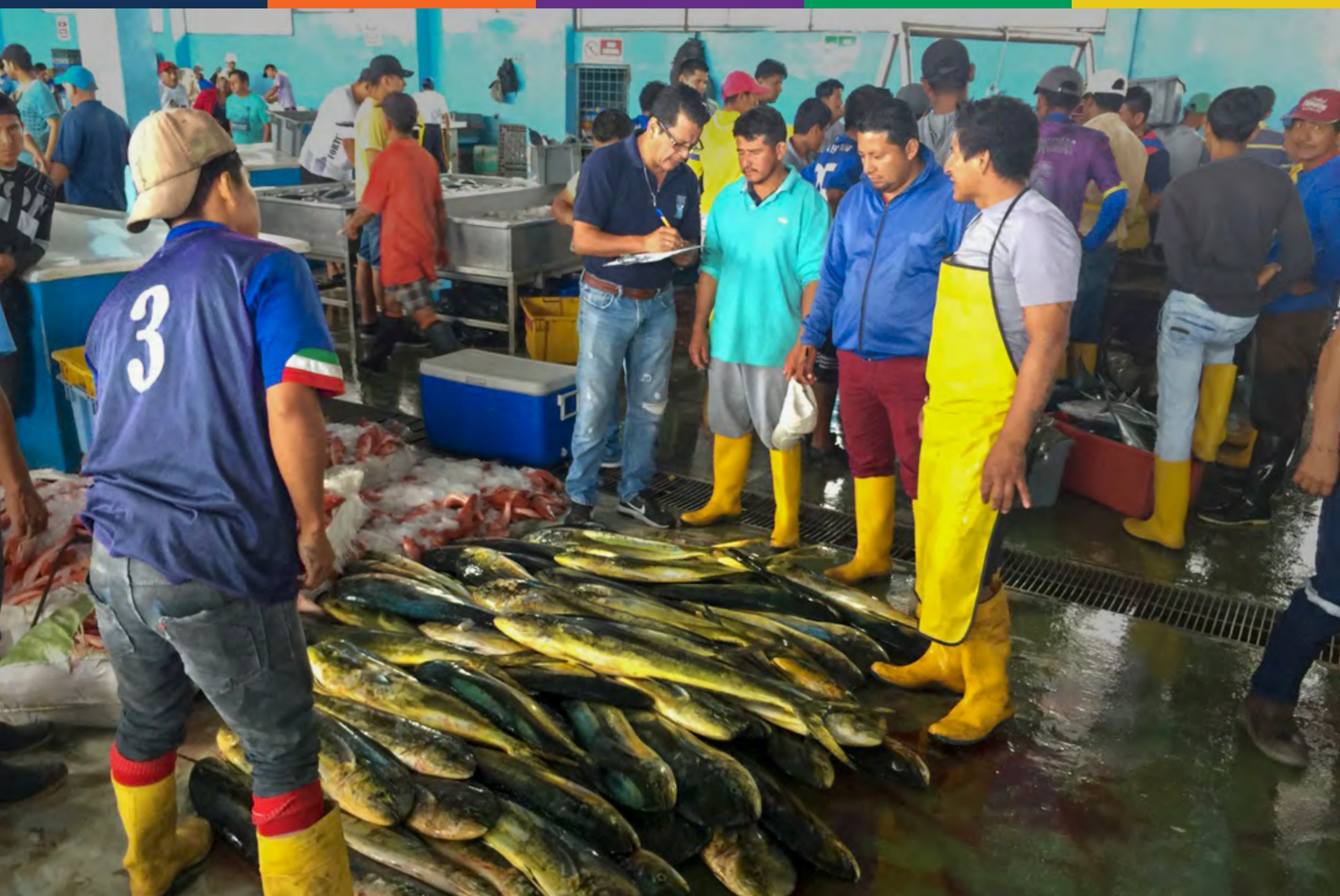
Sustainable Fisheries
PARTNERSHIP

Mahi-Mahi Stock Assessment in the Eastern Pacific: