

Diversas vías para la resiliencia climática en los sistemas de pesca marina

Jacob Eurich, Doctor en Filosofía

Ciencias Oceánicas, Pesca y Océanos,
Fondo de Defensa Ambiental

Segundo taller sobre cambio climático de la CIAT

Del 6 al 8 de abril de 2026

Presentación de
PowerPoint
traducida con IA

Existe un amplio consenso en que la pesca debe ser resiliente al cambio climático...



Existe un amplio consenso en que la pesca debe ser resiliente al cambio climático...

Pero... ¿cómo se ve realmente para su sector pesquero, para la gente, para sus instituciones?

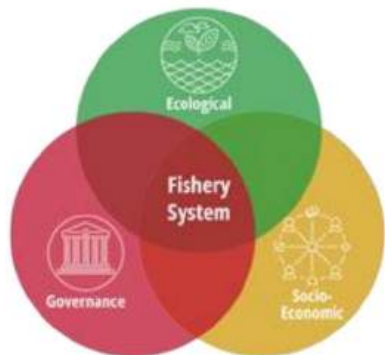


¿Cómo se pasa de comprender los impactos climáticos?

¿Para construir una estrategia de resiliencia?



Enfoques: Visión multidimensional de la resiliencia

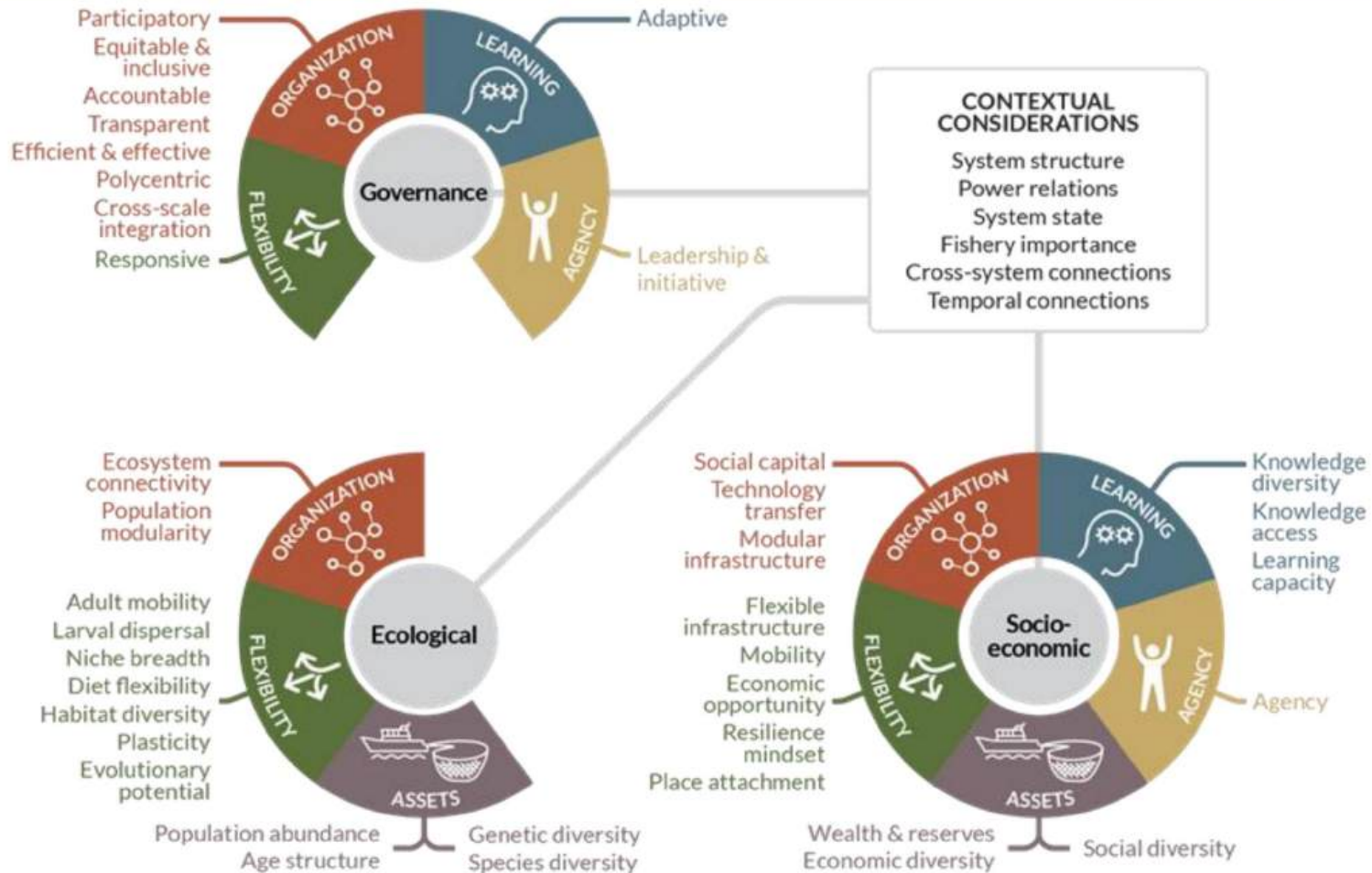


Atributos de resiliencia

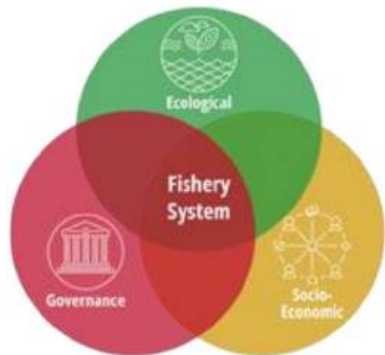


Enfoque: generar y refinar atributos a partir de la literatura y el conocimiento de expertos.

6 artículos de revisión recientes, un grupo de trabajo de expertos y una revisión iterativa



Enfoques: Visión multidimensional de la resiliencia



Atributos de resiliencia

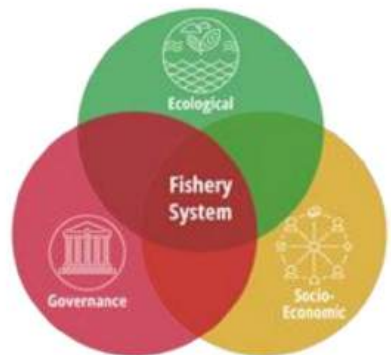


Caminos hacia la resiliencia



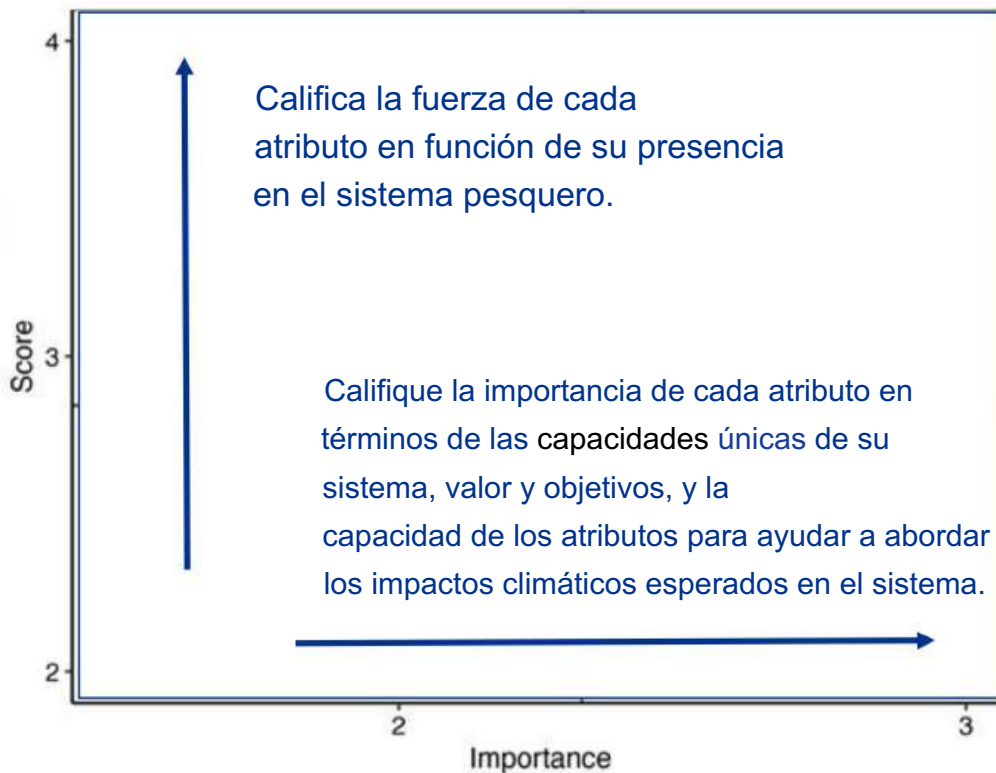
Eurich, Friedman, Kleisner, Zhao et al. 2024 Fish and Fisheries <https://doi.org/10.1111/faf.12790>

Mason, Eurich, Lau et al. 2022 Fish and Fisheries <https://doi.org/10.1111/faf.12630>



