



ABOUT TAIWAN' S OCEAN

Situated in an area between the Ryukyu archipelagos and the Philippine archipelagos, the island of Taiwan is surrounded by the Pacific Ocean (the Philippine Sea), the Bashi Channel, the South China Sea, the Taiwan Strait, and the East China Sea. It is located at the intersection of three large marine ecosystems, namely the East China Sea, the South China Sea, and Kuroshio Current, and with mixed ocean currents, depths, sediments, and water temperatures. Taiwan features abundant coastal and marine ecosystems, such as coral reefs, rocky shores, mangroves, seagrass beds, estuaries, beaches, lagoons, and algal reefs, all of which endow diverse species.

According to the TaiBNET (Catalogue of Life in Taiwan; 2021.9.11 version), there are close to 15,190 species of marine life in Taiwan' s coastal waters, including 3,162 species of fish, 884 species of coral, 2,061 species of seaweed, 1,534 species of crustaceans, 184 species of seabirds, 33 species of cetaceans, and five species of sea turtles.

According to the Law on the Exclusive Economic Zone and the Continental Shelf of the Republic of China and the Law on the Territorial Sea and the Contiguous Zone of the Republic of China, the exclusive economic zone extends 200 nautical miles and the territorial sea extends 12 nautical miles, measuring seaward from the baseline. The area of the territorial sea is approximately 62,550 km². The area of restricted and prohibited waters in Kinmen County, Lienchiang County and Taiping Island is 1,923 km². In order to protect marine resources of Taiwan, 46 marine protected areas were established by 2021, with a total area reaching 5,264 km², accounting for 8.16% of the area of the territorial sea and internal water.



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OCA

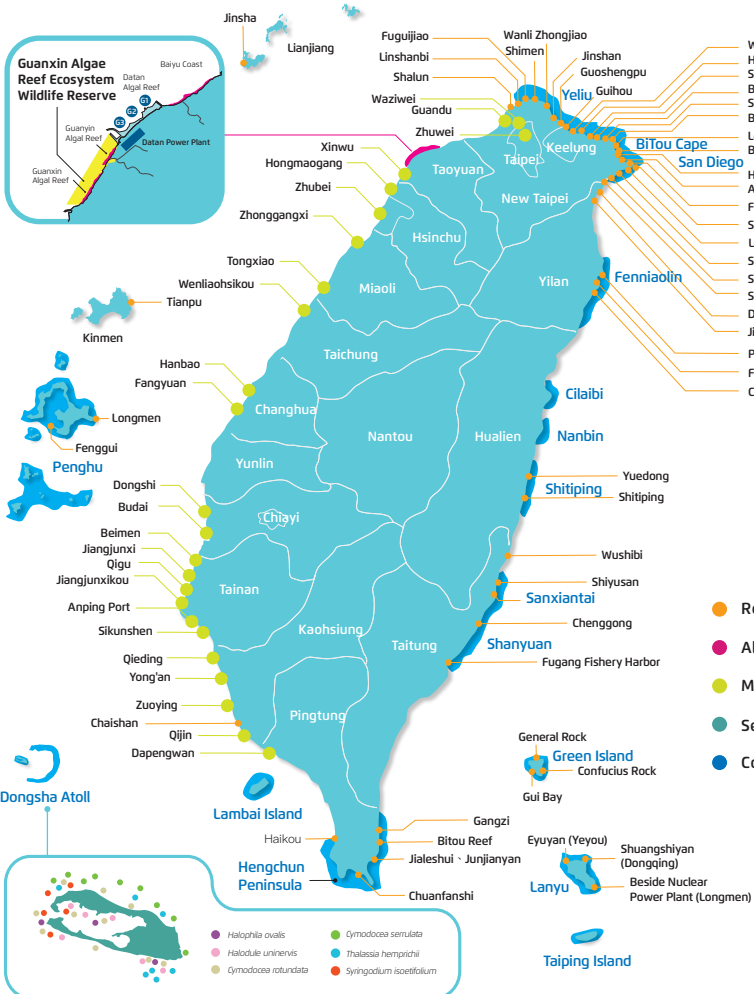
An Introduction to the Duties of the
Ocean Conservation Administration,
Ocean Affairs Council

Survey of Marine Protected Areas

Surveys were conducted in at least 20 sea areas around the island and 50 near-shore areas to collect environmental parameters, phytoplankton, larvae and juvenile fish, marine microplastics, benthic mud ecology, and other marine ecological data, using emerging technologies and integrated research methods.

