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**FAO VIRTUAL EXPERT WORKSHOP ON THE TOOLBOX FOR
FISHERIES CO-MANAGEMENT EVALUATION**

Virtual Meeting, 24, 26 and 28 May 2021

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FAO VIRTUAL EXPERT WORKSHOP ON THE TOOLBOX FOR FISHERIES CO-MANAGEMENT
EVALUATION

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PREPARATION OF THIS DOCUMENT

This document provides a summary of the presentations, discussions, conclusions and recommendations of the FAO Virtual Expert Workshop on the Toolbox for Fisheries Co-Management Evaluation held on 24, 26 and 28 May 2021 using the Zoom platform. The workshop was prepared and coordinated by Mr KwangSuk Oh (Senior Fishery Officer) and Ms Elisabetta Martone (Fishery Officer) of the FAO Fisheries and Aquaculture Division (NFI).

The report was prepared by Ms Elisabetta Martone. The inputs of Ms Helga Josupeit, Mr KwangSuk Oh, Mr Robert Pomeroy and Ms Lena Westlund to the preparation of this report are greatly acknowledged. Ms Maria Catalano (FAO Consultant) is acknowledged for her assistance in editing. The preparation of this document benefitted from the funding provided through the FAO projects: “Fisheries Co-management Capacity Development Program” (GCP/GLO/046/ROK) and “Fisheries Co-Management Capacity Development for Blue Communities: Sustainable Fisheries and Diverse Livelihoods” (GCP/GLO/080/ROK).

ABSTRACT

The FAO Virtual Expert Workshop on the Toolbox for Fisheries Co-management was held on 24, 26 and 28 May 2021 using the Zoom platform to finalize the outline and contents of the Toolbox for Fisheries Co-management Evaluation and to find out what tools are available for evaluating fisheries co-management effectiveness. Twenty-one participants attended the Workshop: 11 experts, 2 FAO observers and 8 FAO secretariat members.

During the Workshop, the drafts of the Toolbox and the Guidebook for Evaluating Fisheries Co-management Effectiveness were presented. The experts were invited to advice on tools and reference materials to perform the evaluation process envisaged in the Guidebook. The experts’ inputs and recommendations received on best practices, indicators, examples of approaches for measuring the indicators, suggested tools and resources will be employed to improve the Toolbox and the Guidebook.

CONTENTS

Preparation of this document	iii
Abstract.....	iii
Acknowledgements	vi
Abbreviations and acronyms.....	vii
Background.....	1
Monday, 24 May 2021.....	1
Opening.....	1
Agenda.....	1
Presentation of the Guidebook and Toolbox.....	2
Plenary discussion	2
Wednesday, 26 May 2021	3
Friday, 28 May 2021	3
Appendixes	
Appendix 1: List of participants.....	5
Appendix 2: Opening statement by Mr KwangSuk Oh, Senior Fishery Officer, FAO Fisheries and Aquaculture Division.....	7
Appendix 3: Agenda.....	9
Appendix 4: Background paper: tools and reference materials for evaluating the effectiveness of fisheries co-management	10
Appendix 5: Tools for a Guidebook for Evaluating Fisheries Co-management Effectiveness.....	27
Appendix 6: Suggested references for fisheries co-management good practices and processes	34
Appendix 7: Tools for the assessment sheet for the evaluation of the design and performance of the fisheries co-management system.....	38
Appendix 8: Tools for the assessment sheet for the evaluation of achievement of goals and objectives of the fisheries co-management plan.....	55

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The experts are gratefully acknowledged for their efforts, contributions and active engagement during the workshop discussions. The facilitators, Ms Helga Josupeit, Mr Robert Pomeroy and Ms Lena Westlund, were critical to the delivery of the Workshop. Ms Yumi Son, Ms Turan Rahimzadeh and Ms Vanessa Lodi provided invaluable support to its organization and delivery.

This workshop was held thanks to the financial support of the Korea Maritime Institute of the Republic of Korea through the project “Fisheries Co-management Capacity Development Program” (GCP/GLO/046/ROK) and of the Ministry of Oceans and Fisheries of the Republic of Korea through the project “Fisheries Co-Management Capacity Development for Blue Communities: Sustainable Fisheries and Diverse Livelihoods” (GCP/GLO/080/ROK).

ABBREVIATIONS AND ACRONYMS

CPUE	catch per unit effort
EAF	Ecosystem Approach to Fisheries
EU	European Union (Member Organization)
FAO	Food and Agriculture Organization of the United Nations
GIS	Geographic Information System
M&E	Monitoring and Evaluation
NFI	FAO Fisheries and Aquaculture Division
NPOA-SSF	National Plan of Action on Small-Scale Fisheries
SSF Guidelines	Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication
ToRs	Terms of Reference
TURF	Territorial Use Rights for Fishing
UN	United Nations
UNDP	United Nations Development Programme
UNSDG	United Nations Sustainable Development Group

BACKGROUND

1. FAO has established the two-year project “Fisheries Co-Management Capacity Development Program” (GCP/GLO/046/ROK) funded by the Korea Maritime Institute, and the five-year project “Fisheries Co-Management Capacity Development for Blue Communities: Sustainable Fisheries and Diverse Livelihoods” (GCP/GLO/080/ROK) funded by the Ministry of Oceans and Fisheries of the Republic of Korea. The overall goal is that all stakeholders, especially policymakers, have a better understanding of the concept of fisheries co-management in order to establish appropriate types of fisheries co-management systems at the national or local level and implement well-designed fisheries co-management programmes on the ground. The following knowledge products will be produced: (i) a guidebook on evaluating the effectiveness of existing fisheries co-management systems; (ii) a knowledge product showcasing current management practices worldwide and featuring a series of case studies on evaluating fisheries co-management effectiveness by applying the Guidebook; and (iii) a toolbox combined with e-learning courses to provide practical guidance on using the Guidebook to evaluate fisheries co-management effectiveness.

2. The forthcoming Guidebook for Evaluating Fisheries Co-management Effectiveness will offer a process and method to evaluate the performance of a fisheries co-management system in order to enhance its effectiveness in delivering benefits and in contributing to environmental, social and economic sustainability and good governance. It is to be used to evaluate the effectiveness of an existing fisheries co-management system operating at a fishery, community or sector level, or in a spatially defined area.

3. The FAO Virtual Global Expert Workshop on the Fisheries Co-management Evaluation Guidebook was held on 7–11 and 17 September 2020 using the Zoom platform to produce an advanced draft of the Guidebook. Case studies are currently testing the evaluation process in the Guidebook.

4. The Toolbox for Fisheries Co-management Evaluation is intended to help the Guidebook users by providing more detailed suggestions on how to carry out the evaluation; it will consist of a compilation of methods, approaches and templates. The Toolbox will be web-based and organised so that the Guidebook users could easily identify the suggested tools for the different tasks composing the evaluation process envisaged in the Guidebook.

5. Within this context, the FAO Virtual Expert Workshop on the Toolbox for Fisheries Co-management Evaluation was held on 24, 26 and 28 May 2021 using the Zoom platform to finalize the outline and contents of the Toolbox and to find out what tools are available for evaluating fisheries co-management effectiveness. Twenty-one participants attended the workshop: 11 experts, 2 FAO observers and 8 FAO secretariat members (Appendix 1).

MONDAY, 24 MAY 2021

Opening

6. Ms Elisabetta Martone, Fishery Officer, FAO Fisheries and Aquaculture Division welcomed the participants. The official opening was officiated by Mr KwangSuk Oh, Senior Fishery Officer, FAO Fisheries and Aquaculture Division (Appendix 2).

Agenda

7. After the self-introduction of participants, Ms Martone presented the background, objectives, expected outputs and agenda of the Workshop (Appendix 3). She explained that the objectives of the Workshop were to: (i) Review the outline and contents of the Toolbox; (ii) Systematically go through the Guidebook and identify what tools are available and suitable for evaluating the effectiveness of fisheries co-management systems and plans as well as assess their usefulness and applicability in the

context of the Guidebook; (iii) Identify what tools are needed but not yet available, how they should be developed, and the potential roles of FAO and other partners in their development, and; (iv) Identify additional reference materials others than tools (e.g. background documents) that can be recommended in support of the Guidebook.

Presentation of the Guidebook and Toolbox

8. Mr Robert Pomeroy presented the current draft of the Guidebook for Evaluating Fisheries Co-management Effectiveness. In detail, he explained that the purpose of the Guidebook is to offer a process and method to evaluate the performance of fisheries co-management systems in order to enhance their effectiveness and improve knowledge about fisheries co-management. The Guidebook consists of five sections. He mentioned that the concept of management effectiveness refers to the degree to which management actions are achieving the goals and objectives of the fisheries co-management plan. This allows for improvement of the fisheries co-management system. Next, he described the outline of the document and briefly reviewed the section on what fisheries co-management is, and the section on the adaptive policy analytical framework. The operationalization of the adaptive policy analytical framework will be undertaken through the fisheries co-management effectiveness evaluation process involving three complementary and linked steps of activities. These three steps are planning, compilation of information, and evaluation. He briefly described each of the tasks under each of the three steps. Finally, he presented the section on post-evaluation and adaptive management.

9. Ms Lena Westlund presented the outline and contents of the Toolbox for the evaluation of fisheries co-management by showing a mock-up version of the Toolbox website. She explained that for each task of the evaluation process envisaged in the Guidebook, the Toolbox would describe the purpose and provide a list of suggested tools and resources for its accomplishment.

10. Mr Pomeroy presented the background paper on tools and reference materials for evaluating the effectiveness of fisheries co-management (Appendix 4). The paper contains a first list of identified tools and resources that could potentially be used for developing the Toolbox.

11. Ms Helga Josupeit presented the homework and breakout sessions. First, the experts were invited to review the identified tools and resources to perform the evaluation envisaged in the Guidebook and advice on other existing or needed but not yet available tools and reference materials (Table 1 in Appendix 4). Then, they were asked to go through the suggested references for fisheries co-management good practices and processes and suggest additional ones (Table 2 in Appendix 4). Lastly, the assignments consisted in examining the assessment sheets for the evaluation of the design and performance of the fisheries co-management system and achievement of goals and objectives of the fisheries co-management plan, suggest amendments to the list of indicators, as needed, and recommend tools and methods for assessing the individual indicators (Tables 3 and 4 in Appendix 4). The experts were invited to dedicate some time on Tuesday 25 and Thursday 27 May 2021 to review and fill in the above-mentioned tables and prepare comments for the plenary discussions on the following days.

Plenary discussion

12. Many experts emphasized the importance of evaluating the governance aspects also of the fisheries co-management systems in addition of those of the plans.

13. Some experts pointed out that the Toolbox should be simple and accessible by all users. In this regard, they recommended limiting the number of references.

14. For the indicators, some experts recommended establishing a core group of indicators with the possibility to add new indicators, as needed. They stressed that having a core set of indicators could allow for longitudinal study across geographic areas for comparative purposes. They suggested developing a guidance on how to select indicators based on the objective of the evaluation. They also suggested expressing quantitative indications in terms of change instead of increase or decrease.

15. Concerning data and information sharing, some experts suggested developing an online platform to upload and share data on fisheries co-management evaluation with FAO as a moderator for those evaluation teams who want to share data and connect with other evaluation teams. They also advised FAO to provide guidance and examples on how to address intellectual property.

16. Mr Oh provided the closing of the day.

WEDNESDAY, 26 MAY 2021

17. The participants reviewed the available tools and background documents for the first step 'Planning' and second step 'Compilation of information' of the evaluation process. The latter was addressed by reviewing the existing references on fisheries co-management good practices and processes. Mr Pomeroy and Ms Westlund moderated the discussion, with the support of Ms Josupeit.

18. Ms Westlund opened the plenary discussion on the following overarching issues raised by the experts in their homework: (i) establish a minimum set of indicators in the assessment sheets for the evaluation of fisheries co-management systems and plans; (ii) differentiate methods and tools depending on the purpose of the evaluation as well as the available resources and time; (iii) sort indicators in social, economic, ecological and governance groups, and; (iv) include governance indicators in both the assessment sheets. The inputs on suggested tools and resources along with the recommendations by tasks received from the experts are reported in Appendixes 5 and 6, while the general recommendations are summarized below.

19. Instead of reducing the number of indicators, the experts suggested specifying in which context the available indicators could be used, e.g. considering the operational scales of fisheries.

20. During the plenary discussion, the experts also recommended including communities and right-holders in the evaluation process envisaged in the Guidebook.

21. They expressed the need of adding references in French and Spanish in the Toolbox. Some experts suggested the use of open-source reference managers with topic tags.

22. For the good practices, they suggested sorting references out by broad categories as in the Guidebook.

23. Some experts suggested addressing the high level of redundancy of tools and resources among the tables in the final stages of the Toolbox development

FRIDAY, 28 MAY 2021

24. On the last day, the participants reviewed the assessment sheets for the evaluation of the design and performance of the fisheries co-management system and achievement of goals and objectives of the fisheries co-management plan. Ms Westlund moderated the discussion, with the support of Ms Josupeit. The inputs on best practices, indicators, examples of approaches for measuring the indicators, suggested tools and resources along with the recommendations by indicators and good practices received from the experts are reported in Appendixes 7 and 8, while the general recommendations are summarized below.

25. The experts emphasized the importance of having a simple and adaptive evaluation process.

26. On the assessment sheet to evaluate the fisheries co-management system, the experts recommended using objective definitions instead of subjective terminology such as clear, fair and good. They also recommended clearly defining the qualitative scales and ratings of the indicators.

