangible activities and where paper outputs have dominated (even if these are essential in the longer-term).

146. Work is in progress regarding the updating of national fisheries policies and legislation. Although it is the responsibility of governments to do so, CNFO is both stimulating fisherfolk organizations to voice their views in this process, and advocating for principles of its own regional Code of Conduct (and of those developed at national levels in Antigua and Barbuda, Saint Lucia, and Saint Vincent and the Grenadines under the StewardFish project) to be enshrined in revised policies and legislation.

147. Both the outcome exercise and the e-survey have underlined the contributing role of the project partners as well as those of the satellite stakeholders in forming an enabling "ecosystem" for the project activities. This was detailed in section 3.5.4.

Finding 22. The project has made a significant contribution to the broader impact(s) encapsulated in FAO's strategic objectives and climate change adaptation focal areas (as stated in the TOC) by creating a necessary change in the way climate change adaptation in fisheries was perceived and (un)addressed. However, progressing further towards impact through the realization of the impact assumptions of the TOC (beyond intermediary state 2), is beyond the project's control, merely within its sphere of influence, and will require more time and commitments from multiple partners and actors, at multiple levels, along with the containing of, or adapting to, major events or crises, should these arise.

148. The project laid new grounds and built awareness and momentum in the importance to build the capacity of those engaged in fisheries and aquaculture to climate change impacts and extreme events where none existed before, especially in the region. However, the uneven performance of countries means that in some, these new grounds are thin at project end and will be lost if no new project comes in support of uptake and scaling of activities.

149. Advances (or lack of) made under each project component, as described above, suggest that not all assumptions of the theory of change (in Box 2) have been fulfilled to the same extent for the reasons explained in the previous sections: assumptions 1.1 and 1.4 have been fulfilled, while assumptions 1.2 and 1.3 only partially. It therefore implies that, by early 2022, the "intermediary states 1.1 to 1.4"[19] of the theory of change have been reasonably but not quite yet fully realized.

Box 2. Assumptions 1.1 to 1.4 towards the realization of intermediary state 1 of the project's theory of change

1.1 Credible evidence is disseminated to key fisheries stakeholders in accessible formats.

1.2 Value addition is important to diversify the fisheries product and increase resilience of the fisheries sector. Fisherfolk, fisherfolk organizations, aquaculturists and private sector are willing to participate in, and appreciate the long-term benefits of, developing new fisheries livelihoods; more adaptable fishing methods; alternative livelihoods; development of new technologies; and capacity building activities. Awareness of affordable, feasible climate-resilient technologies and practices will lead to the sustained application of the knowledge gained and the use of equipment provided. Fisherfolk, having expressed on many occasions a need for insurance services, will effectively use the services when these are made available at attractive rates and conditions.

1.3 Approved policies and plans will be implemented. Draft plans will be approved. Adequate finance available for the development of policies and plans within the desired time frames. Growing awareness (globally, regionally and nationally) of the value and importance of multistakeholder participation in governance arrangements.

1.4 Project lessons learned and best practices widely disseminated. Countries/key stakeholders have the human resource/financial capacity to develop new proposals and apply lessons learned.

Source: FAO, 2020. *Mid-term review of the project "Climate Change Adaptation of the Eastern Caribbean Fisheries Sector (CC4FISH)"*. Bridgetown.

150. E-survey results also corroborate that the project was instrumental to progress towards the theory of change outcomes (particularly Outcome 1 related to improved awareness and understanding of climate change impacts among fishers, aquaculturists and their communities), but that there

[19] Intermediate State 1.1: Increased awareness and understanding of climate change impacts and vulnerability applied to the development of sustainable fisheries livelihoods and reduced unsustainable practices.
Intermediate State 1.2: Actions implemented to develop resilient fisheries in the Caribbean through: Adoption of climate-resilient technologies and practices; Increased number of appropriate fisheries adaptation activities; Adaptive social security and protection mechanisms accessible to vulnerable fishers; Increase in viable value-addition opportunities.
Intermediate State 1.3: Political and institutional environment reinforced through: Implementation of fisheries policies evidencing consideration of EAF, CCA, and DRM issues; Implementation of climate change adaptation policies evidencing consideration of the fisheries sector; Improvement in range of and participation in governance arrangements.
Intermediate State 1.4: Lessons learned and best practices identified from CC4FISH adopted within and beyond the project countries.

are also nuances in the extent to which it was actually instrumental (Table 6). Sustainability of the project results and continued work beyond the life of the project, through a follow-up initiative and/or snowballing initiatives stemming from CC4FISH, will be determinant to consolidate advances and move beyond intermediary states.

Table 6. Contribution of the project to the theory of change outcomes based on the e-survey (n=74).

	Contribution of the project		
Outcomes according to the project TOC	**A lot (= this could not have been achieved without the project)**	**A bit (=the project was instrumental but other factors were also at play)**	**Not much* / None** / This has not happened / I don't know**
Improved awareness and understanding of climate change impacts among fishers, aquaculturists and their communities	44.5%	37.9%	17.6%
Improved awareness and understanding of climate change impacts among fisheries authorities	41.9%	44.6%	13.5%
Adoption of climate-resilient technologies and fishing practices	23%	47.3%	29.7%
(Adoption of) increased number of aquaculture-based adaptation activities	13.5%	41.9%	44.6%
Availability of social security and protection mechanisms accessible to vulnerable fishers	11%	38.3%	50.7%
Increase in viable value-addition opportunities	20.3%	37.8%	41.9%

Notes:
* Not much = the project had a minor role, or indirect influence.
** None =this happened without the project intervention.

Source: Elaborated by the evaluation team on the basis of e-survey data.

151. However, on the basis of the examination of the assumptions enabling the realization of "intermediary state 2" of the theory of change "*Increased resilience and reduced vulnerability to climate change impacts in the Eastern Caribbean fisheries sector, through the introduction of adaptation measures in fisheries management and the built capacity of fisherfolk and aquaculturists, with an equitable focus on women, youth and members of fishing communities and their organizations*", there is still some uncertainty regarding process towards this state because the assumptions underpinning it are only partially realized. If technical support and hardware have been provided and capacity built, cash inputs have not yet happened. There is some evidence of improved self-organization to implement measures for greater climate change resilience (e.g. among fish farmers in Dominica, seamoss farmers in Saint Lucia, and fish processors in Saint Kitts and Nevis), but continued support will be required to expand these developments to other groups. Equally, multi-level partnerships have been created but need to be maintained and reinforced. These are nonetheless encouraging signs that, with time, through both the project's direct (control) and indirect (influence) action and that of its partners, and given the indication of buy-in and continued work beyond the immediate term of the project (see sustainability section 1.4), progress towards the intermediary state 2 will be achieved much quicker than the five to seven-year time frame anticipated in the MTR.

152. There are also signs that activities, lessons and toolkits developed under CC4FISH are starting to have a global resonance, both within and beyond the GEF community of projects and programmes. For example, the terminal evaluation was told that the VCA toolkit was now being used in Asia and Africa under the GEF programme (but could not independently verify it), including for a preliminary study for a pipeline GCF project. Advances in the study of sargassum which, as an Atlantic Ocean issue, also affects West African waters, are also being used by the EAF Nansen Programme surveys (e.g. Transboundary Ecosystem survey in the Western Gulf of Guinea, Leg 3, 2019).

153. Potential barriers and risks that may prevent future progress towards long-term impact still remain. The project has shown that the volcanic and extreme weather risks should not be underestimated. The constraints imposed by the COVID-19 pandemic showed that short-term adaptation is possible, and taught important lessons should a similar health crisis occur again. The continued pressure of climate change, doubled up by fishing and other pressures on capture fisheries stocks and the widening of social and economic inequalities, and the ineffectiveness of institutions in tackling these, are probably the biggest barriers to progress towards long-term impact. Thus, based on the above, the likelihood of impact is rated as satisfactory.

3.5 Factors affecting performance

3.5.1 Monitoring and evaluation system

EQ 5.1a. Was the monitoring and evaluation plan practical and sufficient? (M&E design)

Finding 23. The monitoring of the project complied with GEF and FAO requirements as described in the project document. It was practical and sufficient for such a project.

154. Key monitoring products, as described in the project document, were produced in timely fashion – i.e. i) project inception report; ii) annual work plan and budget;[20] iii) semestrial (FAO) project progress reports; iv) annual (GEF) project implementation report; v) technical reports; vi) co-financing reports; vii) terminal report;[21] viii) SCCF AMAT Tracking Tool.

155. Monitoring of progress in achieving project results and objectives was done based on the targets and indicators established in the project results framework and in accordance with the descriptions of Components 1-3. However, some outputs did not have quantified targets or insufficiently specific indicators, especially under Outcome 2.1, and no requests were made by the donor, the Project Steering Committee or the Project Task Force to rectify this during the course of the project. Although not considered as a difficulty by the Project Coordination Unit for reporting progress, outcomes and outputs are fundamentally different and such mix-up not only blurs the precise quantification of levels of achievement at project end but also constitutes a critical weakness in M&E design, which is rated as moderately satisfactory.

156. Although the MTR was carried out more than half-way through the project (initiated in April 2020 and completed in October 2021), the Project Coordination Unit still had time to act upon the majority of its recommendations, notably those concerning management and oversight, and knowledge and communication aspects of the project.

EQ 5.1b. Did the M&E system operate as per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? (M&E implementation)

[20] Following corrective action at mid-term review.

[21] Not yet prepared due to the extension of the project.

Finding 24. There was no documented M&E plan as such, but the information was compiled and reported on as per monitoring requirements outlined in the project document, with information gathered systematically. Particular efforts were made to involve all stakeholders in reporting and review of progress reports (though these were not always fruitful). Initially misaligned project progress reports and project implementation reports, as well as the rigidness of GEF's AMAT, were not fully conducive to the tracking and reporting of the project's progress.

157. The preliminary M&E plan outlining tasks and responsibilities that was described in the project document was followed but not elaborated upon further. Reporting on implementation progress continued to be done in line with FAO (six-monthly PPRs) and GEF (annual PIRs) requirements, focussing on quantified targets (e.g. numbers of participants in events, disaggregated by age and sex, and outputs), but not evaluating changes in knowledge, attitudes and practices, as was highlighted by the MTR. The production of these reports demanded a high level of interactions with countries, including with the GEF Operational Focal Point (OFP) on a regular basis – the latter being more time-consuming than worth-while (see section 3.3). The diverging focus[22] of project progress reports and project implementation reports, as well as their different timescales (one due every July, the other due every December) could be counter-productive, as highlighted during the key informant interviews as well as in another FAO-GEF fisheries project evaluation (FAO, 2020c), but was not perceived as such by the Regional Project Coordinator, who in fact, saw this requirement as an opportunity to continuously monitor and report on progress. Insufficient keeping of meeting minutes (see section 3.3) constitutes a gap in the monitoring arrangements of the project. As such, the M&E plan implementation is rated moderately satisfactory.

158. The GEF AMAT monitoring tool did little justice to capturing inbuilt flexibility for a project on adaptation such as CC4FISH, and to reflect the unexpected developments that arose out of expressed needs and opportunities, even though reporting according to the AMAT indicators was deemed to have yielded useful discussion among Project Coordination Unit members and to have been relatively straightforward.

159. Based on the above, the overall quality of M&E of the project is rated as moderately satisfactory.

3.5.2 Quality of execution

EQ 5.2. To what extent did the executing agencies effectively discharge their role and responsibilities related to the management and administration of the project? (execution)

Finding 25. National partners executed project activities with as much diligence as possible, despite administrative and procurement bottlenecks and COVID-19 constraints. National teams (NPC+NFP) were dedicated to the project despite variability in staffing. Engagement with GEF Operational Focal Points and FAO National Correspondents at national levels was minimal but without consequences on project execution.

160. Staffing of national project teams (NPC+NFP) has been an issue, for example in Antigua and Barbuda, and Dominica, the NPCs were not replaced following their resignation (for various reasons); in Grenada, three different NPCs took up post in succession; in Trinidad and Tobago, the first NPC resigned. Interviews revealed that these left an important gap that NFPs alone could only partially fill as they have other professional duties alongside their nomination as project focal point. This happened despite a level of ownership by NFPs. The pairing of NPCs and NFPs was confirmed as a suitable means to oversee execution at national level and direct liaison with the government/fisheries authorities, with typically good and constructive relationships. Some NPCs and NFPs demonstrated remarkable dedication to the project, using their own contacts and

[22] FAO's PPR focus on impacts and follow the UN's results-based framework. GEF PIR do not focus on impact and follow the World Bank's results-based framework.

experience to pursue activities under their own initiatives (e.g. in Saint Kitts and Nevis, the NPC continued to provide support and coordinated the training of fishers 'in-kind' after the end of the LOA) and helping sort out national administrative bottlenecks that were beyond the control of the project. Many NPC and NFP reported being satisfied with the quality of the technical backstopping and administrative support received from the Project Coordination Unit.

161. However, all NPCs complained of insufficient training and onboarding on FAO rules and procedures provided to staff who joined in during the course of the project and who were unfamiliar with FAO rules and procedures. This, combined with the complexity of FAO procedures and insufficient validation steps, led to the procurement or returning of wrong equipment (e.g. Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines), with knock-on effects on the work of partners and execution of activities at national level.

162. Grenada, and Trinidad and Tobago demonstrated that once teething issues related to personnel (in the case of the former) and procurement and communication between FAO SLC and country office in the case of the latter, both countries got back on track, were able to overcome relatively well the constraints imposed by the COVID-19 pandemic and were confident to complete all their activities by the end of the additional project extension. However, in Trinidad and Tobago, it was reported that differentials in participation of officers from the Fisheries Division of Trinidad and from the Department of Marine Resources and Fisheries in data collection and statistics training activities had hampered the coordination of follow-up activities between the two islands, as well as understanding of each island's specific needs, and slowed down both the execution and replication/scaling out of activities to other parts of the country. The hiring of local experts as consultants, who were aware of cultural nuances, had a positive effect on the uptake of information and activities. The project's regional Steering Committee meetings were well attended and appreciated by partners.

163. In Saint Kitts and Nevis, and Trinidad and Tobago, quarterly meetings were held between national fisheries authorities (at the impulse of the NPC and NFP) and national stakeholders and beneficiaries to discuss activities, plan, evaluate, update and harness support and attract participants to trainings. In Grenada, they were held on a monthly basis. Although their success in terms of consolidation of the project's actions at national level and support to both implementation and learning is not clear everywhere (e.g. Grenada), such meetings denote fisheries authorities' willingness to engage more closely with a range of stakeholders and fishers themselves, and anchor the project firmly in national processes and interests.

164. The engagement of GEF Operational Focal Points[23] with the project at national levels was very limited. Engagement with GEF OFPs at national level is the responsibility of the FAO Representative (where posted) and Budget Holder, but it would also appear that NPCs and NFPs did not maintain OFPs updated of project results. Seeking inputs from GEF OFPs, notably in the PIR rankings, as was made mandatory by the GEF Secretariat in 2020, proved time-consuming and ineffective.[24] Although lack of engagement had no direct impact on the execution of activities during the project life, it somewhat denotes a lack of strategic engagement on behalf of the project and FAO SLC because some GEF OFPs are empowered and have an influence on national decisions regarding priorities for GEF investments and which agencies to work with, and because it is important for FAO to maintain a good work relationship with national ministries to ensure continuity in project and other initiatives' results.

[23] GEF OFPs are 100 percent paid by the government. They are often in directorial positions in the ministry in charge of environment and/or agriculture and are nominated as GEF OFP.

[24] Only one GEF OFP reviewed the June 2021 PIR, none did in 2020.

165. The engagement of FAO National Correspondents, who are typically based in the agriculture departments of governments and thus tend to be less familiar with fisheries issues, was also very limited, with the exception of those in Saint Vincent and the Grenadines, and Grenada who intervened to solve the consolidated funds issue in these two countries. FAO National Coordinators were invited to Project Steering Committee meetings, but their lack of engagement was of minimal consequence overall on the implementation or execution of the activities.

166. All executing partners displayed a high degree of adaptability to continue implementing activities despite the COVID-19 constraints. COVID-19 and the limitations it imposed on culturally-important face-to-face interactions were nonetheless a major setback for training and capacity building activities. The uptake of the Zoom platform was slow among fishers, but executing partners made efforts to adapt, for example by working with smaller groups, and increasing the number of days of training to reach every intended participant (e.g. Dominica).

Finding 26. Issues arose in some countries with the disbursement of project funds, held in national consolidated funds, while in others administrative hurdles slowed the start of activities. This led to some frustration and compromised the delivery of project activities in some countries, in particular where these issues were compounded by environmental disasters and the COVID-19 pandemic. Letters of agreement with organizational partners were overall effectively implemented.