DISTRIBUTION MAP OF TAIWAN'S MARINE PROTECTED AREAS

DISTRIBUTION MAP OF TAIWAN'S MARINE ECOSYSTEM



- Reefs
- Algal Reefs
- Mangrove Forest
- Seagrass Beds
- Coral Reefs

Duties

According to the announcement of the Executive Yuan, Yuan-Tai-Zi No. 1070725741A made on April 27, 2018, the OCA of the Ocean Affairs Council is the competent authority for implementing the Marine Pollution Control Act and the category of marine wildlife specified in the Wildlife Conservation Act. The OCA is also in charge of the businesses relating to marine natural landscapes and natural monuments as specified in the Cultural Heritage Preservation Act.

Businesses Handled by the OCA

- Planning, coordination, and implementation of marine ecological and environmental protection.
- Planning, coordination, and implementation of marine biodiversity conservation and restoration.
- Planning, coordination, and implementation of marine protected areas.
- Planning, coordination, and implementation of conservation and management of marine nonfishery resources.
- Planning, coordination, and implementation of marine pollution prevention.
- Planning, coordination, and cooperation in matters relating to coastal and sea area management.
- Planning, coordination, and implementation of education extension and information on marine conservation.
- Other matters relating to marine conservation.

Main Strategic Plans

From 2020 to 2023

Marine Pollution Monitoring and Contingency Plan

The Plan is aimed to enhance monitoring of water quality in the marine environments, implement marine pollution contingency mechanisms, improve the capacity of prevention against and response to vessel accidents, subsidize local governments in drifting/seabed marine debris and extend environmental education, in order to safeguard the marine environments.

From 2020 to 2023

Coastal Cleaning and Maintenance Plan

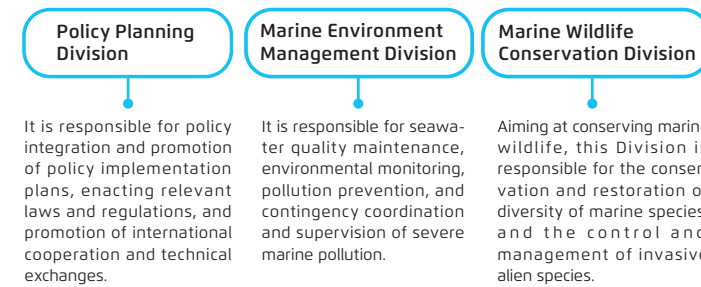
In respect to the governance of marine debris, the Plan involves investigation and monitoring of marine debris and microplastics, promotion of environmental protection fleet and volunteer cleanup divers to conduct sea cleanup activities for timely removal of marine debris.

From 2021 to 2024

Taiwan Marine Ecosystem Protection Plan

It includes three major strategies: restoration of marine ecosystems, enhancement of habitats protection, and promotion of citizen participation, with the formulation of 11 items

Organizational Chart



Thirteen Marine Conservation Stations

The marine conservation rangers are responsible for promoting the following work within the range of each station:

- Investigation and evaluation of marine protected areas and assistance in handling illegal cases and patrolling.
- Extension of marine conservation education, including education extension at schools, communities, and marine station display areas.
- Conducting patrols for conserving marine biodiversity, including inspection by cetacean observers, friendly angling investigations, stranded marine animal rescues, and investigation of cases subject to the Wildlife Conservation Act.
- Implementing marine environment management, including marine pollution inspection and assistance in reporting, investigation of drifting marine debris, and the work relating to marine debris cleanup.

Prospects

The ecological environments in the world are facing climate changes, ecological deterioration, and loss of biodiversity, and therefore, awareness from all sectors is crucial. There is the need of using public resources in a rational manner, and more so with wisdom.

The ocean needs the protection from all of us. With the UN Sustainable Development Goals and the Ecosystem Restoration 2021-2030 Plan in mind, the OCA will work with all sectors to implement the Project on Salute to the Ocean. Focusing on the three policy goals: Clean Ocean, Healthy Habitats and Sustainable Resources, the OCA will continue to strive tirelessly for the sustainability of the ocean, whereby safeguarding the marine ecology for the Taiwan and its entire citizens, to ensure sustainable development of marine resources.



3 SUSTAINABLE RESOURCES

Conserving endangered species
Sustainable marine resources

Scientific Monitoring

There are more than 141 marine wildlife species listed as protected marine species, and listed on CITES appendices, as well as assessed by IUCN as endangered or vulnerable. Priority has been given to undergo systematic scientific investigation and by means of citizen scientists, to assess the resource status of Chinese white dolphins, cetaceans, sea turtles, cartilaginous fishes, seabirds, corals, and shellfish around Taiwan.