27. They pointed out the need for a balance between having precise but rigid indicators, and relevant but flexible indicators. They also highlighted that some of the proposed indicators are too prescriptive (e.g. leadership).
28. Some experts suggested reviewing the selected good practices, to provide the assumptions behind their selection, and specify that they can be revised in the long run based on the co-management evaluation results and experience.
29. Some experts also suggested FAO to create a platform where experts in fisheries co-management evaluations from around the world could voluntarily provide their results with regard to specific good practices and indicators. This platform could then be used to create a statistically significant sample size to test the assumptions, to conduct targeted, multivariate analyses and to identify level of confidence behind good practice assumptions. They stressed that this method could increase the utility of and confidence in the Guidebook and inform on field-based practices.
30. According to some experts, a number of good practices refer to fisheries management instead of fisheries co-management. Some experts also suggested using the governance indicators, which have been formulated to evaluate the fisheries co-management plan, to evaluate the fisheries co-management system instead. Some experts also highlighted that some of the indicators formulated to evaluate the fisheries co-management plan go beyond the control of co-management.
31. Some experts pointed out that templates for all steps and tasks should be developed to ensure consistency of the evaluation process.
32. Ms Josupeit provided a synthesis of the major issues raised by the experts during the Workshop as follows: (i) Employ governance indicators to evaluate both fisheries co-management system and plan; (ii) Integrate the evaluations of fisheries co-management systems and plans into one evaluation process; (iii) Stress the difference between fisheries management and fisheries co-management; (iv) Highlight the tools for evaluating large-scale fisheries; (v) Identify the key indicators, specify in which context they can be used and create specific ones as needed; (vi) Create a platform to exchange experiences, especially for the communities, and; (vii) Consider concepts such as buy in, wellbeing and happiness of the individuals and of the communities to ensure fisheries co-management sustainability.
33. Mr Oh gave a brief summary of the key findings of the Workshop¹. The experts' inputs and recommendations will be then employed to improve the Toolbox and the Guidebook. He also introduced the next steps as follows: (i) Test the evaluation process envisaged in the Guidebook through case studies by the third quarter of 2021; (ii) Organize a third expert workshop to fine-tune the Toolbox as needed, publish the Guidebook and the case studies by the last quarter of 2021; (iii) Release online the Toolbox by the first quarter of 2022; (iv) Release online the e-learning courses to provide practical guidance on using the Guidebook by the second quarter of 2022, and; (v) Organize a Global conference by the fourth quarter of 2022 to raise awareness on the importance of fisheries co-management for sustainable fisheries and livelihoods and to present the Guidebook, case studies, toolbox and e-learning courses.
34. In closing the Workshop, Mr Oh thanked the participants for their tremendous efforts and valuable inputs.

¹ The contents of the summary have been reported in the sub-section 'plenary discussion', and as general recommendations in this section and in the section 'Wednesday, 26 May 2021'.

APPENDIX 1: LIST OF PARTICIPANTS

EXPERTS

Anthony Charles
 Director, School of the Environment
 Director, Community Conservation Research
 Network
 Senior Research Fellow in Environment &
 Sustainability, Sobey School of Business
 Saint Mary's University, Halifax, Nova Scotia
 Canada

Moustapha Kebe
 Independent Small-Scale Fisheries Expert
 Senegal

Patrick McConney
 Senior Lecturer, Marine Resource Management
 Planning
 Centre for Resource Management and
 Environmental Studies
 University of the West Indies
 Barbados

John Parks
 Senior Associate
 Tetra Tech, Hawaii
 United States of America

Richard Pollnac
 Professor Emeritus
 Department of Marine Affairs, Coastal Institute
 University of Rhode Island, Kingston, Rhode
 Island
 United States of America

Jesper Raakjaer
 Professor
 Chairperson of the EU Pelagic Advisory
 Council
 Aalborg University
 Denmark

Massimo Sarti
 Consultant
 Former Full Professor
 Department of Life and Environmental
 Sciences
 Polytechnic University of Marche
 Italy

Raquel Sanchez Tirona
 Vice President
 Rare, Inc.
 Philippines and Micronesia (Federated States
 of)

Vivienne Solis Rivera
 Technical Associate
 CoopeSoliDar R.L.
 Costa Rica

Kuperan Viswanathan
 Professor of Resource and Environmental
 Economics
 University of Utara
 Malaysia

Coleyr Woolston
 Consultant
 WorldFish
 United States of America

FAO OBSERVERS

Nathanael Hishamunda
 Team Leader
 National Planning and Development Support
 Team
 Sustainable Aquaculture Area
 Fisheries and Aquaculture Division

Rubén Sánchez Daroqui
 Small-scale Fisheries Consultant
 Equitable Livelihoods Team
 Sustainable Fisheries Area
 Fisheries and Aquaculture Division

FAO SECRETARIAT

Helga Josupeit
 FAO Consultant
 Trade and Market Team
 Sustainable Trade and Value Chains Area
 Fisheries and Aquaculture Division

Vanessa Lodi
 Office Assistant
 Value Chain Development Team
 Sustainable Trade and Value Chains Area
 Fisheries and Aquaculture Division

Elisabetta Martone
Fishery Officer
National Planning and Development Support
Team
Sustainable Aquaculture Area
Fisheries and Aquaculture Division

KwangSuk Oh
Senior Fishery Officer
National Planning and Development Support
Team
Sustainable Aquaculture Area
Fisheries and Aquaculture Division

Robert Pomeroy
Emeritus Professor
University of Connecticut
United States of America

Turan Rahimzadeh
FAO Consultant
Value Chain Development Team
Sustainable Trade and Value Chains Area
Fisheries and Aquaculture Division

Yumi Son
FAO Consultant
National Planning and Development Support
Team
Sustainable Aquaculture Area
Fisheries and Aquaculture Division

Lena Westlund
FAO Consultant
Equitable Livelihoods Team
Sustainable Fisheries Area
Fisheries and Aquaculture Division

APPENDIX 2: OPENING STATEMENT BY MR KWANGSUK OH, SENIOR FISHERY OFFICER, FAO FISHERIES AND AQUACULTURE DIVISION

Distinguished experts and participants, colleagues, guests,

On behalf of the Food and Agriculture Organization of the United Nations, I wish to convey to you all a convivial welcome to this Virtual Expert Workshop on the Toolbox for Fisheries Co-management Evaluation. We are looking forward to having a fruitful and enjoyable discussion together.

Distinguished experts and participants,

The Code of Conduct for Responsible Fisheries, which was unanimously adopted by FAO Members in 1995, provides principles and standards for the sustainable use of fishery resources. The Code was created in response to the dire situation of the 1980s in which fishery resources could no longer sustain fishing efforts.

To further address fisheries issues, including unsustainable fisheries practices and deficiencies in the livelihoods of fishers and fishing communities, FAO has been working with national governments and civil society over the past decades and has introduced several international instruments, particularly the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security in 2012, and the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) in 2014. The SSF Guidelines incorporate the arrangement of sharing responsibility and authority between government and resource users. This partnership arrangement is generally recognized as fisheries co-management.

During the International Symposium on Fisheries Sustainability hosted at FAO headquarters in November 2019, participants from different sectors and regions around the world suggested to strengthen fisheries co-management and its principles in their discussions, key messages and recommendation actions.

Distinguished experts and participants,

Within this framework, FAO has established the two-year project “Fisheries Co-Management Capacity Development Program” funded by the Korea Maritime Institute, and the five-year project “Fisheries Co-Management Capacity Development for Blue Communities: Sustainable Fisheries and Diverse Livelihoods” funded by the Ministry of Oceans and Fisheries of the Republic of Korea.

The overall goal is that all stakeholders, especially policymakers, have a better understanding of the concept of fisheries co-management in order to establish appropriate types of fisheries co-management systems at the national or local level and implement well-designed fisheries co-management programmes on the ground.

The following knowledge products will be produced: a Guidebook on evaluating the effectiveness of existing fisheries co-management systems; a Publication showcasing current management practices worldwide and featuring a series of case studies based on the application of the guidebook, and; a Toolbox combined with E-learning courses to provide practical guidance on using the guidebook to evaluate fisheries co-management effectiveness.

We expect these products to enhance the effectiveness of fisheries co-management systems around the world and improve knowledge on fisheries co-management that is widely applicable for sustainable fisheries and livelihoods.

Distinguished experts and participants,

With the inputs of the Virtual Global Expert Workshop on the Fisheries Co-management Evaluation Guidebook, held in September 2020, an advanced draft of the Guidebook has been produced. This draft is being tested by case studies that will inform the finalisation of the Guidebook.

This expert workshop is the second event under this framework. I do not wish to anticipate on the discussions that will take place in this meeting. Nevertheless, allow me to recall that the aim of this workshop is to produce a final version of the outline and contents of the Toolbox and a final list of tools to be included in the Toolbox.

The Fisheries Co-management Toolbox is intended to help Guidebook users by providing more detailed suggestions on how to carry out the evaluation and will be a compilation of methods, approaches and templates.

Distinguished experts and participants, colleagues, guests,

At this juncture, I wish to say my sincere gratitude to the Government of the Republic of Korea and its Ministry of Oceans and Fisheries and the Korea Maritime Institute, which, through the above-mentioned projects have funded this workshop.

I also want to note the presence, in this virtual room, of colleagues from FAO headquarters in Rome. They are at your disposal as resource persons for this workshop. Our facilitators, Ms Helga Josupeit, Prof Robert Pomeroy and Ms Lena Westlund, joined to share their international experiences. Last, I want to take this opportunity to acknowledge the effort of all the participants. We highly appreciate you have kindly joined us from all over the world, regardless of the different time zone.

With these few opening remarks, I would like to conclude my intervention by wishing you a fruitful workshop.

APPENDIX 3: AGENDA

DAY 1: WORKSHOP – Monday, 24 May 2021, 15.00–18.00 CEST Time	
Time	PLENARY SESSION:
15.00–15.10	Opening
15.10–15.20	Self-introduction of participants
15.20–15.30	Agenda, objectives and expected outcomes
15.30–16.00	Overview of the Guidebook
16.00–16.10	Q&A
16.10–16.30	Outline and contents of the Toolbox
16.30–16.40	Q&A
16.40–16.50	Break
16.50–17.20	Main tools available for evaluation the effectiveness of fisheries co-management (background paper)
17.20–17.35	Q&A
17.35–17.55	Introduction to homework and breakout sessions
17.55–18.00	Closing
DAY 2: HOMEWORK on all steps of the evaluation process and assessment sheets – Tuesday, 25 May 2021	
DAY 3: WORKSHOP – Wednesday, 26 May 2021, 15.00–18.00 CEST Time	
Time	PLENARY SESSION:
15.00–15.05	Introduction to breakout sessions
Time	BREAKOUT SESSION:
15.05–15.45	Review the available tools and background documents for the first step: planning and second step: compilation of information of the evaluation process
15.45–15.50	Break
15.50–16.50	Review of available tools and background documents for the third step. evaluation focusing on the assessment sheets
16.50–17.00	Break
17.00–18.00	Review of available tools and background documents for the third step: evaluation focusing on the assessment sheets (<i>cont.</i>)
DAY 4: HOMEWORK on the assessment sheets only – Thursday, 27 May 2021	
DAY 5: WORKSHOP – Friday, 28 May 2021, 15.00–18.00 CEST Time	
Time	PLENARY SESSION:
15.00–15.05	Introduction to breakout sessions
Time	BREAKOUT SESSION:
15.05–16.00	Review of available tools and background documents for the third step. evaluation focusing on the assessment sheets (<i>cont.</i>)
16.05–16.15	Break
Time	PLENARY SESSION:
16.15–16.45	Results of breakout sessions: list of available tools and background documents for all steps of the evaluation process and the assessment sheets
16.45–17.00	Plenary discussion on the big issues
17.00–17.10	Break
17.10–17.30	Next steps: key issues and recommendations on the way forward
17.30–17.45	Q&A
17.45–18.00	Closing

APPENDIX 4: BACKGROUND PAPER: TOOLS AND REFERENCE MATERIALS FOR EVALUATING THE EFFECTIVENESS OF FISHERIES CO-MANAGEMENT

Introduction

The *Guidebook for Evaluating Fisheries Co-management Effectiveness* (forthcoming) offers a process and method to evaluate the performance of a fisheries co-management system in order to enhance its effectiveness in delivering benefits and in contributing to environmental, social and economic sustainability and good governance. It is to be used to evaluate the effectiveness of an existing fisheries co-management system operating at a fishery, community or sector level, or in a spatially defined area.

The *Fisheries Co-management Toolbox* is intended to help Guidebook users by providing more detailed suggestions on how to carry out the evaluation and will be a compilation of methods, approaches and templates. The Toolbox will be organised so that the Guidebook user can easily identify the suggested tools for the different tasks of the Guidebook.

This paper contains a first list of tools available and resources identified that could potentially be used for developing tools for the Toolbox. The list is organised in three tables:

- Tools and resources suggested for the different tasks under Steps 1 “planning” and 2 “compilation of information”² (Table 1).
- Tools and resources suggested for Step 3 “Evaluation”³ and the two assessment sheets⁴ (Table 3 and Table 4).

It should be noted that only some tools have been identified so far and hence the below tables still contain a lot of blank cells where further suggestions and information are needed.

It should be noted that Table 3 and Table 4 include an indicative set of indicators that could be adjusted according to the local context of the fisheries co-management system that will be evaluated.

In addition, Table 2 contains a list of references for fisheries co-management good practices and processes.

Suggested actions by the participants

The participants of the virtual expert workshop on the toolbox for fisheries co-management evaluation are invited to:

1. Review the list of tools and resources in Table 1 below, referring to Steps 1 and 2 of the evaluation process, and:
 - Advise on other existing tools as well as reference materials (e.g. background documents) that would be useful for developing the Toolbox.
 - Identify additional tools that are needed but not yet available, advise on how they could be developed, and the potential roles of FAO and other partners in their development.
2. Review the list of references in Table 2 below, referring to the fisheries co-management good practices and processes, and:
 - Suggest additional references.
3. Review the two assessments sheets in Table 3 and Table 4 below, which are to be used in Step 3 of the evaluation, and:
 - Suggest amendments to the list of indicators, as needed.
 - Recommend an overall approach on how to use the assessment sheets, as appropriate, as well as tools/methods for assessing the individual indicators (see suggestions for some of the indicators provided in the tables).

² In sections 4.2.1 and 4.2.2 of the forthcoming Guidebook for Evaluating Fisheries Co-management Effectiveness.

³ In sections 4.2.1 and 4.2.2 of the forthcoming Guidebook for Evaluating Fisheries Co-management Effectiveness.

⁴ In annexes 1 and 2 of the forthcoming Guidebook for Evaluating Fisheries Co-management Effectiveness.

