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Preface

臺灣位處亞熱帶,四面環海,東有黑潮流經,西為大陸棚,有冷水及暖水交會,且東部海岸為岩岸地形,西部為沙岸地形、又有外海沙洲及濕地海岸等多樣化海岸自然景觀,海洋生態多樣,有利於漁業發展。

臺灣漁業在政府積極輔導、學術及試驗研究單位研究開發及業者共同努力經營下,近年(近 5年)總產量約為 120 萬公噸,總產值約為新臺幣 950 億元(約 31 億美元),漁業從業人數約 33 萬人,以 2018 年 FAO 公佈之 2016 年各國漁獲資料統計顯示,臺灣為全球漁業產量第 27 大國家,亦為重要公海捕魚國之一。

Taiwan is situated in the sub-tropic, surrounded by seas, with Kuroshio current along its east coast, and continental shelf extending from its west coast, where warm and cold currents meet, and its east and west coasts are marked by rocky and sandy features. Such diverse natural marine sceneries as offshore sandbanks and wetlands, as well as diverse marine ecosystems provide great opportunity for developing fisheries.

With the active assistance of the government, and research and development of academic and research institutes, coupling with the concerted efforts of the industry, Taiwan's fisheries prospered, generating a total production volume of 1.20 million tons, and a value of NT Dollars 95 billion (approximately US\$3.1 billion). There were about 330 thousand people engaging in the work of fishery in recent five years. According to 2016 FAO statistics of the world's fisheries production published in 2018, Taiwan was the 27th top fisheries producer, and one of the most important high seas fishing countries.

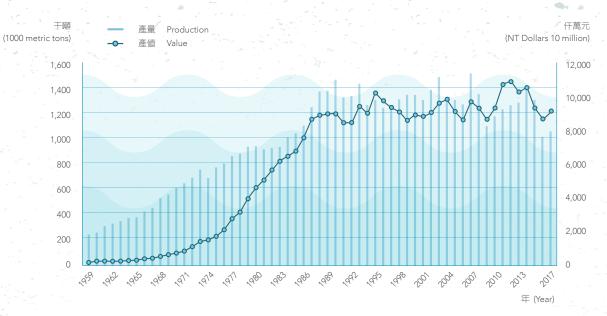


圖 1 漁業生產量值表 Figure 1 Fisheries Poduction and Value

項目 Item	合計 Total	遠洋 Distant water	近海 Offshore	沿岸 Coastal	内陸漁撈 Inland fishing	海面養殖 Mariculture	内陸養殖 Aquaculture on land
漁戶數 Households	127,942	5,617	19,369	62,443	4,513	5,772	30,228
漁戶人口數 Persons in household	364,450	16,929	57,470	171,751	9,004	22,690	86,606
漁業從業人數 Persons engaging in fisheries	325,940	15,282	48,984	164,145	7,419	20,319	69,791



表 1 2017 年漁戶數、漁戶人口數及漁業從業人數 Table 1 Fisheries Households, Number of Persons in Fisheries Households and Number of Persons Engaged in Fisheries in 2017

- 遠洋漁業 Distant Water Fisheries 54% 沿近岸漁業 Offshore and Coastal Fisheries
- 18% 養殖漁業 Aquaculture 28%





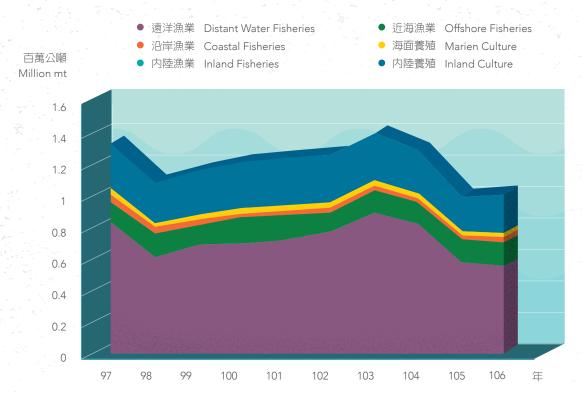


圖 2 三大漁業產量比例 Figure 2 Ratio of Production Volumes of the Three Major





圖 3 三大漁業產值比例 Figure 3 Ratio of Production Values of the Three Major Fisheries



■ 4 近十年各項漁業生產量 Figure 4 Production Volume of Various Fisheries in Recent Decade

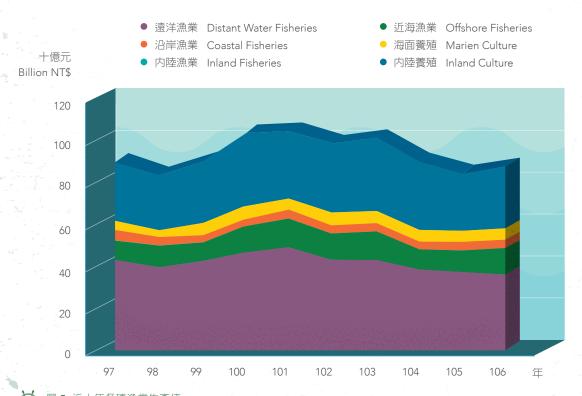


圖 5 近十年各項漁業生產值 Figure 5 Production Value of Various Fisheries in Recent Decade



①Verview of the Fisheries

一、遠洋漁業

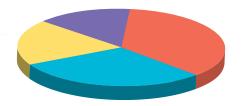
遠洋漁業係指漁船在我國 200 浬經濟海域外從事漁撈作業者,主要漁法包括鮪延繩釣、鰹鮪圍網、秋刀魚棒受網及 魷釣等,近年來平均年產量約 73 萬公噸,產值約新臺幣 402 億元,其中遠洋鮪漁業及秋刀魚漁業規模在世界名列前茅。我國遠洋漁船作業海域遍佈世界三大洋,包括公海 及他國經濟水域,作業船數約有 1,100 多艘,其中在他國經濟水域係以入漁合作方式進入作業,目前與我國漁船有入漁合作國家約有 22 國。

為有效管理我國在三大洋海域作業之遠洋漁船,我國將相關國際漁業管理組織所通過之建、決議案轉換為國内法,要求我漁船確實遵守,以維護漁業資源之永續利用及我國遠洋漁業之永續經營。我國已採行相關保育與管理措施,以確實掌握漁船作業之漁獲量及努力量外,並對漁船作業意外捕獲之生態相關物種採取降低混獲之忌避措施,落實責任制漁業管理。

二、沿近海漁業

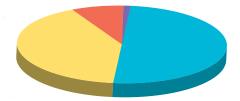
沿近海漁業係指在我國内水、領海、專屬經濟海域内從事 漁撈作業者,主要漁業種類有扒網、中小型拖網、延繩釣、

鮪延繩釣 Tuna Long Line Fishery 36%
鰹鮪圍網 Tuna Purse Seine Fishery 30%
秋刀魚棒受網 Stick-held Dip-net Saury Fishery 15%
鯱釣 Squid Jigging Fishery 15%





鹹水魚塭 Brackish Water Pond 50%
淡水魚塭 Freshwater Pond 41%
淺海養殖 Shallow Sea Aquaculture 8%
箱網養殖 Cage Farming 1%





棒受網、定置網、刺網等,近年來平均年產量約 16.6 萬公噸,年產值約新臺幣 161 億元。為促進沿近海漁業資源之永續發展,以資源保育、生態復育等為施政主軸,辦理收購漁船(筏)、獎勵休漁,劃設禁漁區、水產動植物繁殖保育區,保護棲地以養護漁業資源,並從事魚貝介類種苗放流,改善漁場環境,增裕漁業資源,同時亦輔導漁民從事娛樂漁業,如海釣、賞鯨豚等,多元化發展沿近海漁業。

三、養殖漁業

我國地處亞熱帶,加上水產種苗生產技術之研發與改良,以及養殖技術的提升,養殖種類已近百種,養殖漁業主要分為淡水養殖、鹹水養殖及海面養殖三大類,生產總面積近 4.4 萬公頃,近年來平均年產量約 30.8 萬公噸,年產值約新臺幣 387 億元。

為因應極端氣候影響,秉持環境友善態度,並提升水產品 附加價值,輔導業者生產符合國際產銷規範與標準之品 牌、標章產品,從以往單純魚塭養殖,整合種苗、飼料、 養殖設施到加工儲運等周邊及上下游產業,完整呈現產業 價值鏈,使國內產業得以在有限水土資源下穩定發展。



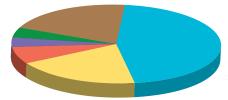


圖 7 沿近海漁業產量比例 Figure 7 Ratio of Production in Coastal and Offshore Fisheries



魚塭空照圖 Aerial shot photo of fishponds

1. Distant Water Fisheries

Distant water fisheries refer to those fishing activities conducted in areas outside the 200-mile exclusive economic zone (EEZ) of the country. The main types of fishing methods used, include tuna long line fishery, tuna purse seine fishery, stick-held dipnet saury fishery, and squid jigging fishery. The average annual production in recent years is around 730 thousand tons, with a value of NT\$40.2 billion. Among which the production scale of distant water tuna fisheries and squid jigging can be considered as one of the top producers in the world. Taiwan has more than 1,100 distant water fishing vessels, whose fishing activities cover all three major oceans of the world, including the high seas and the waters of some coastal countries. Operations of vessels in the EEZ of coastal countries are made through bilateral fishing access agreements. Currently bilateral fishing access agreements have been made with some 22 countries.

To effectively manage the distant water fishing vessels operating in the three major oceans, the Republic of China has transformed resolutions and decisions adopted by relevant international fisheries management organizations into domestic legislation, requiring fishing vessels to comply, in order to ensure sustainability of fisheries resources, and sustainable operations of the distant water fisheries. Relevant conservation and management measures have been implemented for concise monitoring of the catches and efforts of fishing vessels. In addition, for the incidental catch of ecological related species, mitigation measures have been applied to fulfill responsible fisheries management.