Onsite Rescue Unit

- Receiving of Reports
- Situation Assessing
- Onsite Reporting
- Rescue Handling

- Coast Guard Administration
- County and city governments
- Seaside Clean-up Society
- Other private cooperative bodies
- Marine Biology and Cetacean Research Center at National Cheng Kung University
- National Museum of Marine Biology & Aquarium
- National Taiwan Ocean University
- Agencies commissioned by county and city governments

Forensic Analysis Unit

- Sample Management
- Forensic Analysis
- Pathological Anatomy

- National Museum of Natural Science
- National Museum of Marine Biology & Aquarium
- Marine Biology and Cetacean Research Center at National Cheng Kung University
- National Taiwan Ocean University
- School of Veterinary Medicine, National Chung Hsing University
- College of Veterinary Medicine, National Chung Hsing University
- Asia University

Education Advocacy Unit

- Press Release
- Respond to Public Opinions
- Education and Training

- Coast Guard Administration
- County and city governments
- Coast Guard Administration
- Other cooperative bodies

Care and Shelter Unit

- Medical Care
- Temporary Shelter
- Long-term Shelter
- Released Back into the Wild

- National Museum of Marine Biology & Aquarium
- Marine Biology and Cetacean Research Center at National Cheng Kung University
- National Taiwan Ocean University
- Penghu Marine Biology Research Center
- Kinmen Fisheries Research Institute
- Units commissioned by county and city governments
- Other cooperative bodies

Rescue of Stranded Marine Animal

- Set up Relevant Centers and Rescue Stations
- Standard Operating Procedure
- Training

- Coast Guard Administration
- County and city governments
- Coast Guard Administration
- Other private cooperative bodies

1 CLEAN OCEAN

Prevent marine pollution
Reduce marine debris

Environmental Monitoring

Land-based pollutants may enter the sea via rivers confluence and recreational activities, whereby affecting water quality of the sea. Moreover, global warming leads to increased seawater temperature and acidification. Through monitoring of the seawater quality, the pollutant sources can be identified to facilitate source management.

Seas Around Taiwan

According to the Sea Areas Environment Monitoring and Monitoring Stations Establishment Regulations, 105 sea monitoring stations have been established in the sea areas around the main island of Taiwan, Penghu archipelagos, Kinmen, and Lienchiang, to monitor 21 water quality indicators, such as pH, dissolved oxygen and heavy metal contents. Monitoring results are seasonally announced, with publication of annual reports every year. Subsidies were given to local governments to establish monitoring stations in crucial sea areas.

Marine Debris

Scientific investigations such as transect methods and citizen scientists reports are used to investigate microplastic contents in floating marine debris, marine debris on seabed, in seawater, and in the body of marine wildlife.

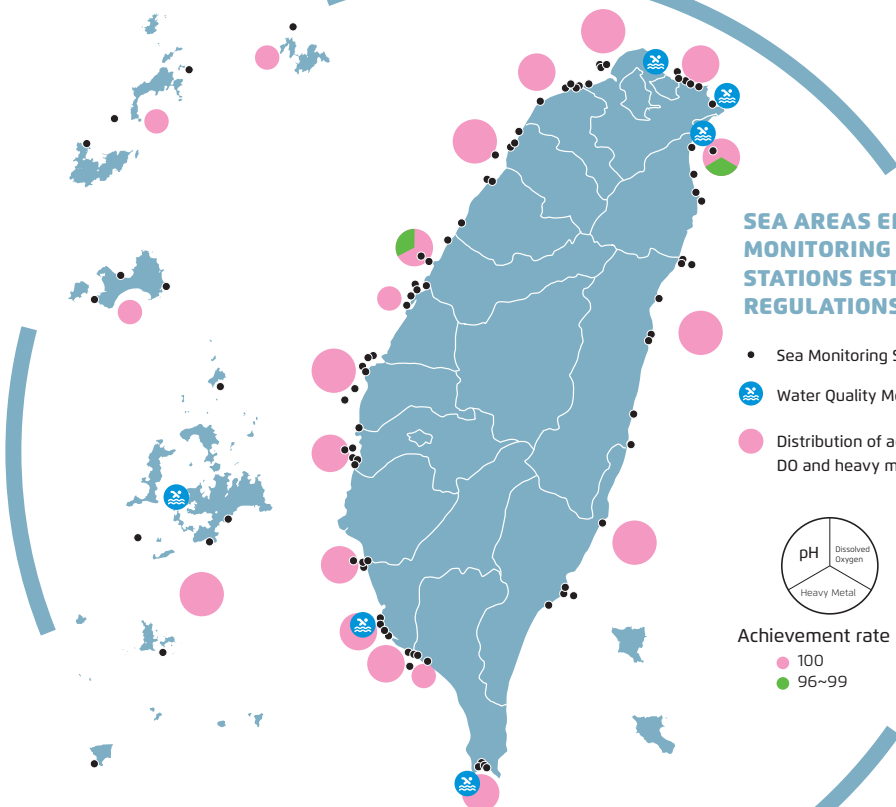
Water Quality Monitoring at Other Sites

To protect the health of the public in recreational activities. Water quality levels are classified as excellent, normal, and unsuitable for water activities.

