



Ocean Conservation Administration,
Ocean Affairs Council, Chinese Taipei

Bulletin on Marine Resource Conservation and Fisheries

August 2023
Volume. XXIII, Issue 1



Ludao Aquatic Organisms Propagation and
Conservation Zone, Taitung County, Chinese Taipei
Source: Ocean Conservation Administration, Ocean
Affairs Council (Chinese Taipei)

APEC Bulletin on Marine Resource Conservation and Fisheries

August 2023 Vol. XXIII, Issue1

Publisher

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This Bulletin is available online at <https://www.oca.gov.tw/>
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Overall Introduction

Confronting global issues related to climate change and the economic impact of the COVID-19 pandemic, APEC has intensified the coordinated efforts of its members to address climate and economic challenges, so to enhance resilience, promote environmental sustainability, and advance inclusive policies in the APEC region. Recognizing the importance of expediting regional climate actions and sustainable development, APEC also acknowledges the immense value of our oceans and coasts in terms of climate resilience and economic benefits.

To foster sustainable economic growth, development and prosperity in the Asia-Pacific region, the APEC Ocean and Fisheries Working Group (OFWG) has convened for 20 meetings since its establishment in 2011. The OFWG meeting serves as a platform for member economies to collaborate and address key issues related to ocean and fisheries management. Meanwhile, economies could raise proposals or update their recent projects which align with the APEC priorities or the objectives of APEC's roadmaps.

According to the 19th and 20th OFWG meetings, the OFWG has made its contribution toward for APEC's Putrajaya Vision 2040, the priorities of APEC, and the La Serena Roadmap for Women and Inclusive Growth, with a focus on climate mitigation, sustainable growth, and gender inclusiveness. Additionally, the OFWG has developed the Road Map on Small-scale Fisheries and Aquaculture, Roadmap on Marine Debris, and Roadmap on Combatting Illegal, Unreported and Unregulated Fishing

(IUU). These initiatives not only strengthen the regional blue economy and promote marine conservation synergy but are also well aligned with the APEC 2023 theme, i.e., "Creating a Resilient and Sustainable Future for All".

This Bulletin would be divided into three main parts:

- Relation between OFWG and the La Serena Roadmap for Women and Inclusive Growth
- Development of OFWG's Focal Roadmaps
- Tackling Environmental Challenges: Blue Carbon Economy

For the first part, the spillover effect of the La Serena Roadmap for Women and Inclusive Growth on OFWG and its actions would be illustrated. The second part will showcase the status and development of three focal roadmaps of OFWG. Lastly, the significance of the blue carbon economy and its relation to APEC will be discussed.

Through reviewing the development of potential topics and the updates of focal APEC roadmaps related to OFWG, several findings are presented for economies' reference. First, there is a strong emphasis and promotion of the development of sharing technology, knowledge, and management methods in each roadmap. Second, considering the necessity of collaborative mechanisms, multi-party dialogue and cooperation to achieve the goals outlined in the APEC roadmaps are strongly encouraged. Lastly, OFWG strongly recommends the adoption of policies related to the APEC roadmaps or priorities.

Relation between OFWG and the La Serena Roadmap for Women and Inclusive Growth

Overview

APEC has been working to advance women's economic empowerment in the region. Since 1993, topics related to women's empowerment have been raised and discussed in the Human Resource Development Working Group (HRDWG). In 2011, APEC Leaders welcomed the San Francisco Declaration on Women and the Economy that encouraged economies to take concrete actions to fulfil the full potential of women.

In May 2011, with full support from the United States and other economies, the Policy Partnership on Women and the Economy (PPWE) was formed. Its establishment aimed to drive greater inclusive economic development and enhance the participation of women in the Asia-Pacific region by providing a more efficient and concrete mechanism for policy discussions. Additionally, the PPWE organized the Women and Economy Forum (WEF) annually to support women in the APEC region who face multiple disproportionate barriers to economic empowerment compared to men. The progress made in this area assures that the significance of women's economic empowerment and inclusiveness has gradually become a focal point in APEC's cooperative topics.