2. Coastal and Offshore Fisheries

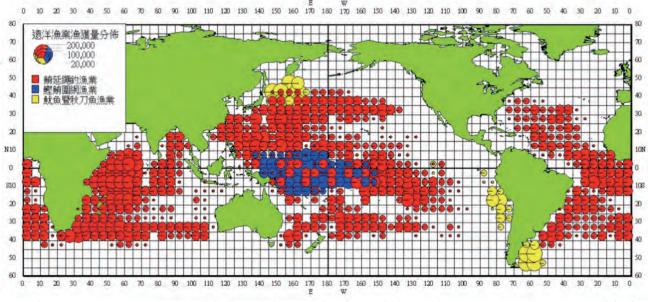
Coastal and offshore fisheries refer to those fisheries operated in Taiwan's internal waters, territorial sea, and exclusive economic zone. The main fishing methods used include Taiwanese seine fishery, small-scale trawl fishery, long line fishery, stickheld dip-net fishery, set-net fishery, gill-net fishery, and etc.

The production volume in recent years is approximately 166 thousand tons, with a value of about NT\$16.1 billion. To promote sustainable development of the coastal and offshore fisheries resources, the policies of the government are focused on conservation of resources, and restoration of ecosystem. The work conducted include implementation of vessel buyback programs, fishing layoffs, mapping of closed fishing areas and conservation areas, protection of habitats to conserve fisheries resources, releasing of seeds of fish and shellfish to improve the environment of fishing grounds, with the aim of increasing the fisheries resources. Assistance has been provided to fishermen to conduct recreational fishery, such as sea angling, whale watching, and others, in order to enable diversification in the development of the coastal and offshore fisheries.

3. Aquaculture

Situated in the sub-tropic, Taiwan's aquaculture is well developed. With technologies and research in fish seed propagation and advanced aquaculture techniques, more than one hundred aquatic species were developed. Aquaculture is divided into freshwater pond aquaculture, brackish water pond aquaculture, and marine culture, with a total area of approximately 44 thousand hectares. In recent years, the average annual production is about 30.8 thousand tons, with a value of approximately NT\$38.7 billion.

In order to address the impacts of extreme climate, aquaculture should be conducted in an environment-friendly manner, while increasing added values of aquaculture products. Assistance was provided to farmers in producing fishery products consistent with international regulations and standards, and products with brands and labels. Farm facilities were integrated from purely pond farming to seed and feed producing, and to such peripheral industries as processing, storage, and distribution in the entire upstream and downstream industries, for a complete industry value chain, to enable the industry to develop steadily facing the impediments of shortage in land and water resources.



遠洋漁船三大洋漁獲量分布圖 Catch Distribution of Distant Water Fisheries in the Three Major Oceans



漁業機構與組織 Fisheries Authorities. Fisheries Societies. and their Organizations 行政院農業委員會為我國中央漁業決策機構,下設漁業署,為我國最高漁政主管機關,負責規 劃推動各項漁業政策與推廣工作;在地方政府設有漁業部門,以執行地方漁業行政管理與推廣 業務。其它相關漁業研究、教育機構及漁民組織如下各圖表。

The Council of Agriculture is the fisheries policy decision-making agency of the central government. The Fisheries Agency, which is an autonomous body under the Council of Agriculture, is the highest fisheries administrative agency. It is responsible for planning and implementation of fisheries policies and fisheries outreach work. In different levels of local governments, fisheries divisions or sections are established for fisheries administration and outreach work. Other fishery-related research and educational institutes, and fishermen's organizations are illustrated in the following chart.

中華民國漁業行政機關 Fisheries authorities in Taiwan (ROC)

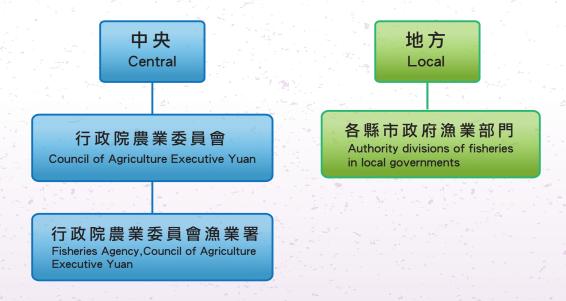




圖 9 中華民國漁業行政機關 Figure 9 Fisheries Authorities of the Republic of China (Taiwan)

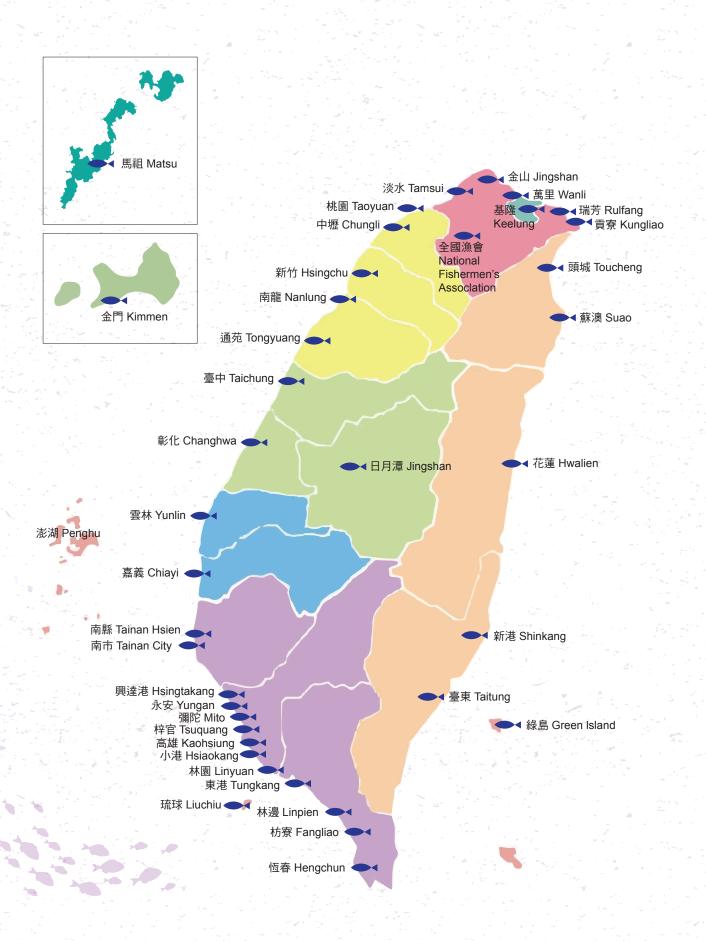


圖 10 漁會分布圖 (1 個全國漁會、39 個區漁會) Figure 10 Locations of Fishermen's Associations (including 1 national fishermen's association and 39 district fishermen's associations)

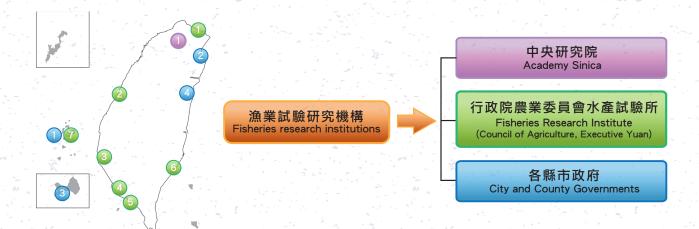
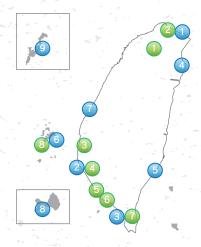




圖 11 漁業試驗研究機構 Figure 11 Fisheries Research Institutes



漁業教育機構 Fisheries education institutions



大學 Universities

- 1. 國立臺灣大學 National Taiwan University
- 2. 國立臺灣海洋大學 Nation Taiwan Ocean University
- 3. 國立嘉義大學 National Chiayi University
- 4. 國立成功大學 National Cheng Kung University
- 5. 國立中山大學 National Sun Yat-Sen University
- 6. 國立高雄海洋科技大學 National Kaohsiung Marine University
- 7. 國立屏東科技大學 National Pingtung University of Science and Technology
- 8. 國立澎湖科技大學 National Penghu University of Science and Technology
- 9. 其他公私立大專院校 Others

高級職業學校 Vocational High Schools

- 1. 國立基隆高級海事職業學校 National Keelung Maritime Vocational High School
- 2. 國立臺南高級海事水產職業學校 National Tainan Senior Marine Fishery Vocational School
- 3. 國立東港高級海事水產職業學校 National Tung Kang Maritime & Fishery Vocational High School
- 4. 國立蘇澳高級海事水產職業學校 National Suao Marine & Fisheries Vocational High School
- 5. 國立成功商業水產職業學校 National Cheng Kung Commercial & Aquactture Senior Vocational High School
- 6. 國立澎湖高級海事水產職業學校 National Penghu Marine & Fishery Vocational High School
- 7. 國立鹿港高級中學(附設職業科) National Lukang Senior High School
- 8. 國立金門農工職業學校 National Kinmen Agricultural & Industrial Vocational Senior High School
- 9. 國立馬祖高級中學(附設職業科) National Matsu Senior High School