167. Issues with letters of agreement arose in nearly half of the national executing partners. Regardless of the project's administration, issues with the disbursement of LOA funds occurred in Antigua and Barbuda, Grenada, and Saint Vincent and the Grenadines, where they were held in the government's consolidated funds. In Saint Vincent and the Grenadines, the letter of agreement was eventually cancelled given the impossibility to spend it on project activities in country, leaving FAO SLC to do all procurement on the country's behalf. Some key informants reported that they would have appreciated some closer supervision of LOA on behalf of the Project Coordination Unit, for example, receiving final payments on time. The issue of the consolidated funds could not be solved everywhere (e.g. Antigua and Barbuda, and Saint Vincent and the Grenadines), and affected the quality of execution and overall project achievements in these countries.

168. In Trinidad and Tobago, after a turbulent start, the field budget allocation (deemed by some key informants as "unnecessarily problematic" and "an unnecessarily long procedure") eventually enabled the successful unlocking of the execution of activities in the country in 2019 and their smooth implementation from then on. The delayed start meant that managing beneficiaries' expectations until then was challenging. However, service contracts – either attempted (e.g. Antigua and Barbuda) or effective (e.g. Saint Lucia), as well as direct procurement (e.g. Dominica) were not as efficient. Saint Vincent and the Grenadines' capacity to deliver the project was further hampered by a volcanic eruption, and Dominica's by a hurricane, before being hit by the COVID-19 pandemic.

169. The standard procedure of issuing LOAs to organizational partners worked well overall. LOA reports denote the quality and thoroughness of the work they undertook for the project (see section 3.5.4). Some organizational partners mentioned that whilst LOAs provided an effective contractual arrangement for their involvement in the project, it also cut short their inputs and interest to remain involved once it ended. Some partners, involved in the first half of the project, indicated that they would have liked to remain involved/follow-up on their activities in the second half, but were not given the opportunity to do so because contractual arrangements (LOA) could not be extended or renewed. In one instance, the delay in renewing an LOA with an organizational partner (CANARI's phase 2 LOA) held up their execution of in-country activities, such as VCAs, which would have otherwise been completed before the COVID-19 pandemic hit. Given the need

for face-to-face interactions in VCAs, this procedural bottleneck had a substantial impact on the final quality of this activity.

170. Based on the above, the overall quality of execution is rated as satisfactory.

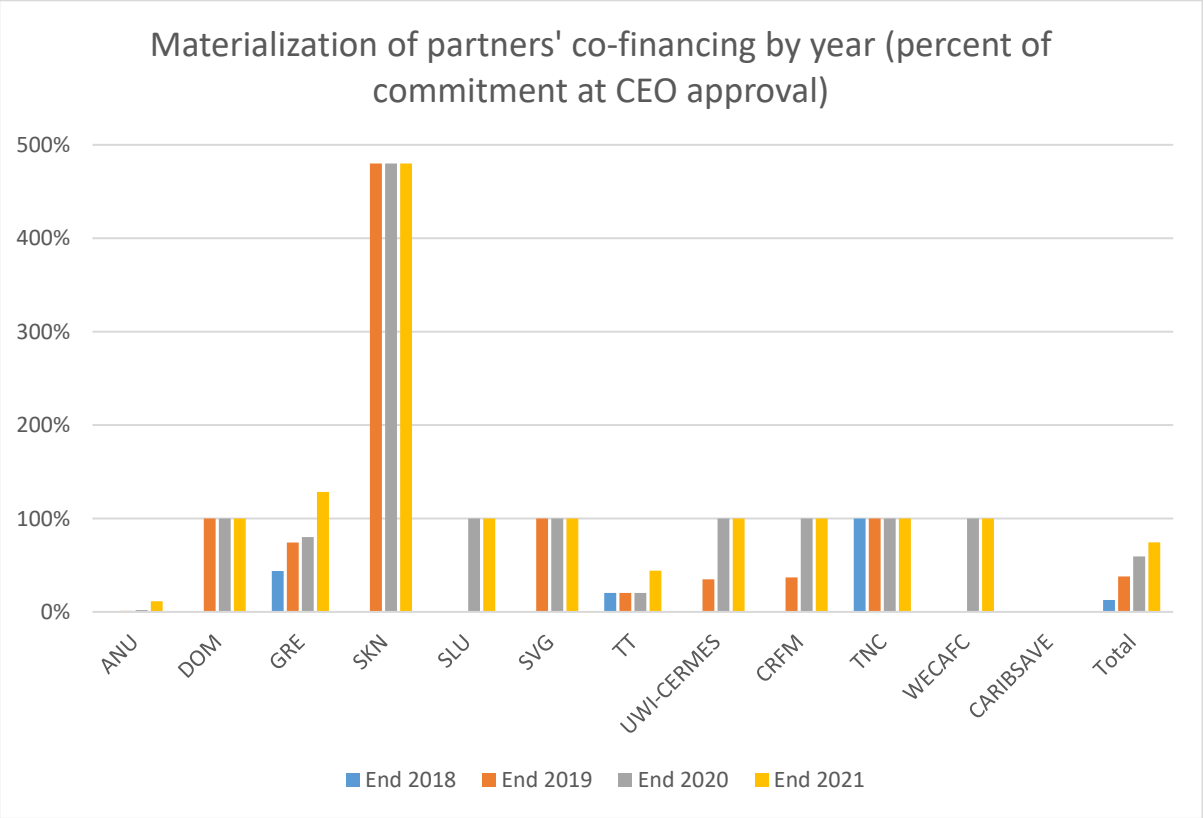
3.5.3 Financial management and mobilization of expected co-financing

EQ 5.3. To what extent did the expected co-financing materialize, and how did short fall in co-financing, or materialization of greater than expected co-financing affect project results?

Finding 27. Seventy-four percent of the project's co-financing partners' commitments materialized, with some more, and others less, than initially indicated. Given the nature of co-financing – more of an indicator of buy-in than actuals – this did not affect the project results, but raises some questions regarding the estimation of co-financing commitments and the monitoring of their materialization. There is less evidence of the value of the contribution of some co-financing partners.

171. The project's co-financing table, in Appendix 6, contains updated figures from the mid-term evaluation, based on executing partners' co-financing letters. The overview of partners' co-financing commitments over the life of the project shows that, out of the 12 co-financing partners, 7 honoured their initial commitments in full, 2 committed more than initially envisaged (Grenada and Saint Kitts and Nevis), 2 less (Antigua and Barbuda, and Trinidad and Tobago), 1 not at all (CARIBSAVE ceased to exist before the start of the project). However, at the end of the project, additional commitments did not make up for the accumulated shortfall, with total commitments reaching only 74 percent of what had been initially committed (Figure 5).

Figure 5. Co-financing realized by source for years 2018–2021



Source: Elaborated by the evaluation team on the basis of co-financing letters provided by project partners.

172. While the under-materialization of co-financing has not been detrimental to the execution of activities, it denotes the various degrees of engagement and interest of partners at national level (e.g. Antigua and Barbuda being a case in point). Initial commitments based on yet unconfirmed

outside project funds can be risky. Not only do they risk overinflating a project's overall budget envelope, but their non-materialization can also jeopardize execution and scaling of activities. In Trinidad and Tobago, the non-materialization of the financing offered from approved Fisheries Division projects which did not materialize due to economic constraints left the country scrambling for other projects to incorporate to reduce the shortfall in co-financing as much as possible. Reciprocally, Saint Kitts and Nevis's very large increase in commitment did not make a proportionally visible difference in its execution of activities, nor in their scale and outreach, but underlined the country's commitment to the project.

173. Tracking and reporting on commitments is the responsibility of co-financers, but is made difficult by the in-kind nature of the commitments (use of office space, equipment, overheads, staff time, etc.). It required a lot of administrative follow-up on behalf of the Project Coordination Unit to obtain annual letters confirming co-financing and to track in-kind commitments. With the moving of workshops and meetings to virtual platforms with the COVID-19 crisis, the monitoring of in-kind commitments was made even more difficult, and the reporting to GEF in annual project implementation reports rather artificial.

174. The project was able to secure additional funds in cash and in-kind from other projects and initiatives in the region to support and expand the resonance and outreach of its activities. Up to 2020, USD 438 000 worth of funding had been secured, and has since been complemented by approximately USD 11.5 million (including activities implemented over the 2019–2021 period) (Annex 7). Of these USD 11.5 million, USD 1.116 million have been secured for activities beyond the 2022 end date of CC4FISH.

175. The value-added of the contribution of some co-financing partners (e.g. WECAFC) is less obvious. The role of WECAFC in the project was more de facto – due to the Lead Technical Officer being the Secretary, than active. Aside from a paper on climate change adaptation in Caribbean fisheries presented by the Regional Project Coordinator at the 2019 WECAFC meeting (see section 3.4), there is little evidence of other fertile crossovers between the project and the Organization, for example through the regular discussion of climate change issues in meeting agendas. This may be partly due to the two-year lull between the departure of the first Lead Technical Officer to another FAO office and arrival of his official replacement as both Lead Technical Officer and WECAFC Secretary in the FAO SLC office. It may also be due to the fact that not all project activities and outputs were relevant to all WECAFC 30+ members.

176. Based on the above, the financial management and co-financing are rated as moderately satisfactory.

3.5.4 Project partnerships and stakeholder engagement

EQ 5.2a. How effective were stakeholder engagement and partnerships?

Finding 28. The project established strong partnerships with most co-executing partners and other satellite stakeholders, thus creating a unique "ecosystem" of partnerships which were essential for the execution of activities at national and regional levels.

177. The e-survey revealed that an equal proportion of respondents (37 percent) (69) found the project "successful" in having a suitable variety of partners to support the uptake of climate change adaptation practices among beneficiaries (22 percent "very successful"), and in creating synergies between its multiple executing partners (fisheries authorities, other donors, etc. (24 percent "very successful"). Indeed, organizational partners UWI-CERMES and CIRP, CANARI and CNFO brought their tremendous and specific expertise to the project. A number of key informants agreed that the project would have not achieved what it did without these partners. These partners easily

found their place in the project, and established a strong rapport with the Project Coordination Unit. Good relationships across partners existed prior to the project (e.g. student exchanges between CIRP and CNFO, CRFM providing office space to CNFO). The project stimulated further interactions among these partners which are likely to continue in the future. For example, CIRP provided support to CNFO for building their website after the end of CNFO's involvement in the project.

178. The outcome mapping exercise confirmed agreement that regional partners have collaborated more with one another and that their joint action had been strengthened by the project. As such, CC4FISH had a catalytic role in creating an "ecosystem of partners" which was essential for the successful implementation of thematic actions. SAS and ICT activities under Component 1 highlighted the importance of bringing satellite stakeholders (e.g. coast guards, telecommunication companies) in the picture. Similarly, in Saint Lucia, the NPC is actively linking partners' initiatives (e.g. CERMES SargAdapt project) (UWI, 2022), use of CC4FISH outputs (Sargassum Outlook Bulletins) with university, schools and local communities, thus enabling an integrated approach to sargassum management. The outcome mapping exercise confirmed that the challenges imposed by containment of the COVID-19 pandemic accelerated new ways of working together across all stakeholders.

179. Fishers reported they felt they had benefited more from the project partners than from the fisheries authorities of their own country, especially in those where project funds did not reach fisheries authorities (e.g. Saint Vincent and the Grenadines). Echoing this, fisheries authorities generally felt that the project had given them leverage to develop a stronger collaborative relationship with organizational partners (e.g. CFTDI, CIRP, CANARI) that would last beyond the project (e.g. Dominica, Grenada).

180. There is also evidence that organizational partners themselves have benefited from their involvement in the project in other means than just financial. For example, CANARI reported having expanded its expertise through its development of the VCA toolkit and implementation of VCAs and developed ideas for future initiatives (e.g. participatory geographic information system [GIS]). Similarly, UWI-CIRP is now participating in the SST project thanks to the materials and protocols CC4FISH enabled it to strengthen and refine (see section 3.4). Another example of benefits from partners' synergies is the incorporation of CIRP's ICT training (developed during CC4FISH) into the CFTDI regional training which was deemed transformational by regional partners.

181. However, overreliance on some organizational partners, such as CERMES, came at a cost when some of their activities had to be scaled down (e.g. formulation of FMP) due to the COVID-19 and staff changes within the Organization. The partnership between INFOPESCA and the project was disappointing due to uncoordinated preparation of the field missions between the Project Coordination Unit/ Regional Project Coordinator and INFOPESCA consultants, misunderstandings regarding the focus of the value chain analyses, as well as a breakdown in communication and lack of follow-up post-assignment which hampered the relevance and usefulness of the work and did not lead to the improvements in value chains initially expected (see section 3.2.2).

EQ 5.2b. Were other actors, such as civil society, Indigenous Peoples or private sector involved in project design or implementation, and what was the effect on project results?

Finding 29. Involvement of the private sector was limited to aquaculture-related activities, and to a tuna company in Grenada, but less successful in relation to the provision of vessel insurance.

182. In the case of aquaculture, involvement of aquaculture entrepreneurs forged an innovative partnership enabling simultaneous demonstration, training and good upkeep of facilities (e.g. Saint Kitts and Nevis, Saint Lucia, Antigua and Barbuda).

183. In the context of the insurance work, lack of interest of private insurance providers (e.g. Credit Union in Saint Kitts and Nevis) stalled the process of developing an insurance scheme for fishers, as anticipated in the project document. Thus, all the expectations for developing insurance for fishers (as per project document) did not materialize.

184. The only exception with regard to marine capture fisheries relates to the development of a public-private partnership between the private sector involvement, Government of Grenada, fishers' cooperatives and a tuna export company. Institutional partners (fisheries authorities) were the main interlocutor of organizational partners (e.g. CRFM), and therefore had no interactions with the private sector (aside from artisanal fishers who operate on a private basis).

185. The lack of participation of large-scale commercial fisheries actors had limited consequences on the project given its main focus on artisanal fisheries. Indigenous Peoples (in Dominica, and Saint Vincent and the Grenadines) were not specifically targeted.

186. Based on the above, the quality of partnerships and stakeholder engagement is highly satisfactory.

3.5.5 Knowledge management, communication and public awareness

EQ 5.3a. How is the project assessing, documenting and sharing its results, lessons learned and experiences?

Finding 30. Despite the late recruitment (post-MTR) and subsequent departure of a knowledge and communication specialist, the project produced, in collaboration with its partners, a vast and impressive array of knowledge and communication products, for its target audiences and beyond. These are disseminated through the project webpage on FAO's website, partners' websites, and some through social media. Accessibility and the technical level of some of these products are however a challenge for some stakeholders, especially fishers, aquaculturists and processors.

187. The project filing system, on SharePoint, significantly improved after the MTR. The project produced an impressive number and range of outputs which were well tracked and organized by the Project Coordination Unit. These outputs include very valuable, high-quality, reusable and adaptable materials (training materials and toolkits, e.g. , VCA toolkit developed by CANARI) and communication products using a variety of supports, from posters at landing sites, to videos, to press articles, e-books for schoolchildren, to more formal policy briefs and reports for a range of audiences, such as sargassum practice guide for fishers produced by CERMES (Speede *et al*, 2019).

188. Useful lessons and experiences are documented and disseminated on partners' platforms, for example CERMES's report on lessons learned regarding the development of partnerships (FAO, 2021c), CANARI's website, in addition to the standard FAO project webpage and repository. These can be used by others and in other parts of the world. Project outputs stemming wholly or partly from the project (e.g. scientific publications on sargassum) were also deemed useful for the organization partners who thus built their capacity and visibility among the international scientific community. A large majority of respondents to the e-survey (77 percent, 65 respondents)

estimated that the project had been “effective” to “extremely effective” in promoting the sharing of experiences across partners, stakeholders and countries.

189. Outreach also extended to regional conferences and meetings thanks to the proactivity of the Regional Project Coordinator in this regard. For example, CC4FISH work on sargassum was presented at the International Conference on Sargassum in Guadeloupe in 2019. The work of CC4FISH on adaptation also found its way in the state-of-the-art 2018 FAO Technical Paper No. 627 on the impacts of climate change on fisheries and aquaculture, in relation to the development of the SAS app with UWI-CIRP adapted to the Caribbean, and in a chapter co-authored by the Regional Project Coordinator (Oxenford and Monnereau, 2018). This FAO publication is a reference for both scientists and policymakers alike. This was subsequently converted to a paper presented at a WECAFC meeting in 2019 entitled "Impacts of climate change on Western Central Atlantic marine fisheries" (WECAFC, 2019) which also suggested actions for the Commission to follow.

190. Table 5 in section 3.3 shows higher disbursement for Component 4 compared to what had been anticipated, reflecting efforts made to create and disseminate knowledge products and enabling the reallocation of undisbursed travel funds due to COVID-19. The terminal evaluation was also impressed by the quality of the outreach products, in particular videos including testimonies of beneficiaries and members of fishing communities (e.g. YouTube videos on the importance of ICT for increasing fishers’ SAS [CC4FISH, 2020] and on the results of the VCAs in Grenada).