In the view of the integration and empowerment of women, La Serena Roadmap for Women and Inclusive Growth (2019 – 2030) was welcomed at WEF in La Serena, Chile. In December 2019,

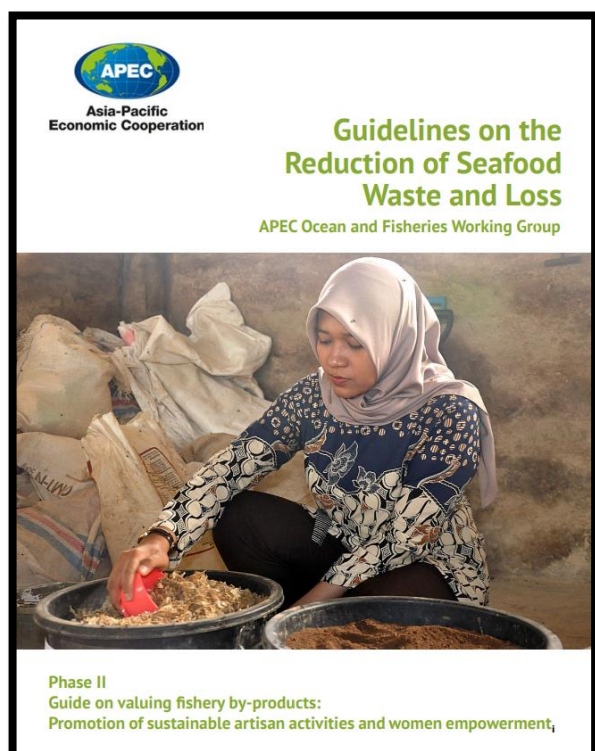
the Roadmap was endorsed, which seeks to provide guidance and catalyze policy actions to promote the empowerment of women in the Asia Pacific region. To be more specific, the La Serena Roadmap seeks to encourage actions in the following cross-cutting key areas:

- Empowering women through access to capital and markets;
- Strengthening women's labor force participation;
- Improving access of women to leadership positions in all levels of decision-making;
- Supporting women's education, training and skills development and access in a changing world of work;
- Advancing women's economic empowerment through data collection and analysis.

In 2020, an Implementation Plan for the La Serena Roadmap was developed as a framework to guide the APEC fora and sub-fora in aligning their works with the objectives of the Roadmap. The Implementation Plan serves as a comprehensive and cross-cutting direction for APEC to determine relevant existing and new work streams that contribute to meeting the targets and fulfilling the Action Areas outlined in the La Serena Roadmap for Women and Inclusive Growth.

OFWG's Contribution to Achieve the La Serena Roadmap

The La Serena Roadmap for Women and Inclusive Growth has indeed been supported and practiced in APEC fora and cross-fora activities. The OFWG also demonstrates dedication to key areas of the Roadmap. The Roadmap originated from Chile's proposal and has a significant connection with Chile. The Lead Shepherd (LS) of OFWG, Ms. Mónica Rojas Noack, being from Chile, has been leading OFWG to make continuous progress in implementing the Roadmap, particularly in the fisheries and aquaculture sectors. Her leadership reflects the commitment of Chile and OFWG to advancing women's empowerment in the APEC region.



APEC Publication: Guidelines on the Reduction of Seafood Waste and Loss (OFWG)
Source: APEC Web (<https://tinyurl.com/2nuz8hdt>)

The dedication of key members in promoting women's empowerment in APEC serves as a catalyst for activating follow-up actions by OFWG. When key member economies demonstrate their commitment to the implementation of the Roadmap, it encourages other economies to support its implementation as well. This includes practicing policies that aim to close the gender gap, improve women's access to core skills, facilitate their participation in high-level management positions, and enhance their engagement in marine fields.

By aligning their policies and actions with the objectives of the La Serena Roadmap, APEC economies can collectively work toward achieving gender equality and women's economic empowerment in the region. The involvement of OFWG and other relevant working groups helps ensure that women's empowerment is integrated into specific sectors and industries, such as fisheries and aquaculture, to create more inclusive and sustainable economic growth.

During the 19th OFWG meeting, Chile presented the outcomes of "Phase II: Guide on Valuing Fishery By-Products: Promotion of Sustainable Artisan Activities and Women Empowerment." This phase of the project was originally proposed by Chile and Indonesia in 2020. The outcomes of this project included the successful completion of a workshop held in June 2022 in Bali, Indonesia. The workshop per se functioned as a platform for exchanging opinions and gathering input from participating economies. The structure of the proposed Guidelines was approved during this workshop.