圖 12 漁業教育機構 Figure 12 Fisheries Educational Institutes



漁業施政與 輔導措施 Fisheries Policies and Counsel Measures

環境保育

、建立棲地保育機制,維護漁業資源永續平衡

(一) 推動棲地保護及漁業資源培育與養護

規劃設置水產動植物繁殖保育區、魚礁區或禁漁區等海洋 保護區,投設各型人工魚礁,藉以提供各類水產生物棲 息、繁殖、索餌、洄游及躲避敵害的環境;推動栽培漁業 示範區,豐裕海域漁業資源,建立捕撈規範,以達到以海 為田之海洋牧場的目標;實施覆網清除計畫、廢棄漁網回 收機制及辦理淨灘活動,以維護海洋及海岸環境;培育 及放流多樣之魚、貝、介及珊瑚等種苗,近5年(2014-2018年)每年平均放流超過862萬尾(粒),補充沿近 海漁業資源。

(二) 推動劃設刺網漁業禁漁區及輔導轉型措施

為加強保育及復育沿近海棲地生態及漁業資源之永續利 用,除輔導地方政府公告計88處人工魚礁區及68處保護 礁區,全面禁止網具類漁船進入作業外,特別針對「漁獲



效率較高」、「對海底棲地破壞性高」或「對物種破壞性 大」之漁法,如拖網、扒網或燈火等漁法漁船實施距岸3 到 12 浬禁漁區漁業管理措施,另因刺網易與海底礁岩纏 繞,影響礁岩區魚類及附著性生物之生存,漁業署刻正逐 步推動刺網退出距岸 3 浬内作業政策,並且限制刺網漁船 數量及輔導轉型經營一支釣、曳繩釣等友善漁法,促使資 源永續利用。

(三) 獎勵休漁及漁船筏收購

配合聯合國國際海洋法公約養護及管理漁業資源,調整漁 業產業結構,改善沿近海漁業環境,辦理減船措施,逐步 縮減漁業經營規模;另實施獎勵休漁綠色補貼措施,降低 漁獲努力量,落實漁業資源保護工作,確保漁業資源永續 利用。

二、強化海洋漁業管理,落實責任漁業

(一) 強化國際合作打擊非法漁撈

依據聯合國糧農組織(FAO)於2001年制定「預防、制 止和消除非法、未報告及不受規範漁業之國際行動計畫」 (IPOA-IUU),各區域性漁業管理組織(RFMOs)及國 家亦無不致力於採取各項行動以打擊 IUU 漁撈。

為因應國際趨勢,我國於2016年通過「遠洋漁業條例」, 並修訂「漁業法」及「投資經營非我國籍漁船管理條例」, 透過「法律架構」、「監測、管控及監督(MCS)」、「可 追溯性」、「國際合作」等4個面向,推動各項改善措 施以強化我國漁業管理,並與相關國家共同合作打擊 IUU 漁撈,我國亦已成立跨部會之「打擊非法與未報告及不受 規範漁業專案小組」整合我國内資源,以推動並落實防杜 IUU 漁撈行為發生、阻絕 IUU 魚貨於市場流通之政策與工 作。







- 1. 人工魚礁區魚類聚集情形 Fish Aggregation around artificial fish reef
- 2. 獎勵漁船船主自願休漁 Incentive to vessel owners for conducting voluntary fishing layoffs
- 3. 漁船筏収購減船解體情形 Scrapping of fishing vessels under buyback program
- 4. 魚苗放流 Fish seeds releasing













- 1. 107 年 4 月 30 日「打擊非法漁業保障合法業者權益」記者會 Press Conference on Combating IUU Fishing to ensure the rights of legitimate operators held on 30 April 2018
- 2. 農委會漁業署成立 24 小時漁業監控中心 24-Hour Fisheries Monitoring Center established by the Fisheries Agency
- 3. 漁船休漁在港停留情形 Fishing vessels berthing at port during fishing layoffs
- 4. 珊瑚漁業管理 Management of coral fishery
- 5. 漁業署指派觀察員至作業漁船執行海上觀測任務 Observer dispatched by the Fisheries Agency for at sea observation
- 6. 漁船主主動填報漁撈日誌 Filling-in of catch logbook by vessel owner
- 7. 強化監管漁獲可追溯性,2016 年辦理貿易商實地稽核 Auditing at the premises of exporter in 2016 to enhance traceability of catch
- 8. 漁業署派員於模里西斯路易士港執行漁獲轉載卸魚檢查情形 Inspection by FA personnel at Port Louis during transshipment

(二) 我國漁船監控管理措施(MCS)

為符合國際打擊 IUU 漁撈,近年持續辦理各項漁船監控管理措施,包含公海登臨巡護、建立漁船白名單制度、建立漁業證明文件制度、輔導漁船安裝船位回報系統及電子漁獲日誌、建立觀察員制度、指定國外卸魚轉載港口、國內外港口檢查、轉載卸魚預報與聲明等。並發展 MCS 整合資訊系統,將原有運用於漁業管理之四套資訊系統進行整合,並發展自動交叉比對查核之功能,以降低人力操作,並提升查核效率與準確性。

此外,為善盡國際漁業管理制度要求、國内外漁政管理需求及維護海洋漁業資源,漁業署成立 24 小時漁業監控中心,電腦系統可顯示在海上作業分布,只要未依規定回報船位或違規進入他國經濟海域作業就能立刻警示並由監控中心人員轉知漁船,以防杜漁船違規作業,落實執法。

對於沿近海具重要性及敏感性之特定漁業,如珊瑚、飛魚卵、魩鱙、鯖鰺、拖網等漁業實施禁漁區、禁漁期、總漁獲量管制、裝設船位回報器、填報漁撈日誌及卸魚聲明書、指派觀察員隨船觀測、海上登臨檢查或港口查核等管理工作,以落實漁業資源永續利用目標。

(三)提升漁獲可追溯性措施

為健全漁產品可追溯性,我國依「遠洋漁業條例」授權訂定「遠洋漁業漁獲物或漁產品出□業者核准及管理辦法」於 2017 年 1 月 20 日施行。漁獲努力量,落實漁業資源保護工作,確保漁業資源永續利用。

該辦法將從事遠洋漁業漁獲物或漁產品出口之遠洋漁業相關業者首次納入管理,要求業者出口應建立採購、銷售行為規範、作業流程並按季申報資料,且應向漁政主管機關申請核准,始得為之。漁政主管機關運用資料比對及漁獲貿易稽核等方式,查核業者提交之資料,強化監管漁獲可追溯性。

(四)強化海域巡護功能,取締非法漁撈

為保障我國漁船在公海作業安全,並落實區域漁業管理組織規範,我國每年會派遣巡護艦艇,執行2至3航次的公海巡護及海上登檢任務,以善盡船旗國責任,確保我國漁船遵守我國及國際漁業組織之作業規定。另外,漁業署與漁岸巡防署共同執行「沿近海漁業管理執法合作專案計畫」,進行海上違規取締與港口查核工作。

Environment Conservation

1. Establishment of Mechanism for the Conservation of Habitats and Safeguarding Sustainability and Balance of Fisheries Resources

1.1 Promoting Protection of Habitats, and Cultivation and Conservation of Fisheries Resources

Marine protected areas such as conservation areas, fish reef areas, or closed areas were planned for restocking of aquatic animals and plants. Artificial fish reefs of various types were launched for creating environments for suitable habitats, reproduction, feeding, migration and shelters from predators. Establishment of showcase areas for marine cultivation was promoted, for enriching marine fisheries resources, establishing fishing regulations, using the sea as farmland for achieving the goal of sea ranching. Plans for clearing fishing nets on the seabed, mechanism for the retrieval discarded fishing gear, and beach cleaning activities were implemented for the protection of marine and coastal environment. Seeds of fish, shellfish and corals have been cultivated and released for restocking of coastal and offshore fisheries resources, with average release of more than 8.62 million seeds annually in the recent five years (2014-2018).

1.2 Establishment of Closed Areas for Gill-net Fishery and Measures to Assist Fishery Transformation

To enhance conservation and restoration of the ecosystem of coastal habitats, and to ensure sustainable utilization of fisheries resources, in addition to assisting and providing guidance to local governments for the establishment and announcement of 88 artificial fish reef areas and 68 protected reef areas, for overall fishing prohibition of net-gear fishing vessels, with particular focus on those fishing methods of high catching efficiency, high destruction to seabed habitats, or high destruction to species, such as trawl fishing, Taiwanese seine fishing, or light induction fishing. As such, the Fisheries Agency has enforced closed areas banning fishing between 3 and 12 nautical miles from the coast. In view of easy entanglement of gill-nets to seabed reef rocks, thus affecting the viability of fish and stationary species in reef areas, the Fisheries Agency has been promoting the policy of gradual withdrawal of gill-net fishing within 3 nautical miles from coast, and restricting the number of gill-net fishing vessels, while assisting them to shift their operations to more environmental friendly fishing methods, such as line fishing, and troll fishing, to ensure sustainable utilization of resources.

1.3 Incentives for Fishing Layoffs and Buybacks of Fishing Vessels and Rafts

In line with the need of the conservation and management of fisheries resources provided in the United Nations Convention on the Law of the Sea, the structure of the fishing industry was adjusted, to improve the fishing environment of the coastal and offshore fisheries, and vessel buyback programs were implemented for gradual reduction of the scale of fishery. Measures for fishing layoffs were implemented for providing green incentives, reducing fishing efforts, fulfilling the work of fisheries resources protection, to ensure sustainable utilization of fisheries resources.



2. Enhancing Marine Fisheries Management, and **Fulfilling Responsible Fisheries**

2.1 Strengthening International Cooperation in Combating IUU Fishing

In 2001, the Food and Agriculture Organization of the United Nations adopted the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (IPOA-IUU). Accordingly, various regional fisheries management organizations and States have made tremendous efforts in taking actions in combating IUU fishing.