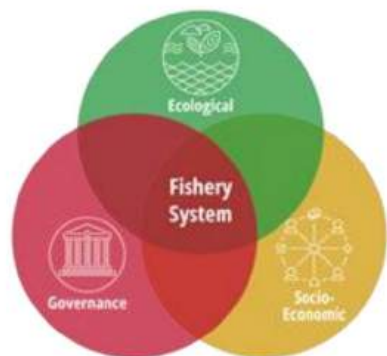
38 atributos

18 estudios de caso

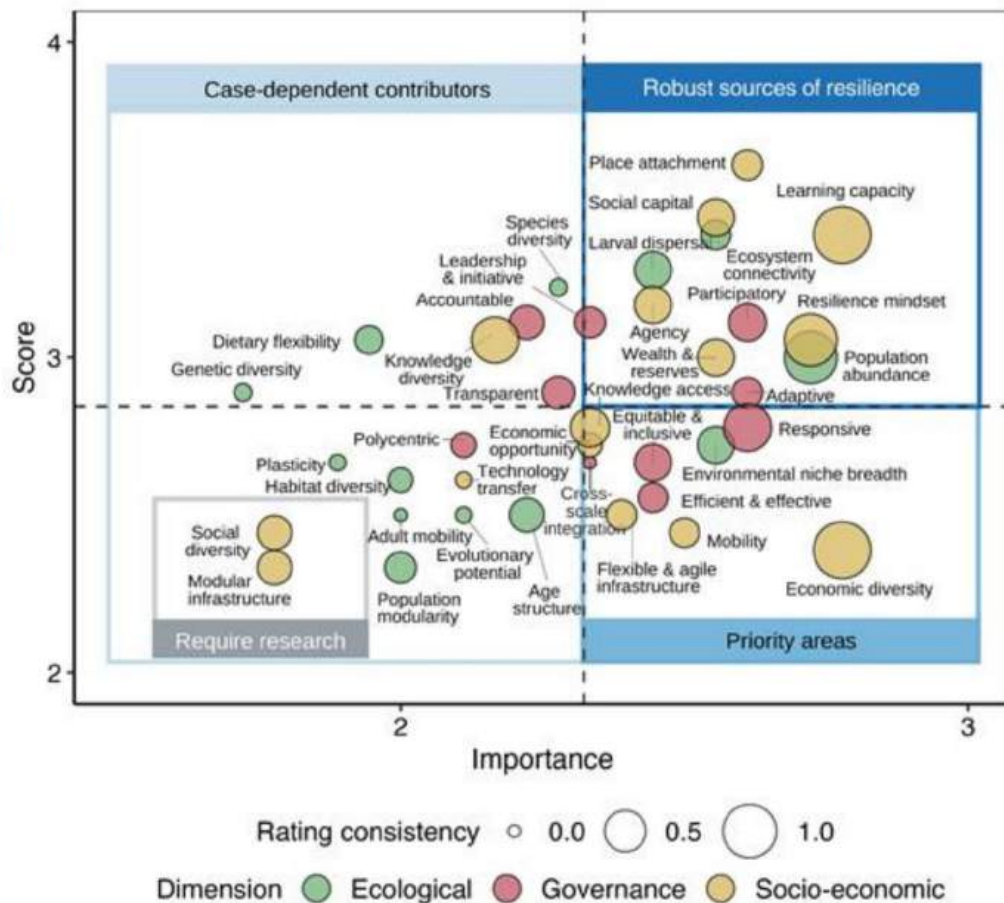


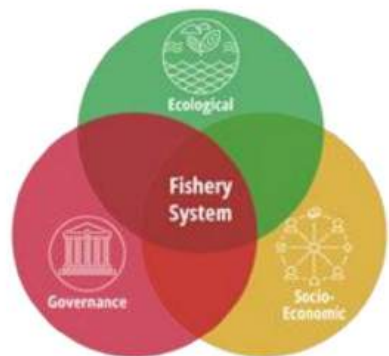
Rating consistency ○ 0.0 ○ 0.5 ○ 1.0

Dimension ● Ecological ● Governance ● Socio-economic

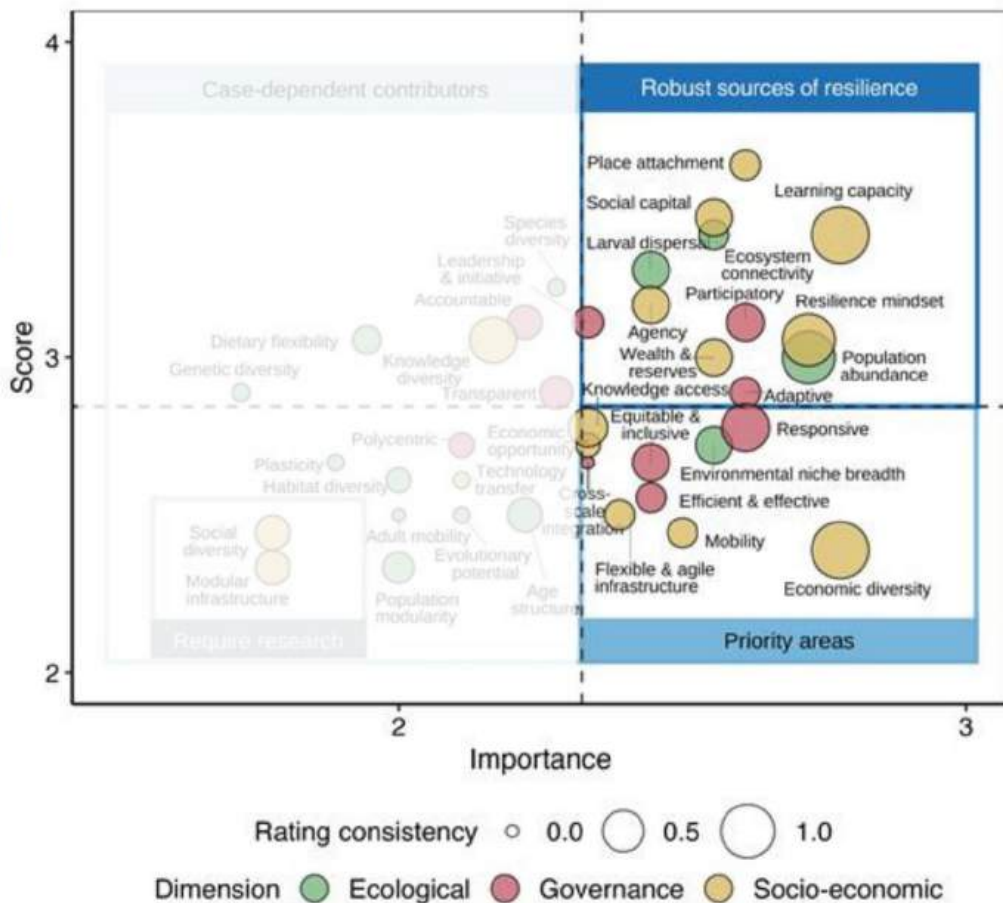


38 atributos,
18 estudios de caso





38 atributos,
18 estudios de caso



Planificar el cambio...

... requiere un plan de
resiliencia climática para la pesca.



Herramienta de planificación pesquera resiliente al clima



Sistema de apoyo a la toma de decisiones para gestores pesqueros, partes interesadas y comunidades que buscan aumentar su resiliencia al cambio climático.

Componentes

- Peligros y riesgos climáticos
- Enfoques e intervenciones de adaptación para mitigar los impactos del cambio climático.
- Capacidades y limitaciones basadas en atributos de resiliencia
- Estrategias de resiliencia climática