191. A range of means were used to disseminate these lessons outwards, according to prevailing preferences (e.g. preference for Facebook over Twitter platform in the Caribbean), Media platforms were also essentially fed and maintained by the Regional Project Coordinator when a knowledge management and communication specialist would have been better placed to fulfil this role (and would have freed the Regional Project Coordinator to deal with managerial matters). National media and news channels highlighted project activities in some of their stories (some of which are still available on YouTube (Grenada Broadcasting Network, 2020, Island AgriCULTURE, 2020), as well as on governments' news webpages (e.g. Saint Kitts and Nevis [SK NIS, 2021]), thus enabling wider outreach. However, the general sentiment from key informants was that "more PR could be done" and that there were "missed opportunities to get the project out there" to wider, lay audiences. The appropriateness of the communication means for specific target groups could have been more carefully considered to respond more creatively to needs and capacities. For example, fishers felt that greater use of national media (e.g. radio, TV, local press) would allow them to communicate better key messages to this group on, for example, SAS protocols, importance of business skills, etc. For policymakers, it was suggested that “bite-size” videos distilling the key messages of studies and assessments conducted under the project would be a good means to reach them, as well as other non-fisheries stakeholders. Greater use of cartoons (e.g. as used to communicate the findings of the VCA in Grenada) was also suggested as a good way to communicate key messages to children and the youth, especially as they are well suited to the social media platforms they use.

192. However, some technical study reports commissioned by the project were said to have remained too formal, indigestible and inaccessible to lay audiences (e.g. aquaculture and aquaponics assessments, value chain assessments). Despite constituting valuable sources of information for specialist audiences (e.g. researchers, consultants, technical agencies, etc.), no particular effort was made to promote their dissemination aside from their uploading on the FAO project website repository, notification on the Facebook page, and the collaborating partners’ own efforts to promote them through their own networks.

193. The clearance procedure for all outputs, but in particular technical ones such as studies, was particularly cumbersome and lengthy due to multiple iterations of checks done by FAO Office of Communications (OCC) and the requirements imposed by the Publication Workflow System (PWS). The Regional Project Coordinator and project administrator spent much of their time reviewing and editing reports to acceptable standards, managing editors recruited to do so and pushing publications through PWS (noting that this task is not explicit in the project administrator's TOR). The double burden of procurement and FAO corporate requirements impeded the smooth production of visual outputs: for example, in Grenada, the production of a video was stalled, while the approval of seven VCA community posters was significantly delayed by the clearance process. Similarly, two promotional and technical videos on aquaculture could not be produced in Saint Lucia, while the production on a video on ICT and safety at sea with UWI-CIRP was extensively delayed due to insufficiently specified corporate requirements at the start.

194. Furthermore, the accessibility of some of the project outputs is not always straightforward. In Saint Kitts and Nevis, for example, only the government has access to technical reports and a request must be made, while in Dominica, it was reported that very few staff members of the Fisheries Divisions know of, and have access to, the CC4FISH platform. Although the e-survey results indicated that those who had participated in training courses (21) knew where to access training materials, and systematically used them (43 percent), 24 percent reported that they didn't although they would make use of them, confirming inequality in accessibility. The FAO project website is not regularly consulted and did not appear to be the first point of call for partners to retrieve project documentation. An accessible archive was pointed as missing despite being essential for sustaining and institutionalizing the project results.

195. Learning across the partners in the region has remained ad hoc, as revealed by some of the key informants. The dynamism of interpersonal interactions created by in-person meetings at the start of the project were badly dampened by the quasi-systematic resorting to virtual meetings and the cancellation of country exchanges which would have contributed to reinforcing links across NPCs and NFPs of different countries. The lively – but ad hoc – WhatsApp group only partially filled this gap instead of through the more formal mechanisms of the project, such as the Project Steering Committee meeting (noting nonetheless that some people joined the WhatsApp and Facebook groups late and this means of communication did not make up for the relatively limited communications between NPCs and NFPs). The real-time nature of WhatsApp was nonetheless felt to have offered a dynamic communication channel through which tips and inspiration to mirror each other's activities could be found, and to be a breather from more formal workshops.

196. Knowledge management and communication efforts were particularly stepped up after the MTR, thanks to the recruitment of the knowledge management and communication expert as part of the Project Coordination Unit, alleviating these responsibilities from the Regional Project Coordinator. However, the premature departure of the knowledge management and communication expert has left many communication products still unfinished, and once again, in the hands of the Regional Project Coordinator and project administrator to handle their finalization and dissemination, with the risk of losing the momentum that had been created. Thus, based on these findings, communication, knowledge management and products, and public awareness are rated as moderately satisfactory. The overall assessment of factors affecting performance is satisfactory.

3.6 Cross-cutting concerns

3.6.1 Gender

EQ 6.1. Was the project implemented in a manner that ensures gender equitable participation and benefits, in accordance with FAO and GEF Policies on Gender Equality objectives?

Finding 31. The project complied with prevailing gender divisions in fisheries (typically men at sea, women in post-harvest) and did not try to challenge nor redress gender inequality, dynamics or perceptions. Though women were encouraged to attend, targets regarding their participation in project activities have not been reached.

197. Funded under GEF-5, the project was not required to have a gender strategy. The MTR had however noted that "No rigorous gender assessment has been undertaken [...] to address the often-invisible role of women in the sector (e.g. as boat owners and financial managers)", and had identified areas where the project could make more substantial efforts to mainstream a gender perspective in its activities. This however has not happened to any meaningful extent, owing to insufficient understanding on how to go about mainstreaming gender and promoting gender equality in a project such as CC4FISH. For example, it was assumed that because men typically fish and women work in post-harvest, more men than women would be interested and participate in SAS training (for example), and more women than men would naturally partake in food safety and value addition training. This remained largely unquestioned. Yet, women do own boats (even if in minority, and even if they do not go to sea themselves), which means that having the right SAS equipment onboard vessels in their name is their responsibility, and therefore that they should be equally knowledgeable about SAS requirements and practices as captains and crews. Gender considerations were missing from ecosystem approach to fisheries and other trainings and this is a gap that could be addressed in the future.

198. The MTR had warned that achieving women's participation targets would be challenging and it proved so. The project progress report to 31 December 2020 informs that 21 percent of participants in project activities are women. The value chain analyses (under Component 2.1) described the position and roles of women in the post-harvest sector. The July 2021 PIR shows that target percentages for women's participation under Outcome 2.1 were not achieved (no targets were set for women's participation under Outcome 2.2). The July 2021 PIR also reports that only around 10 percent of the people who participated in training for diversified, climate livelihood options, including food safety training under Output 2.1.2, were women. Even if this average figure includes the (lower) percentage of women who participated in SAS/ICT training, and if the proportion of women working in post-harvest is lower in the Caribbean compared to other parts of the world (for comparison, 58 percent of the actors in African seafood post-harvest activities are women, FAO 2021b) this remains low.

199. Opinions are divided and evidence is inconclusive on the extent to which the project enabled gender equitable participation and benefits. On one hand, the project progress report to 31 December 2021 reports relatively high participation of women in all project activities (although highly variable across components, where targets are available, as indicated above), and e-survey results show that women and gender equality considerations were promoted "very well, with systematic and active measures to address gender inequalities" for 24 percent of respondents (76). On the other hand, 42 percent of respondents (76) thought that gender considerations followed the current gender divide between fishing and post-harvest, which was confirmed during the key informant interviews, and opinions were evenly shared between respondents (54 percent) who considered that the project had reached women (35 percent), had benefited them (37 percent), and empowered them (28 percent) – the highest mark towards equality and

empowerment. The impossibility to carry out field visits and to gather testimonies from women beneficiaries themselves was a large constraint.

200. Even in aquaculture, usually deemed less loaded with gender biases, and where 41 percent of all training participants were women (reported in PPR to 31 December 2021), women's interest and capacity in aquaculture was reported to have increased only "a little" or not at all (compared to the situation prior to the project), according to the five aquaculturists who responded to the e-survey. It is however acknowledged that the project made particular efforts to engage women and there are signs that the joint work (including gender analysis and promotion of women's leadership) of partners common to both CC4FISH and StewardFish (e.g. CNFO, CERMES) on gender issues has triggered a change in attitudes towards gender and women's participation and recognition in the sector: "Men fishers now realize there are gender issues and that women need to be encouraged [to participate more]", and "women have awareness about what they can do". This is an example of how interactions of both projects through fisherfolk organizations (in their three common countries) have both synergized and benefited CC4FISH's work. Thus, for all the above reasons, gender and other equity dimensions are rated as moderately unsatisfactory.

3.6.2 Minority groups, including Indigenous Peoples, disadvantaged, vulnerable and people with disabilities, and youth

Finding 32. The project activities included Indigenous Peoples de facto in the countries where they are present (Dominica, and Saint Vincent and the Grenadines) but did not treat them as a specific target group. Younger fishers responded particularly well to ICT training. Efforts made to reach the youth/students for aquaponics training and development are promising.

201. Individuals from Indigenous groups were involved where they formed part of the general fishing or aquaculture communities. In Dominica, aquaculture activities took place with the Kalinago. In Saint Vincent and the Grenadines, there has not been a specific drive, by the project, to focus on Indigenous Peoples (who have their own fishery) because they are Indigenous. The e-survey (40) confirmed that the needs of Indigenous Peoples had been taken into account "well" by the project (40 percent) or "somewhat well" (20 percent). FAO's FPIC guidance was not followed in the design and implementation of activities with Indigenous Peoples.

202. The April 2021 PPR reported that the highest number of beneficiaries (4 669) were in the 35-39 range for men, and 30-34 for women. Youth (15-24) represented 5 percent of those involved and benefiting from the project activities. The terminal evaluation found however that views over the participation and targeting of the youth were shared. Thirty-eight percent of e-survey respondents (76) indicated that the participation of the youth was dependent on the type of activity, resulting in imbalance between young and senior participants, and 28 percent that youth participation was, on the other hand, systematically sought, with as many young as senior people participating in project activities. A comment from an e-survey respondent suggested, on the other hand, that a positive change brought about by the project was that "fishers both young and older (female and male), co-operated". The development of aquaponics activities in partnership with colleges and their promotion to students (see section 3.2.3) is promising, and the five aquaculturists who responded to the e-survey indicated that the project had increased interest about aquaculture and capacity among the youth "a little" compared to before the project. For the above reasons, the addressing of human rights issues/Indigenous Peoples is rated as moderately satisfactory.

3.6.3 Environmental and social safeguards

EQ 7. To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?

Finding 33. While the environmental and social risk classification did not change during the course of the project, environmental and social concerns were not closely monitored.

203. The project was classified as Environmental Impact Assessment Category B at CEO approval, meaning it did not entail significant (or potentially irreversible) negative environmental (and associated social) impacts, but which may still have adverse effects that can be mitigated with suitable preventive actions (small and medium-size aquaculture, including small and medium-scale industrial and artisanal fisheries are typically deemed to fall in this category). The July 2021 PIR identified that the project's Environmental and Social Risk classification was still valid and that no grievances had been received although the terminal evaluation could not find evidence that environmental and social safeguards (ESS) analysis and review had been done systematically across the life of the project and particularly for livelihoods-related activities which may incur occupational health risks, as was underlined by the MTR. Thus, environmental and social safeguards are rated as moderately satisfactory.

4. Conclusions and recommendations

4.1 Conclusions

Relevance

Conclusion 1. The project carved a place for climate change adaptation in the fisheries sector in the Eastern Caribbean and affirmed it in the work of FAO. The project set some standards where none existed before, for example regarding safety at sea and sargassum management. The project contributed to addressing important gaps regarding lack of safety at sea protocols, inadequate knowledge on the operation of VHF radios, lack of experience in sargassum management, insufficient communication and linkages across maritime sectors (e.g. coast guards, environment, fisheries, social security, etc.) – the latter being a positive and unexpected result of the project.

Conclusion 2. The institutionalization and appropriation of the project results at national level have not gone as far as they could notably be due to the lack of a knowledge and communication expert from inception, and an accessible project archive and strategic/planned dissemination of its outputs, despite the wealth of information and how useful it could be to other projects, organizations and initiatives. Greater efforts are needed on behalf of regional fishery bodies such as WECAFC to increase the visibility of climate change adaptation in fisheries issues in its areas of work.

Effectiveness

Conclusion 3. The project was catalytic mainly in the concretization of intentions at national level, which would have remained in a draft or pipeline status. However, the sheer size and complexity of the project resulted in lower achievements in some components which had an impact on reaching the overall project objective. Breakthroughs were made regarding fisheries management plans, aquaponics, sargassum management plans, but also in establishing new practices and knowledge (e.g. SAS protocols, VCAs, sargassum outlook bulletins, etc.) thus initiating a transformation and enabling a departure from 'business-as-usual' in the understanding and tackling of climate change impacts on the fisheries sector and livelihoods, a key step towards the achievement of the project objective. However, the multiplicity of activities spread across seven countries as well as the complexity of some of the issues addressed by the project was a constraint on progress. Aquaponics development showed the demand for supporting greater access to capital and markets, while insurance for fishers and other actors along the fish value chain showed the need for embedding in a wider safety-policy-data nexus. The execution of activities implemented individually revealed their multiple links and synergies *ex post*.

Conclusion 4. The project tried to strike a balance between tangible and less tangible activities and outputs but managing all stakeholders' expectations was at times difficult. Hands-on capacity building, participatory activities and equipment deliveries targeting primary beneficiaries had an immediate and visible impact. For those less tangible ("paper") project activities, such as studies and formulation of management plans, impact is less evident at the end of the project due to the time lag and requirement for other influences to turn outputs into observable outcomes. High project expectations were curtailed where administrative issues prevented the full realization of tangible activities and where paper outputs have dominated (even if these are essential in the longer-term).

Conclusion 5. The project has made an evident contribution to raising awareness about climate change adaptation but less so to strengthening beneficiaries' own capacity to adapt. Though linked, increasing awareness is not synonymous with increasing capacity. One cannot expect a single project to build climate change resilience, and although the efforts of CC4FISH to lay the basis for this are commendable, follow-up support for uptake and upscaling are needed to meet identified needs within the sector. Greater understanding and accounting of fishers' behaviour and attitudes are essential to lead to long-term change.

Efficiency

Conclusion 6. FAO had a comparative advantage in acting as both implementing and executing agency. Agile project management ensured adaptability and seizing of opportunities. However, the complexity of FAO rules and procedures is a hindrance. CC4FISH was about climate change adaptation and demonstrated its own capacity to cope and adapt to emerging circumstances (including COVID-19) and opportunities by adding value, teaming up with other initiatives and/or modifying the scope of activities, as well as increasing their resonance and likelihood of sustainability – wherever there was a chance to do so and without changing its objectives. While this may appear 'opportunistic', and also meant that the project and its staff learned 'on the go' and had little previous experience and hindsight to inform activities, it worked well in the context of this project because of its very nature on adaptation, and because new developments remained strategically aligned with the ultimate goal of the project. Project management was also 'agile' and ensured that no opportunity was lost to reorient activities and/or capitalize on work initiated but which, for one reason or another, could not be fully completed as planned. Flexibility over the role of FAO as both implementing and executing agency gave the Organization a comparative advantage and compensated for the weak capacity of some executing agencies for managing a fisheries project as large and complex as CC4FISH. However, both the complexity of FAO rules and procedures, as well as insufficient onboarding and familiarity with standard operating and management procedures strained technical staff (in the Project Coordination Unit) and national teams alike and had some negative repercussions on project efficiency.

Sustainability and impact

Conclusion 7. CC4FISH as a whole was greater than the sum of the work it carried out in its seven countries. The project was also worth the investment but securing its results and achievements remains dependent on future funding. Despite the multiple issues that arose during its implementation (COVID-19, extreme weather events and natural disasters, procurement issues, inaccessible consolidated funds, staff turnover, diversity and specificities of national circumstances, over which the project itself had little control), the overall resonance of the project is noteworthy, and constitutes an example of how a multi-country, multi-activity project can still overcome fragmentation and challenges. The groundwork achieved, for example on SAS-ICT, sargassum, seamoss farming and aquaculture, require follow-up activities and financial support from donor and national agencies to kick start replication and scaling out of project activities and results to other communities to yield direct benefits. Improved access to suitable finance will also be essential for enabling aquaponics entrepreneurs transition from demonstration to adoption. The GEF SCCF provided a unique opportunity to holistically address the multiple facets of climate change adaptation in the fisheries sector and its uncertain replenishment for future projects of a similar nature is of concern.