In response to such international trend, in 2016, the Republic of China promulgated the Act for Distant Water Fisheries, and amended the Fisheries Act and the Act to Govern Investment in the Operation of Foreign Flag Fishing Vessels, through the four directions, namely legal framework, MCS, traceability and international cooperation, for promoting various improvement measures in enhancing fisheries management. Cooperation with relevant countries in combating IUU fishing was strengthened. An inter-agency task force for combating IUU fishing was established for integrating domestic resources in implementing policies and work for deterring IUU fishing, and preventing the flow of IUU catch in the market.

2.2 Monitoring, Control and Surveillance Measures on R.O.C. Fishing Vessels

In consistent with international actions on combating IUU fishing, in recent years the Fisheries Agency continued implementing various vessel monitoring and management measures, including high seas boarding and inspection, establishment of the system of authorized fishing vessel list, establishment of the system of catch documentation, assisting fishing vessels to install vessel monitoring system and electronic catch logbook system, establishment of observer program, designation of foreign ports for landing and transshipment of catch, inspection at domestic and foreign ports, transshipment pre-notification and declaration, and others. An integrated MCS information system was developed, incorporating the four fisheries management information systems, and the function of automatic crosschecking was developed to reduce manual operations and improve the efficiency and accuracy in verification process.

In addition, in response to the requirement of international fisheries management regime, and domestic and foreign fisheries administrative requirements, as well as to ensure the sustainability of fisheries resources, the Fisheries Agency established a 24-hour fisheries monitoring center, with computer system capable of monitoring the activities of fishing vessels at sea, and enabling triggering of an immediate alert in case of non-reporting of vessel positions within required timeframe, or entering into foreign EEZ without authorization, for notifying the respective vessel by the monitoring personnel to avoid illegal fishing thus strengthening enforcement.

三、推動海洋生物及混獲物種保育,維護海洋生 態平衡

(一) 鲨魚、海龜及海鳥等物種保育

在鯊魚養護管理上推動一連串之管理措施,除持續配合各RFMO將有關鯊魚之規範内國法化外,自2008年起全面禁止捕撈、販賣、持有及進出口CITES附錄Ⅱ之鯨鯊:禁止割鰭棄身,於國外港口卸下鯊魚鰭身比不得超過5%;發布「漁船捕獲鯊魚魚鰭處理應行遵守及注意事項」,推動「鯊魚鰭不離身」措施;發布「魚翅進口應遵行事項」,規範RFMO自名單漁船或RFMO會員/合作非會員非鮪漁業漁船捕獲之魚翅,方得進口販售;訂定「大白鯊象鮫及巨口鯊漁獲管制措施」,強化科學資料蒐集;發布「申請及核發鯊魚及鬼蝠魟屬物種來源證明書作業要點」,規範已列入CITES附錄Ⅱ之紅肉丫髻鮫及鼠鯊及鬼蝠魟屬等物種或其產製品應申請來源證明書,俾符合CITES出口相關規定;利用DNA科學技術檢驗產地市場及市面上所售魚翅產品,查核有無保育類禁捕鯊種。

在海龜養護管理部分,除於法規宣導場合,向漁民宣導安全釋放海龜的準則外,並立法規範延繩釣船應備有手抄網、除鉤器、剪線器、剪鉤器及能讓海龜安全張嘴之工具等,以降低對海龜之影響。

此外,我國與國際鳥盟合作舉辦降低鮪延繩釣漁業混獲海 鳥相關議題研討會或工作坊,提供產官學界交流之平台。 除此,雙方仍持續進行交流及合作,推出臺灣版降低海鳥混獲措施宣導影片,向漁民宣導及說明漁業對海鳥資源的影響,推廣目前國際上所通過之降低海鳥混獲忌避措施,要求前往中高緯度作業之漁船應遵守各區域漁業管理組織規範,以有效減少延繩釣漁業對海鳥的影響。另於2016年及2018年與國際鳥盟合作派員於模里西斯路易士港推動減緩海鳥混獲之宣導活動、協助漁船找出最合適之避鳥措施、了解漁船可能面臨之問題並協助解決,善盡遠洋漁業國保育海鳥之責。

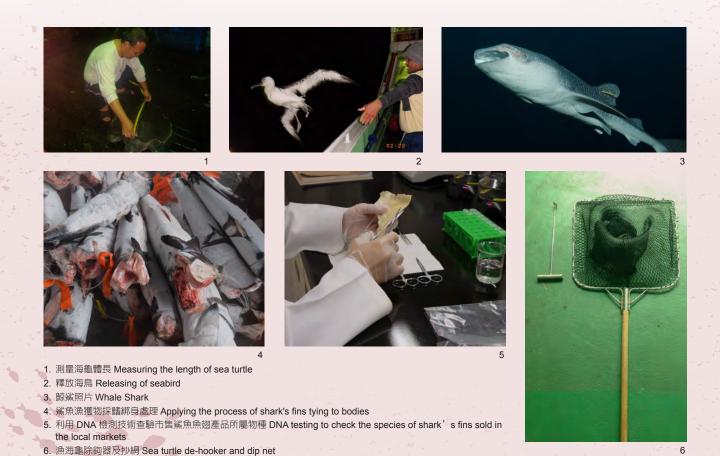
(二) 鯨鯊及鬼幅魟等物種保育

1、鯨鯊保育

由於鯨鯊時常洄游到臺灣附近海域,為瞭解鯨鯊資源情形,我國在 2001 年開始實施鯨鯊漁獲通報制度。2002 年第 12 屆 CITES(華盛頓公約)大會,將鯨鯊列為附錄 二保育物種後,我國開始實施鯨鯊總量管制措施,並自 2005 年起逐年調降限捕尾數,2008 年度起,全面禁止捕撈、販賣、持有及進出□鯨鯊,顯示國人的保育觀念日趨成熟。

2、實施「鬼蝠魟屬漁獲管制措施」

華盛頓公約(CITES)於 2013年將鬼蝠魟列入附錄二物種,基於我國鬼蝠魟科學研究不足,為強化前鬼蝠魟科學資料之蒐集,農委會於 2016年施行「鬼蝠魟漁獲管制措施」,藉由通報制度,掌握鬼蝠魟之漁獲量及作業資訊,並自 2018年起,全面禁止捕撈,以維護其資源續存。





強化海域巡護功能,取締非法漁業 Crackdown illegal fishing and strengthening the function of

For specific coastal and offshore fisheries of particular importance and sensitivity, such as coral taking, flying fish eggs harvesting, larval fishing, mackerel fishing, and trawl fishing, such management measures as closed fishing areas and time, catch limits, installation of vessel monitoring system, filling in of catch logbook, dispatching of observers, at sea boarding and inspection, and port inspection, were implemented to achieve the goal of sustainable utilization of fisheries resources.

2.3 Improvement of Catch Traceability

To ensure traceability of fishery products, as empowered by the Act for Distant Water Fisheries, the Regulation for the Approval and Management of Exporters of the Catches or Fishery Products from Distant Water Fishery was established for enforcement on 20 January 2017.

The regulation requires exporters to establish a code of conduct for the purchase and sale of fishery products and operation procedures for quarterly reporting. The code of conduct should be approved by the competent fisheries authority, before working. Making use of the information received and that on file, the competent authority will audit the trade of the catches to enhance control and traceability of catches.

2.4 Enhancing the Function of Patrolling, and Crackdown of IUU Fishing

To ensure the safety of fishing vessels operating on the high seas, as well as to comply with the measures adopted by regional fisheries management organizations, patrol vessels are dispatched every year for 2-3 trips to conduct high seas patrolling and high seas boarding and inspection, to demonstrate the obligation of a flag state, and to ensure compliance of fishing vessels with the domestic regulations and those adopted by RFMOs.

In addition, the Fisheries Agency and the Coast Guard Administration cooperated in implementing the Project on Management and Enforcement of Coastal and Offshore Fisheries, for conducting the joint work of at sea enforcement and port inspection.

3. Promoting Conservation of Marine Living Resources and Bycatch Species, and Protecting the Balance of Marine Ecosystems

3.1 Conservation of Sharks. Sea Turtles, and Seabirds

Apart from transforming RFMOs' measures on sharks into domestic legislation, a series of forward-looking measures were implemented in the management of sharks. They include overall prohibition from 2008 of catching, selling, retaining, importing and exporting whale sharks listed in Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) Appendix II; prohibition of shark finning, and to those sharks landed at foreign ports their fins not to exceed 5% of the body; promulgation of the Directions on the Disposal of the Fins of the Shark Catches of Fishing Vessels, and implementation of the Measure on Shark's Fins Naturally Attached; announcement of Regulations on the Import of Shark's Fins, requiring imports and sale of shark's fins be only derived from the catches of fishing vessels on the authorized fishing vessel lists of regional fisheries management organizations (RFMOs), or from the catches of non-tuna fishing vessels of members or cooperating non-members of RFMOs; establishment of the Measure on Controlling the Catch of Great White Shark, Basking Shark and Megamouth Shark, to enhance collection of scientific data; establishment of the Directions on the Application and Issuing of Certificates of Origin for Shark and Ray Species, requiring the application of certificates of origin for the export of scalloped hammerhead shark, porbeagle shark, and manta spp. which are on CITES Appendix II in compliance with the CITES trade regulations; and making use of scientific technologies to test those shark's fins sold at the production fish markets as well as in the local retail channels, to check the existence of prohibited shark species.

In the management of sea turtles, apart from making propaganda to fishermen at appropriate occasions on safe release of sea turtles, legislation on requiring tuna long-line vessels to carry dip nets, de-hookers, and wire cutters, and equipment for safe opening of sea turtle's mouth and etc., to reduce the impacts on sea turtles.

