Contribution to the ICSP-17 topic "sustainable fisheries management in the face of climate change"

In the context of the 17th round of informal consultations of States Parties to the Agreement, Brazil would like to suggest that the ICSP-17 focuses on the establishment of marine protected areas as an instrument for fisheries management in the face of climate change.

Brazil has recognized the urgent need to address the impacts of climate change on its coastal and marine environments, including the depletion of fish stocks, habitat degradation, and the loss of biodiversity. In response, the country has increasingly turned to MPAs as a tool for enhancing fisheries management and promoting ecosystem resilience.

One notable aspect of the Brazilian experience is the integration of scientific research, stakeholder engagement, and adaptive management strategies in the establishment and management of MPAs. Through collaboration between government agencies, scientific institutions, fishing communities, and civil society organizations, Brazil has sought to design MPAs that effectively balance conservation objectives with the socio-economic needs of coastal communities.

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In that regard, we appreciate the opportunity to present overarching elements for consideration at ICSP-17, as follows.

a) Experience in sustainable fisheries management in light of climate change, including in relation to: assessing the impacts of climate change on fisheries; addressing the impacts of climate change on fisheries; accounting for cumulative impacts; applying an ecosystem approach and a precautionary approach in light of climate change; and incorporating economic, social and cultural aspects into sustainable fisheries management in light of climate change.

- Effective experiences related to sustainable management in the light of climate change are not yet in advanced stages of development in Brazil. Nonetheless, there is a nascent research in this direction, in particular on the effect of climate change on the true sardine fishery (Sardinella brasiliensis).

b) Lessons learned, best practices and challenges in sustainable fisheries management in the light of climate change

- In light of the lack of specific plans and guidelines for dealing with the consequences of climate change on fishing activity, especially in relation to extreme weather conditions, the Brazilian government has acted in a punctual and emergency manner through direct social aid to fisherman/women impacted by climate change in regions classified as under a state of public calamity. One should note that the studies focused on fishing dynamics are increasingly considering climate change. Studies carried out by Brazilian researchers have assessed the sensitivity of various fishing resources to climate change. Among their findings, we highlight, for instance, that mollusks, followed by elasmobranchs, are more sensitive to the adverse effects of climate change. (Gianelli_et_al_2023_Sensitibity_to_global_warming_southwestern_Atlantic).
- We also highlight the recent presentation of studies during the 1st Ordinary Meeting of the Standing Committee for Fisheries Management and the Sustainable Use of Pelagic Fisheries Resources in the Southeast and South Regions (CPG Pelágicos Sudeste/Sul) - a forum that promotes dialogue among public administration bodies and entities, the productive sector and researchers, on the rules for planning pelagic fisheries in the Southeast and South regions. In this context, the studies "True sardine fishing: reproductive cycle, closed season, El Niño and climate change" and "The geographical distribution of true sardines

between Cabo de São Tomé (RJ) and Rio Grande (RS), on the way to Chuí?" were presented, explaining the effects of climate change on purse seine fisheries targeting true sardines (Sardinella brasiliensis). They observed effects of the El Niño Southern Oscillation (ENSO) on fishing landings, as well as the possible tropicalization effect of the sardine, i.e. its movement further south due to the warming of surface waters in the southern region of the country.

- Recommendation 4/2023 of the 1st Ordinary Meeting of the Southeast/South Pelagics CPG deals with "Revising the True Sardine Management Plan, including adaptive management models and the effects of climate change on fisheries". The Brazilian Ministries of Fisheries and Aquaculture and of the Environment and Climate Change (MMA) act together to tackle the issue, aiming at complying with the deadline of 2024 established under that Recommendation. Considering that the current Management Plans in Brazil lack updating and an ecosystem approach that includes the effects of climate change, the main challenge faced by Brazil relates to the revision and the development of these management plans, including the True Sardine Management Plan in light of EbAs. For that, there is still the need to develop institutional and management capacity to include climate change in adaptive and ecosystem management of pelagic fisheries.
- With specific regard to artisanal fishing, Brazil established the Artisanal Fishing Peoples Program in 2023, which is the first program run by the federal government aimed exclusively at this fishing segment. With approximately 1 million people in Brazil, the Program aims to develop and implement public policies and establish an agenda of priority actions, built in a participatory manner, aimed at defending, promoting and strengthening artisanal fishing communities in the national territory. As an offshoot, the Program also foresees the creation of the National Artisanal Fishing Plan by 2024, with actions to create multidimensional policies for fishing over the next 10 years. In partnership with the Ministry of Social Development and Fight against Hunger, actions are planned to promote the socio-economic inclusion of fishermen/women. There are also actions to benefit the category with lines of credit and technical assistance, the productive and sanitary inclusion of artisanal fishing and the expansion of the acquisition of artisanal fish in the Food Acquisition Program (PAA), in partnership with the Ministry of Agrarian Development and Family Agriculture and the National Supply Company (Conab).

c) Actions needed to strengthen sustainable fisheries management in the light of climate change, including by addressing specific challenges faced by developing countries through capacity building in accordance with Part VIII of the Agreement

- In light of Recommendation 4/2023 of the 1st Ordinary Meeting of the Southeast/South Pelagics CPG we believe that strengthening sustainable management in light of climate change include enhancing technology transfer and South-South cooperation, developing institutional, research, management and implementation capacities for ecosystem-based management, informed by relevant knowledge on the adverse effects of climate change on fisheries. Therefore, we favor holding workshops to exchange experiences on drawing up Management Plans and their implementation, as well as technical visits with this finalized. Addressing the impacts of climate change on fisheries must consider the cumulative effects of these phenomena, taking into account not only environmental but also socio-economic aspects. To deal with these challenges, it is essential to adopt a precautionary, ecosystem approach, taking into account the complex interaction between environmental, socio-economic and cultural factors. In addition, sustainable fisheries management needs to incorporate economic, social and cultural aspects, ensuring that the measures adopted are socially just, culturally sensitive and economically viable.
- In this sense, an example to be considered through an ecosystem approach are the losses and damages to equipment and fishing gear, One should bear in mind relation between the equipment used and the housing conditions of families, which exposes the interdependence between the domestic sphere and the economic sphere. Given the climate crisis, the calculation of damages should estimate the economic impacts of climate change in, for instance, sales or the loss of small family stocks, which often guarantee family food security. These analyses should consider the medium-term effects of climate change on fisheries, given the dependence of fishing crops on water dynamics. These interconnections make sustainable fisheries management complex in the light of climate change, especially in a scenario of great diversity in continental fisheries, estuarine-laguar fisheries and marine fisheries, whether artisanal or industrial, most of which are multi-species and dynamic.

- In addition to that complexity, Brazil develops its plans in line with the guidelines of the Ministry of the Environment and the Ministry of Fisheries, thus ensuring that the actions and public policies built for the various types of fishing are guided by the premises of interdisciplinarity, relating ecosystem services to human well-being and with sustainability as the guiding principle. It is clear that climate change represents a pressing challenge for national fishing activities, requiring innovative and integrated approaches to tackle it. In this context, the practices to be adopted by the Ministry of Fisheries and Aquaculture should aim not only to mitigate the impacts of climate change on fishing, but also to promote adaptive and ecosystem-based management that ensures the sustainability of this important activity for the country and the communities that depend on it.

The ICSP-17 can provide State Parties to the Agreement with a space to share best practices as well as cooperative approaches on the establishment of marine protected areas as an instrument for fisheries management in the face of climate change.

New York, 3rd May 2024.