To control possible pollution sources at coastal areas that may affect water quality of the sea area.

Technology Monitoring of Oil Pollution

In case of a shipwreck which poses the concern of oil spill, simulation of possible pollution areas will be conducted through Oilmap oil pollution diffusion model. If necessary, marine pollution radar monitoring vehicles will be used to calculate the oil spill distribution by receiving echoes of oil on the sea surface, thereby facilitating rapid understanding of the marine oil pollution incidents.



Regulations

Marine Pollution Control Act

- Major Marine Oil Pollution Emergency Contingency Plan.
- Designated announcement seawater sampling analysis method.
- According to Article 13 of the Marine Pollution Control Act, which it was deemed by that the locations for companies obtained letter of approval from the Ministry of Economic Affairs to establish wind power offshore systems were those public and private locations as provided in Article 13 of the Marine Pollution Control Act.

Emergency Response

Major Marine Oil Pollution Emergency Contingency Plan

- Training relevant personnel.
- Standard operating procedures have been established accordingly.
- Immediate response to marine oil pollution.

Law Enforcement

Marine Environments Inspection and Governance

- Onsite Inspection of Operators Permitted for Oil Transmission.
- Marine Pollution Contingency and Port Inspection of Local Governments
- Marine Debris Governance Platform.
- Environment Protection Fleet / Volunteer Cleanup Divers

Wildlife Conservation Act

- Marine Wildlife Conservation Advisory Committee
- Wildlife Conservation Regulations
- Marine Wildlife Conservation Management and Maintenance
- Marine Wildlife Import and Export Review

Law Enforcement

Marine Living Resources Conservation and Restoration

- Conservation Plan for the Taiwanese Humpback Dolphin
- Species Conservation Plans
- Cetacean Observer System
- Friendly Angling Action Plan
- Friendly Whale Watching
- Datan Algal Reef Protection
- Coral Restoration
- Investigation of Illegal Activities

Regulations

Cultural Heritage Preservation Act

- Definition of Marine Natural Landscapes and Marine Natural Monuments
- Marine Natural Landscapes and Marine Natural Monuments Council

Public Participation and Local Protection

Marine conservation protection projects were promoted in cooperation with local communities and rewards and subsidies were provided to individuals, communities, civil groups, as well as private enterprises for participating in the work of marine conservation, and with the five themes, namely, marine habitat restoration, marine citizen scientists, friendly angling, advocacy for marine conservation, and protection of marine environments, to incorporate people from the government, academia, and industries in promoting public participation in marine affairs.

In 2021, the Ocean Conservation Administration' s Plan on Marine Conservation Volunteer Service was established to recruit 60 volunteers for engaging in the work of marine conservation education extension and the service of volunteer for marine environment protection, in order to improve the public awareness on the conservation of marine ecology and the sustainability of marine resources.

Publicity of Marine Conservation Information

The "iOcean" website was established to compile data on marine ecology and water quality survey collected by the OCA, related agencies and civil groups, as well as angling reports, and other information from citizen scientist and volunteer cleanup divers on marine wildlife sightings.

Extension of Marine Conservation Education and Elite Training

On April 22, 2019, the OCA signed memoranda of understanding with the National Museum of Marine Science & Technology, the National Museum of Natural Science, and the National Museum of Marine Biology and Aquarium for extending marine conservation education activities.

Artistic calendars with marine wildlife and ecology, conservation picture booklets, illustrated books about protected marine wildlife, and quarterly journals on special issues were published, and such workshops as "Baby Sea Turtle Strikes Back" and "Bravo Taiwan Cetaceans" were held, to broaden the knowledge of the public on marine conservation.

The OCA has cooperated with local governments and civil groups in organizing seminars on marine conservation related topics, educational propaganda, and education extension activities, for example, the All Aspects on Marine Conservation Seminar, the Mermaid Family Story Telling, and the National Ocean Day, etc.

The Marine Conservation Education Center was established to organize innovative marine conservation activities and introduce marine conservation education.

PARTNERSHIP

International Participation and Bilateral Cooperation

Active participation in marine environment protection and wildlife conservation related international organizations and meetings was promoted to keep track on the international development and promote international cooperation.

- Agreement on the Conservation of Albatrosses and Petrels, ACAP
- Asia Pacific Economic Cooperation, Ocean and Fisheries Working Group, APEC OFWG
- Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES
- Our Ocean Conference, OOC
- Bilateral meetings and visitations with the United States, Palau, Japan, and the European Union were conducted, for exchanging marine conservation methods with international friends to understand the trends of international management.