In addition, in cooperation with Bird Life International, seminars and workshops on the mitigation of seabirds in tuna long-line fishery, were conducted, providing platforms for communications between the industry, government officials, and academics. Moreover, the two sides also cooperated in producing a Taiwan version video on the mitigation of seabirds, as means to educate fishermen the impacts of fishing on seabirds resources, outreaching the international seabird mitigation measures adopted, requesting fishing vessels proceeding to fish in areas of high latitudes to comply with the measures adopted by RFMOs, in order to effectively reduce the impacts of long-line fishing on seabirds. In 2016 and 2018, in cooperation with Bird Life International, personnel was sent to Port Louis, Mauritius to conduct propagating campaigns on the mitigation of seabirds, providing assistance in finding the most suitable mitigation measures, realizing the problems faced by fishing vessels, and assisting in solving such problems, in order to assume the responsibility of a distant water fishing nation in seabird conservation.

3.2 Conservation of Whale Shark and Manta Spp.

i. Whale Shark Conservation

Whale sharks often migrate to the nearby seas of Taiwan. In order to realize the status of whale shark resources, implementation of catch reporting system of whale shark began in 2001. During the 12th COP of the CITES held in 2002, whale shark was listed in Appendix II, and since then implementation of catch limit measure began, and gradually reduced the number of whale shark allowed to catch. As from 2008 catching, selling, retaining, importing and exporting of whale shark were prohibited, showing maturity of conservation concept of the people in Taiwan.

ii. Implementation of the Measure on Controlling the Catch of Manta Spp.

In 2013, CITES listed manta spp. in Appendix II. In view of lack of scientific research on this species, for the sake of enhancing collection of scientific data on manta spp., in 2016 the Council of Agriculture implemented the Measure on Controlling the Catch of Manta Spp., as from 2018 prohibition on their catching was implemented to protect the sustainability of the resources.











糧食安全

Tasting Show by Chef

3. TAP 水產品照片 TAP Seafood4. 結合通路辦理親子魚料理體驗活動 Family Fish Cooking Experience at

5. 主廚示範料理及品嚐活動 Cooking and

Code

Market Outlets

四、強化水產品安全體系,增加水產品內外銷多 元通路

(一) 水產品溯源安全管理及輔導

 2016 Marketing Campaign on Seafood Traceability (photo provided by Taiwan Aquaculture Development Foundation)
 QR Code 水產品照片 Seafood with QR

- 1、自2007年起,推動養殖水產品產銷履歷制度,輔導業者生產安全、可追溯性水產品,另因應產業需求,整併臺灣良好農業規範(TGAP),並將驗證範圍延伸至初級加工,俾利生產更多產銷履歷驗證水產品上市銷售,供消費者安心選購。
 - 2、為擴大水產品符合追蹤追溯要求,強化生產者對產品 自主管理責任,自 2016 年起,推動臺灣水產品生產 追溯制度,並與資訊系統結合,便利消費者使用手機 掃描產品追溯條碼(QRCode),查詢到產品及生產 者資訊,以提升國人對國產水產品之信賴。

(二) 拓展市場及強化產銷調節

- 拓展市場:為提升國人消費在地水產品及強化消費者 溝通,結合地方產業文化引導消費者農村旅遊及消費, 推動食魚教育及培育餐飲學生、業界廚師等料理種子 員,並於超市通路、臺北希望廣場、國軍等通路強化 行銷當令水產品,以擴大内銷市場。另鼓勵業者開發 多樣化精品及組團參與「東京國際食品展」等國際展 覽,以提升臺灣優質水產品的國際能見度及競爭力。
- 2、強化產銷調節:委託專家學者評估大宗養殖魚種產

況及價格趨勢,並每日監控魚價,當魚價臨近監控價格,啓動先期調節措施,如加強超市、國軍副食、百大企業團購、電子商務等通路行銷,另補助地方政府、產業團體辦理行銷活動,整體刺激消費者買氣; 魚價低於監控價格時,邀集專家、地方政府及產業團體研商辦理緊急產銷調節措施時機及方式,如收購凍存、獎勵外銷等,以紓緩產地賣壓及維護漁民收益。

(三) 提升魚市場及直銷中心環境衛生安全

國内外市場對食品安全日趨重視,對於漁產品的衛生安全亦日漸嚴格,而魚市場為漁產品生產鏈中不可或缺的重要一環,須提升其作業環境並加強衛生安全管理,始能減少魚貨可能遭受到的污染,確保漁產品衛生安全品質。

爰此,近年來持續輔導主要魚市場推動「魚貨不落地」,並協助其改善作業環境,強化作業流程衛生管理制度,針對人員、進排水、貨物交易動線、車輛等各個面向的可能 汙染源加強管制,如協助裝設人車管制設施、海水淨化消毒設備、卸魚平台、電動堆高機等,期能從源頭提升漁產品衛生及品質,提高產品價值,建立我國漁產品優質形象,強化產業國際競爭力。

另參考世界公認高標準的歐盟規定,於 2017 年 6 月 20 日發布「輸銷歐盟漁獲物魚市場及卸魚場衛生管理作業要點」,規範欲供應魚貨銷往歐盟的魚市場及卸魚場應符合之標準,期引導魚市場逐步提升環境衛生及建立高度衛生管理制度。

Food Security

4. Enhancing the Seafood Safety System, and **Increasing Diverse Market Channels for Seafood**

4.1 Management and Counsel on Seafood Safety Traceability

- i. Promotion of traceability of farmed fishery products began in 2007. Assistance and guidance were provided to farmers to produce safe and traceable seafood. In addition, in addressing the need of the industry, the function of Taiwan Good Agricultural Products was modified extending its certification scope to include primary processing, to facilitate the production of more certified traceable seafood, for consumers' trusty purchase.
- ii. In line with the need of more traceable seafood, while strengthening producers' responsibility for self-management of products, promotion of the system of seafood traceability began in 2016. Incorporating with data system, consumers can use cellular phone QR Code scanning, to check information of the product and its producers, to improve consumers' trust on seafood.

4.2 Market Expansion and Regulation of Production and Marketing

- i. Market Expansion: To increase consumption of locally produced seafood, and improve communications with consumers, incorporating with local industry culture and seafood consumption in farming villages, promotion was extended to education on fish eating and fostering seed chefs from culinary students and restaurant cooks. Marketing channels on supermarkets, Taipei Hope Square, and military service market chains were explored to expand domestic markets. In addition, the industry sector was encouraged to develop more diverse fine seafood, and participate in international food exhibitions, such as the Tokyo International Food Show, to improve international presence and competitiveness of Taiwan's fine seafood.
- ii. Regulation of Production and Marketing: Experts and scholars were commissioned to conduct production and price trends on fish species farmed in large scale. Fish price was monitored daily, and when approaching to the set monitored price, preliminary regulatory measure, such as strengthening the marketing activities of supermarkets, military provisions procurement, group purchase from the top 100 enterprises, and on-line businesses, started to function. Furthermore, local governments and industry

groups were subsidized to conduct marketing activities, for stimulating consumers' buying power. In case the fish price is lower than its production cost, experts, local governments, and industry groups will be gathered to discuss the timing and ways for conducting production and marketing regulations, such as purchase for storage, export encouragement, and others, in order to ease the selling pressure at the production end and protect the income of farmers.

4.3 Improvement of the Safe Sanitary Environments of Fish Markets and Direct Retail Outlets

Food safety is becoming more and more important in both domestic and foreign markets, and sanitary safety of fishery products is not less strict. Fish markets are indispensable parts in the production chain of fishery products. Their working environments should be improved and their sanitary safety management should be enhanced, to reduce possible contamination of the catches, thus ensuring sanitary and safe quality of the fishery products.

As such, in recent years the Fisheries Agency continued to promote and assist major fish markets in achieving the goal of "no fish on the floor", and provide assistance in improving their working environments, and enhancing the system of sanitary management. For those possible sources of contamination, such as persons, water inflows and drainages, cargo operating lines, vehicles, and others, intensive controls were developed, including assistance in installing facilities for the incoming control of persons and vehicles, equipment for sterilizing seawater, fish offloading platforms, and electric forklift loaders, with the anticipation of improving the value of fishery products through enhancement of sanitation and quality from the very beginning of their sources, thus creating the image of excellent quality of Taiwan's fishery products, and strengthening their international competitiveness.

In addition, taking reference of the regulations of the European Union, which have been deemed as one of the highest standards in the world, on 20 June 2017, the Fisheries Agency announced "Directions on Hygiene Management of Fish Markets and Fish Landing Sites for Catches Exporting to the European Union", providing fish markets and fish landing sites with catches intended for export to the European Union, to be consistent with the required standards, with the anticipation of gradually improving the sanitation of fish markets, and creating a high hygiene management system.