Factors affecting performance

Conclusion 8. The project moved forward in line with the re- and pro-activity of its institutional partners, notably at national level. Considering national governance as well as the geography of partner countries is primordial for the successful execution of activities. Co-financing was a good indicator of a country or institution's interest and buy-in in the project. GEF OFPs and FAO National Correspondents could have seized opportunities that were given to them to engage with the project, to a greater extent.

Conclusion 9. The project created a departure from business-as-usual in the relationships between fishers and fisheries authorities on one hand, as well as between the various stakeholders who need to join forces in supporting fishers, their communities and actors of the value chain to cope with, and adapt to, climate change impacts. The project's organizational partners were critical to the project's advances but learning was reciprocal.

Conclusion 10. Substantial efforts were made towards knowledge management and communication in the second half of the project, but the dissemination of products needs to go further. There are already

signs of buy-in, adoption, use and adaptation of some of the communication products, for example toolkits, manuals, training resources, in other communities and areas. However, there needs to be wider dissemination of products and greater communication effort with stakeholders including private sector to ensure that the project's communication products support the sustainability and scaling up of the project results.

Cross-cutting concerns

Conclusion 11. The project illustrates how addressing gender issues and including Indigenous Peoples in a fisheries project remains a misunderstood topic. This results in the insufficient mainstreaming of gender considerations and Indigenous knowledge and peoples throughout the project activities and management and is missing opportunities for identifying entry points to do so and to change the status quo regarding gender (in)equality and inclusion of Indigenous Peoples in fisheries.

4.2 Recommendations

To FAO

Recommendation 1. Continue technical support to future fisheries and climate change adaptation interventions in the Caribbean. Priority areas identified by the terminal evaluation are [Conclusions 4, 5, 9]: fisheries data collection and statistics, replication and upscaling of models put in place by CC4FISH; aquaponics, FARE, VCA, SAS-ICT, insurance for fishers and value chain actors, in the context of social protection in fisheries more broadly, seamoss farming and transformation, legislation and policies and plans. In developing a programme of work on these topics at national levels, it is recommended to synergise activities: [Conclusion 3] (e.g. VCA+FARE, captains'/SAS + business skills training, data collection at all nodes of fish value chains), nurture multi-sectoral, "organic" partnerships across multiple stakeholders from government, private sector, academia and civil society [Conclusions 3, 10], understand fishers' behaviour [Conclusions 3, 7, 10] and tailor interventions accordingly, and mainstream a gender perspective at all stages of project development and implementation and in all project interventions. [Conclusion 12]. How to go about doing this is detailed in Appendix 7.

To FAO and GEF

Recommendation 2. In the design and management of future projects, FAO should consider scaling down the scope of intended large-scale projects to allow for clearer implementation [Conclusions 1, 3, 4], giving due consideration to the governance and geography of partner countries in organizing operational arrangements at national levels [Conclusion 8], promoting flexibility and agility in project management [Conclusion 6], facilitating the creation and sustainability of an ecosystem of stakeholders [Conclusion 9], and pursuing funding partnerships across donor agencies as well as replenishing the GEF SCCF to tackle the multiple facets of climate change adaptation in projects focused on natural resources [Conclusion 7]. These points are expanded upon in Appendix 7.

To FAO

Recommendation 3. With regards to knowledge management, sharing and dissemination of experiences and lessons in the region and beyond, FAO should consider [Conclusion 11]: pursuing efforts to increase the resonance of CC4FISH to the entire Latin America and the Caribbean region, ensuring that new projects' budgets cover a knowledge management and communication expert from project start as well as the cost of publication of knowledge materials after project end, reviewing protocols and permissions for open access of project archives and greater visibility on social media platforms. How to go about doing this is detailed in Appendix 7.

Recommendation 4. Continue promoting climate change issues and the climate change adaptation agenda in the work of regional fisheries bodies [Conclusion 2]. RFMOs and regional fisheries bodies (in the Caribbean and beyond) to raise climate change and climate change adaptation up in their agendas, for example by making it a regular agenda item and/or topic in the Scientific Advisory Groups (SAG) should be encouraged to mainstream climate change in their programmes of work more systematically.

To FAO headquarters and FAO SLC

Recommendation 5. Review, streamline where possible, and provide more guidance on administrative procedures and requirements [Conclusion 6]. Better onboarding and supervision during project staff transition periods, as well as regular orientation of project staff and executing partners is required. Efforts that have been initiated to streamline procedures should be pursued, along with regular review of financial and operational procedures. Practical steps that could be taken to implement this recommendation are suggested in Appendix 7.

To GEF and FAO

Recommendation 6. More flexible reporting mechanisms and future funding should ensure that progress towards outcomes and the multiple dimensions of climate change adaptations are captured in future projects [Conclusions 1, 5, 6, 7]. Incentives should be provided to GEF OFPs to improve their engagement in projects [Conclusion 8]. While acknowledging that GEF has moved from the AMAT to Core Indicators during the life of the project, it should be ensured that the scope of GEF monitoring through the Core Indicators allows reporting on project outcomes and changes, beyond numbers, and that there is space for outcome-oriented indicators that fall without the strict scope of Core Indicators. Project-specific indicators that embrace outcomes should also be systematically developed in projects' documents and results frameworks. Implementing agencies need to find ways to more meaningfully engage OFPs throughout the project cycle (from development to execution to closing), reciprocally, OFPs should capitalize on their position to provide strategic guidance to projects.

To institutional partners

Recommendation 7.CC4FISH institutional partners (governments and regional organizations) should pursue their efforts to integrate and promote the results of the project in their own programmes and outreach [Conclusions 8, 9], starting with a reflection on how to mainstream the project's results in organizational partners' own activities, and reaching out to wider to 'non-conventional' fisheries project partners who are important components of the stakeholder 'ecosystem'.

5. Lessons learned

204. Key lessons learned and good practices from the CC4FISH project that could be used in subsequent programming are as follows (lessons are presented in no particular order of importance).

Lesson 1. Regarding the project 'ecosystem' (of stakeholders, of activities). The project has aptly demonstrated the importance of considering a project as an 'ecosystem' within which there is scope for multiple interactions among components (stakeholders, activities), non-linearity and surprise. CC4FISH has also demonstrated the importance of project process, and that as part of an ecosystem, satellite stakeholders (beyond those who had been described in the project document), can have synergistic roles and generate additive benefits. It also showed that the links/collaborations that satellite stakeholders create among themselves, under the influence of the project but outside its direct control, are indicative of the development of new behaviours and practices, and fundamental for the sustainability of project results in the longer-term. CC4FISH highlighted the importance of this in the context of some activities such as ICT and insurance which, even more than others, need to be part of an ecosystem of seamlessly coordinated actions.

Lesson 2. Regarding the identification of champions of change, trust and expectations. Identifying champions of change, especially in communities and/or local organizations is key. These people can be a key resource point, as well as important influencers of behaviour change among their peers. The model of ICT stewards in fishing communities and of private aquaculture champions could be emulated in other projects. As a direct link between the project, fisheries authorities and fishers/communities, champions of change can also play a critical role in building trust and managing beneficiaries' expectations. Managing stakeholders' expectations from the start will prevent disappointment and loss of interest in the project in the long-term, even if execution issues arise.

Lesson 3. Regarding co-financing. Amounts committed at project start can be deceiving and can artificially overinflate budget envelopes. Committed amount should be a true reflection of co-financing already confirmed and not potential. Rigorous tracking is also difficult. Amounts committed are nonetheless a good indicator of a country's or institution's interest and buy-in.

Lesson 4. Regarding engagement with primary stakeholders (fishers and government officials). Commitment and dedication, making sure that the appropriate persons are invited to and attend workshops, targeting top and middle management officials constitute the foundation for the sustainability of any activity undertaken by the project. Engagement with fishers must also be continuous, frequent and repeated to ensure memorization of new practices and development of new behaviours, to maintain the project's presence and visibility with fishers. (e.g. FARE training) and provide incentives for them to remain involved. It is also critical to work around fishers' schedules so they do not lose income. This means organizing activities at a time and place convenient for them. Modular training that can be dispensed quickly and cheaply, supported by videos and engaging materials, are needed to easily train new fishers entering the sector. If demonstrations and training include new equipment, mechanisms for their appropriation post-training must be included.

Lesson 5. Regarding preparedness for extreme events and crises. More attention needs to be paid to the impact of extreme climate events which inevitably hinder project activities because of direct disruptions and priorities for response and recovery may be placed elsewhere. Better contingency plans should be ready to reach people on the ground in extreme circumstances (e.g. COVID-19), and these should include a variety of solutions to maintain interpersonal engagement. While virtual engagement was necessary due to COVID-19 restrictions and allowed project activities to continue, its limitation to engage with fishers and communities were evident and could not replace in-person engagement with fishers who may all not have access to or be comfortable with virtual platforms.

Lesson 6. Regarding the diversity of participating countries and actors, including women and Indigenous Peoples. Projects must consider the diversity among participating countries: for a regional climate change adaptation project, it must be recognized that the needs, vulnerabilities and capacities of countries vary, and national objectives and activities must be tailored accordingly. One size does not fit all. Equally, the diversity of climate change adaptation actors must be recognized and embraced. Climate change adaptation in the fisheries sector is not just about fisherfolk and national fisheries authorities. Close collaboration across various government agencies and sectors is required, even if deemed a priori remotely connected to the issue.

Lesson 7. Regarding aquaculture development support. CC4FISH showed that aquaculture development for adaptation holds potential but is not a panacea: taking into account the wider context beyond the sole development of the production technology itself is fundamental, and strengthening technical capacity alone is insufficient for uptake, replication and upscaling of project results. Capital investments required at start up are a barrier to entry for poorer and vulnerable groups in the Caribbean (it may be different elsewhere), all the more so that credit is not available from private financing institutions. Access to resources is also key (e.g. fingerlings, inputs) and the size of the country – in terms of its ability to source these – matters in this regard. Domestic demand and international market conditions are also important for the economic viability of aquaculture operations. Finding the right level of entry as well as the right scale of operation in terms of required capital investment, capacity/know-how and products/species is key but also needs to be adapted to the entrepreneurial profile of those willing to invest in the activity.

Lesson 8. Regarding FAO's role and the monitoring and evaluation of project advances. FAO's dual role as both an implementing and executing agency worked well in the context of a relatively simply designed project and maintained the Organization's comparative advantage to both implement and execute this type of projects, especially in the context of fisheries projects where its technical expertise is unique. While project-level indicators and GEF Core Indicators provide insights into the project's progress and achievements at different levels, the potential to leverage their synergies and inform both programme and project managers, as well as executing partners, could be explored.

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Appendix 1. People interviewed

Last name	First name	Organization/ country	Position/location	Role in project	Date interviewed
Archer	Derek	Trinidad and Tobago	Health and Safety Officer, Lecturer, Caribbean Fisheries Training and Development Institute (CFTDI)	SAS training of trainers ICT training	16 Dec 2021
Archibald	Mark	Antigua and Barbuda	Fisheries Officer, Fisheries Division	NFP	17 Nov 2021
Bahri	Tarub	FAO	Senior Fishery Officer	Former LTO	02 Dec 2021
Blondel	Emmanuel	FAO	Fisheries Statistics Officer (consultant)	Statistician	07 Dec 2021
Browne	Nikita	Saint Kitts and Nevis	Oceanography & GIS Officer, Dept. of Marine Resources	NFP	06 Dec 2021
Charlery	Kaygiana	Saint Lucia	Manager, Goodwill Fishermen's Cooperative	FFO representative	14 Jan 2022
Charles	Terry	Grenada	Consultant, Grenada Red Cross Society	FARE Consultant	22 Dec 2021
Clarke	Renata	FAO SLC	Sub-Regional Coordinator	Budget Holder	13 Dec 2021
Clarke	Jeg	Saint Lucia	Tour guide, ranger	Sargassum management activities	07 Jan 2022
Cox	Shelly-Ann	UWI-CERMES	Former Postdoctoral Research Associate	Personnel working on CC4FISH	18 Nov 2021
Cruickshank-Howard	Jennifer	Saint Vincent and the Grenadines	Fisheries Officer, Fisheries Division	NFP	06 Dec 2021
Culzac-Wilson	Lystra	Saint Vincent and the Grenadines	FAO	NPC	03 Dec 2021
Diei-Ouadi	Yvette	FAO SLC	Fishery Officer	LTO at time of TE	06 Dec 2021
Felix	Marie-Louise	Saint Lucia	FAO Director of 4BluC's	NPC	01 Dec 2021
Gonzales-Riggio	Valeria	FAO	FAO-GEF Liaison Officer	FLO for CC4FISH	13 Oct 2021 04 Jan 2022
Granderson	Ainka	CANARI	Manager, Climate Change and DRR programme	Lead personnel working on CC4FISH	01 Dec 2021
Harvey	Orlando	Grenada	Marine Biologist, Fisheries Division	NFP	23 Nov 2021
Herbert	Jamie	Antigua and Barbuda	Fisheries Officer, Fisheries Division	National Steering Committee member	02 Dec 2021
Hilton	Kurt	Dominica	Fisheries Officer, Agriculture Division	NFP	26 Nov 2021

Last name	First name	Organization/ country	Position/location	Role in project	Date interviewed
Isaacs	Kris	Saint Vincent and the Grenadines	Fisheries Officer, Fisheries Division	NFP	06 Dec 2021
Jobe	Kerton	Trinidad and Tobago	FAO	NPC	22 Oct 2021 13 Dec 2021
Josupeit	Helga	INFOPESCA	Fish value chains Expert	Value chain analyses GRE & TT	15 Dec 2021
Khan	Imtiaz	Trinidad and Tobago	President, Carli Bay Fishing Association	Fisherfolk Representative	27 Dec 2021
Laurent	Yann	FAO	Fisheries Statistics Officer (consultant)	Statistician	07 Dec 2021
Lay	Mitchell	CNFO	Programme Coordinator	Lead personnel working on CC4FISH	01 Dec 2021
Mallalieu	Kim	UWI-CIRP	Senior Lecturer, Coordinator of Caribbean ICT Research Programme	Lead personnel working on CC4FISH	15 Dec 2021
Masters	June	CRFM	Statistics & Information Analyst Statistical and Information Analyst	Focal Point CC4FISH	24 Nov 2021
McConney	Patrick		Director	Lead personnel working on CC4FISH	17 Nov 2021
McDonald Moore	Krisma	Grenada	FAO	NPC	25 Nov 2021
Mieux	Recardo	Trinidad and Tobago	Fisheries Officer, Fisheries Division	NFP	22 Oct 2021 09 Dec 2021
Moe	Celestine	FAO SLC	Administrative Assistant	CC4FISH Administrative Assistant	17 Dec 2021
Monnereau	Iris	FAO SLC	Regional Project Coordinator	Regional Project Coordinator for CC4FISH	11 Oct 2021 16 Dec 2021 27 Jan 2022
Nembhard	Nadine	CNFO	Administrative Secretary	Lead contact for fisherfolks	01 Dec 2021
Page	Estelle	FAO SLC	Programme Officer	Programme Officer for CC4FISH	22 Oct 2021 07 Dec 2021
Perreira	Graciela	INFOPESCA	Director	Value chain analyses GRE & TT	15 Dec 2021
Polus	Petronilla	Saint Lucia	Fisheries Officer / Extension Officer, Fisheries Division	NFP	21 Dec 2021
Poulain	Florence		Fisheries and Aquaculture Officer, FAO Rome	Initial FARE workshop (prior CC4FISH) and training	09 Feb 2022
Quay	Joslyn Lee	Trinidad and Tobago	President, Trinidad and Tobago United Fishers	Fisherfolk Representative	21 Dec 2021

Last name	First name	Organization/ country	Position/location	Role in project	Date interviewed
Searles	Jeremy	Saint Vincent and the Grenadines	Fisheries Officer, Fisheries Division	NFP	06 Dec 2021
Serieux	Vaughn	Saint Lucia	Aquaculture Officer / Extension Officer, Dept of Fisheries	Aquaponics	10 Jan 2022
Stankus	Austin	FAO	Aquaculture Officer (consultant)	Aquaponics expert	03 Dec 2021
Stephen	Devon	Saint Lucia	Vice-Chair, Saint Lucia Fisherfolk Cooperative	FFO representative	14 Jan 2022
van Anrooy	Raymon	FAO	Senior Fishery Officer	Former LTO	02 Dec 2021
Williams	Orisia	Saint Kitts and Nevis	FAO	NPC	29 Nov 2021
Winsbert	Harry	Saint Vincent and the Grenadines	Chairperson, National Fisherfolk Cooperative of SVG	Fisherfolk representative	08 Dec 2021