Progress and Next Steps

December 2025



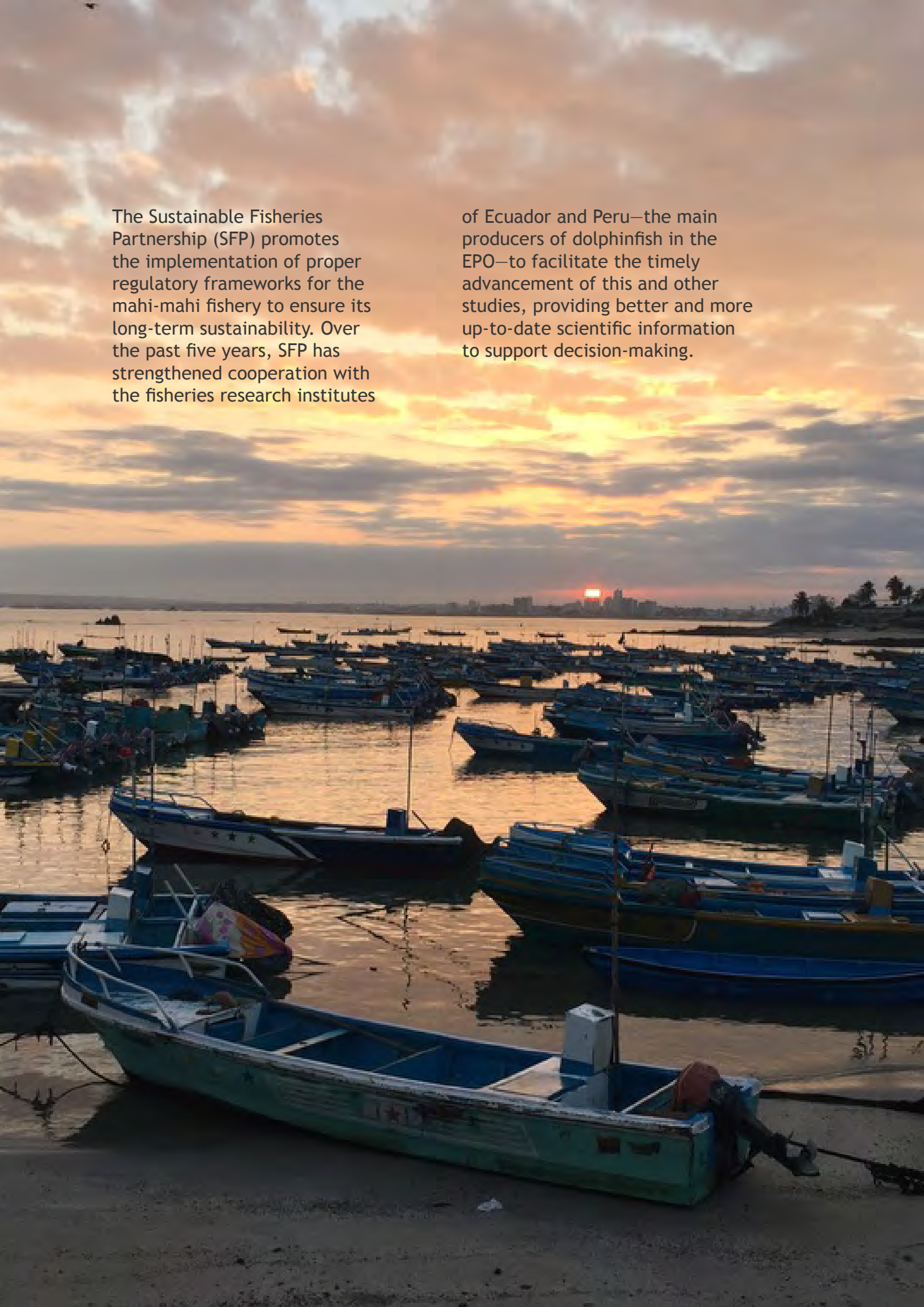
Mahi-Mahi Stock Assessment in the Eastern Pacific:

Progress and Next Steps

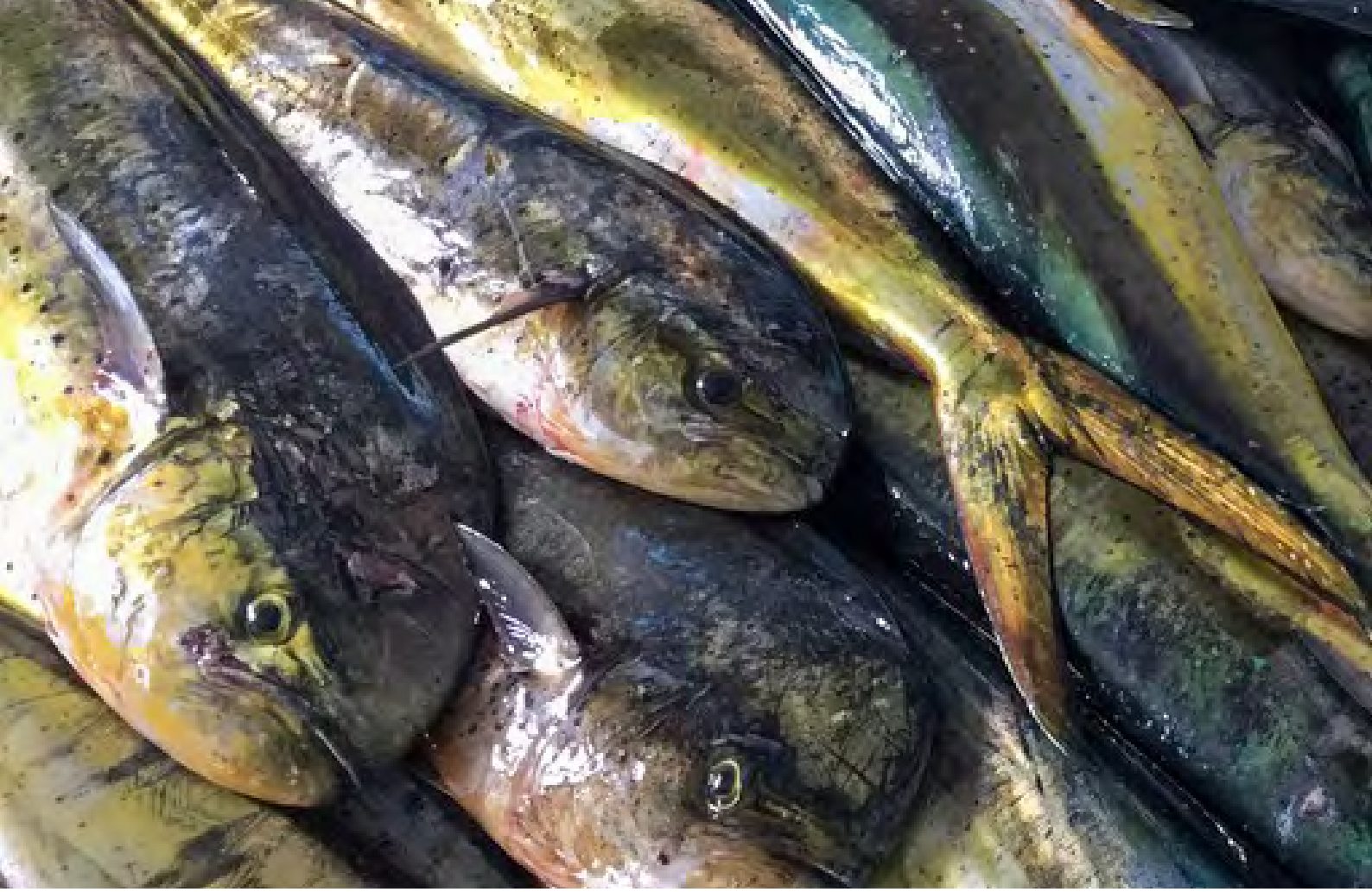
The dolphinfish or dorado (*Coryphaena hippurus*), also known as mahi-mahi, is a fast-growing, early-maturing, and highly migratory pelagic species. In the coastal countries of the Eastern Pacific Ocean (EPO), mahi-mahi has high socioeconomic value, supporting commercial fisheries that are mainly artisanal and semi-industrial with an artisanal component (mother vessels operating with longlines).