梓官魚市場積極推動魚貨不落地及通過HACCP驗 證 Promotion of "No fish on floor" practice and HACCP certification by Tsuquang Fish Market



臺中魚貨直銷中心生鮮攤位 Fresh fish stalls in the Taichung Fish Outlet



蘇澳區漁會鯖鰺整車拍賣過磅情形 Mackerel auction in truckload promoted by Suao District Fishermen's

- - 1. 觀賞魚疫病監測之訪視與實驗照片 Laboratory visit: Monitoring of disease of ornamental fish
 - 2. 石斑魚養殖場照片 Grouper farming
 - 3. 甲魚養殖場採樣及稽核照片 Sampling at soft shell turtle farm







六、積極參與國際組織,強化漁業合作

(一) 積極參與國際漁業組織

目前我國參與之組織,包括中西太平洋漁業委員會 (WCPFC)、美洲熱帶鮪類委員會(IATTC)、大西 洋鮪類資源保育委員會(ICCAT)、印度洋鮪類委員會 (IOTC) 及南方黑鮪保育委員會(CCSBT)、北太平洋 鮪類國際科學委員會(ISC)、南太平洋區域性漁業管理 組織(SPRFMO)、北太平洋漁業委員會(NPFC)及南 印度洋漁業協定 (SIOFA)。另亦參與經濟合作發展組織漁 業委員會(OECD-COFI)、亞太經濟合作會議(APEC) 及世界貿易組織(WTO)之活動。為強化各魚種資源管 理需求,國際會議遽增,目前每年出席相關會議總計約 40-60 場。

因應近年鰻魚資源低迷,華盛頓公約(CITES)已通過提 案對鰻魚資源及貿易進行調查,並評估實施貿易管制,爰 為避冤衝擊鰻魚產業,我國自 2012 年起積極參與「鰻魚 資源養護與管理國際合作會議 | 與日本、中國大陸及韓國



五、提升產業競爭力,引領漁業強勢出擊

(一) 推動養殖登錄自主管理制度

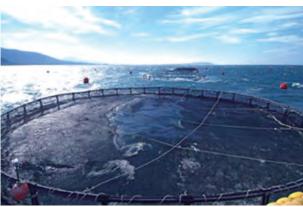
為確保養殖場之衛生安全,並進行源頭管理,推動養殖 場登録自主管理措施。我國石斑魚、甲魚及觀賞魚產業 為符合輸入國要求,已規範養殖場及中轉養殖場登錄管 理規定,輔導養殖業者取得養殖場登錄,協助養殖業者 建立自家品管流程、疫病防治等自主管理觀念及標準生 產作業規範,生產符合國際標準之優質產品,達到快速 通關,提升業者外銷競爭力,並建立我國水生動物疾病 資料庫,供官方及業者未來參考及防治使用。另為配合 國際鰻魚管理,要求養鰻業者應取得許可始得放養,其 放養量不得超過許可之額度,以促進鰻魚資源永續利用 管理。

(二)推動科技設施養殖及節能措施

為追求水產養殖永續發展,考量到水土資源有限、疫病防 治、極端氣候影響及食安等因素,研發養殖結合智能科技 (如導入網際網路,雲端大數據,投餌、疫病、水溫、水 質、溶氧等自動、監測管理系統),建立陸域與海洋的分 段養殖模式,以海為田,發展可沉式海洋箱網養殖、節能 省碳及模廠養殖生產模式,結合節能省電設備及室内養殖 模廠,提升產業因應天然災害應變能力,進行計畫性及科 學化生產,並以對環境友善方式生產優質養殖水產品,促 進養殖產業與生態環境和諧發展。



- 箱網養殖圖片(恆春海洋箱網養殖公司提供) Cage farming photo provided by Ever Spring Marine Aquaculture Co.
- 2. 養殖設施圖片(漢頁股份有限公司提供) Fish farming facilties photo provided by Hydean Biotechnology



5. Improving Industry Competitiveness for Proactive Promotion

5.1 Promoting Fish Farm Registration for Self-Management

To ensure sanitary safety of fish farms, and to promote sources management, the fish farms registration and self-management measure was promoted. For the farming of groupers, soft shell turtles, and ornamental fish, in order to comply with the requirements of importing countries, registration of fish farms and transiting farms were required. Meanwhile guidance was provided to farmers for acquiring farm registration, and assistance was rendered to establish such self-management concept and standard production practices as quality control procedures, disease prevention, and others, for producing excellent products consistent with international standard, to achieve the goal of rapid customs clearance, improving the export competitiveness of their products. Databank for the diseases of aquatic animals was established, for future references of disease prevention by both the government and industry. In addition, in line with international eel management, farmers were required to obtain permission before farming eels, with the quantity not exceeding that has been approved, in order to promote sustainable utilization of eel resources.

5.2 Promotion of Scientific Aquaculture Facilities and Energy Saving Mechanism

To promote sustainable aquaculture development, taking into account of such factors as limited water and land resources, prevention of diseases, impacts of extreme climate, and food safety, there is the need to develop smart science and technologies in aquaculture, such as introduction of internet, big data in cloud, and automatic monitoring management system on feed dispensing, disease prevention, water temperatures, water quality and oxygen content in water, and etc. Plans were made on the establishment of land and sea phased farming

model, taking the sea as farmland, to develop submergible cage farming, energy saving and low carbon, factory-base production models, and incorporating with energy saving equipment and indoor fish farming factory, to improve the resilience of the aquaculture industry to natural disasters. Planned and science-base production was conducted, using environment-friendly methods in producing excellent quality fishery products, whereby promoting harmonized development between aquaculture and the environment.

6. Active Participation in International Organizations, and Promoting Closer Fisheries Cooperation

6.1 Active Participation in International Fisheries Organizations

The fisheries organizations that Taiwan participates include the Western and Central Fisheries Commission (WCPFC), the Inter-American Tropical Tuna Commission (IATTC), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Scientific Committee for Tuna and Tuna-like Species in the North Pacific (ISC), the South Pacific Regional Fisheries Management Organization (SPRFMO), the North Pacific Fisheries Commission (NPFC), and the Southern Indian Ocean Fisheries Agreement (SIOFA). In addition, Taiwan also participates in the activities of the Fisheries Committee of the Organization for Economic and Cooperation Development (OECD-COFI), Asia-Pacific Economic Cooperation (APEC), and World Trade Organization (WTO). For the need of enhancement in the management of fisheries resources, the number of international fisheries meetings grows substantively, with 40-60 meetings attended annually.

In view of the exhausting status of eel resources, and in response to the proposal of CITES for conducting investigation on eel resources and their trade for assessing implementation of trade restrictions, in order to prevent possible impacts on the eel industry, since 2012, Taiwan has been actively participating Informal Consultations on International Cooperation for Conservation and Management of Japanese Eel Stock and Other Relevant Eel Species, along with Japan, the Mainland China, and Korea, for promoting sustainable utilization of eel resources, and made joint declaration and press release in the 7th meeting in 2014 and 12th meeting in 2018, for applying such conservation measures as quantity control on eel farming. In addition, to strengthen self-management of the industry, eel industry organizations of the relating countries established the Alliance on Sustainable Eel Aquaculture, with Taiwan Eel Development Foundation representing Taiwan.



2018 年出席北太平洋漁業委員會(NPFC)第 4 屆委員會(東京) Participation in NPFC4 in 2018 in Tokyo

等國,共同促進鰻魚資源永續使用,並分別於2014年的第7次會議及2018年的第11次會議發表聯合聲明/新聞稿,推動鰻魚放養管控及相關保育措施:另為強化產業的自主管理,各國的鰻魚產業團體已組成「永續鰻魚養殖聯盟」(ASEA),我國由財團法人臺灣區鰻魚發展基金會代表參加。

(二) 在臺主辦國際會議

我國也積極在臺舉辦相關國際會議,於 2016 年 10 月在臺主辦南方黑鮪保育委員會(CCSBT)「第 11 屆紀律委員會」暨「第 23 屆延伸委員會年會」。該次年會由黃鴻燕署長擔任主席,計有日、澳、紐、韓、印尼、歐盟、南非及我國等會員代表合計約 70 人參加。

我國與 ISSF 於 2015 年 12 月在高雄共同籌辦「電子監控系統應用於鮪延繩釣漁業國際研討會」,邀請國內外專家學者,就電子監控系統技術與政策及國際管理層面發表報告,並探討執行電子監控系統所面臨的問題,希望透過電子監控系統取得之資訊符合 RFMO 之國家觀察員資料蒐集標準,以有效提升觀察員涵蓋率,滿足 RFMO 管理要求。



我國參與之三大洋國際漁業組織 RFMOs participated by Taiwan

(三) 加強推動雙邊漁業合作

我國近年分別與我漁業關聯性較高之國家,如吐瓦魯、諾魯、馬紹爾群島、斐濟共和國、塞昔爾、密克羅尼西亞、韓國、萬那杜及吉里巴斯等國簽署政府間漁業合作瞭解備忘錄或漁業合作協定,或就卸魚/轉載檢查機制及其資料交換的安排達成共識,強化與我國漁船主要作業水域沿海國的漁業合作關係。



於 2016 年 10 月在臺主辦南方黑鮪保育委員會 (CCSBT)「第 11 屆紀律委員會」暨「第 23 屆延伸委員會年會」 Hosting of 11th Compliance Committee and Extended Commission of the 23rd Annual Meeting of CCSBT

6.2 Hosting of International Conferences in Taiwan

Taiwan also actively hosted relevant international fisheries related meetings. In October 2016 Taiwan hosted the 11th Compliance Committee, and the Extended Commission of the 23rd Annual Meeting of the CCSBT, with more than 70 participants from member countries, including Japan, Australia, New Zealand, Korea, Indonesia, European Union, South Africa and Taiwan. During the meeting Taiwan's reprsentative then Deputy Director-General Hung Yen Huang served as the Chair.

In cooperation with International Seafood Sustainability Foundation, in December 2015, Taiwan hosted the International Workshop on Application of Electronic Monitoring System in Tuna Longline Fisheries in Kaohsiung. Local and foreign experts and scholars were invited to make presentations on the technological and policy aspects of the electronic monitoring system, as well as the approach in international management, and to explore matters to be faced in implementing the system.

It was anticipated that through the information collected by the electronic monitoring system compatible to the data collection standards applied by RFMOs' national observer program, observer coverage could be effectively increased to satisfy the requirements of RFMOs.

6.3 Promoting Closer Bilateral Fisheries Cooperation

In recent years, Taiwan signed governmental memoranda of understanding and agreements on fisheries cooperation with countries having close and mutual interests in fisheries, such as Tuvalu, Nauru, Marshall Islands, Fiji, Seychelles, Federal States of Micronesia, Korea, Vanuatu and Kiribati. Arrangements in respect to inspection of fish landing and transshipment, and exchange of information were also signed with several coastal countries where Taiwan's vessels fished, to strengthen the fisheries cooperative relation.