Tools and reference materials for steps 1 and 2

Table 1. Tools for a Guidebook for Evaluating Fisheries Co-management Effectiveness

Guidebook			Suggested tools	Suggested resources
Section	Title	Topic		
4.2.1	Evaluation process Step 1: Planning	Task 1.1: Develop a workplan, timeline and budget for the evaluation	Templates for workplan and budget	Examples from FAO National Plan of Action on Small-scale Fisheries (NPOA-SSF) toolkit (draft under preparation)
4.2.1	Evaluation process Step 1: Planning	Task 1.2: Clarify the purpose and scope and scale of the evaluation	ToRs templates for evaluation.....	.....
4.2.1	Evaluation process Step 1: Planning	Task 1.3: Establish the evaluation team	Templates on team members with skills, role and responsibility.....	.....
4.2.1	Evaluation process Step 1: Planning	Task 1.4: Obtain approvals	Templates to list different approvals needed, contacts and responsible person.....	.....
4.2.1	Evaluation process Step 1: Planning	Task 1.5: Carry out a stakeholder analysis	How to do a stakeholder analysis	International Institute of Rural Reconstruction. 1998. <i>Participatory Methods in Community-based Coastal Resource Management</i> . 3 volumes. Silang, Cavite, The Philippines. Grimble, R. & Chan, M.K. 1995. Stakeholder analysis for natural resource management in developing countries. <i>Natural Resources Forum</i> , 19(2): 113–124. Townsend, P. 1998. <i>Social Issues in Fisheries</i> . FAO Fisheries Technical Paper 375. FAO, Italy. FAO. 2011. <i>EAF planning and implementation tools</i> . Stakeholder Analysis . <i>EAF Tool fact sheets</i> . Text by Adapted by EAF Toolbox Team based on FAO (2009). Rome. Examples from FAO National Plan of Action on Small-scale Fisheries (NPOA-SSF) toolkit (draft under preparation)

Guidebook			Suggested tools	Suggested resources
Section	Title	Topic		
4.2.1	Evaluation process Step 1: Planning	Task 1.6: Plan for a stakeholder participation	How to do a stakeholder engagement plan .....	..... UNDP. 2020. <i>Stakeholder Engagement. Guidance Note</i> . UNDP Social and Environmental Standards (SES). Examples from FAO National Plan of Action on Small-scale Fisheries (NPOA-SSF) toolkit (draft under preparation)
4.2.1	Evaluation process Step 1: Planning	Task 1.7: Determine the audience(s) who will receive the evaluation results and develop a communication plan	How to develop a communications plan	FAO. 2011. <i>Food Security Communications Toolkit</i> . Rome. Example from the FAO Communication Strategy in support of the FAO Umbrella Programme for the Promotion and application of the SSF Guidelines (draft under preparation)
4.2.1	Evaluation process Step 1: Planning	Task 1.8: Identify key criteria for the evaluation of the fisheries co-management system	Benchmarking analysis	d'Armengol, L., Castillo Prieto, M., Ruiz-Mallén, I. & Corbera, E. 2018. A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. <i>Global Environmental Change</i> , 52: 212–225. Evans, L., Cherrett, N. & Pems, D. 2011. Assessing the impact of fisheries co-management interventions in developing countries: a meta-analysis. <i>J Environ Manage</i> , 92: 1938–49. Gutiérrez, N.L., Hilborn, R. & Defeo, O. 2011. Leadership, social capital and incentives promote successful fisheries. <i>Nature</i> , 470: 386–389. Pomeroy, R.S., Cinner, J. & Nielsen, J.R. 2011. Conditions for successful co-management: lessons learned in Asia, Africa, the Pacific and the wider Caribbean. <i>In: Pomeroy, R.S. & Andrew, N. (Eds.) Small-scale fisheries management: frameworks and approaches for the developing world, Chapter 7</i> . CABI Publishing, Oxfordshire, UK and Cambridge, MA, USA. Pomeroy, R.S., Katon, B.M. & Harkes, I. 2001. Conditions Affecting the Success of Fisheries Co-management: Lessons from Asia. <i>Marine Policy</i> , 25(3): 197–208. Pomeroy, R.S., Pollnac, R.B., Katon, B.M. & Predo, C.D. 1997. Evaluating Factors Contributing to the Success of Community-Based Coastal Resource Management: The Central Visayas Regional Project-1, Philippines. <i>Ocean and Coastal Management</i> , 36(1–3): 97–12. Tamura, M., Ishida, M., Sidman, C., Montes, N. and Lorenzen, K. 2018. Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience . Japan International Cooperation Agency & Florida Sea Grant, University of Florida.

Guidebook			Suggested tools	Suggested resources
Section	Title	Topic		
4.2.1	Evaluation process Step 1: Planning	Task 1.9: Locate the fisheries co-management plan	Templates for fisheries co-management plan.....	.....
4.2.1	Evaluation process Step 1: Planning	Task 1.10: Select the indicators	Selection and/or adaptation of indicators in the list in Table 3 and Table 4 below	Mosse, R. & Sontheimer, L. E. 1996. <i>Performance monitoring indicators handbook</i> (English). World Bank technical paper no. WTP 334 Washington, D.C.: World Bank Group. Hammond, A., Adriaanse, A., Rodenburg, E., Bryant, D., & Woodward, R.T. 1995. <i>Environmental Indicators: A Systematic Approach to Measuring and Reporting on Environmental Policy Performance in the Context of Sustainable Development</i> . World Resources Institute.
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: METHODS	Methods	English, S., Wilkinson, C. & Baker, V. 1997. <i>Survey Manual for Tropical Marine Resources Townsville, Australia</i> . Australian Institute of Marine Science. Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia</i> . Australian Institute of Marine Science.
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: SAMPLING	General advice on sampling methods	Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia</i> . Australian Institute of Marine Science. FAO. 1989. <i>Sampling method for agricultural surveys</i> . Rome. Cadima, E. X., Caramelo, A.M., Afonso-Dias, M., Conte de Barros, P., Tandstad, M.O. & de Leiva-Moreno, J. I. 2005. <i>Sampling methods applied to fisheries science: a manual</i> . FAO Fisheries Technical Paper. No. 434. Rome, FAO.
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: DATA RECORDING	Advice on data recording, including cleaning, verifying etc.	Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia</i> . Australian Institute of Marine Science.
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying	Templates for workplan and budget	.....

Guidebook			Suggested tools	Suggested resources
Section	Title	Topic		
		out the evaluation: WORK PLAN AND BUDGET	.....

Suggested references for fisheries co-management good practices and processes

Table 2. References on fisheries co-management good practices and processes

Guidebook			Suggested resources
Section	Title	Topic	
2.2	Fisheries co-management good practices	Enabling environment good practices	<p>d'Armengol, L., Castillo Prieto, M., Ruiz-Mallén, I. & Corbera, E. 2018. A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. <i>Global Environmental Change</i>, 52: 212–225.</p> <p>Evans, L., Cherrett, N. & Pems, D. 2011. Assessing the impact of fisheries co-management interventions in developing countries: a meta-analysis. <i>J Environ Manage</i>, 92: 1938–1949.</p> <p>Gutiérrez, N.L., Hilborn, R. & Defeo, O. 2011. Leadership, social capital and incentives promote successful fisheries. <i>Nature</i>, 470: 386–389.</p> <p>Pomeroy, R.S., Cinner, J. & Nielsen, J.R. 2011. Conditions for successful co-management: lessons learned in Asia, Africa, the Pacific and the wider Caribbean. <i>In: Pomeroy, R.S. & Andrew, N. (Eds.) Small-scale fisheries management: frameworks and approaches for the developing world. Chapter 7.</i> CABI Publishing, Oxfordshire, UK and Cambridge, MA, USA.</p> <p>Pomeroy, R.S., Katon, B.M. & Harkes, I. 2001. Conditions Affecting the Success of Fisheries Co-management: Lessons from Asia. <i>Marine Policy</i>, 25(3): 197–208.</p> <p>Pomeroy, R.S., Pollnac, R.B., Katon, B.M. & Predo, C.D. 1997. Evaluating Factors Contributing to the Success of Community-Based Coastal Resource Management: the Central Visayas Regional Project-1, Philippines. <i>Ocean and Coastal Management</i>, 36(1–3): 97–12.</p> <p>Tamura, M., Ishida, M., Sidman, C., Montes, N. and Lorenzen, K. 2018. Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience. Japan International Cooperation Agency & Florida Sea Grant, University of Florida.</p> <p>.....</p>
2.3	Generic model of fisheries co-management	Fisheries co-management process	<p>Pomeroy, R.S. & Rivera-Guieb, R. 2006. Fisheries co-management: a practical handbook. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p>

Guidebook		Suggested resources
Section	Title	Topic
		<p>Watt, P. 2001. <i>A manual for the co-management of commercial fisheries in the Pacific</i>. Secretariat of the Pacific Community.</p> <p>Tamura, M., Ishida, M., Sidman, C., Montes, N. and Lorenzen, K. 2018. <i>Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience</i>. Japan International Cooperation Agency & Florida Sea Grant, University of Florida.</p> <p>Secretariat of the Pacific Community. 2010. <i>A community-based ecosystem approach to fisheries management: Guidelines for Pacific Island Countries</i>. Noumea, New Caledonia.</p> <p>.....</p>
4	The fisheries co-management effectiveness evaluation process	<p>Management effectiveness evaluation</p> <p>Hocking, M., Stolton, S. & Dudley, N. 2000. <i>Evaluating Effectiveness: A Framework for Assessing the Management of Protected Areas</i>. IUCN, Gland, Switzerland and Cambridge, UK.</p> <p>Pomeroy, R.S., Parks, J.E. & Watson, L.M. 2004. <i>How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness</i>. IUCN, Gland, Switzerland and Cambridge, UK.</p> <p>Geldmann, J., Deguignet, M., Balmford, A., Burgess, N.D., Dudley, N.; Hockings, M., Kingston, N., Klimmek, H., Lewis, A.H., Rahbek, C., Stolton, S., Vincent, C., Wells, S., Woodley, S. & Watson, J.E. 2021. Essential Indicators for Measuring Area-Based Conservation Effectiveness in the Post-2020 Global Biodiversity Framework. <i>Conservation Letters</i>.</p> <p>Tempesta, M. & Otero, M. 2013. <i>Guide for quick evaluation of Management in Mediterranean MPAs</i>. WWF Italy, IUCN.</p> <p>.....</p>

Tools for the Assessment sheets

Table 3. Tools for the Assessment sheet for the evaluation of the design and performance of the fisheries co-management system

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
ENABLING ENVIRONMENT – EXTERNAL FACTORS	<p><i>GOOD PRACTICE: Enabling policies and legislation for fisheries co-management: supportive legislation, policies, rights and authority structures are in place</i></p> <p>INDICATOR: The legal framework gives the resource users, and their representatives, a clear role in developing and implementing a fisheries co-management plan</p>	<p><i>Review of legislation; questionnaire survey (perception)</i></p> <p>.....</p>	<p>.....</p>

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
	INDICATOR: A co-management agreement has been signed and approved between government and resource users/community	Review of co-management agreement	Checklist Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook . CAB International, Rome and International Development Research Centre, Ottawa, Canada.
<i>GOOD PRACTICE: Tenure rights of the co-managed fishery resources: formal and recognized rights to the fishery resources are granted to the co-management unit and defined mechanisms (economic, administrative and collective) and other structures required for allocating use rights among co-management participants are in place</i>			
	INDICATOR: Tenure and access rights are fairly allocated	<i>Review of government agreement and tenure arrangements; questionnaire survey (perception) among different resource users along the value chain</i>	..........
	INDICATOR: All stakeholders have access to information on the tenure rights and resource allocation criteria and processes	<i>Review of existing (legal) documentation and how it can be accessed; questionnaire survey</i>	..........
<i>GOOD PRACTICE: Authority of government on the right to organize and make management rules: resource users have legal right to organize and make rules</i>			
	INDICATOR: There are legal provisions for resource users to organize and register formal organizations	<i>Review of legislation and procedures for registering an organization</i>	..........
	INDICATOR: Co-management responsibilities have been formally delegated to the co-management committee	Review of co-management agreement	Checklist Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook . CAB International, Rome and International Development Research Centre, Ottawa, Canada.

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
<p><i>GOOD PRACTICE: Support of government and political/economic elites: active cooperation and power sharing with resource users</i></p> <p>INDICATOR: The government supports and participates in co-management according to agreement with resource users on cooperation</p>	<p><i>Review of co-management agreement; discussions with key informants</i></p>	<p>Checklist Sample guide for focal groups / key informant discussion</p>	<p>Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p>
	<p><i>Review of co-management membership and protocols for member participation and representation on the co-management committee</i></p>	<p>Checklist</p>	<p>.....</p>
<p>CO-MANAGEMENT SYSTEM – INTERNAL FACTORS</p> <p>INDICATOR: Right to fish, to participate in management and to be a member of related organisations are agreed and clearly stated in co-management documentation</p>	<p><i>Review of co-management documentation</i></p>	<p>Checklist</p>	<p>Pomeroy, R.S. & Rivera-Guieb, R. 2006. Fisheries co-management: a practical handbook. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p>
	<p><i>GOOD PRACTICE: Conflict management mechanisms: existence of a mechanism to address conflict</i></p>		
	<p><i>Review of co-management documentation</i></p>	<p>.....</p>	<p>.....</p>
	<p><i>Review of incident reports and complaints to police, community leaders or other instances addressing conflicts</i></p>	<p>.....</p>	<p>.....</p>
<p><i>GOOD PRACTICE: Accountability: co-management conducted in an open and transparent manner</i></p>			

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
	INDICATOR: Decision-making by and leadership of the co-management system is transparent and documented in committee meeting minutes available to all co-management participants	<i>Review of co-management committee meeting minutes; questionnaire survey (perception)</i>	.....
	INDICATOR: There is an elected management committee representing resource users/user groups	<i>Review of protocols of the elections of co-management committee members</i>	.....
<i>GOOD PRACTICE: Leadership: existence of a singular individual with entrepreneurial skills, highly motivated, legitimate and respected as a local leader</i>			
	INDICATOR: A qualified local leader with entrepreneurial skills elected by local people to lead overall co-management activities	<i>Review of protocols of the elections of co-management committee members</i>	.....
	INDICATOR: A qualified local leader is properly working with fishers for sustainable fisheries and community livelihoods	<i>Questionnaire survey (perception); focus group discussions, observation</i>	.....
CO-MANAGEMENT SYSTEM – FEASIBILITY AND PERFORMANCE	<i>GOOD PRACTICE: Appropriate scale: scale may vary but should be appropriate to the area's ecology, people and level of management</i>		
	INDICATOR: The scale and the area of the co-managed fishery have been agreed through a participatory process with concerned stakeholders	<i>Review of co-management documentation; questionnaire survey (perception)</i>	.....
<i>GOOD PRACTICE: Clearly defined boundaries of the co-management system: The boundaries of the area to be co-managed are distinct so that the fishers have accurate knowledge of them.</i>			
	INDICATOR: Boundaries of the fishery to be co-managed have been demarcated, if a spatially defined area; or otherwise clearly described in co-management agreement	<i>Review of co-management documentation</i>	.....
<i>GOOD PRACTICE: Regular interaction : regular, active and participatory meetings of co-management partners to serve as a forum for discussion, power-sharing and trust building</i>			
	INDICATOR: Regular, active and participatory meetings of co-management participants are held	<i>Review of co-management meeting minutes; questionnaire survey (perception); observation of meetings</i>	.....