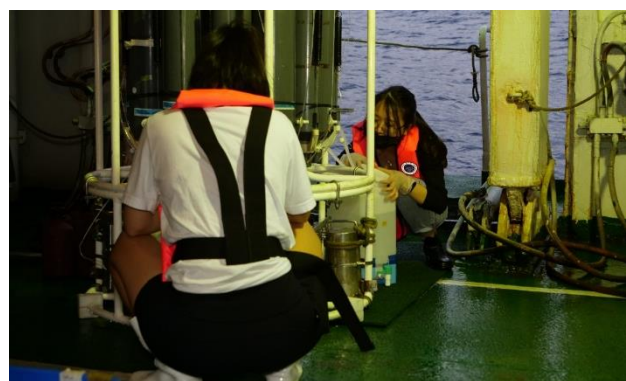
The project focused on addressing the issue of seafood waste and loss, and the Guidelines produced as a result combined three dimensions of APEC priorities: sustainable economy, global cooperation, and social inclusiveness. This project demonstrated the potential of the OFWG to serve as an outstanding model for cooperation under marine issues, particularly regarding networking and collaboration during the pandemic.

The spillover effect of the aforementioned project was evident in the 20th OFWG meeting. During the first half of the meeting, the OFWG's dedication to the La Serena Roadmap was emphasized, and three economies (Chile, Korea, and the Philippines) presented their works related to the roadmap. Chinese Taipei also presented their project "Promoting Women's Role in Ocean Science toward Sustainable and Inclusive Ocean Governance (OFWG 06 2021A)" during the meeting, demonstrating their commitment to recognizing and valuing women's contributions in the field of ocean science. This project is well aligned with the APEC Putrajaya Vision 2040, which aims to promote inclusive economic growth and harness the potential of women through increased participation

Advancing Women's Marine Empowerment

Considered a shining example of collaboration among economies, the success of "Phase II: Guide on Valuing Fishery By-Products:

Promotion of Sustainable Artisan Activities and Women Empowerment" has served as a reminder to the APEC region of the importance of cooperation in achieving social inclusiveness and women's empowerment. The Guidelines highlight the significance of "strengthening cooperation among APEC economies through the sharing of best practices," which has facilitated the implementation of the OFWG's roadmap. Chile has emerged as a remarkable role model by enacting a gender equity law that recognizes women's contributions and enhances their visibility in the artisanal fishing sector. The Guidelines further emphasize the need to promote government policies that foster the circular economy and women's empowerment, as well as the disaggregation of data by gender, to effectively meet the roadmap's targets. Given the recommendations put forth by leading economies in the OFWG regarding women's empowerment, it is evident that the implementation of the La Serena Roadmap will remain a prominent topic for cooperation and discussion among member economies.



Female experts conducting marine survey on board
Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

The Development of OFWG's Focal Roadmaps

I. Road Map on Small-scale Fisheries and Aquaculture 2022 – 2027

Background

At the 17th meeting of OFWG, a special session to address small-scale fisheries and aquaculture relevance to OFWG was held, in line with the OFWG's Strategic Plan 2021-2023. The importance of this sector, which according to the Food and Agriculture Organization (FAO), involves around 90% of the 35 million people recorded globally and a further 20 million people involved in the small-scale post-harvest sector was highlighted due to its relevance for the social and economic development of APEC economies. Taking the Southeast Asia for example, coral reef fisheries alone comprise about 3.4 million small-scale fishers, and cumulatively speaking, the aforesaid economic activities generate around \$21 billion USD, which represents 51% of the world's economic value of small-scale fisheries. During the difficult times of COVID-19 pandemic especially, small-scale fisheries and aquaculture have played their significant roles respectively in economic development, providing livelihoods, as well as ensuring the food security and nutritional needs of many. Furthermore, special consideration should be given to the approach toward coastal communities' development, heritage and integration of indigenous cultures and gender equality. That said, small-scale fisheries and aquaculture activities in the APEC region are fully recognized and supported as contributors to human well-being of population, resilient and sustainable food systems and economic development through the responsible

and sustainable use of fisheries and aquaculture resources and socio-economic development in the APEC region.

