

## FAIRSEA (ID 10046951)

“Fisheries in the Adriatic Region - a Shared Ecosystem Approach”

# D 3.2.1: Cross-border roadmap for a conceptual framework on operational EAF in the region

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## D 3.2.1

# Cross-border roadmap for a conceptual framework on operational EAF in the region

### **FAIRSEA – Fisheries in the Adriatic Region – a shared Ecosystem Approach**

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## Acronyms used

<b>CFP</b>	Common Fisheries Policy
<b>EAF</b>	Ecosystem Approach to Fisheries
<b>EAFM</b>	Ecosystem Approach to Fisheries Management
<b>FAIRSEA</b>	Fisheries in the Adrlatic Region – a Shared Ecosystem Approach
<b>FLAG</b>	Fisheries Local Action Group
<b>LP</b>	Lead Partner
<b>OGS</b>	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS
<b>PO</b>	Producers Organization
<b>GT</b>	Gross Ton
<b>PS</b>	Purse Seiners
<b>PTM</b>	Midwater Pair Trawls
<b>OTB</b>	Bottom Trawl
<b>EMFF</b>	European Maritime and Fisheries Fund

## INTRODUCTION

The FAIRSEA project (Fisheries in the Adriatic Region – a Shared Ecosystem Approach) aims at enhancing transnational capacity and cooperation in the field of an ecosystem approach to fisheries (EAF) in the Adriatic region by exchanging knowledge and sharing good practices among partners. The complementary expertise of the partners is shared, interlinked and integrated, considering also challenges and opportunities identified by stakeholders.

This WP includes a series of activities for increasing partnership and for spreading concepts for the EAF in the Adriatic Sea thus broadening the access to EAF knowledge.

In order to increase practical understanding and implications of integrated approaches, in the capacity building activities, the tools and results developed during WP4 will be used for presenting a possible EAF decision support tool in the region. This WP aims at mapping the current situation, defining a roadmap for application of EAF, increasing capacity on EAF for scientific, technical and policy experts, and networking to disseminate project results to expert commissions with a broad scope.

### About FAIRSEA Project

The FAIRSEA project aims at enhancing transnational capacity and cooperation in the field of an ecosystem approach to fisheries in the Adriatic region by exchanging knowledge and sharing good practices among partners. The complementary expertise of the partners is shared, interlinked and integrated, considering also challenges and opportunities identified by stakeholders. The best way to reach sustainability, in fact, is to ensure stakeholders' participation in the process that requires time, trust, transparency and efficient steering. The efforts are embedded in a spatially explicit management platform that will allow to share expertise, create a common pool of knowledge, boost the operational application of the ecosystem approach to fisheries, enhance the competence in complex system dynamics, and foster a consensus on the state of the environment and fisheries in the region. The collective development of the integrated platform will enhance partners' expertise on an approach seldom carried out in the Mediterranean Sea. The platform will result in a spatially explicit dynamic tool integrating cornerstone elements for an ecosystem approach to fisheries that are: water masses circulation and connectivity (module HYDRO), biogeochemical planktonic processes (BGC), distribution of resources (BSTAT), catch and fleet statistics (FSTAT), effort distribution (EFFORT), bioeconomic responses (BIOECO) and food web dynamics (FWM). The attention to the spatial components in the distribution of the resources, the variability of the oceanographic condition, the management policies and the socio-economic impact is a particularly innovative and extremely valuable aspect. The shared integrated platform will be used as a planning tool to implement demonstrative testing of applicable fisheries policies both at local (subareas) and whole Adriatic scales. Especially, it will provide a scientific basis to formulate and evaluate shared management advice in the local and international participatory processes, answering to the need of reference points

knowledge for the optimisation between ecological and socio-economical sustainability. The process developed in FAIRSEA will provide an opportunity to describe best practices and define guidelines for a sustainable fishery management. The integrated platform will result in a product that constitutes the basis for a science-based decision support tool and a preliminary step toward the future development of multiannual fishery management plans.