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
INDICATOR: There is representation of men and women at meetings and active participation by both men and women	<i>Review of co-management meeting minutes; questionnaire survey (perception); observation of meetings</i>	.....	.....
<i>GOOD PRACTICE: Adequate financial resources/budget: existence of a financial sustainability mechanism</i>			
INDICATOR: Funding is secured for at least one year	<i>Review of accounts and agreements with funder</i>	.....	.....
INDICATOR: There is a budget and identified sources of funding	<i>Review of financial records and reports</i>	.....	.....
<i>GOOD PRACTICE: Co-management plan: existence of a co-management plan developed and agreed by resource users / co-management participants through a participatory mechanism</i>			
INDICATOR: There is a co-management plan and it contains key provisions and clear goals and objectives	<i>Review of co-management plan</i>	.....	.....
INDICATOR: The co-management plan has been developed with the adequate participation of different stakeholders	<i>Documentation of co-management plan development process; perception survey</i>	.....	.....
INDICATOR: The co-management plan has been translated in the stakeholders' native languages	<i>Review of co-management plan</i>	.....	.....
INDICATOR: There is a gender perspective in the co-management plan	<i>Review of co-management plan</i>	.....	.....
<i>GOOD PRACTICE: Clear goals and objectives from a well-defined set of issues: clarity and simplicity of goals and objectives to steer the direction of co-management</i>			
INDICATOR: Clear and simple goals/objectives and indicators are defined in the co-management plan	<i>Review of co-management plan</i>	.....	.....
<i>GOOD PRACTICE: Knowledge of resource: resource is one of which stakeholders have a good knowledge and there is recognition of traditional knowledge</i>			
INDICATOR: Stakeholders have a good knowledge of resources	<i>Questionnaire survey, focus group discussions</i>	.....	.....

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
INDICATOR: Traditional knowledge is explicitly taken into account in management decision-making	<i>Review of discussion making documentation; focus group discussions</i>	.....	.....
<i>GOOD PRACTICE: Monitoring and evaluation: participatory, indicators, targets and baselines</i>			
INDICATOR: Monitoring and evaluation are conducted in a participatory way	<i>Questionnaire survey (perception)</i>	.....	.....
INDICATOR: Indicators, targets and baselines are defined in an monitoring and evaluation plan in the co-management plan	<i>Review of co-management plan</i>	.....	.....
<i>GOOD PRACTICE: Adaptive management: a focus on systematic learning-by-doing</i>			
INDICATOR: Adjustments to the co-management have taken place based on monitoring and evaluation results	<i>Review of co-management plan and committee meeting minutes</i>	.....	.....
<i>GOOD PRACTICE: Mutually beneficial alliances and networks: communication and connectedness among various resource user groups and stakeholders</i>			
INDICATOR: Networks and alliances among various user groups/stakeholders are in place	<i>Review of registered organizations and their memberships; questionnaire survey among stakeholders on their organizational memberships</i>	.....	.....
INDICATOR: Experiences and lessons learned are shared among various stakeholder groups	<i>Focus group discussions, questionnaire survey (perception)</i>	.....	.....
CO-MANAGEMENT SYSTEM – PARTICIPATION AND EQUITY	<i>GOOD PRACTICE: Participation by those affected: most individuals affected by co-management arrangements are included in the group that makes decisions about and can change the arrangements</i>		
	INDICATOR: Stakeholders affected by co-management arrangements and decisions are included in the co-management committee	<i>Review of co-management committee membership in comparison with stakeholder analysis (carried out under Step 1)</i>

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
INDICATOR: Co-management participants and committee members receive advance information before decision-making	<i>Focus group discussions; review of communications and meeting minutes</i>	.....	.....
<i>GOOD PRACTICE: Group/social cohesion: a high degree of homogeneity, in terms of kinship, ethnicity, norms, trust, religion or fishing gear type, among the resource users</i>			
INDICATOR: Co-management participants trust each other	<i>Questionnaire survey (perception)</i>	.....	.....
INDICATOR: The co-management committee members are representative of the ethnicity, religion etc of the resource users / co-management participants	<i>Review of co-management committee members</i>	.....	.....
INDICATOR: Members of the co-management system work well and make decisions together	<i>Review of co-management meeting minutes</i>	.....	.....
<i>GOOD PRACTICE: Empowerment, capacity building and social preparation: activities for individual and resource user group empowerment and skills development to actively participate in co-management</i>			
INDICATOR: There are active skill development programs for enhancing capacity building for fishers to participate in co-management activities at community level.	<i>Review of activity programme</i>	.....	.....
INDICATOR: There is a basic understanding among participants about the purpose and operation of the co-management system	<i>Questionnaire survey</i>	.....	.....
<i>GOOD PRACTICE: Coordination: forum for cooperation between government and resource users</i>			
INDICATOR: A forum for coordination and cooperation of government and resource users is operational	<i>Review of institutional structures and meeting minutes</i>	.....	.....
INDICATOR: There are regular meetings between government and resource users	<i>Review of meeting minutes</i>	.....	.....
<i>GOOD PRACTICE: Community organizations: existence of a legitimate (as recognized by the local people) community or people's organization for representing resource users and other stakeholders in decision-making</i>			

Best practice & indicator	Examples of approaches for measuring indicators	Suggest tools	Suggested resources
INDICATOR: A legitimate (as recognized by the local people) organization representing resource users and other stakeholders in decision-making is in place	<i>Review of institutional structures and meeting minutes; questionnaire survey (perception)</i>	.....	.....
INDICATOR: A legitimate (as recognized by the government) organization representing resource users and other stakeholders in decision-making is in place	<i>Review of institutional structures and meeting minutes; questionnaire survey (perception)</i>	.....	.....
<i>GOOD PRACTICE: Equity: equal opportunity and fair access to the fishery among the various resource users and between different user groups</i>			
INDICATOR: Different resource user groups have equal opportunities to participate in and benefit from the co-management system	<i>Questionnaire survey; focal group discussions (perceptions)</i>	.....	.....
<i>GOOD PRACTICE: Inclusiveness: recognition and involvement of different resource users and community members, including youth, women, indigenous people and others with a stake in the future of the fishery</i>			
INDICATOR: Different legitimate resource user groups, including youth, women, and indigenous people, are recognized as stakeholders in the co-management and have equal opportunities to participate in the co-management arrangement	<i>Questionnaire survey; focal group discussions; questionnaire survey (perception)</i>	.....	.....
<i>GOOD PRACTICE: Congruence: scale and scope of rules are appropriate to local conditions</i>			
CO-MANAGEMENT SYSTEM – RULE OF LAW INDICATOR: There are rules and regulations for fisheries management	<i>Review co-management plan</i>	.....	.....
INDICATOR: Scale and scope of rules and regulations fit local conditions are well defined in a participatory way	<i>Review of co-management plan; focus group discussions</i>	.....	.....
<i>GOOD PRACTICE: Management rules enforced: self-enforcement system of penalties imposed by strong operational rules designed, enforced and controlled by local users</i>			
INDICATOR: Self-enforcement system of penalties is designed by resource users / co-management participants	<i>Review of documentation on enforcement system; focal group discussions</i>	.....	.....

Best practice & indicator		Examples of approaches for measuring indicators	Suggest tools	Suggested resources
	INDICATOR: There is an active patrolling and enforcement mechanism in place and operational	<i>Review of documentation on enforcement system; focal group discussions</i>	.....	.....
<i>GOOD PRACTICE: Graduated sanctions: sanctions increase with the number or the severity of offences</i>				
	INDICATOR: Sanctions are proportional to the number or severity of offences	<i>Review of documentation of sanctions; questionnaire survey (perception)</i>	.....	.....
<i>GOOD PRACTICE: Individual incentive structure: individual incentive structure (economic, social, political) that induces individuals to participate in co-management</i>				
	INDICATOR: Individuals have incentives (economic, social, political) to participate in co-management	<i>Questionnaire survey (perception); focal group discussions</i>	.....	.....
	INDICATOR: Incentives from government are available for individuals and stakeholder groups to positively participate in co-management	<i>Review of government programmes; questionnaire survey</i>	.....	.....

Table 4. Tools for the Assessment sheet for the evaluation of achievement of goals and objectives of the fisheries co-management plan

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources
SOCIAL GOALS AND OBJECTIVES (examples include benefits from fisheries equitably distributed; compatibility between management and local culture maximized; environmental awareness and knowledge enhanced)			
INDICATOR: The co-management approach and measures represent the range of interests of different stakeholders and accommodates the full diversity of those interests	Review of management plan document; questionnaire survey (perception)	.....	.....
INDICATOR: Equitable management that represents the range of interests of stakeholders and accommodates the full diversity of those interests	Questionnaire survey (perceptions)	.....	.....
INDICATOR: Indigenous and local knowledge is explicitly reflected in the fisheries co-management plan	Review of management plan document; questionnaire survey (perception)	.....	.....
INDICATOR: There is support for co-management among different stakeholder groups	Questionnaire survey (perceptions) among stakeholder groups identified in the stakeholder analysis (carried out in evaluation Step 1)	.....	.....

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources
INDICATOR: Diversity of gender, youth and ethnicity aspects have been integrated in the co-management committee.	Review co-management committee composition and the roles/powers of different members	.....	.....
INDICATOR: Tenure and access rights are fairly allocated	Review of government agreement and tenure arrangements; questionnaire survey (perception) among different resource users along the value chain	.....	.....
INDICATOR: Social learning (collective knowledge, shared values) is enhanced	Questionnaire survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	.....	.....
INDICATOR: Local values and beliefs about marine resources are enhanced	Questionnaire survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	.....	.....
INDICATOR: The co-management provides benefits (economic, social) to stakeholders	Questionnaire survey (perception) covering different stakeholder groups (including, women, youth, vulnerable groups)	.....	.....
<i>ECONOMIC GOALS AND OBJECTIVES (examples include livelihoods enhanced or maintained; food security and nutrition enhanced or maintained; increased incomes)</i>			
INDICATOR: Seafood availability has increased at household/community/market levels	<i>Observation; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Benefits of operating and maintaining co-management arrangements exceed the costs	<i>Financial analysis based on co-management accounts</i>	.....	.....
INDICATOR: There are incentives for stakeholders to support co-management	<i>Questionnaire survey (perception); focal group discussions</i>	.....	.....
INDICATOR: Co-management has benefited stakeholders economically	<i>Questionnaire survey</i>	.....	.....
INDICATOR: Fish catches have improved overall in the co-managed fishery or area	<i>Catch and landings data survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources
INDICATOR: Co-management participants have a higher level of material lifestyle (housing, household goods etc)	<i>Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Number of sick days among co-management participants have decreased	<i>Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Incomes/benefits are fairly distributed between men and women	<i>Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
<i>ECOLOGICAL GOALS AND OBJECTIVES (examples include fisheries resources exploited at sustainable levels; resilient ecosystems secure multiple services to local communities; essential fish habitats well protected)</i>			
INDICATOR: Abundance of key focal species has increased	<i>Observations (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Fish catches have improved overall in the co-managed fishery or area	<i>Catch and landings data survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Previously destroyed habitats show signs of recovery	<i>Observations (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)</i>	.....	.....
INDICATOR: Management measures for fisheries management are appropriate and operational	<i>Review co-management plan (fisheries management plan); focal group discussions</i>	.....	.....
INDICATOR: The ecosystem approach to fisheries (EAF) is an integral part of the fisheries management plan	<i>Review co-management plan (fisheries management plan)</i>	.....	.....
INDICATOR: Resource users/co-management participants take an active role in monitoring compliance with agreed regulations	<i>Review of compliance/enforcement arrangements (documentation in co-management plan, existing institutional structures)</i>	.....	.....
<i>GOVERNANCE GOALS AND OBJECTIVES (examples include effective co-management structures and strategies maintained; effective stakeholder participation and representation ensured; resource use conflicts managed and reduced)</i>			

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources
INDICATOR: Effective co-management institutions (committee, administrative team) and related important structures (professional organizations) are in place and functional	<i>Review of co-management documentation (meeting minutes etc.); focal group discussions; questionnaire survey (perception)</i>	.....	.....
INDICATOR: There is a co-management plan and it contains key provisions and clear goals and objectives	<i>Review of co-management plan</i>	.....	.....
INDICATOR: The degree of legitimacy of the management system with stakeholders increased	<i>Focal group discussions; questionnaire survey (perception)</i>	.....	.....
INDICATOR: Decision-making is transparent to all stakeholders	<i>Focal group discussions; questionnaire survey (perception)</i>	.....	.....
INDICATOR: All main stakeholders are empowered and capable to actively participate in decision-making	<i>Focal group discussions; questionnaire survey (perception)</i>	.....	.....
INDICATOR: Conflict management mechanism is in place and documented	<i>Review of co-management documentation</i>	.....	.....
INDICATOR: Conflict management mechanism is contributing to reducing the number of conflicts between different resource user groups / stakeholders	<i>Review of incident reports and complaints to police, community leaders or other instances addressing conflicts</i>	.....	.....
INDICATOR: Self-enforcement system of penalties is designed by resource users / co-management participants	<i>Review of documentation on enforcement system; focal group discussions</i>	.....	.....
INDICATOR: Networks and alliances among various user groups/stakeholders are in place	<i>Review of registered organizations and their memberships; questionnaire survey among stakeholders on their organizational memberships</i>	.....	.....
INDICATOR: Different legitimate resource user groups, including youth, women, and indigenous people, are recognized as stakeholders in the co-management and have equal opportunities to participate in the co-management arrangement	<i>Questionnaire survey; focal group discussions; questionnaire survey (perception)</i>	.....	.....
INDICATOR: There is a formal legal framework regulating fisheries co-management	<i>Review of legislation; questionnaire survey (perception)</i>	.....	.....

