



SCIENCE – SEAMOUNTS

What is a seamount? Pitcher et al. (2007) define a seamount as, “...any topographically distinct seafloor feature that is at > 100 m but which does not break the sea surface.” This definition excludes large banks and shoals, and topographic features on continental shelves. They classify seamounts based on summit depth, on the basis that this affects biological productivity. However, the term seamount can be used to refer to any underwater feature, including a drowned reef, drowned atoll, bank or mountain, where the summit can be very deep or just below the surface.

Globally, there may be more than one million seamounts > 100 m in elevation, perhaps 100,000 to 200,000 seamounts which reach > 1000 m in elevation, the majority of which are found in the Pacific where around 30,000 seamounts > 1000 m are believed to exist. The Pacific tectonic plate is believed to contain close to half of seamounts that are > 2km in height. Very few of these have undergone studies to document bathymetry, geology, oceanography, and biodiversity.

Seamounts that reach within 500 to 100m of the surface have the potential to affect the pelagic ecosystem and pelagic fisheries, as associated upwellings can bring nutrients from the deeper ocean to enhance primary productivity, encouraging aggregations of pelagic fish.

In conjunction with SPC’s work on ecosystems analysis, central aims of the IUCN’s work in the region on seamounts are to review the state of knowledge of pelagic longline fishing effects on seamount ecosystems from a review of the literature, and by drawing upon existing fisher knowledge, with an objective of identifying priority information gaps and research needs. The overarching goal of the study is to ensure the sustainable management of longlining on seamounts to benefit fishers and seamount ecosystems.