The main overall objective of FAIRSEA is to enhance the conditions for implementing innovative approaches in the sector of sustainable fisheries management in the Adriatic Sea. This is done through the development of a shared conceptual and operational framework for an EAF. It will be achieved through the implementation of a spatially explicit and territorially integrated tool that considers water mass circulation, physical-chemical properties, plankton productivity, dynamics of resources including their interactions, fisheries displacement and bio-economic drivers. The technical integration is adapted to address stakeholders' and policy makers' issues and is used for increasing awareness, for understanding EAF, for increasing technical skills and capacities in the region also through demonstrative applications. The platform result in a high technological and innovative tool for EAF to be useful for policy makers, institutions and organizations and might require patent.

Overall objective will be achieved through three specific objectives as in the following.

### Project specific objectives

#### Project specific objectives

- Enhance trans boundary integrated competence in the field of ecosystem approach to fisheries
- Implement a shared “state of the art” integrated platform for the region
- Share benefits and challenges of ecosystem approach to facilitate the achievement of CFP objectives.

## ECOSYSTEM APPROACH TO FISHERIES MANAGEMENT IN ADRIATIC: CROSS-BORDER ROADMAP FOR A CONCEPTUAL FRAMEWORK ON OPERATIONAL EAF IN THE REGION

The FAIRSEA project Roadmap aims to consolidate the regional, national and cross-border aspects that need to be included in EAF implementation, as well as a process for selecting parameters that may depend on the characteristics of each fishery and management level. . The need of a common Roadmap is crucial in the Adriatic framework taking into account that most of the shared resources, therefore exploited both by Croatia and Italy. The Roadmap arises from the framework analyses carried out on institutional, technical and socio-economic context in Adriatic area and includes a joint analysis of the relationship and possibilities of cooperation between technical and institutional bodies on one side and local communities and associated fishermen on the other side. This to identify the parameters to be included in the EAF. The Roadmap will be developed and used to communicate with technical, institutional and stakeholders involved in the project. The FAIRSEA platform under development in WP4 will integrate from physics to bioeconomy of fisheries as a state of the art and will represent an operational supporting tool to facilitate the implementation of the activities considered in the cross-border roadmap.

### MAIN TARGET GROUP OF ROADMAP

**National and Local Authorities**

- For a better EAF governance in regional system by minimizing sectoral conflicts, favouring networking and co-management initiatives
- For apply science-based policies

**Research & Academia**

- For developing sound and applicable science-based approaches
- Developing Decision support tools (as FAIRSEA platform developed by PP3)

**Socio-economic operators**

- For skills and competences development and transfer facilitated by scientific organization and policy makers
- New cooperation schemes with research – policies- other operators
- For a more sustainable business while preserving income

## BACKGROUND AND STRUCTURE

The Roadmap lays its foundation on the FAIRSEA approach and practices towards EAF application in the aims of their capitalization and transfer as well as of its systematic adoption.

The Roadmap starts from the vision and strategic goals definition, **recalling the EAF principles and the stakeholder point of view**, on which building up operational actions - grouped in steps – addressing common and specific challenges.

The roadmap overall structure is given however it is also to be intended **as living tool** since it could be integrated in terms of specific issues and scales.

A revision of the roadmap and the “consolidated version” based upon project outcomes can be included in the project final guidelines too.

## ROADMAP TIMELINE AND TRANSFERABILITY

- The FAIRSEA Roadmap ambition is to serve as general tool for the EAF application in Adriatic regions within and beyond the project lifespan.
- The Roadmap is a tool for supporting planning, implementation, management and transfer of EAF at local and cross-border scale by means of a set of strategic and operational actions.
- The Roadmap is conceived to be **promoted by national and local authorities, facilitated by scientists and endorsed by socio-economic stakeholders**.

## SUSTAINABILITY AND DURABILITY: THE ROLE OF THE FAIRSEA PARTNERSHIP BEYOND THE PROJECT

FAIRSEA partnership involves national and local authorities, sectoral agencies and research bodies of Adriatic area working together for common goals. Increased cooperation among different stakeholders of different countries is the bulk of the INTERREG programmes, and **partners are called upon to ensure durability, sustainability and transferability of projects outputs** after the projects end.

In this perspective, the FAIRSEA partners – according to their mission and competences – will commit themselves in contribution to Roadmap implementation and evaluation of the outcomes. Institutional



partners will commit themselves in adopting the Roadmap as a programming tool in their ordinary operations. Scientific partners will commit themselves in feeding the Models/Platforms, providing advices and reports on the outcomes.