The first stock assessment of mahi-mahi in the EPO was conducted by the Inter-American Tropical Tuna Commission (IATTC) in 2016. This exploratory assessment highlighted: (i) the need to explore alternative assessmenont models for comparative analysis, and (ii) the urgency of a specialized study to identify the mahi-mahi population structure in the EPO.

Stock assessment is an analysis that employs mathematical and statistical models to describe the state and dynamics of a fish population (for example, how much biomass exists and how much can be sustainably harvested). It is a key tool for establishing management measures in a fishery. Within Fishery Improvement Projects (FIPs), stock assessment is the first step toward implementing actions that enhance fishery management.



The Sustainable Fisheries Partnership (SFP) promotes the implementation of proper regulatory frameworks for the mahi-mahi fishery to ensure its long-term sustainability. Over the past five years, SFP has strengthened cooperation with the fisheries research institutes of Ecuador and Peru—the main producers of dolphinfish in the EPO—to facilitate the timely advancement of this and other studies, providing better and more up-to-date scientific information to support decision-making.



2019

The Regional Committee of Mahi Producers and Processors (COREMAHI) requested the Scientific Advisory Committee (SAC) of the Inter-American Tropical Tuna Commission (IATTC) to update the existing stock assessment (based on 2008–2014 data) and invited the governments of the coastal countries to support this request.

