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## Small-scale fisheries in French outermost regions: streamlining scientific evidence to enhance progress toward the sustainability of fisheries and associated socio-ecosystems

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Small-scale fisheries operating in coastal areas represent 90% of worldwide fisheries and 84% of the European Union (EU) fleet. They are globally vital for coastal populations as they sustain a major source of animal protein, provide numerous job opportunities, livelihoods, support economic activities and are culturally central. In EU Outermost Regions (ORs), these fisheries are subject to the Common Fisheries Policy (CFP) and related regulations, although they benefit from derogatory or specific regimes for instance regarding fleet renewal. Obligations include in particular reporting on fleet fishing capacity to inform future fisheries policies.

Small-scale fisheries are typically data-limited. In this context, assessing the ecological and socio-economic sustainability of local fisheries through the status and evolution of fish stocks and fleets is a challenge that relies on utilizing existing knowledge and collecting additional key data.

In order to address this challenge, a holistic approach based on fisheries socio-ecosystems (FSES) was initiated. In 2022, a pluridisciplinary working group (WG) was formed that included fisheries scientists, marine ecologists, social scientists and fisheries economists, in order to compile fisheries-related knowledge and data in the five French EU ORs (Guadeloupe, Martinique and French Guiana in the Atlantic Ocean and Reunion and Mayotte in the Indian Ocean). This comprehensive endeavour of the group provided the first overview of fleets, stock status and overall social and economic context in each OR as well as the environmental and ecosystem interactions with fisheries.

The WG organized institutional exchanges through an overall workshop and several meetings with stakeholders (national and local fisheries managers, fishers' representatives and other stakeholders) of each territory. The fisheries' current status were presented, together with existing research projects and knowledge gaps; and discussions were engaged about the challenges faced by

stakeholders and their needs, and identifying the needs that can be studied or documented by science.

In 2024, a first report presents validated assessment results for 38 coastal stocks, and describes in detail the economic and social situation of the different fleets of the French ORs, as well as the interactions with other uses of fishery resources (large-scale commercial fishing, recreational and subsistence fishing, illegal fishing), the seafood sectors, and the governance and regulation of fisheries. The impacts of fishing on ecosystems, other factors of erosion of populations and biodiversity and the implications for fishing are also discussed.

We present the main findings of this report, and discuss knowledge gaps and potential solutions to make up for these. Although the WG work is iterative, the approach used proved fully relevant and effective, due to both the FSES integrated approach, the sharing of experiences and expertise from several OR, and the interactions with the stakeholders. The WG outcomes will contribute documenting sustainability indicators in the perspective of UN SDGs and improving the governability of FSES in a tight context regarding marine biodiversity conservation, maritime spatial planning and climate change.