電子監控系統應用於 崩延繩釣漁業國際研討會 International Workshop on Application of Electronic Monitoring Systems in Tuna Longline Fisheries





- 1. 吉里巴斯 MOU 簽署 Signing of MOU with Kiribati
- 2. 中西太平洋漁業委員會(WCPFC)第 15 屆年會我國代表團合影 Taiwan delegation at WCPFC15
- 3. 我國與 ISSF 於 2015 年 12 月在高雄共同籌辦「電子監控系統應用於鮪延繩釣漁業國際研討會」Hosting of the International Workshop on Application of Electronic Monitoring System in Tuna Longline Fisheries in Kaohsiung in December 2015
- 4. 我國與馬紹爾群島共和國漁業合作協定簽署儀式 The Signing Ceremony of the Agreement on Fisheries Cooperation between ROC and RMI
- 5. 漁業署黃鴻燕署長與馬紹爾群島簽署卸魚 / 轉載檢查機制及其資料交換安排 Signing of arrangement on landing and transshipment inspection mechanism by Director-General Hung-Yen Huang with RMI official







- 1. 漁村青少年技藝傳承推廣教育 Outreach education on traditional skill to youth in fishing village
- 2. 彰化養殖漁業產銷班第一班班員參與文蛤採收過程 Members of Changhua aquaculture production team participated in hard clam harvesting
- 3. 漁村技藝培育推廣教育(中華民國全國漁會提供)Education outreach on art and culture of fishing village (provided by the National Fishermen's Association)

000000 社會安定

七、培育漁業菁英,促進人力年輕化

(一) 強化漁民組織功能

漁會是臺灣最重要的漁民團體,以漁民為會員主體。在臺 灣漁業發展過程中,漁會扮演著政府與漁民之間的橋樑, 充分發揮居間協調溝通的功能,使政府各項漁業政策得以 落實。我國漁會為二級制,包含1個中華民國全國漁會及 39 個區漁會。漁會會員分為甲類會員、乙類會員、贊助 會員。目前會員總數約43.1萬人。

臺灣漁會具有服務事業、經濟事業、金融事業,扮演漁業 推廣、漁村經濟、產銷發展等多目標功能,臺灣漁會組織 已有百年歷史,因應時代變遷,將不斷學習、創新改革, 以永續經營發展。

(二) 強化漁船船員訓練

培育漁船青年幹部船員,針對漁船海難、海上衝突、違規

被扣及航行安全事件之防範,辦理各項漁船船員海上安全 及幹部職能訓練,加強領導統御技巧、國際海洋法規、漁 業法令之認識及船用設備操作等,以提升船員素質,保障 漁民生命財產安全及漁業經營發展。另為因應勞工衛生安 全及魷釣漁船入漁福克蘭群島作業需求,針對魷釣漁船船 員辦理作業安全訓練專班,計完成20期2,830人之訓練, 協助我國魷釣漁船 108 年度福克蘭群島漁業合作順利進行。

(三) 培育青年養殖漁民

自 2015 年起輔導百大青年農民 - 水產養殖類,由產官學 界專家以一對一方式陪伴輔導,並開設農民學院及養殖青 年學堂相關行銷、電網及專業技術課程,輔導參與展售等 行銷活動。由政府於社群網站設立「養殖青年團」粉絲專 頁,分享新知與交流經驗,並於2018年組團帶領養殖青 年漁民前往辦理馬來西亞清真及水產業研習暨青年漁業從 業人員交流,帶領10位青年漁業從業人員及3位專家開 發新南向清真商機,促進開發馬來西亞外銷、國内水產清 真認證及我國水產業前進新南向市場。











- 1. 國中船員班海上求生(遠洋漁業開發中心) Course on lifesaving at sea given to junior high school crews (Deep Sea Fishery Research and Development Center)
- 2. 國中船員班滅火實習(遠洋漁業開發中心) Course of fire fighting given to junior high school crews (Deep Sea Fishery Research and Development Center)
- 3. 雷達應用實習 (高雄科技大學) Practice on the use of radar (Kaohsiung University of Science and Technology)
- 金工實習(高雄科技大學)Course on marine mechanics (Kaohsiung University of Science and Technology)
- 5. 魷釣漁撈作業安全訓練專班(高雄市政府海洋局大禮堂) Special training course on safety in squid fishing (Kaohsiung Marine Bureau)

Social Stability

7. Nurture of Fisheries Elites, and Promoting **Younger Fisheries Manpower**

7.1 Reinforcing the Functions of the Fishermen's Associations

Fishermen's associations are the most important fishermen's groups in Taiwan, with fishermen as their members. In the course of Taiwan's fisheries development, fishermen's associations served as the bridge between the government and the fishermen, conducting the function of coordination and communication, to enable full implementation of the government's fisheries policy. Taiwan's fishermen's associations are divided into two levels, including one National Fishermen's Association, and 39 district fishermen's associations. Members of the fishermen's associations are classified into Class A members, Class B members and sponsoring members. Currently there are 431 thousand members.

Businesses of Taiwan's fishermen's associations include service affairs, business operations, and financial service, serving multiple functional objectives such as fisheries outreach, fishing village economy, production and marketing. The organization of Taiwan's fishermen's associations has a history of nearly one hundred years. In addressing the change of generations, fishermen's associations continue to receive new knowledge. undergo reforms and creativity, to enable sustainable development.

7.2 Strengthening Training of Fishing Crews

Young fishing officers were nurtured, and focusing on prevention of at sea distress, conflicts on board, vessel detention due to violations, and safety in navigation, courses on crew safety, and officers trainings were conducted, to enhance their skill of leadership, knowledge on international ocean law and fisheries regulations, and the use of equipment on board, in order to improve the quality of fishing workers, while safeguarding the safety of life and properties of fishermen, as well as ensuring fisheries operations and development. In order to promote the healthiness and sanitation of fish workers and to address the requirement of squid jigging vessels access to the waters of Falkland Islands for fishing, special training courses on safety in fishing were given to crews of squid jigging vessels, with completion of 20 courses and the training of 2,830 persons, in assisting squid vessels to acquire fishing cooperation with Falkland Islands in 2019.





- 1. 2018年12月5日辦理馬來西亞清真和水產市場研習團行後分享會 Research group returning home after mission in Malaysia on Halal and seafood market on 5 December 2018
- 2. 2018 年 11 月 21 日新世代養殖牛力軍成果發表會 Publicizing outcome of Aquaculture New Generation Team on 21 November 2018

7.3 Nurture of Young Fish Farmers

Beginning from 2015, counsels were provided to 100 young farmers (including fish farmers), with one to one counsel by experts from the industry, government and academic. Farmer schools and tuition classes for young fish farmers were formed, providing trainees with courses on marketing, internet, and professional technology. Guidance was provided to them in the participation of exhibitions and other marketing activities. A "Young fish farmer group" special fan page was developed by the government on social networking site, for knowledge sharing and experiences exchanging. A research mission was launched in 2018 for young fish farmers to visit Malaysia in Halal and fishery training and exchange. The mission were participated by 10 young fishery practitioners and 3 experts, with the aim of developing Muslim business opportunities under the new southward policy, and for promoting export market in Malaysia, Halal certification for Taiwan seafood, and markets for Taiwan seafood in the southeast Asian countries.





- 3. 陪伴輔導生產、加工、行銷等面 向之技術與經驗 Expert providing technology and experience on aquaculture production, processing and marketing
- 4. 以一對一方式陪伴輔導 One to one counsel in nurturing fish



(四) 獎勵畢業生上漁船服務

運用「漁業發展基金」推動「獎勵水產海事相關院校及職訓中心畢結業生上漁船服務」計畫,鼓勵水產海事院(職)校漁業、輪機及航海等相關科系畢業,具備相關專業知識的有志青年,投入遠洋漁業漁船服務,以培育本國籍遠洋漁業優秀漁船幹部船員。

(五) 保障外籍船員福利

自 2017 年 1 月 20 日「境外僱用非我國籍船員許可及管理辦法」頒布施行後,已加強對仲介機構之管理,並改善外籍船員之福利待遇與人權保障:在船員部分,規範船員基本薪資,並須投保一定金額之一般身故險,以及醫療保險及意外險,船主與船員須依主管機關規定之範本簽訂勞務契約等,保障船員福利。在仲介機構之管理部分,建立仲介連帶保證責任及評鑑制度,避免船員遭不良仲介剥削。

為保障外籍漁工福利待遇,目前漁業署補助基隆及澎湖地區設立外籍漁工休憩中心,並購置視聽設備、飲水機、淋浴設施及個人電腦設備等,提供外籍漁工靠港期間從事上網、閱覽、盥洗及禱告之場所。後續亦將持續於外籍漁工人數較多之地區(如蘇澳、東港等),尋負合適地點規劃設置休憩中心。

八、漁港功能躍升,推廣休閒漁業

(一) 振興漁港設施機能建設

漁港建設將在既有之漁港建設基礎,以「整建、修建」為主,以維護現有漁港基本機能為主要工作,依據各漁港的使用現況及有待改善的項目辦理既有設施之改(興)建,

辦理維護漁港功能與適正建設、配合漁港多元化發展及配合觀光休閒活動之需求辦理漁港多元化營造,並擇定漁港内適合民間參與投資建設的先期規劃與可行性研究等工作,以建構多元化漁港及推展海上觀光休閒、共享港灣資源之整體目標;並落實「永續海岸整體發展方案」以疏浚及柔性工法處理漁港淤積,減少海岸人工構造物,及配合臨近海岸養灘之需求,以兼顧海岸保育及自然平衡,維護海洋及海岸整體環境及因應氣候變遷,同時因應氣候變遷,對沿海易受災害地區之漁港辦理碼頭面加高,改善漁港及漁村社區面臨之潛在威脅。

(二)推動漁港朝海岸休閒之多元化

臺灣四面環海,全國共有約224處漁港,各個漁港有其不同的功能及特色,如以發展遠洋漁業為主的前鎮漁港、南方澳漁港,或是以漁業兼具觀光之梧棲漁港、八斗子漁港。漁業署近年來即積極推動漁港功能多元化,依各漁港的未來發展規劃分別投入不同的建設,提升漁港所具有的環境及功能,成功讓國人對漁港的既有印象有所轉變。



南方澳漁港漁船進出港 Fishing vessels entering and leaving Suao Fishing Port



東港漁港興建停車場 Car parks built at Tungkang Fishing Port



外籍漁工在船員休憩活動中心祈禱情形 Foreign crews making prayers at Fishermen's Leisure Center



澎湖地區船員休憩活動中心 Fishermen's Leisure Center in Penghu

7.4 Rewarding Students Graduated from Colleges to work on Fishing Vessels

Making use of the fisheries development fund, the program of million-dollar reward was promoted, encouraging students of courses in fisheries, marine engineering, and sea navigation, graduated from fisheries and marine schools and colleges with professional knowledge and ambition, to join the work in distant water fishery, in order to develop excellent domestic fishing officers for distant water fishery.