APPENDIX 5: TOOLS FOR A GUIDEBOOK FOR EVALUATING FISHERIES CO-MANAGEMENT EFFECTIVENESS

All inputs on suggested tools and resources along with the recommendations received from the experts through the homework and during the plenary discussions are highlighted in **bold font** in the below table. The purpose was to report all inputs received and recommendations expressed by all the experts.

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
4.2.1	Evaluation process Step 1: Planning	Task 1.1: Develop a workplan, timeline and budget for the evaluation	<p>Templates for workplan and budget</p> <p>Visual aids for workplan (flowchart, step mapping, etc.)</p> <p>Software-assisted timeline and project management</p> <p>Standard Excel budget worksheet</p>	<p>FAO. 2015. <i>Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication</i>. Rome, FAO.</p> <p>United Nations Development Group (UNSDG). 2011. <i>Results-based Management Handbook</i>.</p> <p>United Nations Development Programme (UNDP). 2009. <i>Handbook on Planning, Monitoring and Evaluating for Development Results</i>.</p> <p>Görgens, M. & Kusek, J. Z. 2009. <i>Making Monitoring and Evaluation Systems Work: A Capacity Development Toolkit</i>. World Bank.</p> <p>Chambers, R. 2002. <i>Participatory workshops: a sourcebook of 21 sets of ideas and activities</i>. Earthscan Publications Ltd. London, United Kingdom.</p>	<p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p>
4.2.1	Evaluation process Step 1: Planning	Task 1.2: Clarify the purpose and scope and scale of the evaluation	ToRs templates for evaluation	<p>UNSDG. 2011. <i>Results-based Management Handbook</i>.</p> <p>UNDP. 2009. <i>Handbook on Planning, Monitoring and Evaluating for Development Results</i>.</p> <p>Görgens, M. & Kusek, J. Z. 2009. <i>Making Monitoring and Evaluation Systems Work: A Capacity Development Toolkit</i>. World Bank.</p>	<p>Highlight that co-management as a governance process is being evaluated, not the entirety of fishery management</p> <p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p> <p>Include examples of different evaluation contexts and their impact on scope and scale</p>

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
4.2.1	Evaluation process Step 1: Planning	Task 1.3: Establish the evaluation team	Templates on team members with skills, role and responsibility ToRs for evaluation team members	UNSDG. 2011. <i>Results-based Management Handbook</i>. UNDP. 2009. <i>Handbook on Planning, Monitoring and Evaluating for Development Results</i>. Görgens, M. & Kusek, J. Z. 2009. <i>Making Monitoring and Evaluation Systems Work: A Capacity Development Toolkit</i>. World Bank.	Add tools ensuring gender, indigenous people, right-holders and stakeholders balance Consider that in a participatory process of evaluation the team may include stakeholders
4.2.1	Evaluation process Step 1: Planning	Task 1.4: Obtain approvals Rephrase task 1.4 as follows: “Comply with rights”	Templates to list different approvals needed, contacts and responsible person [addendum] based on the requirements of local institutions and legislations, and formal/informal agreements with stakeholders Memos on having consultation process and using traditional knowledge (TK) as the principle of Free, Prior and Informed Consent (FPIC)	United Nations (UN). 2007. <i>Article 8(j) - Traditional Knowledge, Innovations and Practices of the Convention on Biological Diversity (CBD)</i>. In <i>United Nations Declaration on the Rights of Indigenous Peoples</i>.	Add tools ensuring gender, indigenous people, right-holders and stakeholders balance Potentiate correct information gathering and inclusion of traditional knowledge.
4.2.1	Evaluation process Step 1:	Task 1.5: Carry out a stakeholder analysis	How to do a stakeholder analysis	International Institute of Rural Reconstruction. 1998. <i>Participatory Methods in Community-based Coastal Resource Management</i> . 3 volumes. Silang, Cavite, The Philippines.	Add tools ensuring gender, indigenous people, right-holders and stakeholders balance

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
	Planning		<p>[addendum] with visual aids/tutorials</p> <p>[addendum] participatory methods with local stakeholders, e.g. Venn diagramming of stakeholder influence and interests, SWOT analysis of fisheries with key informants</p> <p>Actor analysis, e.g.</p>	<p>Grimble, R. & Chan, M.K. 1995. Stakeholder analysis for natural resource management in developing countries. <i>Natural Resources Forum</i>, 19(2): 113–124.</p> <p>Townsley, P. 1998. <i>Social Issues in Fisheries</i>. FAO Fisheries Technical Paper No. 375. Rome, FAO.</p> <p>FAO 2011. <i>EAF planning and implementation tools. Stakeholder Analysis</i>. EAF Tool fact sheets. Text by Adapted by EAF Toolbox Team based on FAO (2009). Rome.</p> <p>UNDP. 2009. <i>Handbook on Planning, Monitoring and Evaluating for Development Results</i>.</p> <p>Chevalier, J.M. 2001. <i>Stakeholder analysis and natural resource management</i>. Carleton University, Ottawa.</p>	<p>Synthesize the reference materials to make accessible to diverse users</p> <p>Add references to power relationships in SSF and to indigenous people’s culture</p> <p>Stress that stakeholders may be also part of the evaluation process</p>
4.2.1	Evaluation process Step 1: Planning	Task 1.6: Plan for a stakeholder participation	<p>How to do a stakeholder engagement plan</p> <p>Templates for the design of mobilization meetings</p> <p>Templates to list the standard roles and responsibilities of different stakeholders</p>	<p>UNDP. 2020. <i>Stakeholder Engagement. Guidance Note</i>. UNDP Social and Environmental Standards (SES)</p>	<p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p> <p>Include examples of different evaluation contexts and their impact on scope and scale</p>
4.2.1	Evaluation process Step 1: Planning	Task 1.7: Determine the audience(s) who will receive the evaluation results and develop a	<p>How to develop a communication* plan</p> <p>*[addendum] strategy and</p>	<p>FAO. 2011. <i>Food Security Communications Toolkit</i>. Rome.</p>	<p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p> <p>Cite social behaviour change communications (SBCC) approach</p>

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
		communication plan			<p>Add references to communication plan for smaller exercises</p> <p>Develop a list of communication tools, including templates, examples and potential target beneficiaries for each tool</p> <p>Look among the existing civil society organization (CSO) communication toolkits</p>
4.2.1	Evaluation process Step 1: Planning	Task 1.8: Identify key criteria for the evaluation of the fisheries co-management system	Benchmarking analysis	<p>d'Armengol, L., Castillo Prieto, M., Ruiz-Mallén, I. & Corbera, E. 2018. A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. <i>Global Environmental Change</i>, 52: 212–225.</p> <p>Evans, L., Cherrett, N. & Pems, D. 2011. Assessing the impact of fisheries co-management interventions in developing countries: a meta-analysis. <i>J Environ Manage</i>, 92: 1938–1949.</p> <p>Gutiérrez, N.L., Hilborn, R. & Defeo, O. 2011. Leadership, social capital and incentives promote successful fisheries. <i>Nature</i>, 470: 386–389.</p> <p>Pomeroy, R.S., Cinner, J. & Nielsen, J.R. 2011. Conditions for successful co-management: lessons learned in Asia, Africa, the Pacific and the wider Caribbean. <i>In: Pomeroy, R.S. & Andrew, N. (Eds.) Small-scale fisheries management: frameworks and approaches for the developing world. Chapter 7.</i> CABI Publishing, Oxfordshire, UK and Cambridge, MA, USA.</p> <p>Pomeroy, R.S., Katon, B.M. & Harkes, I. 2001. Conditions Affecting the Success of Fisheries Co-management: Lessons from Asia. <i>Marine Policy</i>, 25(3): 197–208.</p> <p>Pomeroy, R.S., Pollnac, R.B., Katon, B.M. & Predo, C.D. 1997. Evaluating Factors Contributing to the Success of Community-Based Coastal Resource Management: the Central Visayas Regional Project-1, Philippines. <i>Ocean and Coastal</i></p>	<p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p> <p>Add tools for basic comparative level of effectiveness evaluation criteria through time and across participating geographies, e.g. guidance on simple, standardized pre-test/post-test (i.e., baseline/pre-implementation versus every 2-3 years following implementation)</p> <p>Agree on a citable period for the references</p>

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
				<p><i>Management</i>, 36(1–3): 97–12.</p> <p>Tamura, M., Ishida, M., Sidman, C., Montes, N. and Lorenzen, K. 2018. Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience. Japan International Cooperation Agency & Florida Sea Grant, University of Florida.</p>	
4.2.1	Evaluation process Step 1: Planning	Task 1.9: Locate the fisheries co-management plan	<p>Templates for fisheries co-management plan</p> <p>Templates of charter for co-management bodies</p> <p>ToRs of co-management actors (e.g. fishery associations, cooperatives, beach management units)</p>	<p>Takahashi, B. & van Duijn, A. P. 2012. <i>Operationalizing fisheries co-management: lessons learned from lagoon fisheries co-management in Thua Thien Hue Province, Viet Nam</i>. FAO Regional Office for Asia and the Pacific.</p> <p>Rivera, V. S., Borrás, M. F. & Quesada, R. C. 2014. <i>Cabuya: Un pueblo con mar a la par de una Reserva</i>. San José, CoopeSoliDar R.L.</p> <p>Rivera, V. S., Fonseca, M. & Cubillo, R. 2015. <i>Dominicalito. Un pueblo de pesca artesanal en el Sur que despierta: de la resistencia a la incidencia</i>. San José, CoopeSoliDar R.L.</p> <p>Rivera, V. S., Borrás, M. F. & Seager, J. 20 . <i>Tárcoles +5 Línea de Base de la Comunidad de Tárcoles</i>. CoopeSoliDar R.L.</p>	<p>Add tools ensuring gender, indigenous people, right-holders and stakeholders balance</p> <p>Add references providing examples of baseline</p> <p>Clarify if the purpose is to list fisheries co-management plans covering a span of areas, types of fisheries and socio-ecological systems</p> <p>Also other documents concerning the fisheries ex. base lines information on the fisheries, policies etc.</p> <p>Add references providing examples of baseline</p> <p>Clarify if the plan will lead to setting up the co-management process that may be helpful to allow evaluators to understand how the co-management process works, e.g. how many meetings per year, who is invited. If it is a plan developed through co-management about how to do fishery management (e.g. whether to use nets or traps) that</p>

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
					may not be useful in evaluating the co-management system
4.2.1	Evaluation process Step 1: Planning	Task 1.10: Select the indicators	Selection and/or adaptation of indicators in the list in Table 3 and Table 4 below	Mosse, R. & Sontheimer, L. E. 1996. <i>Performance monitoring indicators handbook</i> (English). World Bank technical paper no. WTP 334 Washington, D.C.: World Bank Group. Hammond, A., Adriaanse, A., Rodenburg, E., Bryant, D., & Woodward, R.T. 1995. <i>Environmental Indicators: A Systematic Approach to Measuring and Reporting on Environmental Policy Performance in the Context of Sustainable Development</i> . World Resources Institute.	
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: METHODS	Methods Flowchart for data collection steps (e.g. location of information, retrieval of secondary data documents, data selection, data need assessment)	English, S., Wilkinson, C. & Baker, V. 1997. <i>Survey Manual for Tropical Marine Resources Townsville, Australia</i> . Australian Institute of Marine Science. Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia</i> . Australian Institute of Marine Science. UNDP. 2009. <i>Handbook on Planning, Monitoring and Evaluating for Development Results</i>. Görgens, M. & Kusek, J. Z. 2009. <i>Making Monitoring and Evaluation Systems Work: A Capacity Development Toolkit</i> . World Bank.	Create a minimum recommended set of methods to be used Create a list of simpler versus more advanced methods Specify the methods Create a guidance to select methods with pros and cons Include disaggregation of interest for each indicator Create a generic list of major references to be used because this is a preliminary step to design the operational procedure
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: SAMPLING	General advice on sampling methods Develop visual aids for sampling methods, with examples	Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia</i> . Australian Institute of Marine Science. FAO. 1989. <i>Sampling method for agricultural surveys</i> . Rome. Cadima, EX., Caramelo, A.M., Afonso-Dias, M., Conte de Barros, P., Tandstad, M.O. & de Leiva-Moreno, J.I. 2005. <i>Sampling methods applied to fisheries science: a manual</i> . FAO Fisheries Technical Paper. No. 434. Rome, FAO.	

Guidebook			Suggested tools	Suggested resources	Recommendations*
Section	Title	Topic			
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: DATA RECORDING	Advice on data recording, including cleaning, verifying etc. Templates for database for data storage and retrieval GIS-based database	Bunce, L., Townsley, P. Pomeroy, R. & Pollnac, R. 2000. <i>Socioeconomic Manual for Coral Reef Management. Townsville, Australia.</i> Australian Institute of Marine Science.	Create a list pros and cons for of data recording collected digitally (via handheld) versus paper/pen/clipboard Add community participation in mapping and data collection Stress the importance of updating information in a timely manner
4.2.1	Evaluation process Step 1: Planning	Task 1.11: Assess what methods and resources are needed for carrying out the evaluation: WORK PLAN AND BUDGET	Templates for workplan and budget	CoopeSoliDar R.L. 2013. <u>Indicadores</u> para el seguimiento y evaluación de Áreas Marinas de Pesca Responsable. CoopeSoliDar R.L. 2013. Fortaleciendo la <u>gubernaza</u> marina desde las comunidades de pesca artesanal: Áreas marinas de pesca responsable y la vision desde sus protagonistas en el mar.	Verify the redundancy with Task 1.1

* The recommendations may have been made by one or more experts.