Herramienta de planificación pesquera resiliente al clima



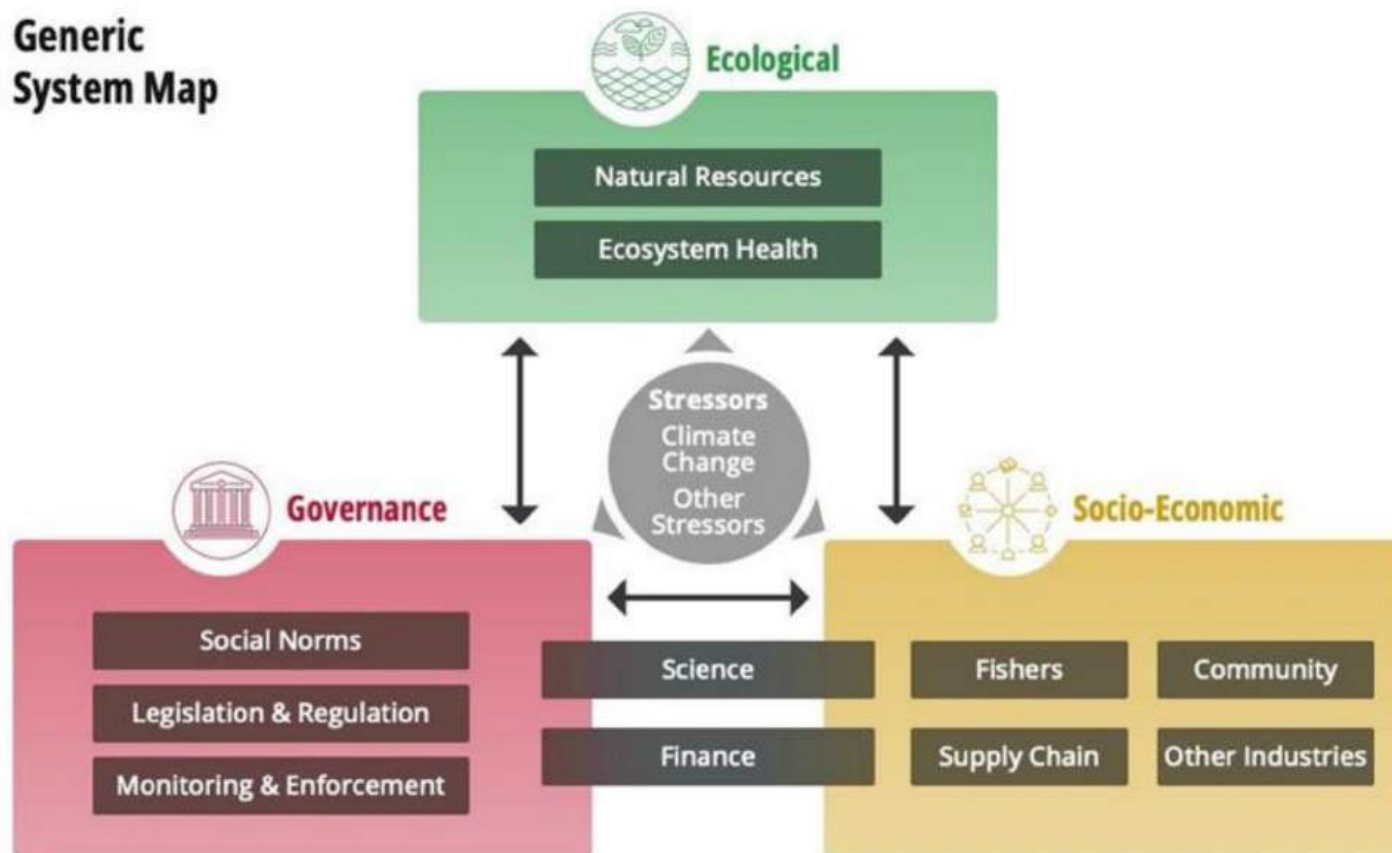
<https://climateresilientfisheries.net>

Herramienta de planificación pesquera resiliente al clima

DEFINIR

Especificar el sistema pesquero: mapeo genérico del sistema.

Generic System Map



Herramienta de planificación pesquera resiliente al clima

EVALUAR

La herramienta facilita una evaluación de las dimensiones de gobernanza, ecológicas y socioeconómicas de un sistema pesquero utilizando los atributos de resiliencia presentados anteriormente.

22 atributos recomendados

Calificar la 'fuerza' y la 'importancia'