The Road Map on Small-scale Fisheries and Aquaculture (SSFA Roadmap) was then endorsed by OFWG at the 18th OFWG meeting in February 2022, accordingly with strategic plan 2021-2023. The SSFA Roadmap was also endorsed by SOM Steering Committee on Economic and Technical Cooperation (SCE) representatives in December 2022.

Key Content

The establishment of the SSFA Roadmap provides specific action areas to promote and develop this sector. The Road Map should prioritize these action areas as a framework for the development of projects and activities, encompassing the following identified areas:

- **Small scale fisheries and aquaculture sector characterization in APEC region**

To have a better knowledge and understanding of the structure and characteristics of the small-scale fisheries and aquaculture sector in APEC economies, it is necessary to identify and address main needs and gaps on sustainable management of resources. In this regard, it is recommended and encouraged to gather data and information on small scale fisheries and aquaculture in each APEC Economy.

- **Implementation of SSF Guidelines in the APEC region**

It is recommended to promote the

implementation of the “FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines)” among APEC members as a way to improve the responsible and sustainable use of fisheries and aquaculture resources in inland, coastal and ocean environment.

- **Enhance awareness of women’s role and potential in small-scale artisanal fisheries and aquaculture**

It is recommended to support improvement and participatory implementation of policy and regulatory frameworks to secure gender equality and equity across small-scale artisanal fisheries and aquaculture in the APEC region.

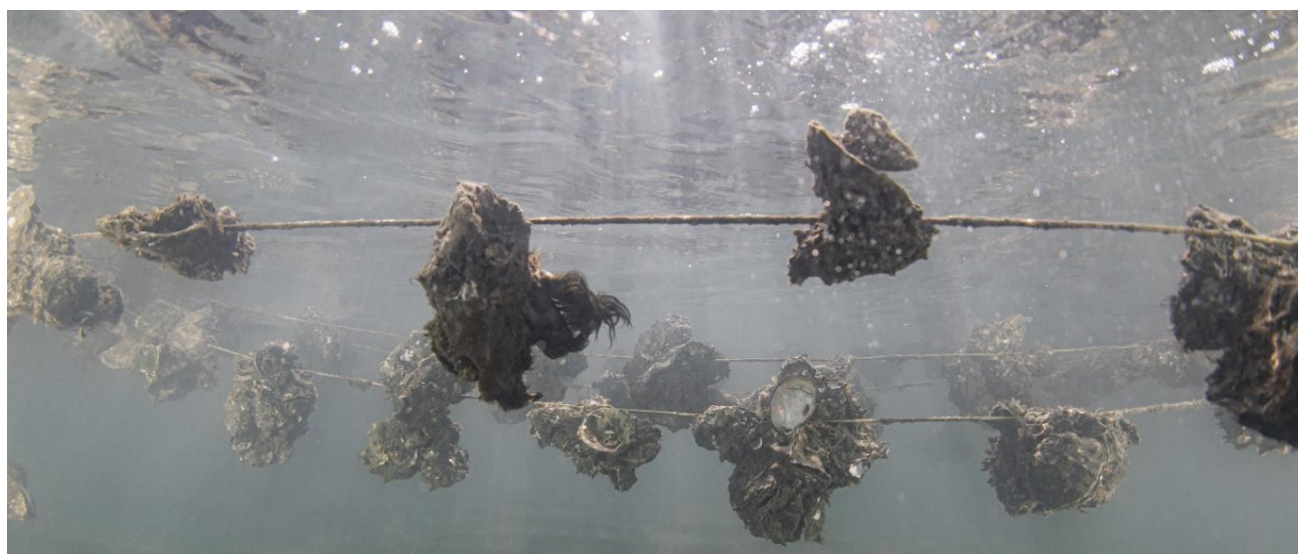
- **Support of coastal communities**

It is recommended to support the development of coastal communities through empowerment of small-scale fishers, fish farmers, fish workers, indigenous peoples and their organizations in the context of management of small-scale fisheries and

aquaculture. In this area, community-based coastal resource management (CBCRM) programs development experiences should be shared as an important conservation and fisheries management strategy in some economies within the APEC region.

- **Production and market development of small-scale fisheries and aquaculture in APEC region**

It is recommended to sustain and strengthen small-scale fisheries and aquaculture through supply chain and market development within the APEC region, including the use of post-harvesting technologies and stakeholder participation, while the following actions should be promoted: establishing standards for aquatic products derived from small-scale fisheries and aquaculture; adding value to fisheries products, including certified options such as responsible or sustainable fisheries, environmental-friendly and blue products, as well as products derived from CBCRM programs; promoting online marketing strategies.