Appendix 2. CC4FISH evaluation matrix

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
1. Design and approach: RELEVANCE			
EQ 1.1	Were the project outcomes and envisioned long-term impacts congruent with the GEF focal areas/operational programme strategies, country priorities and FAO Country Programming Framework (CPF), as well as regional and subregional environmental and development priorities?	Matches GEF matrix rating: A1.1. Alignment with GEF and FAO strategic priorities	E-survey Key informant interview (KII) in Project Coordination Unit (PCU), Project Task Force (PTF), national institutions and other co-funders. Prodoc, MTE, project documentation, annual work plan (AWP) OED Framework for Capacity Development evaluation
	Was the project design appropriate for delivering the expected outcomes, and in a way consistent with the institutional capacity and time frame for implementation of the various implementing actors (i.e. state-level, civil society, academia)?	This was covered by the mid-term evaluation (MTE) to some extent: focus will be on the remaining adequacy of the design throughout the project lifetime, and overall institutional capacity to deliver it in its entirety.	
EQ 1.2	Were the project activities considered relevant by the project beneficiaries (institutional and local level)?	Matches GEF matrix rating: A1.2. Relevance to national, regional and global priorities and beneficiary needs	E-survey KII in seven countries (National Project Coordinator [NPC]), beneficiaries' representatives Project documentation: Workshop reports and evaluations by participants (where available). In case study countries: one - health (OH)-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
			themselves if the opportunity arises, e.g. Trinidad and Tobago (TT) forthcoming meetings with fishers).
EQ 1.3	To what extent were the project's interventions complementary to existing interventions and the StewardFish project in the region?	ADDED. Matches GEF matrix rating: A1.3. Complementarity with existing interventions	Project documentation KII with PCU, discussion with evaluator for StewardFish project KII with common execution partners in Saint Lucia (SLU) case study country KII with CC4FISH and StewardFish common execution partners
2. Results: Output and Outcome level | EFFECTIVENESS CRITERIA			
EQ 2.1	To what extent have project outcomes and outputs been achieved? How well has the project delivered its planned outputs?	The impact of COVID-19 will be examined here (capacity of the project to adapt to new circumstances). Unintended results (since the MTE) will be examined here. Matches GEF matrix ratings: B1. Overall assessment of project results B1.1 Delivery of project outputs B1.2 Progress towards outcomes and project objectives (Outcome 1, Outcome 2, etc.) - Overall rating of progress towards achieving objectives/outcomes B1.3 Likelihood of impact	Project documentation (project implementation report [PIR], project progress report [PPR], annual work plans, results framework etc.) and outputs (publications, workshop reports, website, etc.) E-survey KII in seven countries (NPC/Focal Point [FP]), beneficiaries' representatives, and executing partners OED Framework for Capacity Development evaluation

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
EQ 2.2	What evidence is there of: - The **type of awareness and understanding** of climate change impacts and among which actors in the fisheries sector? (=progress to Outcome 1) - The extent to which **men and women fisherfolk and beneficiaries** have embraced adaptation technologies and changed their practices (behaviour change) (=progress to Outcome 2) - The extent to which **aquaculture initiatives** are supporting livelihood resilience in the face of climate change (=progress to Outcome 2) - The extent to which **national institutions** have improved their capacity around the mainstreaming of climate change adaptation in policymaking (=progress to Outcome 3).	As above + Adaptation Monitoring and Assessment Tool (AMAT) indicators 10 and 12 for Outcome 3 (4th question) Use OED Framework for Capacity Development evaluation as the basis for the assessment of measures, approach, performance and outcome of the activities focused on capacity building (including training).	E-survey AMAT Workshop reports, news articles based on project activities KII in seven countries (NPC/FP), beneficiaries' representatives In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers).
3. Efficiency | EFFICIENCY CRITERIA			
EQ 3.1	To what extent did FAO respond to the mid-term review (MTR) recommendations and fulfilled its role of oversight and supervision? (implementation)	Project identification, concept preparation, appraisal, preparation, approval and start-up have been covered in the MTE. Matches GEF matrix ratings: E2. Quality of project implementation E2.1 Quality of project implementation by FAO (Budget Holder [BH], Lead Technical Officer [LTO], Project Task Force [PTF], etc.) E2.1 Project oversight (Project Steering Committee, [PSC] project working group, etc.) E1. Project design and readiness	MTE report, management response, annual work plans, PIRs, PPR. PSC meeting reports KII with PCU, task force KII with executing partners and co-financing partners
	How well were risks identified and managed, since the MTR? (execution)	E3. Quality of project execution	

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
Question 3.2	To what extent has the project been implemented efficiently, cost-effectively, and has management been able to adapt to any changing conditions to improve the efficiency of project implementation, (since MTR)?	Matches GEF matrix rating: E4. Financial management and co-financing	Project's financial reports, co-financing reports, AWP KII with Funding Liaison Officer [FLO], PCU, BH KII with executing and-or co-financing partners
	To what extent did the project partners execute and implement in an efficient manner (since the MTR)?	Matches GEF matrix rating: E4. Financial management and co-financing	
	To what extent did the expected co-financing materialize, and how did short fall in co-financing, or materialization of greater than expected co-financing affect project results?	Matches GEF matrix rating: E4. Financial management and co-financing	
4. Sustainability			
Question 4.1 How sustainable are the project achievements, and what is the overall likelihood of risks to sustainability?	What are the mechanisms built into CC4FISH that ensure long-term sustainability of the project at the local, national and regional level?	To answer the question on sustainability, four main criteria will be assessed: i) ownership by beneficiaries (including access to markets); ii) availability of resources; iii) sufficient capacities of stakeholders; and iv) enabling institutional and social environment (with respect to FAO's Capacity Development Framework). The recommendations that can be provided in order to help strengthen the sustainability plan of the project will be included in the recommendations section of the report. Matches GEF matrix ratings: D1.1. Financial risks D1.2. Sociopolitical risks D1.3. Institutional and governance risks D1.4. Environmental risks D2. Catalysis and replication	E-survey KII with PCU KII with executing partners In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers).
	What is the likelihood that the project results will continue to be useful or will remain even after the end of the project? What is the potential to project results to be scaled and/or replicated?		
	What are the key financial, sociopolitical, institutional and environmental risks which may affect the sustainability of project benefits?		

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
5. Factors affecting performance			
EQ 5 on monitoring and evaluation (M&E)	Was the monitoring and evaluation plan practical and sufficient? (M&E design)	Matches GEF matrix rating: E7.1 M&E design	
	Did the M&E system operate as per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies? (M&E implementation)	What follows will also be covered under this question: Was the information from the M&E system appropriately managed and used by the regional executing partners, project management, PTF and Regional Project Steering Committee (RPSC,) in order to make timely decisions and foster learning during project implementation? Matches GEF matrix ratings: E7. Overall quality of M&E E7.1 M&E design E7.2 M&E plan implementation (including financial and human resources)	Project documentation (results framework, PIR, PPR, annual work plan, etc.) KII with M&E officer, PCU KII in seven countries (NPC/FP), beneficiaries' representatives In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers).
Regarding stakeholders engagement	How effective were stakeholder engagement and partnerships?	Matches GEF matrix rating E5. Project partnerships and stakeholder engagement	E-survey Workshop reports, letter of agreement (LOA) reports PIR, PPR, AWP KII with executing partners KII in seven countries (NPC/FP), beneficiaries representatives In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the
	Were other actors, such as civil society, Indigenous Peoples or private sector involved in project design or implementation, and what was the effect on project results?	Matches GEF matrix rating E5. Project partnerships and stakeholder engagement	

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
			opportunity arises, e.g. TT forthcoming meetings with fishers).
6. Environmental and social safeguards			
EQ 7	To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?	Attention will be paid to youth and Indigenous Peoples (under social safeguards) The new FAO Free, Prior and Informed Consent (FPIC) Manual, which includes the current FAO policy on working with Indigenous Peoples and local communities, will be used as benchmark. Matches GEF matrix ratings: F2. Human rights issues/Indigenous Peoples F2. Environmental and social safeguards	KII with PCU KII with executing partners KII in seven countries (NPC/FP), beneficiaries' representatives MTE
7. Gender			
EQ 6.1	Was the project implemented in a manner that ensures gender equitable participation and benefits, in accordance with FAO and GEF Policies on Gender Equality objectives? Environmental and social safeguards	The extent to which gender was considered in designing and implementing the project was covered by MTE. In terms of gender analysis and the work done with local communities, an assessment will be carried out of the project's contribution to the objectives presented in the FAO and GEF Policy on Gender Equality. Matches GEF matrix rating: F1. Gender and other equity dimensions	E-survey Workshop reports, including capacity building workshops, LOA reports Technical reports (e.g. vulnerability assessments, value chain analysis etc.) FAO and GEF Policy on Gender Equality Prodoc, PIR, PPR KII with executing partners KII in seven countries (NPC/FP), beneficiaries' representatives
	Was there appropriate gender targeting or mainstreaming in the project activities?	Matches GEF matrix rating: F1. Gender and other equity dimensions	

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
			In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers). FAO and GEF Policy on Gender Equality
8. Progress to impact			
	To what extent can the progress towards long-term impacts be attributed to the project? Are there any barriers or other risks that may prevent future progress towards long-term impacts?		Theory of change (TOC) E-survey KII with PCU KII with executing partners KII in seven countries (NPC/FP), beneficiaries' representatives In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers).

Evaluation Questions	Sub-questions/Indicators	Comments	Methods/Informants
9. Knowledge management			
	How is the project assessing, documenting and sharing its results, lessons learned and experiences (since the MTR)? What have been the effects, if any, on dissemination of project results and lessons? To what extent are communication products and activities likely to support the sustainability and scaling-up of project results?	Matches GEF matrix rating: E6. Communication, knowledge management and knowledge products	E-survey KII with PCU KII with executing partners KII in seven countries (NPC/FP), beneficiaries' representatives Communication products, including website PIR, PPR
10. Lessons learned			
	What are the key lessons learned and good practices (from the diversity of issues the project tackled, as well as its implementation process) from the CC4FISH project that could be used in subsequent programming?	Matches GEF matrix rating: E6. Communication, knowledge management and knowledge products	KII with PCU KII with executing partners KII in seven countries (NPC/FP), beneficiaries' representatives In case study countries: OH-adapted interviews with representatives of direct and indirect beneficiaries (or beneficiaries themselves if the opportunity arises, e.g. TT forthcoming meetings with fishers).

Appendix 3. GEF evaluation criteria rating table and rating scheme

GEF criteria/sub-criteria	Rating	Summary comments[25]
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	HS-HU	
A1.1. Alignment with GEF and FAO strategic priorities	HS-HU	
A1.2. Relevance to national, regional and global priorities and beneficiary needs	HS-HU	
A1.3. Complementarity with existing interventions	HS-HU	
B. EFFECTIVENESS		
B1. Overall assessment of project results	HS-HU	
B1.1 Delivery of project outputs	HS-HU	
B1.2 Progress towards outcomes[26] and project objectives	HS-HU	
- Outcome 1	HS-HU	
- Outcome 2	HS-HU	
- Etc.	HS-HU	
- Overall rating of progress towards achieving objectives/outcomes	HS-HU	
B1.3 Likelihood of impact	HS-HU	
C. EFFICIENCY		
C1. Efficiency[27]	HS-HU	
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	L-HU	
D1.1. Financial risks	L-HU	
D1.2. Sociopolitical risks	L-HU	
D1.3. Institutional and governance risks	L-HU	
D1.4. Environmental risks	L-HU	
D2. Catalysis and replication	HS-HU	
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[28]	HS-HU	
E2. Quality of project implementation	HS-HU	
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	HS-HU	
E2.1 Project oversight (PSC, project working group, etc.)	HS-HU	
E3. Quality of project execution For decentralized projects: Project Management Unit/BH For OPIM projects: Executing agency	HS-HU	
E4. Financial management and co-financing	HS-HU	
E5. Project partnerships and stakeholder engagement	HS-HU	
E6. Communication, knowledge management and knowledge products	HS-HU	
E7. Overall quality of M&E	HS-HU	

[25] Include reference to the relevant sections in the report.
[26] Assessment and ratings by individual outcomes may be undertaken if there is added value.
[27] Includes cost efficiency and timeliness.
[28] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

GEF criteria/sub-criteria	Rating	Summary comments[25]
E7.1 M&E design	HS-HU	
E7.2 M&E implementation plan (including financial and human resources)	HS-HU	
E8. Overall assessment of factors affecting performance	HS-HU	
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	HS-HU	
F2. Human rights issues/Indigenous Peoples	HS-HU	
F2. Environmental and social safeguards	HS-HU	
Overall project rating	HS - HU	

Rating scheme[29]

PROJECT RESULTS AND OUTCOMES

Project outcomes are rated based on the extent to which project objectives were achieved. A six-point rating scale is used to assess overall outcomes:

Rating	***Description***
Highly Satisfactory (HS)	*"Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings."*
Satisfactory (S)	*"Level of outcomes achieved was as expected and/or there were no or minor shortcomings."*
Moderately Satisfactory (MS)	*"Level of outcomes achieved more or less as expected and/or there were moderate shortcomings."*
Moderately Unsatisfactory (MU)	*"Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings."*
Unsatisfactory (U)	*"Level of outcomes achieved substantially lower than expected and/or there were major shortcomings."*
Highly Unsatisfactory (HU)	*"Only a negligible level of outcomes achieved and/or there were severe shortcomings."*
Unable to Assess (UA)	*The available information does not allow an assessment of the level of outcome achievements.*

During project implementation, the results framework of some projects may have been modified. In cases where modifications in the project impact, outcomes and outputs have not scaled down their overall scope, the evaluator should assess outcome achievements based on the revised results framework. In instances where the scope of the project objectives and outcomes has been scaled down, the magnitude of and necessity for downscaling is taken into account and despite achievement of results as per the revised results framework, where appropriate, a lower outcome effectiveness rating may be given.

[29] See instructions provided in Annex 2: Rating Scales in the "Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized Project", April 2017.

PROJECT IMPLEMENTATION AND EXECUTION

Quality of implementation and of execution will be rated separately. Quality of implementation pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources. Quality of Execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground. The performance will be rated on a six-point scale:

Rating	***Description***
Highly Satisfactory (HS)	*There were no shortcomings and quality of **implementation** or **execution** exceeded expectations.*
Satisfactory (S)	*There were no or minor shortcomings and quality of **implementation** or **execution** meets expectations.*
Moderately Satisfactory (MS)	*There were some shortcomings and quality of **implementation** or **execution** more or less meets expectations.*
Moderately Unsatisfactory (MU)	*There were significant shortcomings and quality of **implementation** or **execution** somewhat lower than expected.*
Unsatisfactory (U)	*There were major shortcomings and quality of implementation substantially lower than expected.*
Highly Unsatisfactory (HU)	*There were severe shortcomings in quality of **implementation** or **execution**.*
Unable to Assess (UA)	*The available information does not allow an assessment of the quality of **implementation** or **execution**.*

MONITORING AND EVALUATION

Quality of project M&E will be assessed in terms of:

- Design
- Implementation

SUSTAINABILITY

The sustainability will be assessed taking into account the risks related to financial, sociopolitical, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability. The overall sustainability will be assessed using a four-point scale:

Rating	***Description***
Likely (L)	*There is little or no risk to sustainability.*
Moderately Likely (ML)	*There are moderate risks to sustainability.*
Moderately Unlikely (MU)	*There are significant risks to sustainability.*
Unlikely (U)	*There are severe risks to sustainability.*
Unable to Assess (UA)	*Unable to assess the expected incidence and magnitude of risks to sustainability.*

Appendix 4. CC4FISH results framework and achievements

Achievements of outcomes and outputs as of 31 December 2021

(Based on information in the 2021 project implementation report [PIR] and 2022 project progress report [PPR])

Reports and other documents produced are available at: https://www.fao.org/in-action/climate-change-adaptation-eastern-caribbean-fisheries/en/ and partners' websites.