APPENDIX 6: SUGGESTED REFERENCES FOR FISHERIES CO-MANAGEMENT GOOD PRACTICES AND PROCESSES

All inputs on suggested resources along with the recommendations received from the experts through the homework and during the plenary discussions are highlighted in **bold font** in the below table. The purpose was to report all inputs received and recommendations expressed by all the experts.

Guidebook			Suggested resources	Recommendations*
Section	Title	Topic		
2.2	Fisheries co-management good practices	Enabling environment good practices	<p>d'Armengol, L., Castillo Prieto, M., Ruiz-Mallén, I. & Corbera, E. 2018. A systematic review of co-managed small-scale fisheries: Social diversity and adaptive management improve outcomes. <i>Global Environmental Change</i>, 52: 212–225.</p> <p>Evans, L., Cherrett, N. & Pems, D. 2011. Assessing the impact of fisheries co-management interventions in developing countries: a meta-analysis. <i>J Environ Manage</i>, 92: 1938–1949.</p> <p>Gutiérrez, N.L., Hilborn, R. & Defeo, O. 2011. Leadership, social capital and incentives promote successful fisheries. <i>Nature</i>, 470: 386–389.</p> <p>Pomeroy, R.S., Cinner, J. & Nielsen, J.R. 2011. Conditions for successful co-management: lessons learned in Asia, Africa, the Pacific and the wider Caribbean. <i>In: Pomeroy, R.S. & Andrew, N. (Eds.) Small-scale fisheries management: frameworks and approaches for the developing world, Chapter 7.</i> CABI Publishing, Oxfordshire, UK and Cambridge, MA, USA.</p> <p>Pomeroy, R.S., Katon, B.M. & Harkes, I. 2001. Conditions Affecting the Success of Fisheries Co-management: Lessons from Asia. <i>Marine Policy</i>, 25(3): 197–208.</p> <p>Pomeroy, R.S., Pollnac, R.B., Katon, B.M. & Predo, C.D. 1997. Evaluating Factors Contributing to the Success of Community-Based Coastal Resource Management: the Central Visayas Regional Project-1, Philippines. <i>Ocean and Coastal Management</i>, 36(1–3): 97–12.</p> <p>Tamura, M., Ishida, M., Sidman, C., Montes, N. and Lorenzen, K. 2018. <i>Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience.</i> Japan International Cooperation Agency & Florida Sea Grant, University of Florida.</p> <p>Cowie, W., Al Dhaheri, S., Al Hashmi, A., Solis-Rivera, V., Baigun, C., Chang, K., Cooney, R., Kamaka'ala, S., Lindeman, K., Louwa, C., Roe, D., Walker-Painemilla, K., Al Baharna, R., Al Ameri, M., Al Hameli, S.,</p>	<p>Sort references by broad categories as in the Guidebook</p> <p>Suggest adding links to relevant sections in the suggested publications</p>

Guidebook		Suggested resources	Recommendations*
Section	Title			Topic
		<p>Al Jaberi, K., Alzahlawi, N, Binkulaib, R. & Al Kharusi, Y. 2020. <i>IUCN Guidelines for gathering of fishers' knowledge for policy development and applied use</i>. IUCN, Gland, Switzerland; and Environment Agency – Abu Dhabi, United Arab Emirates.</p> <p>Ogwang, V., Medard, M., Kilosa, E., Nyeko, J. I. & Bakunda, A. 2005. <i>Guidelines for beach management units (BMUs) on Lake Victoria</i>. Report East African Community - Lake Victoria Fisheries Organizations.</p> <p>Charles, A. 2018. Meaningful partnerships in meaningful ocean governance. In: International Ocean Institute - Canada; Werle, D., Boudreau, P.R., Brooks, M.R., Butler, M.J.A., Charles, A., Coffen-Smout, S., Griffiths, D., McAllister, I., McConnell, M.L., Porter, I., Rolston, S.J. & Wells, P.G., eds. <i>The Future of Ocean Governance and Capacity Development: Essays in Honor of Elisabeth Mann Borgese (1918-2002)</i>. Brill Nijhoff. Leiden, Netherlands/Boston, USA. pp. 24–29.</p> <p>Alexander, S., Armitage, D. & Charles, A. 2015. Social networks and transitions to co-management in Jamaican marine reserves and small-scale fisheries. <i>Global Environmental Change</i>, 35:213–225.</p> <p>Nasuchon, N. & A. Charles. 2010. Community involvement in fisheries management: Experiences in the Gulf of Thailand countries. <i>Marine Policy</i>, 34:163–169.</p> <p>Charles, A. 2009. Rights-based fisheries management: The role of use rights in managing access and harvesting,. In: Cochrane K.L. & Garcia S.M., eds. <i>A Fishery Manager's Guidebook</i>. pp. 253–282. Wiley-Blackwell. Oxford, UK.</p> <p>Charles, A. 2013. Governance of tenure in small-scale fisheries: Key considerations. <i>Land Tenure Journal</i>, 1:9–37.</p> <p>Capistrano, R.C. & Charles, A. 2012. Indigenous rights and coastal fisheries: A framework of livelihoods, rights and equity. <i>Ocean & Coastal Management</i>, 69:200–209.</p> <p>Garcia, S.M., Rice, J. & Charles, A. 2014. <i>Governance of Marine Fisheries and Biodiversity Conservation: Interaction and Co-evolution</i>. Wiley-Blackwell. Oxford, U.K.</p>	

Guidebook			Suggested resources	Recommendations*
Section	Title	Topic		
			<p>Charles, A. 2011. Human Rights and Fishery Rights in Small-scale Fisheries Management. In R.S. Pomeroy and N.L. Andrew, editors. <i>Small Scale Fisheries Management</i> . pp. 59–74. CAB International.</p>	
2.3	Generic model of fisheries co-management	Fisheries co-management process	<p>Pomeroy, R.S. & Rivera-Guieb, R. 2006. <i>Fisheries co-management: a practical handbook</i>. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p> <p>Watt, P. 2001. <i>A manual for the co-management of commercial fisheries in the Pacific</i>. Secretariat of the Pacific Community.</p> <p>Tamura, M., Ishida, M., Sidman, C., Montes, N. & Lorenzen, K. 2018. <i>Facilitating Co-managed Fisheries in the Caribbean Region: Good Practices and Guidance from the CARIFICO Experience</i>. Japan International Cooperation Agency & Florida Sea Grant, University of Florida.</p> <p>Secretariat of the Pacific Community. 2010. <i>A community-based ecosystem approach to fisheries management: Guidelines for Pacific Island Countries</i>. Noumea, New Caledonia.</p> <p>Graham, J., Charles, A. & A. Bull. 2006. <i>Community-Fisheries Management Handbook. A publication of Turning the Tide: Communities Managing Fisheries Together</i>. Gorsebrook Research Institute, Saint Mary's University. Halifax, Canada.</p> <p>Léopold, M., Thébaud, O. & Charles, A. 2019. The dynamics of institutional innovation: Crafting co-management in small-scale fisheries through action research. <i>Journal of Environmental Management</i>, 237:187–199.</p> <p>Charles, A., Loucks, L., Berkes, F. & Armitage, D. 2020. Community science: A typology and its implications for governance of social-ecological systems. <i>Environmental Science & Policy</i>, 106:77–86.</p> <p>Castrejón, M. & Charles, A. 2012. Improving Fisheries Co-management through Ecosystem-based Spatial Management: The Galapagos Marine Reserve. <i>Marine Policy</i>, 38:235–245.</p> <p>Takahashi, B. & van Duijn, A. P. 2012. <i>Operationalizing fisheries co-management: lessons learned from lagoon fisheries co-management in</i></p>	

Guidebook			Suggested resources	Recommendations*
Section	Title	Topic		
			<i>Thua Thien Hue Province, Viet Nam. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2012/02.</i>	
4	The fisheries co-management effectiveness evaluation process	Management effectiveness evaluation	<p>Hocking, M., Stolton, S. & Dudley, N. 2000. <i>Evaluating Effectiveness: A Framework for Assessing the Management of Protected Areas</i>. IUCN, Gland, Switzerland and Cambridge, UK.</p> <p>Pomeroy, R.S., Parks, J.E. & Watson, L.M. 2004. <i>How is your MPA doing? A Guidebook of Natural and Social Indicators for Evaluating Marine Protected Area Management Effectiveness</i>. IUCN, Gland, Switzerland and Cambridge, UK.</p> <p>Geldmann, J., Deguignet, M., Balmford, A., Burgess, N.D., Dudley, N.; Hockings, M., Kingston, N., Klimmek, H., Lewis, A.H., Rahbek, C., Stolton, S., Vincent, C., Wells, S., Woodley, S. & Watson, J.E. 2021. Essential Indicators for Measuring Area-Based Conservation Effectiveness in the Post-2020 Global Biodiversity Framework. <i>Conservation Letters</i>.</p> <p>Tempesta, M. & Otero, M. 2013. <i>Guide for quick evaluation of Management in Mediterranean MPAs</i>. WWF Italy, IUCN.</p> <p>Helen E. Fox, Jed L. Holtzman, Kelly M. Haisfield, Catherine G. McNally, Gonzalo A. Cid, Michael B. Mascia, John E. Parks & Robert S. Pomeroy. 2014. How Are Our MPAs Doing? Challenges in Assessing Global Patterns in Marine Protected Area Performance. <i>Coastal Management</i>, 42:3, 207–226.</p> <p>Boyd, H. & Charles, A. 2006. Creating community-based indicators to monitor sustainability of local fisheries. <i>Ocean and Coastal Management</i>, 49:237–258.</p>	

* The recommendations may have been made by one or more experts.

APPENDIX 7: TOOLS FOR THE ASSESSMENT SHEET FOR THE EVALUATION OF THE DESIGN AND PERFORMANCE OF THE FISHERIES CO-MANAGEMENT SYSTEM

All inputs on best practices, indicators, examples of approaches for measuring the indicators, suggested tools and resources along with the recommendations received from the experts through the homework and during the plenary discussions are highlighted in **bold font** in the below table. The purpose was to report all inputs received and recommendations expressed by all the experts.

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">ENABLING ENVIRONMENT – EXTERNAL FACTORS</p>	<p><i>GOOD PRACTICE: Enabling policies and legislation for fisheries co-management: supportive legislation, policies, rights and authority structures are in place</i></p> <p>INDICATOR: The legal framework gives the resource users, and their representatives,* a clear role in developing and implementing a fisheries co-management plan *[addendum] an equitable and</p>	<p>Review of legislation; questionnaire survey (perception)</p> <p>Interviews and consultations with local institutions</p>	<p>Examples of relevant language used in legislation</p> <p>Template of annotated listing of articles and decisions supporting the implementation of a co-management system</p>	<p><i>Environmental Law Institute. 2020. Law and Governance Toolkit for Sustainable Small-Scale Fisheries: Best Regulatory Practices. Washington, D.C.</i></p> <p>People’s Committee of Thua Thien Hue Province (PPC). 2006. <i>Guidelines 159/HD-STs of April 26, 2006, of the People’s Committee of Thua Thien Hue Province on the implementation of management regulation of aquatic exploitation in the lagoon of Thua Thien Hue Province.</i></p> <p>People’s Committee of Thua Thien Hue Province (PPC). <i>Decision No. 4260/2005/QD-UBND on promulgating the regulations on the</i></p>

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
<p>INDICATOR: A co-management agreement has been signed and approved between government and resource users/community</p> <p>Rephrase as quantitative indicator: “number of co-management agreements that have been signed and approved between government and resource users/community”. In addition to providing information on whether co-management agreements are being put into action, it would give insights on the frequency and perhaps even the scope of their use</p>	<p>Review of co-management agreement,*</p> <p>*[addendum] or arrangements agreed by involved parties to constitute co-management</p>	<p>Checklist</p> <p>Examples of co-management agreements</p>	<p><i>management of lagoon fisheries in Thua Thien Hue.</i></p> <p>Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p>	<p>Define what qualifies as an "agreement" so that the users better understand what to look for</p> <p>Clarify if policies, decrees, and ordinances can be considered "agreements"</p>
				<p>Clarify if "fairness" includes accountability and/or transparency regarding rights and allocations</p> <p>Add an indicator to assess the degree to which existing tenure arrangements and access rights have been adequately integrated/reflected within the co-management agreement</p>

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: Tenure and access rights are fairly allocated	Review of government agreement and tenure arrangements; questionnaire survey (perception) among different resource users along the value chain Focus group discussion among resource user groups Consultations with professional associations of resource users	Guide questions to probe ‘fairness’ Examples of fishing rights allocation documents Examples of Territorial Use Rights for Fishing (TURF) implementation and water surface area demarcation	Takahashi, B. & van Duijn, A. P. 2012. <i>Operationalizing fisheries co-management: Lessons learned from lagoon fisheries co-management in Thua Thien Hue Province, Viet Nam</i>. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2012/02	Have more specific and objective wording in place of the word “fairly” Include sub-questions on accountability, transparency of decision-making, and gender and indigenous equity
INDICATOR: All stakeholders have access to information on the tenure rights and resource allocation criteria and processes	Review of existing (legal) documentation and how it can be accessed; questionnaire survey Stakeholders consultations Standardized semi-structured questionnaire as part of key informant survey, supported through focus group discussions	Stakeholders meeting minutes documenting the stance and awareness of each group		
<i>GOOD PRACTICE: Authority of government on the right to organize and make management rules: resource users have legal right to organize and make rules</i>				
INDICATOR: There are legal provisions for resource users to organize and register formal organizations	Review of legislation and procedures for registering an organization	Examples of relevant legal language Listing of laws, specific articles and clauses enabling the registration of professional fishers’ organizations or cooperatives, with their chronology and annotations	Environmental Law Institute. 2020. <i>Law and Governance Toolkit for Sustainable Small-Scale Fisheries: Best Regulatory Practices</i>. Washington, D.C. People’s Committee of Thua Thien Hue Province (PPC). 2006. <i>Guidelines 159/HD-STS of April 26, 2006, of the People’s</i>	