Wanggong Mud Shrimp Breeding Conservation Area, Changhua County, Chinese Taipei
Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

Recent Development

In the 20th OFWG meeting this February, the LS presented the SSFA roadmap, highlighted the priorities to implement the roadmap, and presented the 1st draft Implementation Plan for the Roadmap on SSFA (the Implementation Plan), which was circulated on 7th February, 2023.

Implementation Plan for the Roadmap on SSFA

The Implementation Plan identifies action areas and possible work streams to guide the work of implementation of the SSFA Roadmap and advance concerted actions to be achieved by 2027. It has been developed so as to provide direction for APEC's work on SSFA going forward, helping to ensure that future initiatives are practical, targeted, coordinated, and efficient, by ensuring that the SSFA Roadmap is effectively implemented. This Implementation Plan is intended to be a flexible, collaborative, living document, wherein members are able to showcase those initiatives which they are planning to carry out (or in the process of carrying out), and where members are also able to identify gaps which they could see as valuable areas for other economies to champion.

Review of the Implementation Plan will be undertaken during each first annual OFWG meeting, including sharing information on related activities by economies and at regional levels, and discussing and addressing related challenges. These reviews will ensure that APEC-wide and individual actions are in place to complete achievement of the objectives of the SSFA Roadmap by 2027. A final review of

the Implementation Plan will be carried out in 2027 and reported to the 2027 SCE Meeting. The review will focus on measuring the progress made by APEC and individual economies on developing sustainable small-scale fisheries and aquaculture. The reviews will take place in the context of the Implementation Plan being a living document, where an ongoing dialogue will be maintained on the achievement of its objectives and new activities can be added at any time.

Formation of the sub-working group to draft the Implementation Plan

In the recent OFWG meetings, the LS proposed that the OFWG should work on the SSFA Roadmap Implementation Plan and invited the economies to form a sub-working group to develop the Implementation Plan, which the U.S., Thailand, Viet Nam, and the Philippines expressed their willingness to join.

Economy Actions

♦ Chile

The project “Review of Traceability Systems Applied to the Value Chain of Fisheries and Aquaculture in APEC Economies (OFWG 02 2021A)” is Chile's recent contribution to this field. To ensure the legality and safety of fisheries and aquaculture activities, as well as to promote commercialization, Chile has established a traceability system that enables the tracking of the origin and movement of resources and products along the value chain. The project aims to support the gradual implementation of this system to enhance the protection of fishery resources.



SSFA replicable project ideas of APEC economies

(Scan the QR Code to download the Guidelines on the Reduction of Seafood Waste and Loss)

Source: APEC Web (<https://tinyurl.com/2nuz8hdt>)

In the 20th OFWG meeting this year, Chile presented its potential project “Sharing Experiences on Small-scale Aquaculture with a Focus on Gender and Indigenous Issues in Coastal Communities”. This initiative aligns with the SSFA Roadmap by supporting action 1.2 Characterization of productive systems for small-scale fisheries and aquaculture, and considering aspects as the characterization of the sector, principles of SSF, linkage of the activity with coastal communities and commercialization. The focus is to identify gaps and opportunities that allow the generation in the future cooperation actions for the sustainable development of the sector in the APEC economies. China, Papua New Guinea and Chinese Taipei supported the project proposal.

◆ Peru

In the 20th OFWG meeting, Peru updated the progress of its ongoing project: Report and Workshop on Capacity Building for Improvement of Economic Reactivation in Sustainable Aquaculture (OFWG 05 2021), which is co-sponsored by China, Indonesia, Japan, Papua New Guinea, Chinese Taipei, and Thailand. The project aims to hold capacity-building workshops for APEC developed and developing economies. In addition to improving the professional knowledge of all parties involved in carrying out recovery actions and plans, it also benefits SSFA producers, improves food production, revives the economy of the aquaculture value chain, and strengthens resilience to climate change.