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
COMPONENT 1: Understanding and awareness of climate change impacts and vulnerability				
Outcome 1.1. Increased awareness and understanding of climate change impacts and vulnerability	None specified		Exceeded	In the 2022 PPR, 100% completion was assigned based on the full achievement of the three outputs in the component. However, based on the terminal evaluation (TE) estimate for Output 1.1.3 (153%), this outcome has been exceeded.
Output 1.1.1: Assessment of climate change vulnerability in the fisheries sector carried out at local, national and regional level.	Adaptation Monitoring and Assessment Tool (AMAT) Indicator 6: Regional vulnerability assessment for the local level developed and carried out in five project countries	Achievements (Caribbean Natural Resources Institute [CANARI]): • Final vulnerability and capacity assessment (VCA) toolkit and communication strategy. • 1 303 people participated in VCA workshops. • Two pilot VCAs in Saint Lucia (SLU) and Saint Vincent and the Grenadines (SVG) (84 people). • Training of Trainers in VCAs in Saint Kitts and Nevis (SKN), Trinidad and Tobago (TT), SVG and Grenada (GRE) (41 people). • VCA fieldwork in GRE (104 people), SKN (127 people) and TT (539 people). • SLU carried out VCAs independently (386 people).	100% (2021 PIR)	
Output 1.1.2: Models that describe fisheries abundance and accessibility	None specified	Based on the work by Centre for Resource Management and Environmental Studies (CERMES) on modelling, the following activities and reports have been delivered: • five reports (on sargassum, climate change projections for the Caribbean, catch and fishing effort data for flyingfish and dolphinfish in the Eastern Caribbean);	100% (2021 PIR)	No targets are specified in the results framework but all the activities have been completed. Changes were made to the original plan since no baseline data was available on fish catches for modelling. However, there was data on sargassum,

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		• sargassum outlook bulletins for the Eastern Caribbean produced and distributed every two months (the thirteenth bulletin was published in November 2021); • a sargassum best practices guide for fisherfolk; and • sargassum uses guide.		including its impact on two fish species, and the project pivoted to focus on sargassum, which is of major concern in the Caribbean.
Output 1.1.3: Findings of vulnerability assessments and models disseminated at regional, national and local level to improve understanding	AMAT Indicator 5: 1 500 people will have an increased awareness of climate change impacts on the fisheries sector and adaptation practices	Various awareness-raising activities carried out in the countries and at the regional level. 1 303 people attended VCA awareness workshops and trainings. Findings were disseminated through presentations, including at regional conferences (Gulf and Caribbean Fisheries Institute [GCFI] 2019 and 2021, Sarg'Expo 2019), at an international conference (MARE People and the Sea Conference in Amsterdam 2019), in technical publications, webinars, posters and videos.	153% (TE)	It was estimated that findings have been disseminated to at least 2 299 persons, which exceed the target of 1 500 persons by 53%.
COMPONENT 2: Increasing resilience of fisherfolk, aquaculturists and coastal communities to climate change and variability				
Outcome 2.1. Improved resilience of fisherfolk and coastal community members.	AMAT Indicator 3: • 4 200 people (men and women) will benefit from the adoption of diversified, climate-resilient livelihood options by means of adaptation measures, alternative livelihoods and capacity building (40% female); and AMAT Indicator 4: • 1 400 people will adopt adaptation technologies (20% female)		Indicator 3: 113% Indicator 4: 42%	AMAT Indicator 3: Target exceeded AMAT Indicator 4: Despite the MTR suggestion to reduce the number of beneficiaries from 4 200 to 3 000 (AMAT Indicator 3), this target was not fully achieved. However, the project has laid a strong foundation for continued capacity strengthening after it ends.
Output 2.1.1: Strengthened information and communication technology (ICT) capacity of fisherfolk	None specified	ICT capacity of fisherfolk and the CNFO improved by Caribbean ICT Research Programme (CIRP) through the development of the mFisheries@sea mobile application and its localization to five project countries.	100% (2021 PIR)	No targets are specified in the results framework but all activities have been completed.

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
and Caribbean Network of Fisherfolk Organizations (CNFOs)		CIRP developed a variety of ICT trainings and materials including training materials for virtual training on VHF radio and other ICT devices, mobile apps, maps, template for mobile tools, videos on the use of ICT technology. 1 277 stewards and fisherfolk (14% women) from all countries except Antigua and Barbuda (ANU) were trained in ICT (mobile phone, GPS and/or VHF). Stewards continue training outside of the original training programme. The ICT training was incorporated into the regional seaman's training of fisherfolk carried out by the regional Caribbean Fisheries Training and Development Institute (CFTDI) in Trinidad and Tobago. CC4FISH procured and distributed 1 221 VHF radios to the fisherfolk in the six project countries as well as 200 life vests and 200 marine compasses to SVG fisherfolk. Six dual VHF repeater systems delivered to SKN, SLU, GRE and ANU, and installed in GRE and SLU.		
Output 2.1.2: Strengthened fisherfolk and CNFO capacity	None specified	Approx. 1 775 people benefited from the adoption of diversified, climate livelihood options through basic fisher training, engine repair training, fish handling and food safety training, and business skills training in the seven project countries. CNFO completed the following: • Hurricane preparedness poster and flyers. • Organized a national meeting of the National Fisherfolk Organisation (NFO) in each of the seven project countries to increase awareness. • Had two NFO representatives (from GRE and Dominica [DOM]) participate in the GCFI conference (2019). **Insurance:** • Two reports published on assessment of insurance needs and opportunities, and insurance requirements in the Caribbean fisheries sector. • a regional stakeholder meeting on Fisheries Insurance Legislative Frameworks for the Caribbean for DOM, SKN, and TT (15 people). • assessment for improved data vessel registry systems in GRE and SLU. Follow up activities in GRE were carried out. **Market opportunities and value adding:**	80%	70% assigned in the 2021 PIR. Activities hampered by COVID-19 pandemic, extreme weather events and volcanic eruptions.

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		• INFOPESCA finalized the reports "Market study on Fishery Products and Opportunities for Value Addition" and "Opportunities for Fish and Fisheries Products Value Chain Development in GRE and TT". • In TT, a consultant was recruited and submitted his second draft on market assessment of smoked bonito, cutlass fish and mullet roe. • In GRE, fish drying and salting (2022); business opportunities in value adding for the tuna fishery; Marine Stewardship Council (MSC) pre-assessment carried out and development of a public-private partnership (PPP) (now active); support to build a joining facility. IDB is further funding this activity with USD 400 000. • In SVG, in-kind support for a study on small-scale pelagic fishery strategic design and development action plan. • Value chain analysis in DOM and Saint Kitts and Nevis, where three festivals were held to strengthen the capacity of fisherfolk to improve their businesses by creating alternative products. • Equipment: USD 60 532 in equipment to support the fishing cooperative and fish vendors (DOM and Saint Kitts and Nevis). • Business skills/management manuals developed and information exchanged in ANU and SLU; 62 persons trained in business skills in GRE, SLU and SVG. • Diamond back squid and swordfish training to support fishing of underutilized species (SKN). • Fish handling and processing training (ANU and SKN), and in DOM and GRE in Q1 2022. ***Equipment and infrastructure*** • Improvement of landing sites to improve boat hauling, access and safety (SLU). • USD 87 447 in equipment for fish vendors (mostly women) (coolers, knives, cutting boards, vacuum sealers, etc.). ***Fisheries Management Plans (FMP)*** Fish aggregating device (FAD) fisheries management plan (SLU) developed and data collection mechanism tested with involvement of fishers. A FAD fisheries organization was formed. ***Improved safety at sea (SAS)*** In collaboration with the Fish Safety Foundation (FSF): • SAS training and legal framework assessment for SKN, GRE, SLU, and DOM);		

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		• Development of standardized SAS training materials for trainers; • Regional 'Trainers of Trainers' in SAS (11 persons); • A refresher course for SAS trainers in the Eastern Caribbean (2022); • A "Safety at Sea manual for the Caribbean" developed and published and copies widely distributed. • SAS training of fisherfolk (excluding ICT training) (1 681 persons) in DOM, GRE, SKN, SLU, TT (SVG in 2022). ***Other activities*** • Workshop on fish silage feasibility in Barbados and SKN (21 participants) and report published. • Sargassum beach clean-up activities and equipment procurement in SLU and TT.		
Output 2.1.3: Exchange programmes on fisheries co-management and adaptation technology	None specified	• Ten fish farmers from SLU and GRE attended training and learned from aquaponics farmers in ANU. • Exchange visit of two fishers from SKN to SLU on seamoss farming, aquaponics, co-management and SAS training. • Seamoss farmers from TT and SVG attended a regional training and visited seamoss farms in GRE. • 12 SLU fisherfolk went on exchange to Antigua and Barbuda (conch fishers) and to GRE on management plans of action (MPAs) and fishing cooperatives. • CERMES developed a report 'Perfecting the art of fisheries learning exchanges in the Eastern Caribbean'. https://doi.org/10.4060/cb3667en	85% (2021 PIR)	Exchange visits were hampered by COVID-19 and extreme natural events.
Outcome 2.2. Improved resilience of aquaculturists	Indicator 3 AMAT: 300 people will benefit from the rehabilitation of existing and the establishment of new aquaculture centres and capacity-building activities		100%	In the Eastern Caribbean, the aquaculture sector development has taken off due to CC4FISH.
Output 2.2.1: Rehabilitated existing aquaculture centres and newly established aquaculture centres	None specified	DOM: the prawn hatchery farm that was severely impacted by tropical storm Erika and Hurricane Maria was rehabilitated and made climate-resilient; approx. 15 shrimp farmers now frequently seek seedlings; an aquaponics demonstration farm was built. SKN: equipment was purchased for the development of the aquaponics demonstration farm in Saint Kitts and Nevis in	100%	No targets are specified in the results framework but all activities have been completed.

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		collaboration with the Inter-American Institute for Cooperation on Agriculture (IICA); CC4FISH supported the procurement for the aquaponics mobile unit at Greenleaf farms as well as the production of fish seedlings for the aquaponics system. SLU: aquaculture (tilapia) feed and equipment were provided to the Union Aquaculture Hatchery; an aquaponics facility was constructed at the Ministry of Agriculture Union Aquaculture Farm and Hatchery and is now used for aquaponics training. ANU: procurement of water pumps for the aquaponics system at a secondary school in Antigua and Barbuda. TT: aquaculture equipment and audio, video and hardware equipment procured and delivered to the Aquaculture Demonstration Centre in Trinidad and Tobago.		
Output 2.2.2: Strengthened capacity of aquaculturists in climate change adaptation measures and adaptive technologies	None specified	See also 2.2.1. 277 persons were trained (41% women). **Aquaponics** • Two CC4FISH Focal Points (SLU and SKN) attended the Committee on Fisheries (COFI) Sub-Committee on aquaculture in Rome. • Virtual training workshops on Aquaponics as a Business held for aquaponics farmers in TT. Several farmers are now starting to undertake aquaponics on their private land. • FAO business plans for freshwater shrimp and fish were developed through a three-day consultation amongst TT government's aquaculture experts. • Aquaponics workshop held in DOM. • In SLU, a ten-hour online Aquaponics Workshop was held (28 participants). • In SKN, a workshop on Aquaponics was held at Green Leaf Farms for students, teachers, farmers and fisherfolk (41 persons). • A regional training workshop named 'Advancing aquaponics through improved market access' was held in Barbados (25 participants) in synergy with the TCP/SLC/3601 Towards a Caribbean Blue Revolution project. **Seamoss farming** • In GRE, 20 farmers were trained in seamoss farming (production, business and marketing) • The NVT manual for seamoss farming has been drafted.	100% (2022 PPR)	No targets are specified in the results framework but all activities have been completed.

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		• In DOM, seamoss planting workshops were held with some small procurement for planting; four seamoss farming groups were formed; follow-up training on seamoss farming value chain and marketing has been carried out under the TCP-SLC 3801 Regional COVID-19 Recovery. • In SLU, equipment and materials for testing of new farming techniques in seamoss cultivation were procured. • Seamoss farmer consultations were held in order to determine mechanisms to improve post-harvest practices/management and marketing of seamoss. • Various seamoss farming groups were supported, with the formalization of the Eau Piquant seamoss producers group consisting of 120 seamoss farmers. Due to increased partnerships, including with SLU's Fisheries Division and SLU's Export Agency, seamoss exports have increased significantly (from USD 1 700 per month in 2018 to nearly USD 86 000 per month over the first eight months of 2020). In ANU, a Feasibility Study on Climate-Smart Aquaculture was conducted and aquaculture management meetings were held in DOM (30 people), TT (24 people) and SLU (24 people).		
Component 3: Mainstreaming of climate change adaptation in multi-level fisheries governance				
Outcome 3.1. Climate change adaptation mainstreamed in multilevel fisheries governance	None specified		100%	Fully achieved, based on the achievement of the two outputs in this component.
Output 3.1.1: Strengthened institutional regional and national capacity on mechanisms to implement climate change adaptation measures	AMAT Indicator 10: The capacities of five (5) national institutions to identify, prioritize, implement, monitor and evaluate adaptation strategies was improved by five points	• CERMES organized a mainstreaming climate change adaptation (CCA) and disaster risk management (DRM) into the ecosystem approach to fisheries (EAF) training held in July 2018 (30 people). • The FARE training and training of trainers was carried out in September 2018 in GRE (30 people). • At national level, FARE training in GRE (115 persons) was held in 2020. • A Regional Dialogue on nationally determined contribution (NDC) in the Caribbean on Climate-Resilient Fisheries and Coastal Communities was organized in November 2019 (38 people) in collaboration with funds from the FAO Framework Project for Linking Responses to Rural Poverty and	100% (2022 PPR)	

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		Climate Change with a focus on coastal communities, coastal areas and Small Island Developing States, and the StewardFish project. • To improve Fisheries Statistics and Damage and Loss information collection, a training of trainers (three people) was held in TT and training of fisheries officers and university employees (33 people) was also held. Additional training of fisheries officers in fisheries data collection and statistics was carried out in TT (19 persons). • Technical support provided to the TT Government for the production of fisheries statistics for Trinidad and Tobago to update baseline information for the past six years. • Deployment of modern vessel registries in TT and GRE was initiated and vessel registries updated. • Participation in a regional Sargassum Symposium held in 2018. • A regional meeting and workshop were held for the Development of a Protocol to Integrate CCA and DRM in Fisheries and Aquaculture into the Caribbean Community Common Fisheries Policy (CCCFP) in 2018. In various project countries, the project procured items worth USD 85 236 (for desks, computers, printer, Fishers ID card printers, etc.). Institutions have access to and utilize climate information, such as the Sargassum Outlook Bulletins, Policy Briefs and PowerPoints, as well as all ICT and SAS training materials designed for fisheries officers and other government officials. In addition, training materials on seamoss farming activities and aquaculture trainings are now available.		
Output 3.1.2: Climate change adaptation mainstreamed into policies, plans and associated processes	AMAT Indicator 12:National policies and plans to identify, prioritize and integrate adaptation strategies and measures in five (5) countries were strengthened by 5 points	Activities on fisheries policies, plans and legislations incorporating CCA and DRM: • FMP for Marine Managed Areas in GRE. • CC4FISH has supported the development of the Fisheries Policy in SLU. • A FAD FMP for SLU incorporating EAF/CCA/DRM through participatory consultation (185 people participated in the meetings).	100% (2022 PPR)	Management plans are awaiting government approval but in some countries (SLU) they are already being used to guide management and are being incorporated in national fisheries' authorities work plans (SVG).

OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		• An Aquaculture Management Strategy for SLU incorporating EAF/CCA/DRM through participatory consultation (24 people); • An Aquaculture Management Strategy for DOM. • Sargassum Adaptive Management Plans for GRE, SLU, SKN and SVG. • The Protocol to Integrate Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture into the Caribbean Community Common Fisheries Policy was endorsed by the Caribbean Community (CARICOM) Ministerial Council on 11 October 2018.		
Component 4: Project management, monitoring and evaluation, information dissemination and communication				
Outcome 4.1 Project implemented. Lessons learned and best practices have been documented and disseminated.	The project has been executed with a result-based management approach. Project sustainability has been ensured.		80% (2022 PPR)	Project has been extended to the end of March 2022 (admin. closure); the exit strategy is still being prepared.
Output 4.1.1: Project management, monitoring and evaluation system	Project Operational Unit functioning. Procedures established and fulfilled Monitoring and evaluation (M&E) system operational.	The Project Coordination Unit (PCU) was established at FAO SLC and the Regional Project Coordinator (RPC) and other staff recruited in 2017. Five Project Steering Committee meetings (PSCMs) were held (in person and virtually) between 2017 and 2021, with follow-up PSCMs held on 29 July 2021 and 16 November 2021. The MTR was carried out virtually and finalized in 2020. Three Project Task Force Meetings were held in 2018, 2020 and 2021. The final evaluation was initiated in September 2021 and will be finalized by the end of April 2022.	80% (2021 PIR)	
Output 4.1.2: Project knowledge management system	Mechanism for knowledge systematization and sharing. Online platform is operational, and it links users, systematizes lessons learned and good fishing practices, while providing training.	An Information and Knowledge Manager was engaged from mid-2020 to September 2021. Project's website was developed and is now online (https://www.fao.org/in-action/climate-change-adaptation-eastern-caribbean-fisheries/en/). The project has had a large distribution of policy briefs, reports, flyers, videos (sargassum and safety at sea), presentations, social media (Facebook) outputs and other forms of communication, including newspaper articles.	70% (2021 PIR)	A number of documents are still being finalized or edited. CNFO Learning Institute is being used as a platform for training on some topics.