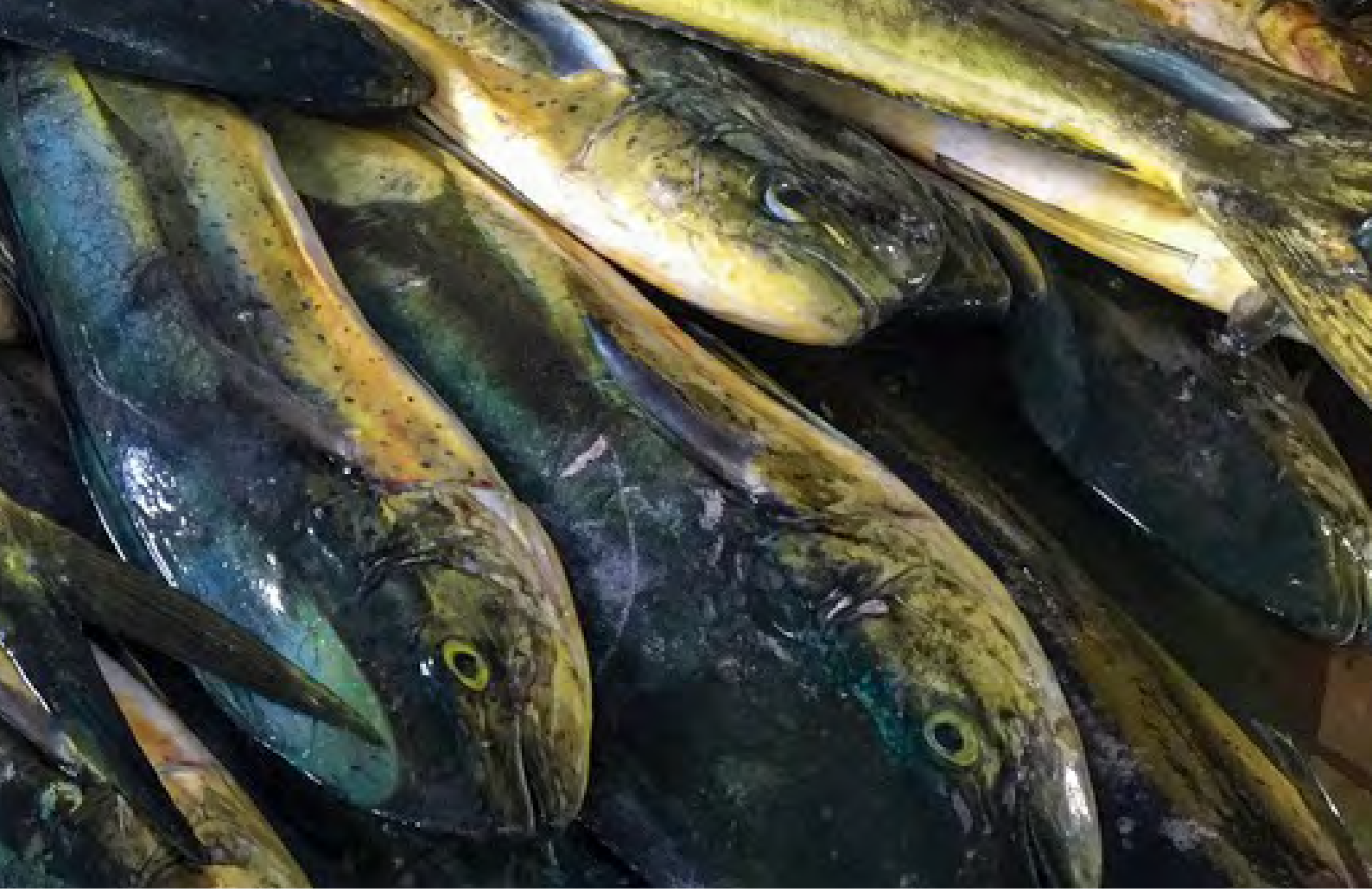
2020

The Public Research Institute for Aquaculture and Fisheries of Ecuador (IPIAP) and the Peruvian Sea Institute (IMARPE) established a joint working group to conduct the stock assessment and agreed to hold three virtual meetings during 2021.

Through the Global Marine Commodities (GMC) project, SFP facilitated the participation of researcher Rubén Roa to provide scientific support to the assessment process.

2023

IPIAP and IMARPE updated the stock assessment by incorporating environmental information, particularly sea surface temperature data associated with El Niño and La Niña events.



2024

IPIAP and IMARPE, with the support of researcher Rubén Roa, carried out a new update of the mahi-mahi stock assessment. They also discussed the results of the genomic and tagging studies and agreed to conduct three assessments: two national (one per country) and one binational.

2025

COREMAHI developed a proposal for the creation of the Dolphinfish Working Group (DWG) within IATTC, with the objective of developing, coordinating, and exchanging scientific information to support stock assessment efforts and ensure the participation of fishery stakeholders in regional decision-making processes regarding mahi-mahi.

The Ecuadorian delegation presented this proposal—with minor changes—during the 103rd Meeting of the IATTC, where it was approved under Resolution C-25-05. This formalized a multisectoral forum integrating the participation of scientists from member countries, technical officials from fisheries authorities, representatives from the artisanal and industrial fishing sectors, as well as managers and observers involved in dolphinfish fisheries in the region.