Herramienta de planificación pesquera resiliente al clima

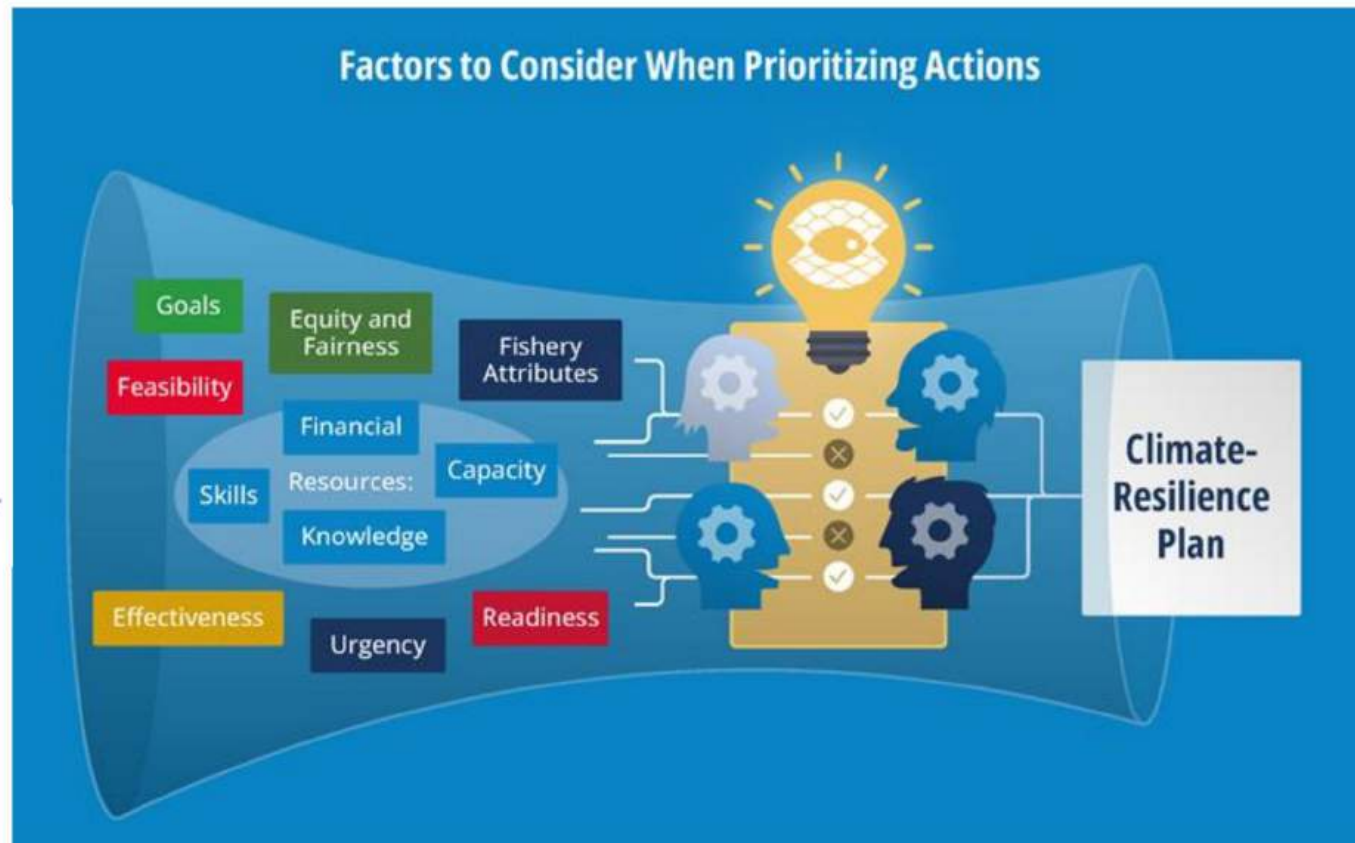
PLAN

STEP 6

Identify Priority Actions

In this step:

- Consider the feasibility of actions
- Prioritize actions for implementation and/or further planning efforts





**CLIMATE—
RESILIENT
FISHERIES**
PLANNING TOOL

[ABOUT THE TOOL](#)

[STEPS 1-6](#) ▾

[CRF CASE STUDIES](#)

climateresilientfisheries.net

A young boy with brown hair, shirtless and wearing dark shorts, is sitting in a small boat on the water. He is holding a small fish on a string in his right hand. The background shows a tropical coastline with palm trees under a blue sky with white clouds.

**Decision support for fishery managers,
stakeholders, and communities seeking to
increase resilience to climate change**



CLIMATE- RESILIENT FISHERIES

PLANNING TOOL

Step 1: Specify the Fishery System

Instructions:

1. List the key types of **ecosystem services** and **values** provided by your system (e.g., food, income, recreation). Consider the ecological, socio-economic, and governance dimensions.
2. Consider the boundaries of the system as defined above. Are there ecosystem resources or actors you won't consider in this assessment and planning process? If so, you may want to note them.
3. Organize the features and actors from the brainstorming exercise into groups using lists, visuals, symbols, or other approaches you prefer, and then describe or visualize them.
4. List external stressors that can influence or impact the system.

[Find more information and resources for this step on the tool website.](#)

Ecological

Socio-Economic

Governance

External stressors

Step 4: Evaluate Climate-Resilience Attributes

Instructions:

1. Become familiar with the definition, mechanisms, and examples from case studies of each climate resilience attribute.
2. Score the strength of each climate resilience attribute based on its presence and strength in the fishery system.
3. Rate the **Importance** of each resilience attribute in terms of the unique capacities of your system, your values, and your goals.
4. Be sure to capture your sources and reasoning as **Notes**.

[Find more information and resources for this step on the tool website.](#)

Dimension	Climate Resilience Attribute <i>Component Attributes (if present)</i>	Brief Description	Example Questions to Consider	Score	Importance	Notes
Ecological	Habitat diversity and quality	The availability, variety, and caliber of suitable habitats.	Are diverse habitat types available? Are the habitats ecologically healthy?			
	Dietary diversity	The range of prey items a species can exploit.	Is the species a generalist feeder, or does it eat only a few types of prey?			
	Spatial flexibility: (1) <i>Adult mobility</i> (2) <i>Environmental niche breadth</i>	The ability of a population to tolerate changing conditions or move to new locations to find suitable conditions.	Can the species tolerate a range of environmental conditions and/or habitat types in one location? Can it easily move to track its preferred environmental conditions?			

Step 5: Brainstorm Climate-Resilience Actions

Instructions:

1. Revisit your goals from Step 2. If you would like to modify them or add new goals based on insights you have gained from earlier steps in this assessment and planning process, do so now.
2. Consider your goals, climate-related impacts, resilience attributes, values, and resources and brainstorm potential actions you might want to take. Examples are available on subsequent pages.
3. For each action, identify which goals it will support, climate-related impacts it will address, and/or resilience attributes it will enhance.