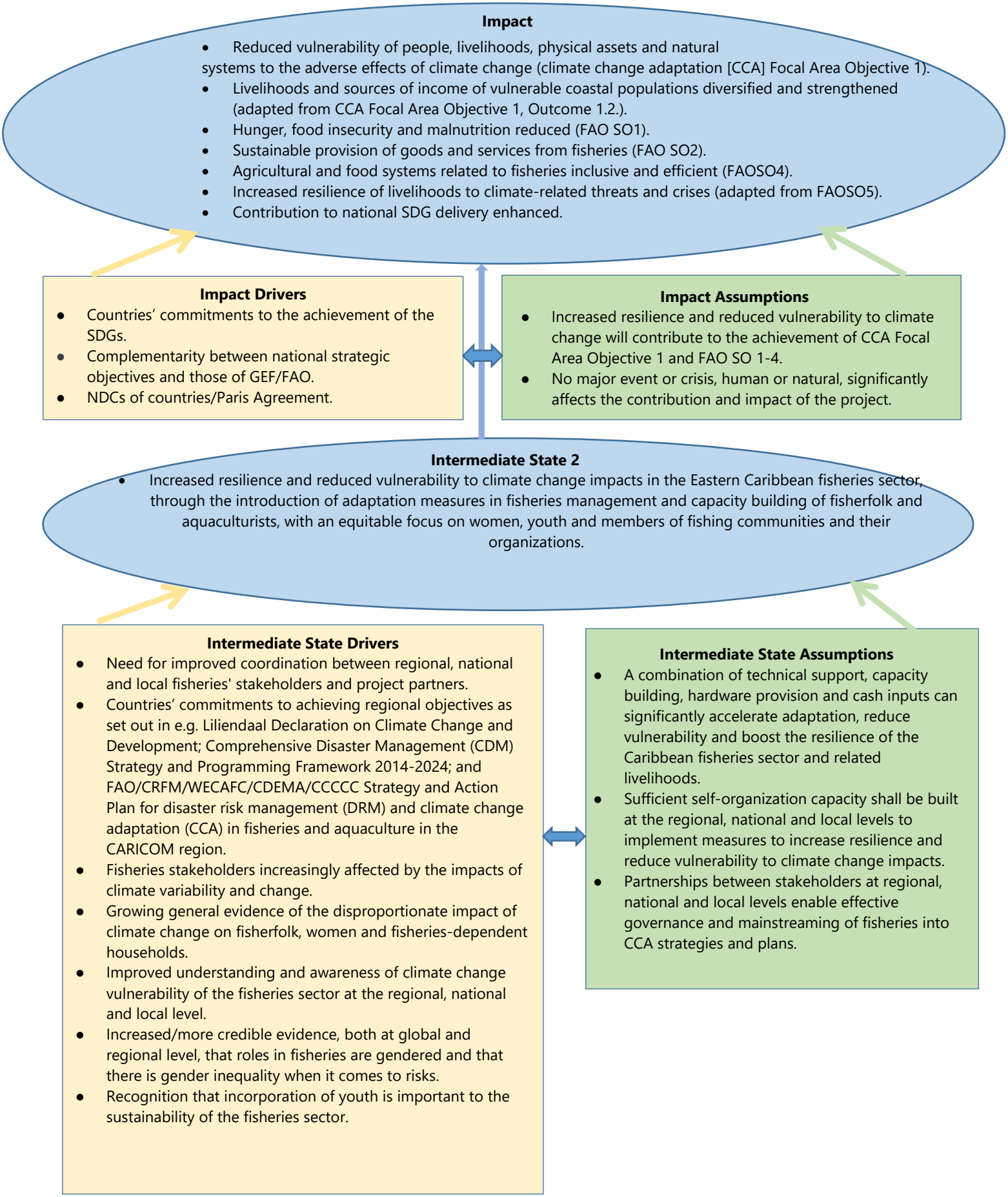
OUTPUTS	TARGETS	ACHIEVEMENTS	% Completion	Comments
		Communication material (developed or currently being developed) at the national level include: CC4FISH calendars, Facebook pages, secondary school materials, animations, presentations at fairs and schools, and support for Kiddies Carnival's Bands.		

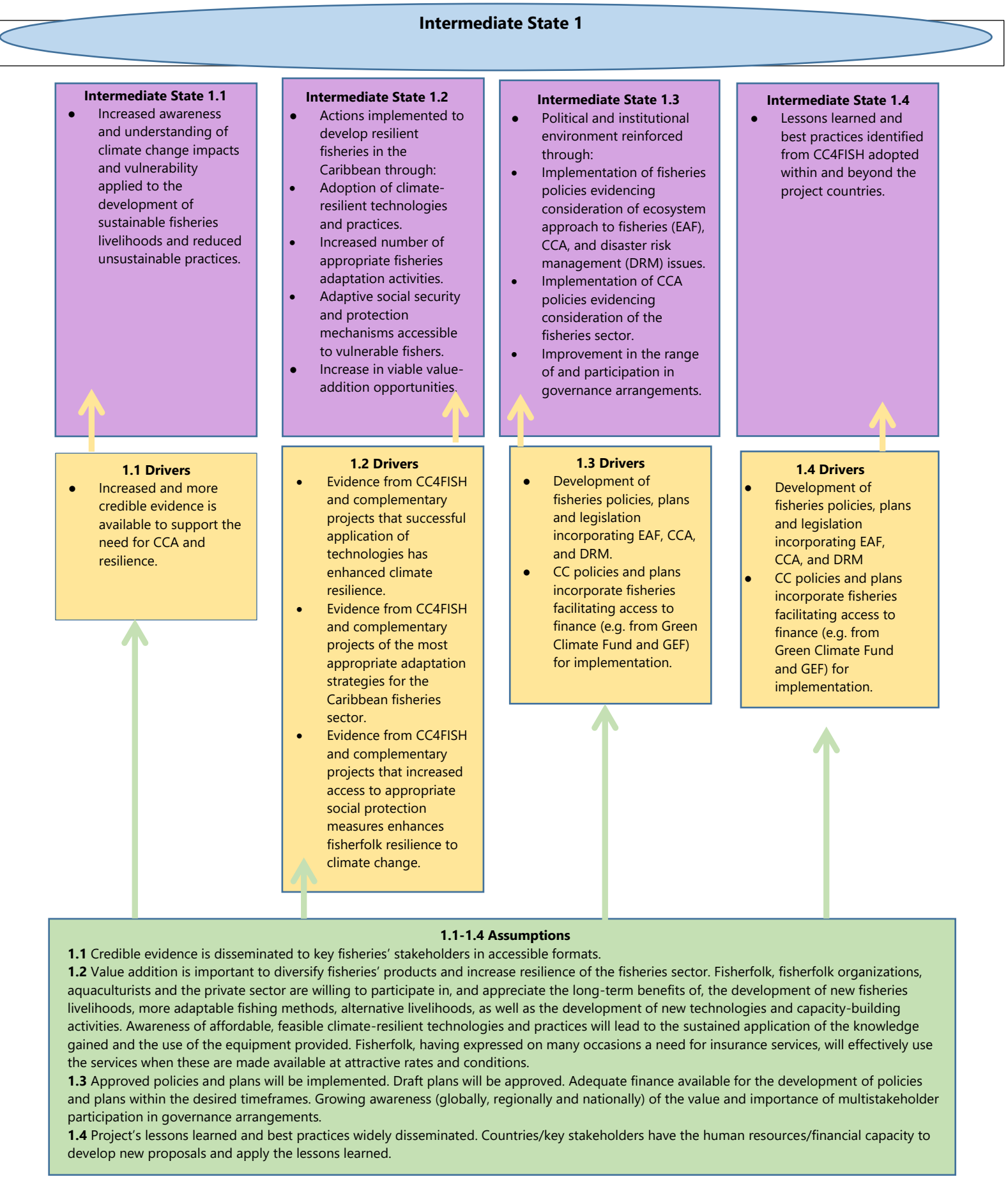
Appendix 5. CC4FISH theory of change diagram

A Theory of Change (TOC)[30] attempts to answer the question 'How will the project/programme contribute to the long-term change being sought?' It describes the causal pathways from *outputs* through direct *outcomes* through other *medium-term* and *longer-term outcomes* or '*intermediate states*', which require additional inputs and involve other actors, towards *impacts*. Also included are assumptions regarding the contextual or environmental factors that will support or hinder progress toward the realization of outcomes along the pathway of change (e.g. political situation, climate change).

The preliminary CC4FISH TOC contained in the project document was revised and elaborated with the Regional Project Steering Committee (RPSC) during the mid-term review (MTR). The reconstructed TOC produced during the MTR (figure on the next page) is more detailed and identifies two additional intermediate states in the project's progress towards (implicit) high-level goals and impact.

[30] Source: FAO OED Evaluation Manual


Impact
Reduced vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change (climate change adaptation [CCA] Focal Area Objective 1).
Livelihoods and sources of income of vulnerable coastal populations diversified and strengthened (adapted from CCA Focal Area Objective 1, Outcome 1.2.).
Hunger, food insecurity and malnutrition reduced (FAO SO1).
Sustainable provision of goods and services from fisheries (FAO SO2).
Agricultural and food systems related to fisheries inclusive and efficient (FAOSO4).
Increased resilience of livelihoods to climate-related threats and crises (adapted from FAOSO5).
Contribution to national SDG delivery enhanced.
Impact Drivers
Countries' commitments to the achievement of the SDGs.
Complementarity between national strategic objectives and those of GEF/FAO.
NDCs of countries/Paris Agreement.
Impact Assumptions
Increased resilience and reduced vulnerability to climate change will contribute to the achievement of CCA Focal Area Objective 1 and FAO SO 1-4.
No major event or crisis, human or natural, significantly affects the contribution and impact of the project.
Intermediate State 2
Increased resilience and reduced vulnerability to climate change impacts in the Eastern Caribbean fisheries sector, through the introduction of adaptation measures in fisheries management and capacity building of fisherfolk and aquaculturists, with an equitable focus on women, youth and members of fishing communities and their organizations.
Intermediate State Drivers
Need for improved coordination between regional, national and local fisheries' stakeholders and project partners.
Countries' commitments to achieving regional objectives as set out in e.g. Liliendaal Declaration on Climate Change and Development; Comprehensive Disaster Management (CDM) Strategy and Programming Framework 2014-2024; and FAO/CRFM/WECAFC/CDEMA/CCCCC Strategy and Action Plan for disaster risk management (DRM) and climate change adaptation (CCA) in fisheries and aquaculture in the CARICOM region.
Fisheries stakeholders increasingly affected by the impacts of climate variability and change.
Growing general evidence of the disproportionate impact of climate change on fisherfolk, women and fisheries-dependent households.
Improved understanding and awareness of climate change vulnerability of the fisheries sector at the regional, national and local level.
Increased/more credible evidence, both at global and regional level, that roles in fisheries are gendered and that there is gender inequality when it comes to risks.
Recognition that incorporation of youth is important to the sustainability of the fisheries sector.
Intermediate State Assumptions
A combination of technical support, capacity building, hardware provision and cash inputs can significantly accelerate adaptation, reduce vulnerability and boost the resilience of the Caribbean fisheries sector and related livelihoods.
Sufficient self-organization capacity shall be built at the regional, national and local levels to implement measures to increase resilience and reduce vulnerability to climate change impacts.
Partnerships between stakeholders at regional, national and local levels enable effective governance and mainstreaming of fisheries into CCA strategies and plans.


Intermediate State 1
Intermediate State 1.1
Increased awareness and understanding of climate change impacts and vulnerability applied to the development of sustainable fisheries livelihoods and reduced unsustainable practices.
Intermediate State 1.2
Actions implemented to develop resilient fisheries in the Caribbean through:
Adoption of climate-resilient technologies and practices.
Increased number of appropriate fisheries adaptation activities.
Adaptive social security and protection mechanisms accessible to vulnerable fishers.
Increase in viable value-addition opportunities.
Intermediate State 1.3
Political and institutional environment reinforced through:
Implementation of fisheries policies evidencing consideration of ecosystem approach to fisheries (EAF), CCA, and disaster risk management (DRM) issues.
Implementation of CCA policies evidencing consideration of the fisheries sector.
Improvement in the range of and participation in governance arrangements.
Intermediate State 1.4
Lessons learned and best practices identified from CC4FISH adopted within and beyond the project countries.
1.1 Drivers
Increased and more credible evidence is available to support the need for CCA and resilience.
1.2 Drivers
Evidence from CC4FISH and complementary projects that successful application of technologies has enhanced climate resilience.
Evidence from CC4FISH and complementary projects of the most appropriate adaptation strategies for the Caribbean fisheries sector.
Evidence from CC4FISH and complementary projects that increased access to appropriate social protection measures enhances fisherfolk resilience to climate change.
1.3 Drivers
Development of fisheries policies, plans and legislation incorporating EAF, CCA, and DRM.
CC policies and plans incorporate fisheries facilitating access to finance (e.g. from Green Climate Fund and GEF) for implementation.
1.4 Drivers
Development of fisheries policies, plans and legislation incorporating EAF, CCA, and DRM
CC policies and plans incorporate fisheries facilitating access to finance (e.g. from Green Climate Fund and GEF) for implementation.
1.1-1.4 Assumptions
1.1 Credible evidence is disseminated to key fisheries' stakeholders in accessible formats.
1.2 Value addition is important to diversify fisheries' products and increase resilience of the fisheries sector. Fisherfolk, fisherfolk organizations, aquaculturists and the private sector are willing to participate in, and appreciate the long-term benefits of, the development of new fisheries livelihoods, more adaptable fishing methods, alternative livelihoods, as well as the development of new technologies and capacity-building activities. Awareness of affordable, feasible climate-resilient technologies and practices will lead to the sustained application of the knowledge gained and the use of the equipment provided. Fisherfolk, having expressed on many occasions a need for insurance services, will effectively use the services when these are made available at attractive rates and conditions.
1.3 Approved policies and plans will be implemented. Draft plans will be approved. Adequate finance available for the development of policies and plans within the desired timeframes. Growing awareness (globally, regionally and nationally) of the value and importance of multistakeholder participation in governance arrangements.
1.4 Project's lessons learned and best practices widely disseminated. Countries/key stakeholders have the human resources/financial capacity to develop new proposals and apply the lessons learned.

Outcomes
(by the end of project implementation)

Outcome 1
1.1 Increased awareness and understanding of climate change impacts and vulnerability

Outcome 2
2.1 Improved resilience of fisherfolk and coastal community members
2.2 Improved resilience of aquaculturists and their organizations.

Outcome 3
3.1 Climate change adaptation mainstreamed in multilevel fisheries governance

Outcome 4
4.1 Project implemented. Lessons learned and best practices have been documented and disseminated.

Barriers identified
- Limited access by fisheries' stakeholders to information on climate change impacts and vulnerabilities.
- Reduced fish stocks as a result of unsustainable practices exacerbated by the impacts of climate variability and change.

Barriers identified
- Limited uptake of adaptive technologies, even if well-known, and available/limited fisherfolk willingness to innovate.
- Capacity gaps in areas such as ICT, business skills, disaster risk reduction and mitigation.
- Insufficient or degraded aquaculture centres.
- Insufficient data on income generation from aquaculture investments leading to lack of confidence in the industry as an alternative source of income.
- Gender segmented labour market may be negatively affecting women in fisheries.

Assumptions
- Delivering capacity building will lead to the application of knowledge and changes in attitude and behaviour/practices that may improve resilience.
- Key stakeholders are available and willing to participate in capacity-building interventions.

Barriers identified
- Weak mainstreaming of fisheries in CCA policies and plans.
- Weak mainstreaming of CCA and DRM considerations in fisheries policies and plans.
- Governance mechanisms for sustainable fisheries are weak and fragmented and exclude fisherfolk from decision-making.

Barriers identified
- Limited access by fisheries stakeholders to practical lessons learned and best practices on enhancing resilience to climate change in the sector.

Outcome 1—4 Assumptions

1. Delivering capacity building will lead to the application of knowledge and changes in attitude and behaviour/practices. Traditional knowledge can be integrated with scientific knowledge to increase awareness of climate change impacts.
2. Delivering capacity building will lead to the application of knowledge and changes in attitude and behaviour/practices that may improve resilience. Key stakeholders are available and willing to participate in capacity-building interventions.
3. Weak mainstreaming of fisheries in CCA policies and plans has contributed to a lack of resilience and persistent vulnerability of the fisheries sector. Most Caribbean CC and fisheries policies and plans pay inadequate attention to the availability of finance for implementation. Improved fisheries governance will increase resilience and reduce vulnerability in the sector.
4. The Project Coordination Unit (PCU) will document and disseminate lessons learned and best practices in formats appropriate to the target audiences throughout the project. The PCU, together with key stakeholders, will develop a monitoring and evaluation (M&E) plan at the outset of the project.