This group will enable the coordination of research and standardization of data for the development and updating of stock assessments, as well as the formulation of technical recommendations to support management decisions based on the best available scientific evidence.
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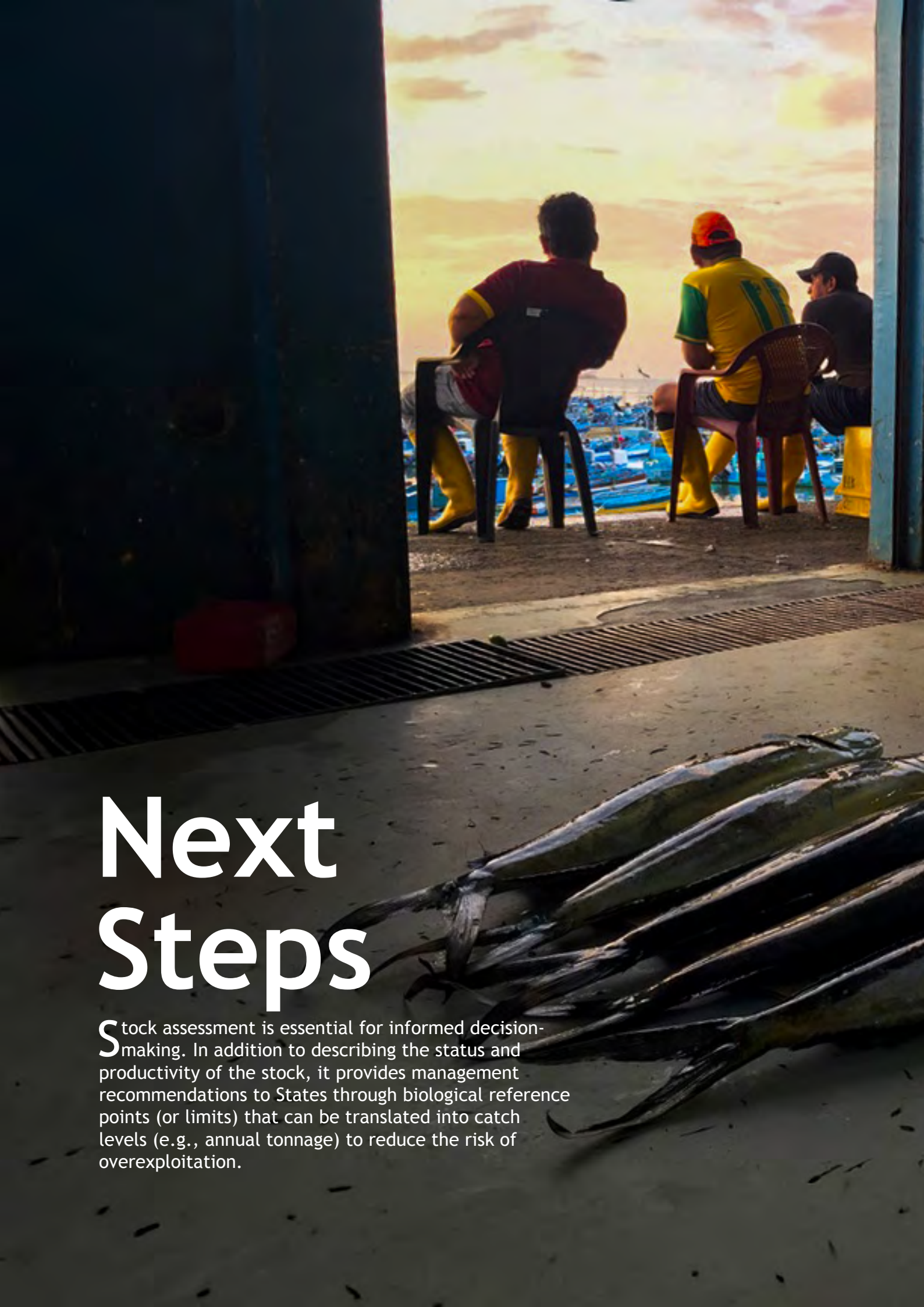
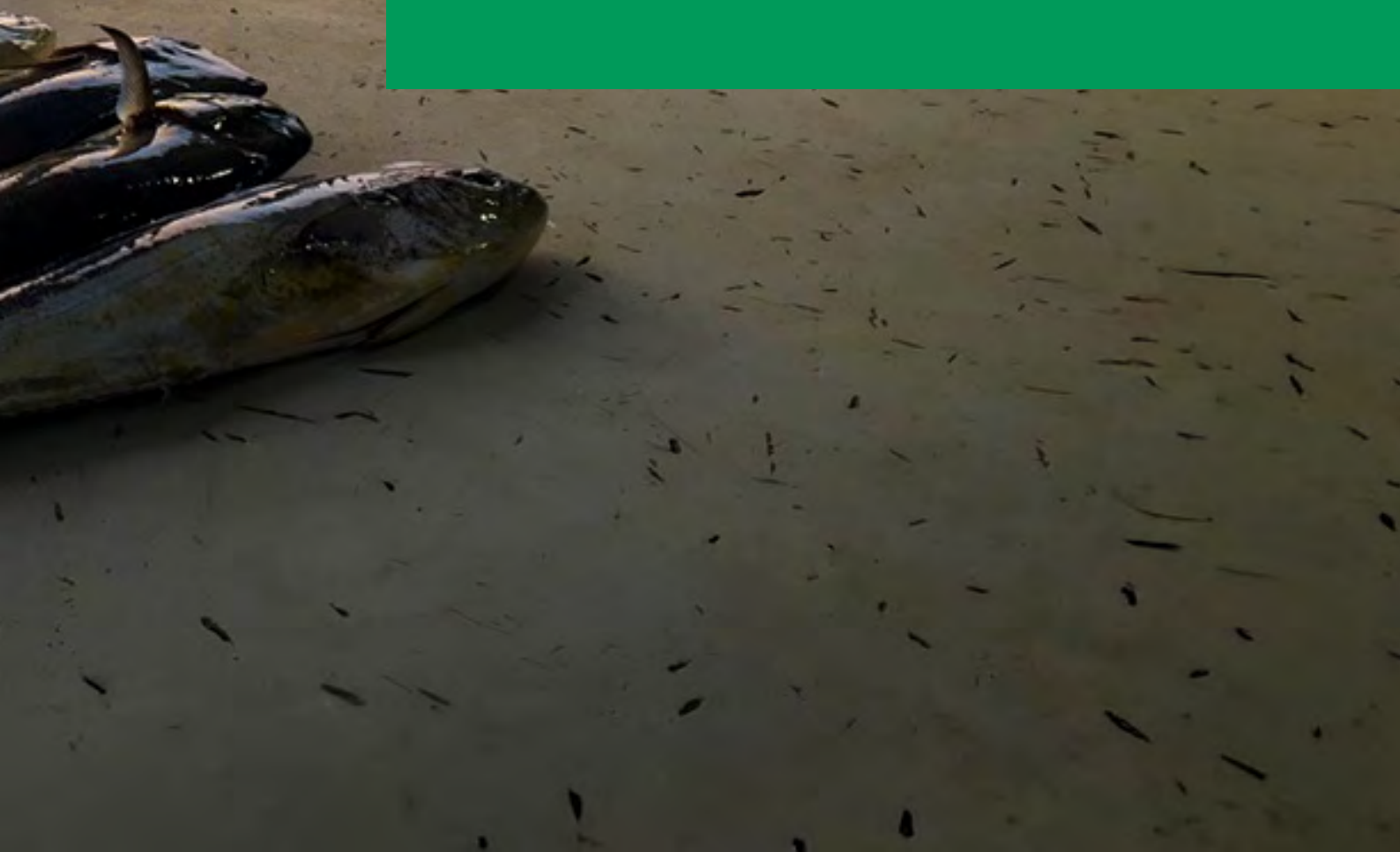


Next Steps

Stock assessment is essential for informed decision-making. In addition to describing the status and productivity of the stock, it provides management recommendations to States through biological reference points (or limits) that can be translated into catch levels (e.g., annual tonnage) to reduce the risk of overexploitation.

In Peru, the results of the IPIAP-IMARPE stock assessment, together with the findings of the genomic study, led to the prioritization of national management measures aimed at mitigating the risk of overfishing. In Ecuador, this assessment will be key to informing discussions under the new mahi-mahi governance system, adopted through a Ministerial Agreement on June 24, 2025, with the objective of establishing management measures for the resource.

Given that Peru and Ecuador account for more than 80% of dolphinfish catches in the Eastern Pacific Ocean (EPO), it is strategically important to promote coordinated regional efforts to maintain a continuous stock assessment process and enhance the compatibility of management measures. The creation of the Dolphinfish Working Group within the IATTC represents a decisive step in that direction.



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If you'd like to learn more about SFP's work with the Mahi-mahi Fishery in Latin America, please email info@sustainablefish.org.