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
			<p><i>Committee of Thua Thien Hue Province on the implementation of management regulation of aquatic exploitation in the lagoon of Thua Thien Hue Province.</i></p> <p>People's Committee of Thua Thien Hue Province (PPC). Decision No. 4260/2005/QD-UBND on promulgating the regulations on the management of lagoon fisheries in Thua Thien Hue.</p>	
<p>INDICATOR: Co-management responsibilities have been formally delegated to the co-management committee</p>	<p>Review of co-management agreement; discussions with key informant</p> <p>Review of the charters of professional fishers' organizations</p> <p>Review of TORs of co-management committee partners, co-management bodies, professional organizations and executive boards</p>	<p>Checklist</p> <p>Examples of relevant legal language</p> <p>Listing of specific articles/clauses formalizing roles and responsibilities of the co-management parties</p>	<p>Pomeroy, R.S. & Rivera-Guib, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook. CAB International, Rome and International Development Research Centre, Ottawa, Canada.</p>	<p>Define what qualifies as an "agreement" so that the users better understand what to look for</p> <p>Clarify if policies, decrees, and ordinances can be considered "agreements"</p>
<p><i>GOOD PRACTICE: Support of government and political/economic elites: active cooperation and power sharing with resource users</i></p>				

Best practice & indicator		Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
	INDICATOR: The government supports and participates in co-management according to agreement with resource users on cooperation	Review of co-management agreement; discussions with key informants Interviews with local authorities (district, communal) delegated to implement co-management Focus group discussion with co-management partners	Checklist Sample guide* for focal groups / key informant discussion *[addendum] and sample minutes	Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management Agreement. Box 10.18, In: Fisheries co-management: a practical handbook . CAB International, Rome and International Development Research Centre, Ottawa, Canada. Takahashi, B. & van Duijn, A. P. 2012. Operationalizing fisheries co-management: Lessons learned from lagoon fisheries co-management in Thua Thien Hue Province, Viet Nam. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2012/02	Define what qualifies as an "agreement" so that the users better understand what to look for Clarify if policies, decrees, and ordinances can be considered "agreements"
	INDICATOR: Decision making is shared across scales and between diverse stakeholders with an interest in the resource being co-managed	Review of co-management membership and protocols for member participation and representation on the co-management committee Interviews with key informants and stakeholders	Checklist 'What good looks like' example		
CO-MANAGEMENT	<i>GOOD PRACTICE: Membership and rights clearly defined: individual fishers, households or companies with rights to fish in a bounded fishing area, to participate in management and to be an organization member are clearly defined</i>				
	INDICATOR: Right to fish, to participate in management and to be a member of related	Review of co-management documentation	Checklist	Pomeroy, R.S. & Rivera-Guieb, R. 2006. Elements of a Co-management	Add a list of different stakeholders with examples of

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
organisations are agreed and clearly stated in co-management documentation	Interviews with key informants and consultations with representatives of the professional fishers organizations on compliance with the rules and regulations by all co-management parties	Interviews and meeting minutes templates	Agreement. Box 10.18, <i>In: Fisheries co-management: a practical handbook</i> . CAB International, Rome and International Development Research Centre, Ottawa, Canada. Takahashi, B. & van Duijn, A. P. 2012. Operationalizing fisheries co-management: Lessons learned from lagoon fisheries co-management in Thua Thien Hue Province, Viet Nam. FAO Regional Office for Asia and the Pacific, Bangkok. RAP Publication 2012/02.	ideal representation and participation arrangements
<i>GOOD PRACTICE: Conflict management mechanisms: existence of a mechanism to address conflict</i>				
INDICATOR: Conflict management mechanism is in place* and documented *[, functional]	Review of co-management documentation Interviews with key informants and consultations with representatives of the professional fishers organizations.	Interviews and meeting minutes templates		Consider in the review of co-management documentation formal and informal approaches, and traditional versus modern conflict management mechanisms used locally to resolve fisheries disputes
INDICATOR: Conflict management mechanism is contributing to reducing the number of conflicts between different resource user groups / stakeholders	Review of incident reports and complaints to police, community leaders or other instances addressing conflicts Discussions Interviews with conflicting parties (if any)	Interviews and meeting minutes templates		

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
<p>Suggest rewording the indicators as follows: “Conflicts between different resource user groups / stakeholders between different resource user groups / stakeholders are resolved in a sustainable manner”. The reason is that “Conflict management mechanism is contributing to reducing the number of conflicts between different resource user groups / stakeholders” cannot be considered as an indicator since it gives an idea of the direction of the expected change (i.e., reduction of the number of conflicts)</p> <p>Suggest rewording the indicators as follows: “number of conflicts addressed through conflict management mechanism”</p>				
<p><i>GOOD PRACTICE: Accountability: co-management conducted in an open and transparent manner</i></p> <p>Suggest rewording the indicators as follows: “co-management conducted in an equitable, open and transparent manner”</p>				<p>Consider that "open" and "transparent" might be redundant</p>
<p>INDICATOR: Decision-making by and leadership of the co-management system is transparent and documented in</p>	<p>Review of co-management committee meeting minutes; questionnaire survey (perception)</p>	<p>Questionnaire template Assessment report templates</p>		<p>Consider the guidelines and training courses for chair persons that the European Union (EU) is developing</p>

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
committee meeting minutes available to all co-management participants				
INDICATOR: There is an elected management committee representing resource users/user groups	Review of protocols of the elections of co-management committee members	Assessment report templates		<p>Consider collective action</p> <p>Clarify that leadership is not about finding one leader but multiple leaders and collective actions</p> <p>Review “elected management committee” in terms of general applicability, e.g. “there is democratic participatory approach”</p>
<i>GOOD PRACTICE: Leadership: existence of a singular individual with entrepreneurial skills, highly motivated, legitimate and respected as a local leader</i>				Clarify the meaning of entrepreneurial
INDICATOR: A qualified local leader with entrepreneurial skills elected by local people to lead overall co-management activities	<i>Review of protocols of the elections of co-management committee members</i>	Assessment report templates		<p>Clarify if the indicator refers to one individual</p> <p>Review this indicator</p>
INDICATOR: A qualified local leader is properly working with fishers for sustainable fisheries and community livelihoods Suggest rewording the indicators as follows: “A qualified local leader is properly working with resource users/user groups for sustainable fisheries and community livelihoods”	<i>Questionnaire survey (perception); focus group discussions, observation</i>	Assessment report templates		Clarify if the indicator refers to one individual

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*	
CO-MANAGEMENT SYSTEM – FEASIBILITY AND PERFORMANCE	<i>GOOD PRACTICE: Appropriate scale: scale may vary but should be appropriate to the area's ecology, people and level of management</i>				
	INDICATOR: The scale and the area of the co-managed fishery have been agreed through a participatory process with concerned stakeholders	<i>Review of co-management documentation; questionnaire survey (perception)</i>	Assessment report templates Participative maps		
	<i>GOOD PRACTICE: Clearly defined boundaries of the co-management system: The boundaries of the area to be co-managed are distinct so that the fishers have accurate knowledge of them.</i>				
	INDICATOR: Boundaries of the fishery to be co-managed have been demarcated, if a spatially defined area; or otherwise clearly described in co-management agreement	Review of co-management documentation Observation or photos of markers Review of the documentation relating to the demarcation procedure Existences of a (GIS-based) maps officially endorsed by the co-management body and incorporated in the co-management agreement Consistency of the demarcated co-managed areas for fishing with the zones of exclusion, such as conservation areas, navigation routes, nursery ground, etc.	Examples of GIS-based maps of co-managed areas officially endorsed by the co-management body Examples of monographs of benchmarks, delimiting the TURF demarcated areas		Verify if observational data could be collected via remote sensing, e.g. satellite imagery or sensors/data loggers in situ Consider if boundaries are related to fisheries management and not fisheries co-management
	<i>GOOD PRACTICE: Regular interaction : regular, active and participatory meetings of co-management partners to serve as a forum for discussion, power-sharing and trust building</i>				
INDICATOR: Regular, active and participatory meetings of	<i>Review of co-management meeting minutes; questionnaire survey</i>	Sample questionnaire Assessment report templates			

Best practice & indicator		Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
co-management participants are held		<i>(perception); observation of meetings</i>			
INDICATOR: There is representation of men and women at meetings and active participation by both men and women		<i>Review of co-management meeting minutes; questionnaire survey (perception); observation of meetings</i>	Assessment report templates		
<i>GOOD PRACTICE: Adequate financial resources/budget: existence of a financial sustainability mechanism</i>					
INDICATOR: Funding is secured for at least one year		<i>Review of accounts and agreements with funder</i>	Assessment report templates		
INDICATOR: There is a budget and identified sources of funding		<i>Review of financial records and reports</i>	Assessment report templates		
<i>GOOD PRACTICE: Co-management plan: existence of a co-management plan developed and agreed by resource users / co-management participants through a participatory mechanism</i>					
INDICATOR: There is a co-management plan and it contains key provisions and clear goals and objectives		<i>Review of co-management plan</i>			Clarify if “plans” include policies/regulations that some managers might argue essentially is their plan. If so, clarifying this might be useful for those readers who have policies or local ordinances serving as their “plan” Clarify if equity is considered given that even if stakeholders are represented, their voice may be marginalized
INDICATOR: The co-management plan has been developed with the adequate participation of different stakeholders		Documentation of co-management plan development process; perception survey Interviews with key informants			

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
	Stakeholders focus group discussion			
<p>INDICATOR: The co-management plan has been translated in the stakeholders' native languages</p> <p>Suggest rewording the indicators as follows: “The co-management plan adequately addresses gender equity needs and reflects diversity of perspectives reflected in community/society”</p>	Review of co-management plan			
<p>INDICATOR: There is a gender perspective in the co-management plan</p>	Review of co-management plan Interviews with key informants	Checklist		
<p><i>GOOD PRACTICE: Clear goals and objectives from a well-defined set of issues: clarity and simplicity of goals and objectives to steer the direction of co-management</i></p>				<p>Evaluate the extent to which objectives meet SMART (Specific, Measurable, Achievable, Realistic, and Timely) criteria</p>
<p>INDICATOR: Clear and simple goals/objectives and indicators are defined in the co-management plan</p>	Review of co-management plan	Assessment report templates		
<p><i>GOOD PRACTICE: Knowledge of resource: resource is one of which stakeholders have a good knowledge and there is recognition of traditional knowledge</i></p>				<p>Define the word “good”</p>
<p>INDICATOR: Stakeholders have a good knowledge of resources</p>	Questionnaire survey, focus group discussions	Assessment report templates		<p>Add the indicator: “Participative research under development/developed”</p>

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: Traditional knowledge is explicitly taken into account in management decision-making	Review of discussion making documentation; focus group discussions			
<i>GOOD PRACTICE: Monitoring and evaluation: participatory, indicators, targets and baselines</i>				
INDICATOR: *Monitoring and evaluation are conducted in a participatory way *[addendum] continuity of	Questionnaire survey (perception) Reviews of monitoring and evaluation reports and minutes Interviews with key informants	Assessment report templates		Look for examples of participatory fisheries monitoring and evaluation (M&E) that can be used as reference and provide examples to follow
INDICATOR: Indicators, targets and baselines are defined in an monitoring and evaluation plan in the co-management plan	Review of co-management plan			Add the indicator: “Number of changes/adaptations made by co-management committee based on analysis and decision-making of available M&E results”
<i>GOOD PRACTICE: Adaptive management: a focus on systematic learning-by-doing</i>				
INDICATOR: Adjustments to the co-management have taken place based on monitoring and evaluation results	Review of co-management plan and committee meeting minutes Review of the monitoring and evaluation reports			
<i>GOOD PRACTICE: Mutually beneficial alliances and networks: communication and connectedness among various resource user groups and stakeholders</i>				
INDICATOR: Networks and alliances among various user groups/stakeholders are in place* *[addendum] and functional	Review of registered organizations and their memberships; questionnaire survey among stakeholders on their organizational memberships Focus group discussions among co-management parties/users groups and stakeholders			

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: Experiences and lessons learned are shared among various stakeholder groups	<i>Focus group discussions, questionnaire survey (perception)</i>			
CO-MANAGEMENT SYSTEM – PARTICIPATION AND EQUITY	<i>GOOD PRACTICE: Participation by those affected: most individuals affected by co-management arrangements are included in the group that makes decisions about and can change the arrangements</i>			
	INDICATOR: Stakeholders affected by co-management arrangements and decisions are included in the co-management committee	Review of co-management committee membership in comparison with stakeholder analysis (carried out under Step 1) Focus Group Discussion with outsiders/excluded stakeholders groups Review of mechanism envisioned to broaden the membership into co-management organization	Assessment report templates	Develop a guide for focus group discussions since a lot of the indicators under the good practices for participation and equity will be tackled through Focus Group Discussions
	INDICATOR: Co-management participants and committee members receive advance information before decision-making	Focus group discussions; review of communication* and meeting minutes *[addendum] mechanisms		
	<i>GOOD PRACTICE: Group/social cohesion: a high degree of homogeneity, in terms of kinship, ethnicity, norms, trust, religion or fishing gear type, among the resource users</i>				Rephrase this good practice because experts did not agree on the concept of high degree of homogeneity as good practice
INDICATOR: Co-management participants trust each other	Questionnaire survey (perception) Interviews with key informants			

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: The co-management committee members are representative of the ethnicity, religion etc. of the resource users / co-management participants	Review of co-management committee members *[addendum]composition Review of the election/selection mechanisms Review of the co-management agreement concerning social inclusion and equitable share of representation	Assessment report templates		
INDICATOR: Members of the co-management system work well and make decisions together	Review of co-management meeting minutes			
<i>GOOD PRACTICE: Empowerment, capacity building and social preparation: activities for individual and resource user group empowerment and skills development to actively participate in co-management</i>				
INDICATOR: There are active skill development programs for enhancing capacity building for fishers to participate in co-management activities at community level.	Review of activity programme Review of training/skill development programmes Review of training needs assessment (if any)	Template of evaluation reports		
INDICATOR: There is a basic understanding among participants about the purpose and operation of the co-management system	Questionnaire survey	Assessment report template		
<i>GOOD PRACTICE: Coordination: forum for cooperation between government and resource users</i>				Define “forum” and provide a of list examples of what would be included under this term
INDICATOR: A forum for coordination and cooperation of	Review of institutional structures and meeting minutes			Establish best practice minimum “regularity” for the review on