## FAIRSEA CROSS-BORDER ROADMAP FOR A CONCEPTUAL FRAMEWORK ON OPERATIONAL EAF IN THE REGION

Ecosystem Approaches to Fisheries (EAF) are intended to ensure that the **planning, development, and management** of fisheries will meet social and economic needs, without jeopardizing the options for future generations to benefit from the full range of goods and services provided by marine ecosystems. Given this definition, the Roadmap starts **from the vision and strategic goals definition**, recalling the EAF principles and the stakeholder point of view, **on which building up operational actions - grouped in “packages” – addressing common and specific challenges**.

### 1. From the EAF principles to the main challenges

EAF PRINCIPLES	CRITICAL ISSUES	MAIN CHALLENGES
<ul style="list-style-type: none"> <li>. Good Governance</li> <li>. Appropriate scale</li> <li>. Increased participation</li> <li>. Multiple objectives</li> <li>. Cooperation and coordination</li> <li>. Adaptive management</li> <li>. Precautionary approach</li> </ul>	<ul style="list-style-type: none"> <li>. Low involvement of local SH in planning and decision-making processes</li> </ul>	<ul style="list-style-type: none"> <li>➤ Advance understanding of ecosystem process</li> <li>➤ Incorporate ecosystem considerations into planning and management of operations</li> <li>➤ Improve decision-making framework</li> <li>➤ Provide systematic advice for other management considerations, particularly applied across multiple species within an ecosystem</li> <li>➤ Maintain wellbeing of coastal communities</li> <li>➤ Improve statistics and inventories</li> <li>➤ Optimize trade-off within the ecosystem components</li> <li>➤ Take into account complex linkages across human and natural systems, identifies conflicts between competing ecosystem services.</li> </ul>
	<ul style="list-style-type: none"> <li>. Scarce acceptance of management measures by SH at local and cross-border level</li> </ul>	
	<ul style="list-style-type: none"> <li>. Data uncertainty, lack of certain data (e.g SSF, recreational fisheries...), difficulties in sharing sensible data (VMS, economic data, etc.).</li> </ul>	
	<ul style="list-style-type: none"> <li>. Knowledge/competences creation/updating</li> </ul>	
	<ul style="list-style-type: none"> <li>. Loss of income for fishermen</li> </ul>	
	<ul style="list-style-type: none"> <li>. </li> </ul>	
	<ul style="list-style-type: none"> <li>. </li> </ul>	

## 2. From main challenges to operational objectives

MAIN CHALLENGES	CRITICAL ISSUES	OPERATIONAL OBJECTIVES
<p>⇒ Advance understanding of ecosystem process</p> <p>⇒ Incorporate ecosystem considerations into planning and management of operations</p> <p>⇒ Improve decision-making framework</p> <p>⇒ Provide systematic advice for other management considerations, particularly applied across multiple species within an Ecosystem</p> <p>⇒ Maintain wellbeing of coastal communities</p> <p>⇒ Improving statistics and inventories</p> <p>⇒ Optimize trade-off within the ecosystem components</p> <p>⇒ Take into account complex linkages across human and natural systems, identifies conflicts between competing ecosystem services.</p>	<p>a. Low involvement of local SH in planning and decision-making processes</p>	<ul style="list-style-type: none"> <li>• Increasing socio-economic SH and institutional SH engagement: participatory and interactive approach in co-decision and co-management (a; b; c; f)</li> <li>• Increasing knowledge and skills: institutional capacity building for institutional SH</li> <li>• Increasing knowledge and skills: technical advanced training for scientists (d;)</li> <li>• Improving data quality, accuracy for models application (c;)</li> <li>• Enhancing cross-border scientific cooperation (c; )</li> <li>• Improving science-based policies and cooperation between policy makers and scientists (d; c; )</li> </ul>
	<p>b. Scarce acceptance of management measures by SH at local and cross-border level</p>	
	<p>c. Data uncertainty, lack of certain data (e.g SSF, recreational fisheries...), difficulties in sharing sensible data (VMS, economic data, etc.).</p>	
	<p>d. Knowledge/competences creation/updating</p>	
	<p>e. Loss of income for fishermen</p>	
	<p>f. Spatial conflicts</p>	
	<p>g. Scarce cooperation between different authorities (also in the same institution)</p>	
	<p>h.</p>	