Outputs Related to Outcomes

1.1.1 Assessment of climate change vulnerability in the fisheries sector carried out at local, national and regional levels.
1.1.2 Models that describe fisheries abundance and accessibility.
1.1.3 Findings of vulnerability assessments and models disseminated at regional, national and local levels to improve understanding.
2.1.1 Strengthened ICT capacity of fisherfolk and Caribbean Network of Fisherfolk Organizations (CNFO),.
2.1.2: Strengthened fisherfolk and CNFO capacity (in business skills, insurance schemes, coping with loss, rapid response and boat hauling) and associated equipment delivered.
2.1.3 Exchange programmes on fisheries co-management and adaptation technology.
2.2.1 Existing aquaculture centres rehabilitated and new aquaculture centres established
2.2.2 Strengthened capacity of aquaculturists in climate change adaptation measures and adaptive technologies.
3.1.1 Strengthened institutional regional and national capacity on mechanisms to implement climate change adaptation measures.
3.1.2 Climate change adaptation mainstreamed into policies, plans and associated processes.
4.1.1 Project management, monitoring and evaluation system
4.1.2 Project knowledge management system

Appendix 6. GEF co-financing table

Name of the Co-financier	Co-financier type	Type of co-financing	Co-financing at project start			Materialized Co-financing at project mid-term (end 2019) (in USD)	Materialized Co-financing at project end (end 2021) (in USD)	Percentage materialized
			(Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)					
			In-kind	Cash	Total	Total [1]	Total [1]	%
Ministry of Agriculture, Lands, Housing and the Environment [Antigua & Barbuda]	Fisheries Division (government)	In-kind & cash	1 350 000	1 900 000	3 250 000	34 700	368 600	11%
Ministry of Agriculture & Fisheries [Dominica]	Ministry of Agriculture & Fisheries (government)	In-kind & cash	1 250 000		1 250 000	1 250 000	1 250 000	100%
Ministry of Agriculture, Lands, Forestry, Fisheries and the Environment [Grenada]	Fisheries Division (government)	In-kind & cash	1 500 000		1 500 000	1 114 543	1 926 943	128%
Ministry of Agriculture, Fisheries and Marine Resources [St. Kitts & Nevis]	Ministry of Agriculture, Fisheries and Marine Resources (government)	In-kind & cash	1 250 000		1 250 000	6 000 000	6 000 000	480%
Ministry of Agriculture, Food Production, Fisheries, Co-Operatives and Rural Development [Saint Lucia]	Department of Fisheries (government)	In-kind & cash	1 840 000	3 640 000	5 480 000	-	5 480 000	100%

Name of the Co-financier	Co-financier type	Type of co-financing	Co-financing at project start (Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)			Materialized Co-financing at project mid-term (end 2019) (in USD)	Materialized Co-financing at project end (end 2021) (in USD)	Percentage materialized
			In-kind	Cash	Total	Total [1]	Total [1]	%
Ministry of Agriculture, Industry, Rural Transformation, Forestry, Fisheries and Industry (Saint Vincent and the Grenadines)	Ministry of Agriculture, Industry, Rural Transformation, Forestry, Fisheries and Industry (government)	In-kind & cash	1 200 000	300 000	1 500 000	1 500 000	1 500 000	100%
Ministry of Land & Marine Resources (Trinidad and Tobago)	Ministry of Agriculture, Land and Fisheries (government)	In-kind & cash	15 600 000	3 900 000	19 500 000	3 952 197	8 608 362	44%
The University of the West Indies, Cave Hill Campus	Centre for Resource Management and Environmental Studies (CERMES) (educational and research institution)	In-kind & cash	110 000	102 000	212 000	148 000	212 000	100%
Caribbean Regional Fisheries Mechanism (CRFM)	Caribbean Regional Fisheries Mechanism (CRFM) (multilateral organization)	In-kind & cash	400 000		400 000	148 000	400 000	100%

Appendix 6. GEF co-financing table

Name of the Co-financier	Co-financier type	Type of co-financing	Co-financing at project start			Materialized Co-financing at project mid-term (end 2019) (in USD)	Materialized Co-financing at project end (end 2021) (in USD)	Percentage materialized
			(Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)					
			In-kind	**Cash**	**Total**	**Total [1]**	**Total [1]**	**%**
The Nature Conservancy (TNC)	The Nature Conservancy Caribbean Program (non-profit organization)	In-kind & cash		200 000	200 000	200 000	200 000	100%
Secretariat of the Western Central Atlantic Fishery Commission (WECAFC)	FAO Subregional Office for the Caribbean (multilateral organization)	In-kind & cash	1 000 000	1 000 000	2 000 000	-	2 000 000	100%
The CARIBSAVE Partnership	The CARIBSAVE Partnership (non-profit organization)	In-kind	1 000 000		1 000 000	-	-	0%
Total			**26 500 000**	**11 042 000**	**37 542 000**	**14 347 440**	**27 945 905**	**74%**

[1] Figures are sourced from the co-financing letters.

* In SLU, the amount of co-financing was for the entire project period.

Appendix 7. Detailed recommendations

To FAO

Recommendation 1. Continue technical support for future fisheries and climate change adaptation interventions in the Caribbean. Priority areas identified by the terminal evaluation are [Conclusions 4, 5, 9]:

Fisheries data collection and statistics. Future efforts could support the development of a "training of trainers" in fisheries data collection and statistics, and use of R (using the training done in Trinidad and Tobago as a starting point). A "national R reference person" could be envisaged to strengthen the capacity of statisticians as and when needed, and contribute to reducing the dependence of capacity building on external trainers.

Replication and upscaling of models put in place by CC4FISH: aquaponics, FARE, VCA, SAS-ICT. Trainees from "training of trainers" programmes, including ICT stewards and trained fishers, need to be encouraged and continuously supported to pass on to others their newly gained knowledge. Pro-active fishers and/or their organizations could be identified as "champions" to stimulate positive change in fishing communities. Strengthening of CNFO Learning Institute to continue to provide training to fisherfolk.

Insurance for fishers and value chain actors: this is an extremely complex topic given its multiple ramifications into legislation, social protection, data collection and its deep cultural embedding. This endeavour should be pursued and would deserve a project on its own to tackle social protection in fisheries more broadly. However, it may be worth considering experiences from elsewhere and their potential replication/adaptation to the Caribbean in the first instance.

Seamoss farming and transformation: although efforts and value chain improvements are currently ongoing in the region, but greater attention needs to be paid to finding alternative production systems, to the potential of seamoss in domestic and regional economies, including potential for product protection and differentiation for Caribbean producers in light of current competition on the global market, and to the planning of the seamoss farming in the seascape where multiple users compete for space (snorkelers, fishers, tourists, etc.).

Legislation and policies and plans: updating needs to be pursued at national levels, with FAO support and guidance, and in particular in light of developments related to safety at sea (SAS).

In developing a programme of work on these topics at national levels, it will be essential to:

i. Synergise activities: [Conclusion 3]
    - Follow-up to vulnerability and capacity assessment (VCA) and FARE should go hand-in-hand as they enable similar discussions through different activities (VCA map danger areas and identify where technical support is needed, FARE focuses on human capacity). Undertaking them at the same time in the future would reinforce each one of them.
    - Ensure that the business skills training latches on the captains'/SAS training for greater traction, and that the business management approaches i) are more personalized to the particular circumstances of the fishers; ii) are not a one-off and include regular follow-up to see behavioural change through.
    - Data collection to link to sargassum, disaster management, monitoring of resilience, as well as fisheries. Examine the potential for integrating post-harvest, value chain data in national data collection and statistics systems, and incorporate data in legislation.

ii. Nurture multi-sectoral, "organic" [quote] partnerships (of which FAO, through its projects, should be an integral part) [Conclusions 3, 10]:

- between fishers, fisheries authorities, coast guards, telecom companies, insurance companies and banks;
- between fishers, fisheries authorities and disaster management personnel, for example disaster management organizations and committees, community disaster groups;
- between private aquaculture operators, educational institutions, fisheries authorities, regional development and research partners (e.g. CANARI, CERMES).

iii. Understand fishers' behaviour and 'psyche' [Conclusions 3, 7, 10]. - "Fishing is about more than jumping on a boat and catching fish". This also means tailoring interventions accordingly, notably through recurring/repeat training sessions (e.g. business skills, SAS, etc.) at regular intervals to overcome cultural perceptions and ingrained practices and beliefs hampering behaviour change. It also means understanding the social behaviour and networks of fishers, and casting the net wider than on fishers' themselves, that is, identifying entry points for influencing awareness raising and behaviour change through their families, including their children and their peers.

iv. Mainstream a gender perspective at all stages of project development (from design to implementation and execution and monitoring) and in all project interventions [Conclusion 12]. This will mean i) collaborating with gender experts from the outset; ii) continuously questioning whether the project, its activities and partners are exploiting, accommodating or transforming gender relations and addressing gender inequalities in their work; and iii) actively and purposely tailoring and adapting activities to ensure that the project moves from being gender blind or simply aware (as was the case of CC4FISH) to being gender transformative, even if gender equality is not one of the main objective of the project.

To FAO and GEF

Recommendation 2. In the design and management of future projects, FAO should consider:

i. Scaling down the scope of intended large-scale projects with multiple countries, activities, a large focus on tangible outputs and involving procurement to projects with a narrower focus (e.g. StewardFish (focus on building capacity of fisherfolk organizations) or REBYC II LAC (focus on two fisheries) to allow for clearer implementation. It would also be advisable that aquaculture development activities are tackled under separate projects to ensure they adequately address overlooked yet essential issues of access to capital (loans) and markets, and involve appropriate partners (e.g. development banks, private sector such as supermarkets and exporters). Interested stakeholders will need access to financing (e.g. microcredit), markets, etc., which may be outside the project's direct scope, but could be facilitated [Conclusions 1, 3, 4].

ii. Giving due consideration to the governance and geography of partner countries in organizing operational arrangements at national levels. The pairing of NPC and NFP should be pursued as a suitable means to support effective execution at national level, while alternate NFPs are also nominated (and kept informed of project progress) to step in as and when necessary. The following options could be considered to adapt the governance of the project to the institutions and the geography of small island developing States (SIDS) with multiple islands, alleviate coordination issues and strengthen ownership of project activities: posting of a National Project Coordinator and nomination of National Focal Point on each island where project activities are conducted if islands of the same country operate in relative autonomy, or posting of a National Focal Point on each island under the coordination of the National Project Coordinator, or instituting specific communication protocols between National Project Coordinators and National Focal Points [Conclusion 8].

iii. Promoting flexibility and agility in project management and possibility to make changes to ensure that the project responds to emerging needs, demands and opportunities from the

ground and other initiatives in a manner that supports its progression towards its stated goal. [Conclusion 6]. This could entail, for example, preparing six-monthly plans and budgets if circumstances are highly variable (as was the case during the COVID-19 pandemic) or if the outcome of some pioneering activities is uncertain.

iv. Facilitating the creation and sustainability of an ecosystem of stakeholders in direct connection with, and beyond, the project, notably by bringing in satellite actors who may be initially perceived of only indirect relevance to project activities but are yet fundamental to the holistic tackling of climate change adaptation in the context of fisheries [Conclusion 9].

v. Pursuing funding partnerships across donor agencies to tackle the multiple facets of climate change adaptation, as well as kick start the replication and scaling out of project activities and results to other communities and countries. It is thus recommended that the GEF SCCF be replenished under the forthcoming GEF-8 cycle in order to avoid diluting the necessity for holistic approaches to tackle climate change and the importance of mainstreaming climate change adaptation in natural resources projects, and losing this focus in future fisheries-based projects [Conclusion 7].

To FAO

Recommendation 3. With regards to knowledge management, sharing and dissemination of experiences and lessons in the region and beyond, FAO should consider [Conclusion 11]:

i. Pursuing efforts to increase the resonance of CC4FISH (and other Caribbean fisheries projects) to the entire LAC region through direct exchanges (e.g. meetings of Project Coordinators in the region) and communication means. The recently obtained authorization from FAO to have a website specific to the Caribbean region denotes a step in this direction. More lessons of relevance can be consolidated, shared, placed and replicated in the LAC region.

ii. Ensuring that new projects set funds aside for completing the editing and publication process of knowledge material developed in the later stages of the projects, including covering staff time to ensure the technical review and soundness of these materials.

iii. Ensuring that project budgets include sufficient funds for the recruitment of a knowledge management and communication expert/officer for the entire duration of projects, especially if these are large scale.

iv. Reviewing protocols and permissions regarding more open access of project archives and greater visibility on social media platforms. Providing easier access by both project stakeholders and wider audiences could be carried through a two-pronged approach:1) Through the creation of systematic, open access, archiving system of all project outputs, e.g. revised SharePoint platform with access rights allowed to project staff without FAO email address (e.g. National Focal Point). 2) Through the development of more interactive and easily accessible outward-facing interfaces for the project, and in particular i) harmonization and solving any potential Indigenous Peoples issues from the start); ii) encouragement to countries to develop their own outputs and communication products; iii) promotion of the use of these materials by forthcoming projects in the region; iv) allowing, under clearly specified rules, a project's own presence on social media, e.g. own Facebook page, Twitter, Instagram, etc., as appropriate.

To FAO headquarters and FAO SLC

Recommendation 5. Review, streamline where possible, and provide more guidance on administrative procedures and requirements [Conclusion 6] by:

i. For FAO SLC:

- Improving onboarding and supervision during project staff transition periods. More onboarding is required for new project staff to become familiar with FAO rules and procedures. To this end, the development of a simple, short and easily shareable standard operating procedures (SOP) guide tailored to the regional office (e.g. two-pager), distilling FAO Manual Sections outlining FAO and project administration "basics" in the regional office, e.g. how and who to reach out to, to develop and manage a letter of agreement (LOA), initiate procurement, working with PWS, etc., and outlining different parties' responsibilities and lines of communication. This would be a first step as this currently does not exist. This should also be supported by more formalized and regular training for updating staff on other topics, for example FAO corporate requirements at FAO level. Close supervision, especially at the start of the project or during staff transition phases, should also be more systematically strengthened and institutionalized.
- Continue streamlining administrative measures that have been initiated, including review of financial and operational procedures as part of the risk analysis to identify alternatives and continue applying protocols that enable the minimization of delays and difficulties in project funds, for example transfer partial letter of agreement amounts in case of consolidated funds. A review of the feasibility to relax some operationalization details of procurement procedures, allowing the sharing of quotes, should also be considered.

ii. For FAO headquarters:

- Providing orientation to new project staff and executive partners, including on lines of communication. Greater clarity on administrative procedures and requirements (e.g. procurement requirements, corporate requirements, PWS requirement) from the start, along with regular and repeated provision of basic courses (or refreshers) on essential FAO rules and procedures (e.g. LOAs, field budget allocations where applicable, PWS), are needed to ensure that FAO and non-FAO personnel in partner organizations have some basic knowledge of these. Ensure that orientation courses are stipulated in partners' contracts.
- Support the greater involvement and strategic role of FAO National Coordinators in facilitating financial discussions between the project and partner countries.

To institutional partners

Recommendation 7. CC4FISH institutional partners (governments and regional organizations) should pursue their efforts to integrate and promote the results of the project in their own programmes and outreach [Conclusions 8, 9]. This could be undertaken through:

i. Engaging in a reflection on how to mainstream the project's results in organizational partners' own activities, e.g. courses of CNFO's Leadership Institute. This is important for both sustainability and for amplifying the results to a wider audience.

ii. Reaching out to wider 'non-conventional' fisheries project partners (beyond typical organizational partners) who are important components of the stakeholder 'ecosystem', such as maritime authorities (including coast guards), telecom companies, international non-fisheries organizations, private insurance providers and commercial and development banks. This is particularly important in relation to ICT/SAS and insurance, both being connected 'ecosystems' in their own right.

Annexes

Annex 1. Overview of activities conducted and stakeholders consulted during the inception phase

https://www.fao.org/3/cc0279en/cc0279en.pdf

Annex 2. Details of the methodology

https://www.fao.org/3/cc0280en/cc0280en.pdf

Annex 3. Interview guide for key informant interviews (KII)

https://www.fao.org/3/cc0281en/cc0281en.pdf

Annex 4. Template for capturing changes brought about by the project

https://www.fao.org/3/cc0282en/cc0282en.pdf

Annex 5. E-survey questionnaire

https://www.fao.org/3/cc0283en/cc0283en.pdf

Annex 6. E-survey results (descriptive statistics)

https://www.fao.org/3/cc0284en/cc0284en.pdf

Annex 7. Other projects in collaboration with, or building onto, CC4FISH

https://www.fao.org/3/cc0285en/cc0285en.pdf

Office of Evaluation
evaluation@fao.org
www.fao.org/evaluation

Food and Agriculture Organization of the United Nations
Rome, Italy

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