7.5 Protecting the Welfare of Foreign Fishing Labors

Since the promulgation of the Regulation on the Approval and Management of Fishing Labors Other than Nationals Employed Outside the Country on 20 January 2017, management of recruiting service agents was enhanced, and the welfare and human right of foreign fishing labors were improved. Vessel owners are required to pay basic wages, provide a specific amount of personal insurance on loss of life, and medical insurance to foreign crews. The contracts between vessel owners and the crews should be made under the template drafted by the competent authority, to protect the welfare of fishing crews. As for the management of recruiting service agents, the system of collateral guarantee and accreditation system was established, to prevent crews from excessive exploitation by bad agents.

To improve the welfare of foreign crews, the Fisheries Agency funded the establishment of foreign crew leisure centers, with procurement of facilities such as TV and video system, drinking water supplies, showers, and personal computers, and provision of places to foreign crews for internet communication, sports and exercises, reading, toiletry and praying during the call of their vessels. It is planned to seek suitable locations for establishing more leisure centers in areas (e.g. Penghu, Suao, Tongkang, and others) where there are more foreign crews.

8. Upgrading the Functions of Fishing Ports, and **Promoting Recreational Fishing**

8.1 Revitalizing the Infrastructure of Fishing Ports

Construction of fishing ports will be based on the existing infrastructures of the ports, primarily to maintain the basic functions of the fishing ports by remodeling and repairing. Based on the using conditions and items to be improved in various fishing ports, the existing port facilities were renovated, for suitable construction and maintaining the functions of the ports. It is envisaged to incorporate with the development of multiple functions of the fishing ports and meeting the need of tourism and leisure activities for multi-functional construction. Choosing those items within the ports suitable for private investments, the work of preliminary planning and feasibility study were conducted, with the holistic goal of promoting diverse uses of fishing ports, marine tourism and leisure activities, and sharing of the resources of the port bays. The program of sustainable integrated development of coastal zone was implemented, using dredging and more flexible methods in addressing siltation of fishing ports, reducing artificial structures on the coast, as well as in conjunction with the need of sponsorship in the maintenance of coastal area, while taking into consideration of both the conservation of coastal area and natural balance, the overall environment of the sea and coastal zone would be maintained, and the climate change be adapted. In addition, in adapting climate change, for fishing ports in potential disastrous areas the surface height of the piers was raised, to improve resilience of potential threats faced by the fishing ports and the fishing villages.

8.2 Promoting Diverse Coastal Leisure in Fishing Ports

Taiwan is surrounded by sea. It has around 224 fishing ports along the coast, and each port has its unique function and feature, for example, the main function of Qianzhen Fishing Port is for the development of distant water fisheries, Nanfengao Fishing Port, Wushi Fishing Port and Badaozi Fishing Port are for both fishery and tourism. In recent years the Fisheries Agency has actively promoted multiple functions of fishing ports. Basing on future development of the ports investments on different infrastructures were planned, to improve the environment and function of the ports, to change people's existing impression on fishing ports.



烏石漁港遊艇泊區 (OT area) Marina at Wushi Fishing Port

為推動宜蘭當地觀光發展及烏石漁港的遊艇活動,發展現代化海域休閒,提供友善遊艇管理服務,並融合在地漁業文化與海洋教育,帶動周邊經濟發展的願景,漁業署與宜蘭縣政府依據促參法與最優申請人於2016年3月30日簽約。除遊艇泊區(OT區域)目前可提供約50個停泊席位(含岸置席位),也將在BOT區域興建觀光飯店、青年旅館、海洋休閒中心等設施,提供總計約350間房間數。本開發案除可提供民衆一個絕佳的親海體驗場所外,亦可提升當地民衆的就業率、提供海洋相關科系學生的實習機會,以及與該區漁會合作共同行銷在地休閒及漁業產業。

(三) 娛樂漁業及漁村生態旅遊推廣

為提升國民海洋素養及發展漁業旅遊,輔導漁業轉型經營朝向休閒、體驗、教育、服務型態發展,培訓娛樂漁業賞鯨解說團隊、辦理國内外遊客海洋生態活動及娛樂漁業漁船相關資訊整合服務計畫,提升娛樂漁業漁船遊憩安全及服務品質;另辦理漁村環境改善計畫、推廣地方特色之產業文化活動及漁村小旅行體驗旅遊,促進漁村社區產業經濟發展及營造漁村社區新氣象。

臺灣賞鯨季為每年的四月至十月,目前賞鯨活動據點主要集中在東海岸宜蘭、花蓮及臺東三縣,依觀賞鯨豚的海域區分,賞鯨活動主要分佈於宜蘭龜山島海域、花蓮石梯海域及臺東成功海域。在賞鯨過程中,除了尋找鯨豚、觀賞鯨豚外,部分賞鯨船解說員也針對自然景觀、漁撈作業及其他海洋生態進行介紹,增加漁業遊憩活動的深度與多樣性。

- 1. 宜蘭生態賞鯨 Whale watching tour in Yilan
- 2. 彰化哈哈漁場蜈蚣網及划竹筏體驗 Experiencing traditional fishing method at Changhua
- 3. 嘉義布袋鎭剝蚵比賽 Oyster shelling competition in Chiayi
- 4. 彰化漁村生態體驗 Ecology experiencing in Changhua fishing village
- 5. 海洋生態賞鯨旅遊 Whale watching tour
- 5. 娛樂漁業海釣 Sea angling on recreational fishing vessel

On 30 March 2016, the Fisheries Agency signed an agreement with the Yilan County Government, in accordance with the Act for Promotion of Private Participation in Infrastructure Projects, for integrated development of marina and hotel, to promote development of tourism in Yilan and yachting activities in Wushi Fishing Port, with the aim of developing modern marine leisure, and providing friendly management on marina service, while incorporating local fishery culture and marine education, driving the vision of economic development in the peripheral industries. The project plans to provide approximately 50 berths (including shore berths) in OT area, and in the area under BOT project, and to construct a tourist hotel, a youth hostel and a marine leisure center, with a total of 350 rooms. The project can provide citizen an excellent place for embracing the sea, and in addition, it can augment the employment rate of the local people, giving training opportunity to students from marine related schools. The district fishermen's association may also cooperate in promoting local recreational and fishing industries.

8.3 Promotion of Recreational Fisheries and Eco-tourism in Fishing Villages

To improve marine literacy of the people and to develop fishery tourism, guidance was provided to the fishing industry in developing businesses relating to recreation, experiencing, educational and servicing. Whale watching tour guides were trained. Integrated projects were conducted for servicing marine eco-tourism activities for domestic and foreign tourists, and providing information on recreational fishing vessels, for improving safety and service of recreational fishing vessels. In addition, projects were implemented to improve the environment of fishing villages, and to promote the industry cultural activities with local characteristics and experiencing tours in fishing villages, in order to promote economic development of fishing villages and create new features in fishing villages.

In Taiwan the season of whale watching is between April and October. Presently these activities are mainly conducted in Yilan, Hualian and Taitung counties along the east coast. The areas of whale watching can be roughly divided into Kweishan Island area in Yilan, Shiti area in Hualian, and Chengguang area in Taitung. In the course of whale watching, apart from searching of whale schools and watching whales, some tour guides will make description on the natural landscapes, and introduction on fishing operations and other marine ecology, thus increasing the depth and diversity in fishery recreational activities.















after the welfare and safety of fishermen; measures for the mitigation and prevention of fishery disasters, to protect the viability of the industry; mitigating coastal erosion by dredging and beach maintenance, and assuring the functions of the piers of fishing ports; improvement of the drainage system in the aquaculture production areas, increasing the capability of disaster prevention, to promote "environment balance and sustainability", "steady industry development" and "population

revitalization of fishing villages".

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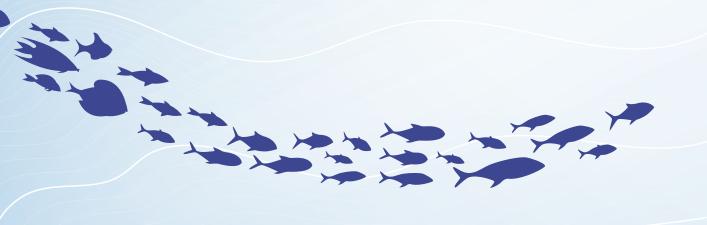
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