NORTHERN MARIANA ISLANDS & MARIANA TRENCH FACT SHEET

Natural resources

Physical Setting

- The Mariana Trench is 1,554 miles long and 44 miles wide. It contains the deepest known point on earth which is 36, 201 feet.
- The Mariana Archipelago lies 3,700 miles west of Honolulu.

Geologic Structure

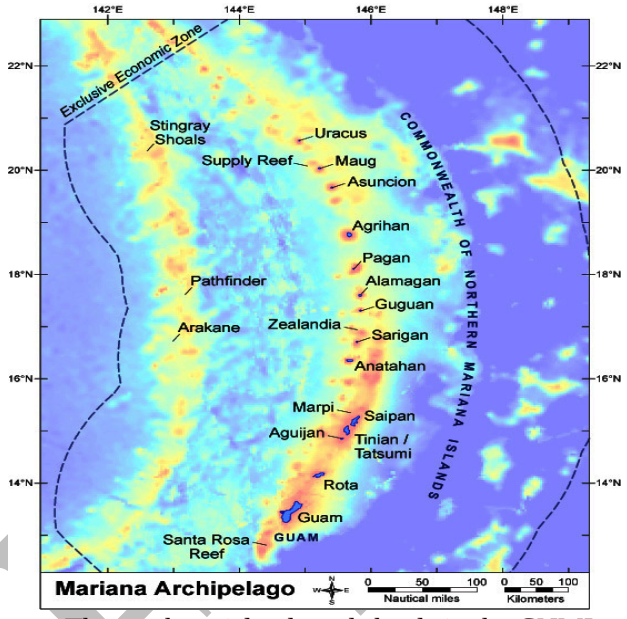
- This region is geologically very complex including a subduction zone, back-arc basins, and active and potentially-active island and submarine volcanoes.

Ecosystem Description

- The area represents the only place on Earth with huge (largest = 31-mile diameter and >1-mile high) active submarine mud volcanoes that release hydrogen.
- The Champagne vent, located at the Eifuku submarine volcano, produces almost pure liquid carbon dioxide. This phenomenon has only been observed at one other site in the world.
- The molten Sulfur Cauldron (convecting pool of liquid sulfur) found at the Daikoku submarine volcano is unique; the only other known location of molten sulfur is on Io, a moon of Jupiter.
- Unlike other reefs across the Pacific, the northernmost Mariana reefs provide unique volcanic habitats that support marine biological communities requiring basalt.
- Maug Crater represents one of only a handful of places on Earth where photosynthesis and chemosynthetic communities of life are known to come together.

Biological Characteristics

- The marine waters of these areas contain very high numbers of apex predators, including large numbers of sharks.
- The waters surrounding the northern islands are a biodiversity hotspot in the Western Pacific, and include some of the most diversified and dense seamount hydrothermal ecosystems yet discovered.
- They also contain one of the most diverse collections of stony corals in the U.S.-affiliated Western Pacific, with approximately 350 species of stony corals currently identified in the area.



- The northern islands and shoals in the CNMI have substantially higher large fish biomass, including apex predators, than the southern islands and Guam.
- Twenty nine species of resident and transient cetaceans occur in the surrounding waters, 6 of which are listed as endangered.
- The waters surrounding Uracas, Maug, and Asuncion support some of the largest biomasses of reef fishes in the Mariana Archipelago.

Historical

- Spanish galleon ship wrecks and grounded modern fishing vessels are not uncommon in the Mariana archipelago, but no records exist for the focus area.
- Asuncion and Maug were both leased by the German authorities from 1909 to 1912 for the purpose of harvesting bird feathers for the European and Japanese plumage trade. Six bird catchers were supposed to be working on Asuncion, but only human corpses were seen on the beach in 1910 when visited by the German station chief.

Cultural

- The native populations of the Chamorro and Carolinians represent a large part of the Northern Mariana Islands cultural history.

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Human use & current management

- There have been 7 scientific expeditions to the area in the last 5 years. NOAA regularly conducts scientific cruises that host a variety of extensive scientific research and management programs.
- There are no known/permitted fisheries in the northernmost part of CNMI.
- No offshore oil or gas exploration or mineral extraction has been known to occur in the northernmost portion of the Mariana Trench, however, permits for mining Pozzolan sought for nearby Pagan Island.
- Marine fishery resources in the Exclusive Economic Zone are managed by the Department of Commerce, National Oceanic and Atmospheric Administration based on fishery management plans developed and recommended by the Western Pacific Fishery Management Council.
- Pagan Island and its surrounding waters are currently designated for use in amphibious training in the U.S. Marine Corps Training Concept Plan for the western Pacific.

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- Map of Essential Fish Habitat Areas, visit www.wpcouncil.org/maps.htm
- For more on Species of Concern, link to http://www.fpir.noaa.gov/PRD/prd_species_of_concern.html
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