### 3. From operational objectives to implementation

OPERATIONAL OBJECTIVES	IMPLEMENTATION PACKAGES	
<ul style="list-style-type: none"> <li>Increasing socio-economic SH and institutional SH engagement: participatory and interactive approach in co-decision and co-management (a; b; c; f)</li> <li>Increasing knowledge and skills: institutional capacity building for institutional SH</li> <li>Increasing knowledge and skills: technical advanced training for scientists (d;)</li> <li>Improving data quality, accuracy for models application (c;)</li> <li>Enhancing local and cross-border scientific cooperation (c; )</li> <li>Improving science-based policies and cooperation between policy makers and scientists (d; c; )</li> </ul>	<b>PLANNING</b>	<b>MONITORING</b>
	<b>TESTING</b>	
	<b>TRANSFERRING</b>	

IMPLEMENTATION PACKAGES	PERIOD 1 (YEAR___)	PERIOD 2 (YEAR__)	PERIOD 3 (YEAR___)
	Activities	Activities	Activities
<p><b>PLANNING</b> A set of activities to:</p> <ul style="list-style-type: none"> <li>⇒ Define the main scope</li> <li>⇒ Identify and prioritize issues</li> <li>⇒ Define the operational goals</li> <li>⇒ Develop and share management goals</li> <li>⇒ Develop indicators and benchmarks</li> <li>⇒ Develop a EAF Plan</li> </ul>	<ul style="list-style-type: none"> <li>➤ Stakeholder mapping</li> <li>➤ Institutional and socio-economic framework analyses: desk survey and stakeholder consultation</li> <li>➤ Identification of priority issues (after the stakeholder consultation)</li> <li>➤ Identification of best practices for incorporating ecosystem considerations into management decisions</li> <li>➤ Setting-up of the Implementation Plan</li> </ul>		
<p><b>TESTING</b> A set of activities to:</p> <ul style="list-style-type: none"> <li>⇒ Identify the best available scientific knowledge and practices</li> <li>⇒ Provide integrated advice for other management considerations</li> <li>⇒ Formalize the EAF Plan</li> <li>⇒ Implement the EAF Plan</li> </ul>	<ul style="list-style-type: none"> <li>➤ Formalization of the EAF Plan at local and national level and/or inclusion in existing Plans/Strategies</li> <li>➤ Prioritize vulnerabilities and risks of ecosystems and their component</li> <li>➤ Data collection and exchange</li> <li>➤ Development of EAF toolbox that includes ecosystem modelling tools and best practices; related decision support tools</li> <li>➤ Explore trade-offs</li> </ul>	<ul style="list-style-type: none"> <li>➤ Data collection and exchange</li> <li>➤ Scenarios 'definition</li> </ul>	

IMPLEMENTATION PACKAGES	PERIOD 1 (YEAR__)	PERIOD 2 (YEAR__)	PERIOD 3 (YEAR__)
	Activities	Activities	Activities
<b>TRANSFERRING</b> <u>A set of activities to:</u> <ul style="list-style-type: none"> <li>⇒ Exchange and increase EAF knowledge</li> <li>⇒ Inform, engage and consult multiple stakeholder in designing, implementing and monitoring phases</li> <li>⇒ Promote policies alignment</li> </ul>	<ul style="list-style-type: none"> <li>➤ Development of a stakeholder engagement plan or include it in the available institutional communication plans</li> <li>➤ Setting up a permanent Scientific Advisory Board</li> <li>➤ Setting –up of Socio-economic Stakeholder Board</li> </ul>	<ul style="list-style-type: none"> <li>➤ Capacity building seminars for institutions</li> <li>➤ Advanced training for researchers</li> <li>➤ Capacity building meeting with socio-economic stakeholder</li> </ul>	
<b>MONITORING</b> <u>A set of activities to:</u> <ul style="list-style-type: none"> <li>⇒ Monitor how management actions are meeting goals and objectives</li> <li>⇒ Reporting on outcomes</li> <li>⇒ Issue local and cross-border recommendations</li> </ul>	<ul style="list-style-type: none"> <li>➤ Setting up of the Monitoring and Evaluation system including indicators to assess</li> </ul>	<ul style="list-style-type: none"> <li>➤ Evaluation of management measures and tools</li> </ul>	<ul style="list-style-type: none"> <li>➤ Evaluation of management measures and tools</li> <li>➤ Recommendations</li> </ul>