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**Actions taken by Chile in the Protection of Vulnerable Marine Ecosystems**

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## **ACTIONS TAKEN BY CHILE IN THE PROTECTION OF VULNERABLE MARINE ECOSYSTEMS**

### **Submitted by Undersecretariat for Fisheries and Aquaculture – Chile**

In accordance with the precautionary principle and the ecosystem approach for fisheries management, the United Nations UN, on its Resolution 61/105 (2006) calls upon States to take actions, individually and through organizations and regional fisheries management agreements (RFMOS), to sustainably manage fish stocks and to protect Vulnerable Marine Ecosystems VMEs, including seamounts, hydrothermal vents, and cold water coral reefs from destructive fishing practices.

To assist States and RFMOS implementing the aforementioned resolution, FAO developed the International Guidelines for the Management of Deep-Sea Fisheries in the High Seas (FAO guidelines), which among other subjects includes criteria and procedures for both the identification of VMEs in areas beyond the limits of national jurisdiction and the assessment of potential impact of fishing activities. These guidelines are expected to facilitate the adoption and implementation of measures to protect VMEs.

Answering the call made by the UN on its Resolution 61/105 and in accordance with the FAO guidelines, different RFMOs have adopted measures to protect VMEs. In particular, within the process of establishing the South Pacific Regional Fisheries Management Organization (SPRFMO) several interim measures on VMEs were adopted, highlighting the Bottom Fishery Impact Assessment Standard, adopted in February 2012.

Despite the growing trend of implementing measures to protect VMEs in the high seas, the States have been slow to adopt such protection measures within their territorial waters. Chile has not been the exception to the latter reflection; however, the subject was largely discussed in the Congress and subsequently, a Law (Nº 20.657) addressing the topic and incorporating measures to protect VMEs within its EEZ was enacted in February 2013.

### **Aspects considered in the General Law in Fisheries and Aquaculture in Chile, concerning the protection of Vulnerable Marine Ecosystems**

#### **Definitions**

*Vulnerable Marine Ecosystem (VME):* a natural unit consisting of fragile geological structures or invertebrate communities or populations, of low biological productivity, such as seamounts,

hydrothermal vents cold water coral reefs or canyons, which have reduced or slow recovery when disturbed by anthropogenic activities.

*Bottom fishing*: extractive fishing operation using gears, implements or fishing devices making contact with the seabed.

*Seamount*: seafloor elevations not emerging from the ocean surface and whose heights exceeds 1000 meters, measured from the surrounding seabed which constitutes its base.

### **Regulation measures**

- i. Prohibition of bottom fishing on seamounts: this type of fishing will not be permitted unless it is scientifically demonstrated that fishing activities do not generate adverse impacts on VMEs occurring in the area
- ii. Establishment of a fisheries management regime for VMEs in limited geographic areas: for such areas where has been verified the presence of invertebrates or geological structures that accounts for the existence of VMEs, the following measures has been established:
  - a) Prohibition of bottom fishing activities with gears, implements or devices that could adversely affect or impact the VMEs in a specific area.
  - b) Regulation of the features and design of gears, fishing implements or fishing devices
  - c) Prohibition of use and carrying of fishing gears, implements or devices as referred in a) or not complying with design and features as referred in b)
- iii. Establishment of the aquatic resources whose fisheries qualify as bottom fishing that can affect VMEs: to perform fishing extractive operations on those resources, vessel owners are obligated to provide, before setting sail, information regarding their expected fishing operations as well as information on their vessel features and fishing equipment. Additionally, the embarking of fisheries observers is mandatory for any vessel operating on the aforementioned resources.
- iv. Application of provisional protection measures if during bottom fishing extractive activities, elements that are constitutive of VMEs are accidentally caught: when applicable, the fisheries observer on board will inform the skipper if the quantities captured exceeded the thresholds and are indicators of VME presence. In such cases, the skipper shall immediately halt fishing operations in the area located around the coordinates where the haul accidentally catching EMV indicators was set.

## Implementation of the Law

Within process of implementing the Law to protect VMEs (Nº 20.657) is still pending the development of specific regulations to materialize the law requirements. These regulations are currently in discussion, and in general, contain the operative requirements for fisheries whose target species qualify as bottom fishing, as well as the requirements for research to be carried out in areas cataloged on VME regime. Special attention has been put to the establishment of a VME evidence protocol which: establishes the elements (indicators) that correspond to the presence of a VME, the respective threshold weights triggering protective actions like the move-on rule, and the distance where a next haul could be set after an encounter with VME. All these aspects are relevant, since the scientific information on these topics is still insufficient in Chile. Therefore regulations will establish them provisionally, and will be reviewed and updated periodically as more information is gathered.

Regarding to species groups indicators of VME, sponges and corals have been considered. Within corals, the following groups have been identified:

Common name	Class	Order	Family
Soft corals	Anthozoa	Alcyonacea	<i>Acanthogorgiidae spp.</i> <i>Alcyoniidae spp.</i>
Black corals	Anthozoa	Antipatharia	<i>Antipathidae spp.</i> <i>Cladopathidae spp.</i> <i>Leiopathidae spp.</i>
Stony corals	Anthozoa	Scleractinia	<i>Caryophylliidae spp.</i> <i>Oculinidae spp.</i>
Hydrocorals	Hydrozoa	Stylasterina	<i>Stylasteridae spp.</i>
Sea fans	Anthozoa	Gorgonacea	<i>Gorgoniidae spp.</i> <i>Isididae spp.</i> <i>Primnomidae spp.</i>

The threshold values that trigger the *move on* rule are still being discussed. However, it has been preliminarily considered 50 kg for sponges (active or inactive) and 30 kg for coral (live or dead) , as well as a moving distance of 2 nm.

Finally, it should be noted that the VME's regulations are expected to be fully operative in 2014, thus advancing in the achievement of a broad consistency within the SPRFMO and Chile's measures on VME protection.