Modified Goals

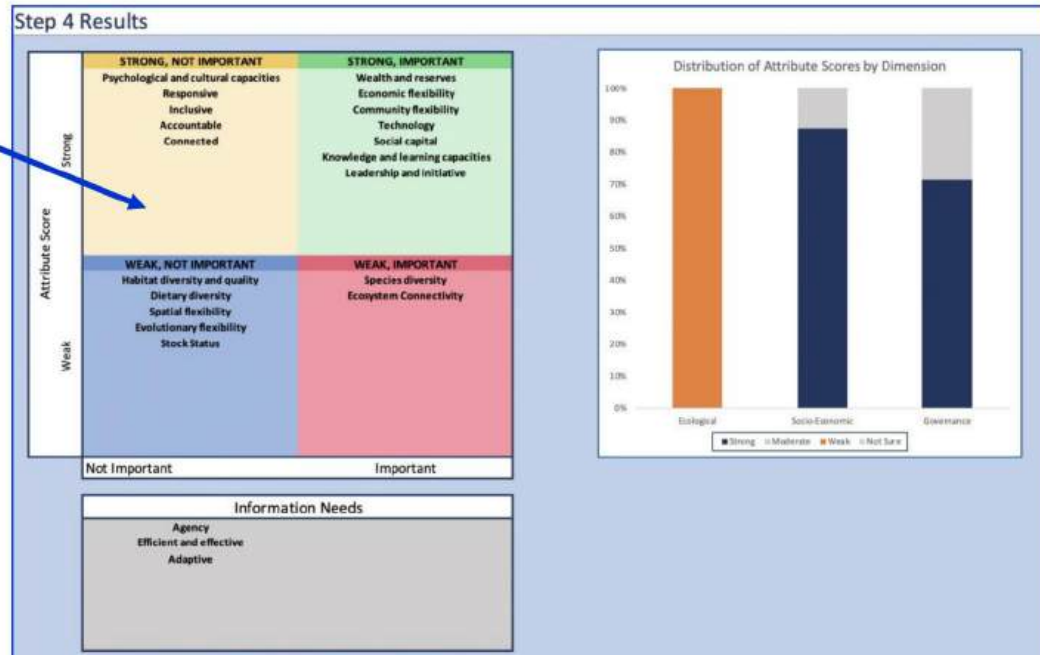
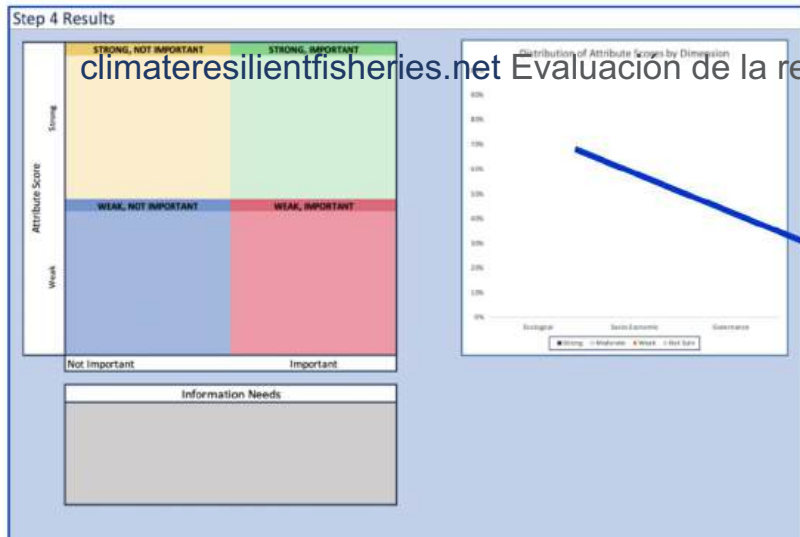
#	Brainstormed Action	Goal(s) supported, Impact(s) addressed, Resilience Attribute(s) enhanced
1	<i>Example: Set up volunteer mangrove seeding program</i>	<i>Mangrove health; Helps reduce erosion; Habitat diversity and ecosystem connectivity</i>
2		
3		
4		
5		



CLIMATE-RESILIENT FISHERIES

PLANNING TOOL

climateresilientfisheries.net Evaluación de la resiliencia de la pesca chilena - Aristóteles Stavrinsky, mayo de 2025





climateresilientfisheries.net

Video: Introduction to the CRF Planning Tool Workbook

 The screenshot shows a video player interface. At the top, there is a toolbar with various icons and a "Capture your screen with Snagit" watermark. The video content displays the "Overview" section of the CRF Planning Tool Workbook. The text in the video includes:

- What does the Climate-Resilient Fisheries (CRF) Planning Tool do?** The Climate-Resilient Fisheries Planning Tool guides users through a six-step process to assess their fishery's climate resilience and identify approaches and priority actions needed to build resilience in their fishery.
- Who should use it?** The tool is designed for fishery participants, community leaders, managers, NGO partners, academics, and others seeking to enhance climate resilience. The tool can be used by individuals and by groups, such as stakeholders in workshops. The tool was developed by Resilient Fisheries.
- Why use the CRF Planning Tool?** Key objectives intended to increase the climate resilience of a fishery will be a complex, long-term, and multifaceted process. Climate-Resilient Fisheries Planning Tool helps users identify and focus their efforts on attributes of the fishery system that are most vulnerable to climate change. The tool is based on rigorous scientific research, analysis of case studies exploring climate resilience in a range of key systems for climate resilience. The tool can be used where climate data is current and projected climate information is available. The tool's value increases over time.
- How to Use CRF Planning Tool user?** The tool facilitates an assessment of ecological, socio-economic, and governance dimensions of a fishery system that enables users to identify dimensions based on the planning goals, expected climate impacts, and resilience attributes present in the fishery. Through a six-step process, users can identify a set of alternative interventions and priorities to operationalize climate resilience in the fishery. The steps are presented in a series of video vignettes with a downloadable tool workbook providing a worksheet for each step. After completing Step 1-6, tool users come away with a prioritized list of potential actions aimed at building climate resilience that can be used to build a fishery climate resilience plan. In many cases, it may be valuable to use the tool iteratively, such as by repeating Steps 4-6 annually, to help refine and adjust climate resilience actions over time.
- How to use the Workbook?** The workbook contains a guide for each step of the tool for users to search the relevant information about their fishery system, allowing of previous content where relevant. Each step contains instructions. However, most data can be approached however users and adjusted to present and apply the information to their system. Throughout the workbook there are tool ranges to assist any functionality being impacted by users. However users can adapt these ranges to their own situation using the provided "Worksheet".