Best practice & indicator		Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
government and resource users is operational	Review on the mechanisms of horizontal and vertical coordination in place				the mechanisms of horizontal and vertical coordination in place, e.g. “bi-annual” or “quarterly” as frequent versus “every two years” as infrequent
INDICATOR: There are regular meetings between government and resource users	Review of meeting minutes Review on the mechanisms of horizontal and vertical coordination in place				
<i>GOOD PRACTICE: Community organizations: existence of a legitimate (as recognized by the local people) community or people's organization for representing resource users and other stakeholders in decision-making</i>					
INDICATOR: A legitimate (as recognized by the local people) organization representing resource users and other stakeholders in decision-making is in place	Review of institutional structures and meeting minutes; questionnaire survey (perception) Review of formal documents/endorsement papers relating to the establishment of the organization				
INDICATOR: A legitimate (as recognized by the government) organization representing resource users and other stakeholders in decision-making is in place	Review of institutional structures and meeting minutes; questionnaire survey (perception) Review of formal documents/endorsement papers relating to the establishment of the organization				Consider also dimension of sufficient awareness and capacity to engage, i.e., to empower marginalized groups who may not know they have opportunity and access
<i>GOOD PRACTICE: Equity: equal opportunity and fair access to the fishery among the various resource users and between different user groups</i>					Formulate additional indicators on equity
INDICATOR: Different resource user groups have equal opportunities to participate in and benefit from the co-management system	Questionnaire survey; focal group discussions (perceptions) Focal group discussions with excluded/non-participating resource users/groups				

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
	<p><i>GOOD PRACTICE: Inclusiveness: recognition and involvement of different resource users and community members, including youth, women, indigenous people and others with a stake in the future of the fishery</i></p> <p>INDICATOR: Different legitimate resource user groups, including youth, women, and indigenous people, are recognized as stakeholders in the co-management and have equal opportunities to participate in the co-management arrangement</p>	<p>Questionnaire survey; focal group discussions; questionnaire survey (perception)</p> <p>Focus group discussion with excluded/non-participating resource users/groups)</p>		
CO-MANAGEMENT SYSTEM – RULE OF LAW	<p><i>GOOD PRACTICE: Congruence: scale and scope of rules are appropriate to local conditions</i></p>			
	<p>INDICATOR: There are rules and regulations for fisheries management</p>	<p>Review co-management plan</p>		
	<p>INDICATOR: Scale and scope of rules and regulations fit local conditions are well defined in a participatory way</p>	<p>Review of co-management plan; focus group discussions</p>		
	<p><i>GOOD PRACTICE: Management rules enforced: self-enforcement system of penalties imposed by strong operational rules designed, enforced and controlled by local users</i></p>			<p>Clarify if this is the same as voluntary compliance</p>
	<p>INDICATOR: Self-enforcement system of penalties is designed by resource users / co-management participants</p>	<p>Review of documentation on enforcement system; focal group discussions</p> <p>Review of the mechanism of sanctioning of violations and active participation of the authorities in the process</p>		
<p>INDICATOR: There is an active patrolling and enforcement mechanism in place and operational</p>	<p>Review of documentation on enforcement system; focal group discussions</p>		<p>Consider active enforcement versus community-supported programme</p>	

Best practice & indicator	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
	Review of the effectiveness/regularity of the patrolling routines			
	<i>GOOD PRACTICE: Graduated sanctions: sanctions increase with the number or the severity of offences</i>			
INDICATOR: Sanctions are proportional to the number or severity of offences	Review of documentation of sanctions; questionnaire survey (perception)			
	<i>GOOD PRACTICE: Individual incentive structure: individual incentive structure (economic, social, political) that induces individuals to participate in co-management</i>			
INDICATOR: Individuals have incentives (economic, social, political) to participate in co-management* *[addendum] and voluntarily comply with co-management rules and decisions	Questionnaire survey (perception); focal group discussions Interviews with key informants Focus group discussion with excluded/non-participating user groups			
INDICATOR: Incentives from government are available for individuals and stakeholder groups to positively participate in co-management	Review of government programmes; questionnaire survey Interviews with Government key informants			

* The recommendations may have been made by one or more experts.

APPENDIX 8: TOOLS FOR THE ASSESSMENT SHEET FOR THE EVALUATION OF ACHIEVEMENT OF GOALS AND OBJECTIVES OF THE FISHERIES CO-MANAGEMENT PLAN

All inputs on best practices, indicators, examples of approaches for measuring the indicators, suggested tools and resources along with the recommendations received from the experts through the homework and during the plenary discussions are highlighted in **bold font** in the below table. The purpose was to report all inputs received and recommendations expressed by all the experts.

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
SOCIAL GOALS AND OBJECTIVES (examples include benefits from fisheries equitably distributed; compatibility between management and local culture maximized; environmental awareness and knowledge enhanced)				Verify if there is some redundancy with the tools listed in Appendixes 5, 6 and 7 above
INDICATOR: The co-management approach and measures represent the range of interests of different stakeholders and accommodates the full diversity of those interests	Review of management plan document; questionnaire survey (perception) Focus group discussions with stakeholders groups	Guidelines to carry out Focus group discussions Questionnaire survey template	Annette Gerritsen. 2013. Focus Group Discussions – a step-by-step guide [Cited 28 May 2021]	Use this indicator to evaluate the fisheries co-management system
INDICATOR: Equitable management that represents the range of interests of stakeholders and accommodates the full diversity of those interests	Questionnaire survey (perceptions) Focus group discussions with stakeholders groups	Guidelines to carry out Focus group discussions Questionnaire survey template	Annette Gerritsen. 2013. Focus Group Discussions – a step-by-step guide [Cited 28 May 2021]	Use this indicator to evaluate the fisheries co-management system
INDICATOR: Indigenous and local knowledge is explicitly reflected in the fisheries co-management plan	Review of management plan document; questionnaire survey (perception) Interviews with key informants (from non-participating/excluded/minorities resource users	Template for interviews		Use this indicator to evaluate the fisheries co-management system

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: There is support for co-management among different stakeholder groups	Questionnaire survey (perceptions) among stakeholder groups identified in the stakeholder analysis (carried out in evaluation Step 1) Focus group discussions with stakeholders groups	Guidelines to carry out Focus group discussions Questionnaire survey template	Annette Gerritsen. 2013. Focus Group Discussions – a step-by-step guide [Cited 28 May 2021]	Use this indicator to evaluate the fisheries co-management system
INDICATOR: Diversity of gender, youth and ethnicity aspects have been integrated in the co-management committee.	Review co-management committee composition and the roles/powers of different members Review of the selection/election mechanism Interviews with key informants from different user groups	Template for interview		Use this indicator to evaluate the fisheries co-management system
INDICATOR: Tenure and access rights are fairly allocated	Review of government agreement and tenure arrangements; questionnaire survey (perception) among different resource users along the value chain			
INDICATOR: Social learning (collective knowledge, shared values) is enhanced	Questionnaire survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)			
INDICATOR: Local values and beliefs about marine resources are enhanced	Questionnaire survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)			
INDICATOR: The co-management provides benefits (economic, social) to stakeholders Suggest rewording the indicators as follows: The co-management provides social benefits to stakeholders	Questionnaire survey (perception) covering different stakeholder groups (including, women, youth, vulnerable groups)			

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
<i>ECONOMIC GOALS AND OBJECTIVES (examples include livelihoods enhanced or maintained; food security and nutrition enhanced or maintained; increased incomes)</i>				
INDICATOR: Seafood availability has increased at household/community/market levels	Observation; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Guidelines to carry out Focus group discussions		Consider availability versus access versus price accessibility
INDICATOR: Benefits of operating and maintaining co-management arrangements exceed the costs	<i>Financial analysis based on co-management accounts</i>	Template for a cost/benefit analysis		
INDICATOR: There are incentives for stakeholders to support co-management	Questionnaire survey (perception); focal group discussions	Guidelines to carry out Focus group discussions Questionnaire survey template		Use this indicator to evaluate the fisheries co-management system Include cost-benefit analysis
INDICATOR: Co-management has benefited stakeholders economically	Questionnaire survey Focus group discussions with stakeholders to aggregate data per groups (capture fishers, fixed gear operators, aquaculture farmers)	Guidelines to carry out Focus group discussions Questionnaire survey template		Consider market-based incentives present in the supply chain
INDICATOR: Fish catches have improved overall in the co-managed fishery or area	Catch and landings data survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Template for a fish catch analysis Fishery survey template Training tools for local enumerators		Consider catch survey records efficiency (catch per unit effort – CPUE) otherwise more effort could lead to improved catch
INDICATOR: Co-management participants have a higher level of material lifestyle (housing, household goods etc.)	Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Guidelines to carry out Focus group discussions Questionnaire survey template		

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: Number of sick days among co-management participants have decreased Reword the indicator as follows: “Number of sick days among co-management participants” because “Number of sick days among co-management participants have decreased” cannot be considered as an indicator since it gives an idea of the direction of the expected change (i.e., decrease of the number of sick days)	Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Guidelines to carry out Focus group discussions Questionnaire survey template		
INDICATOR: Incomes/benefits are fairly distributed between men and women	Focal group discussion; questionnaire survey (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Guidelines to carry out Focus group discussions Questionnaire survey template		
<i>ECOLOGICAL GOALS AND OBJECTIVES (examples include fisheries resources exploited at sustainable levels; resilient ecosystems secure multiple services to local communities; essential fish habitats well protected)</i>				
INDICATOR: Abundance of key focal species has increased Reword this indicator as follows: “There is abundance of key focal species” because “Abundance of key focal species has increased” cannot be considered as an indicator since it gives an idea of the direction of the expected change (i.e., increase of abundance of key focal species)	Observations (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)			Consider relative abundance versus size class distribution of biomass
INDICATOR: Fish catches have improved overall in the co-managed fishery or area	Catch and landings data survey; focal group discussions (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)			Consider historical CPUE versus volume

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: Previously destroyed habitats show signs of recovery	Observations (requires a baseline to compare with, either from earlier evaluation/survey or asking respondents to compare with how they remember the situation was earlier)	Specific habitat mapping (nursery and spawning ground, seagrass fields)		Consider total area of essential fish habitat experiencing observable recovery or functional restoration
INDICATOR: Management measures for fisheries management are appropriate and operational	Review co-management plan (fisheries management plan); focal group discussions Review co-management operational procedures through interviews with Government/Management and Executive/Management Board key informants	Flow-chart of operational procedures		Clarify if appropriate means sufficient (biologically sufficient to induce natural replenishment) Clarify if this indicator excludes restocking/active stock replenishment Include both in situ measures (e.g. manta tow, transect) versus remote sensing (e.g. autonomous/drone, Light Detection and Ranging (LIDAR)/satellite)
INDICATOR: The ecosystem approach to fisheries (EAF) is an integral part of the fisheries management plan	Review co-management plan (fisheries management plan)			
INDICATOR: Resource users/co-management participants take an active role in monitoring compliance with agreed regulations	Review of compliance/enforcement arrangements (documentation in co-management plan, existing institutional structures) Review co-management operational procedures through interviews with Government/Management and Executive/Management Board and resource users key informants	Flow-chart of operational procedures		Use this indicator to evaluate the fisheries co-management system

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
<i>GOVERNANCE GOALS AND OBJECTIVES (examples include effective co-management structures and strategies maintained; effective stakeholder participation and representation ensured; resource use conflicts managed and reduced)</i>				
INDICATOR: Effective co-management institutions (committee, administrative team) and related important structures (professional organizations) are in place and functional	Review of co-management documentation (meeting minutes etc.); focal group discussions; questionnaire survey (perception)	Flow-chart of operational procedures Guidelines to carry out focus group discussion Questionnaire survey template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance
INDICATOR: There is a co-management plan and it contains key provisions and clear goals and objectives	Review of co-management plan	Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance
INDICATOR: The degree of legitimacy of the management system with stakeholders increased	Focal group discussions; questionnaire survey (perception)	Guidelines to carry out focus group discussion Questionnaire survey template Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance
INDICATOR: Decision-making is transparent to all stakeholders* *[addendum] and decision-makers accountable	Focal group discussions; questionnaire survey (perception)	Guidelines to carry out focus group discussion Questionnaire survey template Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
INDICATOR: All main stakeholders are empowered and capable to actively participate in decision-making	Focal group discussions; questionnaire survey (perception)	Guidelines to carry out focus group discussion Questionnaire survey template Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance
INDICATOR: Conflict management mechanism is in place and documented	Review of co-management documentation	Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance Consider formal versus informal mechanisms, traditional versus legal/modern mechanisms
INDICATOR: Conflict management mechanism is contributing to reducing the number of conflicts between different resource user groups / stakeholders	Review of incident reports and complaints to police, community leaders or other instances addressing conflicts Frequency (number) and type of conflicts			Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance In formulating the indicator, take also into account the case in which there could be fewer conflicts but more violent/acute
INDICATOR: Self-enforcement system of penalties is designed by resource users / co-management participants	Review of documentation on enforcement system; focal group discussions			Use this indicator to evaluate the fisheries co-management system since

Type of goals and objectives and indicators	Examples of approaches for measuring indicators	Suggested tools	Suggested resources	Recommendations*
				co-management is set up to improve governance
INDICATOR: Networks and alliances among various user groups/stakeholders are in place* *[addendum] and functional	Review of registered organizations and their memberships; questionnaire survey among stakeholders on their organizational memberships			Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance Consider 'minimum threshold' tool, followed by 'better if you do [INSERT]'
INDICATOR: Different legitimate resource user groups, including youth, women, and indigenous people, are recognized as stakeholders in the co-management and have equal opportunities to participate in the co-management arrangement	Questionnaire survey; focal group discussions; questionnaire survey (perception)			Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance
INDICATOR: There is a formal legal framework regulating fisheries co-management	<i>Review of legislation; questionnaire survey (perception)</i>	Evaluation report template		Use this indicator to evaluate the fisheries co-management system since co-management is set up to improve governance

* The recommendations may have been made by one or more experts.

This document represents the final report of the FAO Virtual Expert Workshop on the Toolbox for Fisheries Co-management Evaluation, held on 24, 26 and 28 May 2021 using the Zoom platform. The objective of the workshop was to finalize the outline and contents of the Toolbox for Fisheries Co-management Evaluation and to find out what tools are available for evaluating fisheries co-management effectiveness. The experts' inputs and recommendations received on best practices, indicators, examples of approaches for measuring the indicators, suggested tools and resources will be employed to improve the Toolbox and the Guidebook.

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