♦ Thailand

Sharing Knowledge and Experiences on Small-Scale Marine Fisheries Data Collection and Management for Sustainable Development in the APEC Region (OFWG 01 2022) is a recent project of Thailand. Since many SSFAs occur in remote areas and often operate without licenses, the catches from SSFAs are primarily consumed locally and sold in local markets. However, there is a lack of formal recording of production and consumption data, making it challenging to assess the status of the resources and their contribution to society. This project aims to promote the sharing of knowledge and experience on SSFA data collection and management among APEC economies, with the goal of developing best practices for sustainable development in both the public and private sectors in the region.

In the 20th OFWG meeting, Thailand invited APEC economies to participate in the International Year of Artisanal Fisheries and Aquaculture 2022 Closing Ceremony for Asia “Toward a new era of support for small-scale fisheries and aquaculture”, which was scheduled for 28 February 2023.

Future Outlook

The SSFA Roadmap would be a crucial product for the recognition of the millions of small fishermen, fish farmers and workers, who provide healthy and nutritious food to billions of people and contribute to the advancement of

the 2030 Agenda for Sustainable Development, including several of the Sustainable Development Goals (SDGs): no poverty (SDG1), zero hunger (SDG2), life below water (SDG14). The Road Map will also pursue its contribution toward the La Serena Roadmap for Women and Inclusive Growth, the APEC Putrajaya Vision 2040 on strong, balanced, secure, sustainable and inclusive growth and Aotearoa Plan of Action on working toward the sustainable resource management of agriculture, forestry and marine resources and fisheries by the support the small-scale fishers and farmers to be better, and stronger in the fisheries industry.

As part of the Road Map implementation commitments, reviews of the Road Map will be undertaken during each first annual OFWG meeting, including sharing information on related activities by APEC economies and at regional levels, as well as discussing and addressing related challenges. At the first OFWG meeting in 2025, each economy will report concerning its implementation of the Road Map. OFWG will report to SCE on the same timeline for monitoring and evaluating the progress purposes under the Road Map. APEC economies will continue efforts to promote sharing of knowledge and success stories, lessons learned from various management approaches, best practices and creative solutions to foster small scale fisheries and aquaculture.

II. APEC Roadmap on Marine Debris

Background

Marine debris, including plastic litter in the marine environment, is an increasing global challenge in need of a cooperative response. The severity of the marine debris problem is particularly acute in the APEC region, which signifies APEC's importance as a regional forum in a strategic position to channel off collective efforts on understanding the impacts and costs of marine debris, and developing the required management and prevention approaches, in order to mitigate its impediments to sustainable economic growth in the Asia-Pacific.

At the APEC Ocean-related Ministerial Meeting in 2014 in Xiamen, China, the Xiamen Declaration called for more integrated, sustainable, inclusive and mutually beneficial partnership and encouraged cooperation on the reduction and mitigation of marine pollution, including from land-based sources.

To implement the Xiamen Declaration, the OFWG and the Virtual Working Group on Marine Debris have had strong work programs on marine debris with several important initiatives. In 2018, the OFWG endorsed the Republic of Korea sponsored "Workshop's Recommendation for a Draft on APEC Marine Debris Management Guideline" which informed the APEC Roadmap on Marine Debris. After that, at the Third Senior Officials' Meeting held in August 2019 in Puerto Varas, Chile, APEC officials endorsed the Roadmap.



The Conservation Association in Southern Penghu Four Islands cleaning the fishing nets under the ocean. Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

Key Content

Recognizing the pressing need for a collective and coordinated vision and long-term strategy with high-level endorsement, the present document aims to encourage member economies to take voluntary and concrete steps while taking into account their respective internal circumstances. Recognizing further that marine debris is a global and multidisciplinary challenge, APEC will take action, based on scientific evidence and lessons learned from regional efforts, to significantly contribute to addressing this urgent issue through the following areas and their corresponding guidelines:

Policy Development and Coordination

Policy Development and Coordination is defined to encourage an APEC consolidated approach by driving policy development and coordination at every level, from regional cooperation down to local governments, across all relevant fora and agencies. Corresponding guidelines are as follows.