 At the bottom of the video player, there is a navigation bar with tabs for "Overview", "Step 1", "Step 2", "Step 3", "Step 4", "Step 5", "Step 6", "Example Actions for Habitat", and "Example Actions for Aquaculture". A "CLIMATE-RESILIENT FISHERIES PLANNING TOOL" logo is visible in the bottom right corner of the video frame.


Climate-Resilient Fisheries Planning Tool: Facilitators' Guide

Decision support for fishery managers, stakeholders, and communities seeking to increase resilience to climate change

Contact information: climateresilientfisheries@gmail.com

I. Introduction

This document is the Facilitator's Guide companion for the [Climate-Resilient Fisheries Planning Tool](#) (CRF Planning Tool). The guide is not intended as a stand-alone product, but rather to concisely provide guidance to participants who are bringing the CRF Planning Tool to a fishery or community and facilitating a climate resilience assessment and planning process.

The purpose of this guide is to outline an in-person collaborative approach that engages a selection of fishery participants, community members, or other partners in (1) understanding and assessing their current fishery system, (2) considering the current and anticipated effects of climate change, and (3) brainstorming and prioritizing actions they can take to improve the climate resilience of their system and interventions to address immediate climate risks. While this guide is intentionally non-prescriptive, it draws on case studies and external resources to present a broad set of tools.

The CRF Planning Tool is available as a website with instructions geared for multiple fishery or community participants to work through together; it is also available as a downloadable PDF for offline environments. Along with this companion document, the tool has a worksheet, provided both as an Excel document and a PDF. The worksheet will help participants record the outcomes of each step, along with thoughts and considerations that arise along the way. Its use throughout the assessment and planning process is highly recommended.



CLIMATE— RESILIENT FISHERIES

PLANNING TOOL

climateresilientfisheries.net

Download the Tool Workbook

Download Workbook (PDF format)

The PDF file is a printable version of the workbook. It does not offer auto-populating spreadsheets and other interactive features. However, it can be used in situations where computers are unavailable.

Spanish Translation: [Descargar libro de trabajo \(formato PDF\)](#) ←

Bahasa Translation: [Unduh Buku Kerja \(format PDF\)](#)

Download Facilitators' Guide (PDF format)

This guide supports users facilitating the CRF Planning Tool in a fishery or community setting. It outlines a collaborative, in-person approach to assess climate resilience and identify priority actions. Use alongside the CRF Planning Tool website and workbook.

Spanish Translation: [Descargar guía para instructores \(formato PDF\)](#) ←

Bahasa Translation: [Unduh Panduan Fasilitator \(format PDF\)](#)

[Slide and Image Bank for Facilitators \(format PPTX\)](#)

Paso 6: Determinar las acciones prioritarias

Instrucciones:

1. Para priorizar su lista de acciones identificadas en el paso 5, analice las condiciones existentes para apoyar la ejecución de cada acción, así como las condiciones que es preciso mejorar o desarrollar para avanzar en la ejecución (Apoyo existente y necesario).
2. Estudie un cronograma adecuado para cada acción en función de varios factores como la urgencia y la preparación.
3. Además de lo anterior, hay muchos otros factores que pueden determinar cómo priorizar sus acciones. Utilizando los ejemplos de preguntas para guiar su reflexión, anote cualesquier otras consideraciones para cada acción.
4. Indique las acciones prioritarias utilizando la función de resaltado, una nueva hoja u otros métodos que prefiera.

Acc.	Apoyo existente y necesario	Cronograma	Otras consideraciones
1	<i>Ya se conocen subvenciones para proyectos relacionados con los manglares, la comunidad los apoya y está implicada</i>	<i>Varios años</i>	<i>Beneficios generales para el ecosistema más allá de la mejora de los hábitats de cría</i>
2			
3			
4			
5			

Conclusiones

- Múltiples caminos, principios compartidos: codesarrollo y relevancia local. son no negociables
- Pasar de los planes a la acción: un marco de resiliencia complementa las herramientas ecológicas y socioeconómicas presentadas esta semana.
- El marco es flexible: se puede adaptar a las especies, escalas y estructuras de gestión
- La expansión requiere equidad: los miembros con menos recursos necesitan un apoyo alineado, política y financiación



Preguntas y debate



Jacob Eurich, PhD – jeurich@edf.org

Herramienta de planificación CRF – climateresilientfisheries.net