- Identify and share effective measures taking into account existing global, regional and domestic action plans and frameworks on marine debris; and promote mutually beneficial collaboration with other relevant international, regional and sub-regional for a or organizations.
- Establish mechanisms for cross-for a dialogue among relevant APEC Working Groups to encourage a coordinated and holistic approach to combating and managing marine debris.
- Strengthen coordination with relevant private sector, and civil society organizations.
- Encourage economies to build upon and apply the 'APEC Policy and Practice Recommendation for Overcoming Barriers to Financing Waste Management Systems and Reducing Marine Debris' to address financing gaps for waste management infrastructure.
- Encourage APEC economies to promote domestic inter-agency policy coordination mechanisms on marine debris and waste management.
- Promote sustainable waste management, and reduction and prevention of leakage of waste from land- and sea-based sources, at all levels of government and expand on successful experiences and models.

- Encourage the use of available scientific information for the development of policies.

Capacity Building

Capacity Building is defined to promote sharing of best practices and lessons learned and enhancing cooperation. Corresponding guidelines are as follows.

- Consider cross-fora collaboration on harmonization of macro and micro plastics monitoring methodologies and the best available technologies (BAT) to reduce the release of plastic waste.
- Promote complementarily between member economies' initiatives within the APEC framework and other similar initiatives in the APEC region.
- Encourage consumer awareness activities and education.

Research and Innovation

Research and Innovation is defined to foster research and innovation for the development and refinement of new methodologies and solutions for monitoring, preventing, and reducing marine debris. Corresponding guidelines are as follows.

- Promote research development and implementation of innovative solutions to marine debris such as environmentally sustainable alternative materials and start-up incubators.
- Promote research to identify policy drivers of marine debris and promote development and implementation of innovative solutions.
- Support research and promote knowledge sharing – to assess marine debris impacts on coastal ecosystems (e.g., mangroves,

sea grass, coral) and the marine environment.

- Encourage research on environmentally sustainable waste disposal and management.
- Support research on land- and sea-based sources, pathways, life cycles and impacts of marine debris, including potential impacts on human health.

Financing and Private Sector Engagement

Financing and Private Sector Engagement is defined to increase access to financing and facilitating private sector engagement to promote investment, trade and market creation in industries and activities that enable marine debris management and prevention. Corresponding guidelines are as follows.

- Encourage and facilitate Public Private Partnerships (PPPs) to increase investments, productive partnership arrangements and outputs.
- Consider the possibility of APEC sub funds to support sustainable management of the marine environment including marine debris.
- Consider applying circular economy or

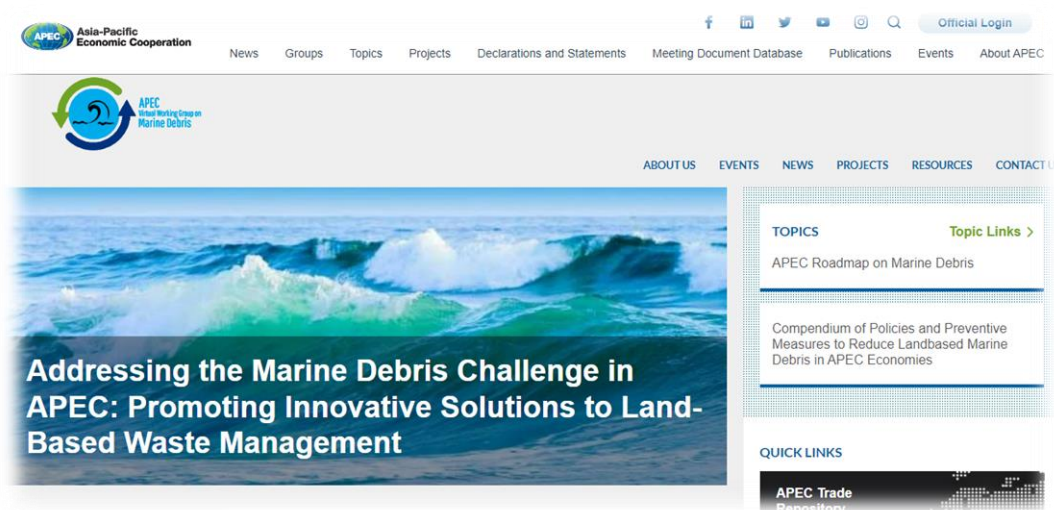
sustainable materials management approaches to strengthen end-markets for plastic wastes and drive sustainable waste management.

- Explore opportunities for de-risking innovations and technologies to enhance access to international financing.

Recent Development

Virtual Working Group on Marine Debris

APEC Virtual Working Group on Marine Debris (VWGMD) was established in 2014 by the Chemical Dialogue (CD) in collaboration with the OFWG and co-chaired by the United States (government) and the Philippines (industry). The group involves the public and private sectors and focuses on innovative solutions for land management of waste to prevent its entry into the aquatic environment. There are two key documents developed by the VWGMD: Policy & Practice recommendation (2016) and the OFWG APEC Roadmap on Marine Debris (2019). These documents are available online, along with relevant news and project information. Economies are invited to access the aforesaid information through www.apec.org/marinedebris.



Virtual Working Group on Marine Debris official website
Source: www.apec.org/marinedebris

APEC Marine Debris Roadmap: Implementation Plan

As the OFWG agreed to the Marine Debris Roadmap in August 2019, the Implementation Plan was being developed to provide more specific action, direction, and prioritization for the OFWG, and APEC more broadly, to effectively implement the actions agreed in the Roadmap. Recognizing that significant work to address marine litter is currently being undertaken at other platforms, and noting resource constraints of economies, the Implementation Plan is a guidance document, and actions are on a voluntary basis. The Implementation Plan is envisioned as a living document and is intended to be updated when agreed by the OFWG. The OFWG will also consider streamlining the Action Plan and focusing on a few key activities. This Plan and its agreed actions will be incorporated into the OFWG work plan and strategic plan to ensure completion and tracking of agreed elements. The Implementation Plan is an informational document for the OFWG and is not currently considered for any higher-level endorsement at this time.

Evaluation of progress on APEC Marine Debris Roadmap Implementation Plan will be undertaken during each first annual OFWG meeting, including sharing information on related activities by economies and at regional levels, as well as discussing and addressing related challenges. The OFWG will report on actions and progress under the Roadmap to the SCE. This could be done each year during the first SCE meeting of the year.



The process of cleaning marine debris
Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

Economy Actions

APEC economies are encouraged to collaborate in areas of common interest. Actions, success stories and lessons learned from various management approaches, best practices and creative solutions to prevent and combat marine debris should be shared by economies during the first OFWG meeting of each year. In the 20th OFWG meeting this year, implementation updates were presented by:

♦ Canada

Canada reported on their initiatives being taken, including a comprehensive domestic approach to plastics solutions. They are also in the final stages of implementing projects to address marine litter with NGOs, led by their Environment and Climate Change Department.

♦ Chile

Chile reported on their participation in the Intergovernmental Negotiating Committee (INC) plastics treaty negotiations; legislation on battery/toxic waste management, and the establishment of a sustainable alliance for fishing waste management, which has already succeeded in pulling 4500 fishing nets for proper disposal.

♦ China

China highlighted their work on implementing ocean actions supporting carbon neutrality and their water quality improvement techniques that have reduced the incidences of red tides. China also highlighted the importance of addressing marine pollution issues including nuclear contaminated water and call on members to promote sustainable waste management and reduction and prevention of leakage waste from land- and sea-based sources.

♦ Korea

Korea reported on their host year for the 7th International Marine Debris Conference with private sector engagement, and their research on marine debris, data collection and analysis on multiple marine debris projects.

♦ Chinese Taipei

Chinese Taipei reported on their work establishing a marine debris recycling coalition, now up to 42 members, and the new initiative to label recycled marine debris products. Chinese Taipei is also progressing a program to identify gillnet fishing gear, with 100% of their 5200 gillnet fishing boats participating in the program.

Chinese Taipei invited all the economies to join

in a workshop under the APEC funded project, named “Good Practices for Traceability Mechanism of Marine Debris Recycled Products in the APEC Region (OFWG 07 2021A)”.

Chinese Taipei also presented how the private sector can combat marine debris with innovative technologies with two case studies in its economy, including a new small automated cleaning boat that can be used in smaller ports to remove marine debris, and an app that maps points to refill reusable water bottles and reduce use of disposable plastic bottles.



Cleaning marine debris

Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei).

♦ Viet Nam

In Feb 2021, the action plan for marine debris in fisheries management (2020-2030) was

approved by Ministry of Agriculture and the Prime Minister. The Ministry of Agricultural Development worked with World Wide Fund for Nature in Viet Nam to develop a marine debris project and conducted a workshop on plastic waste management.

Sub-Fund on Marine Debris Management and Innovation

Established in 2020, the MDMI Sub-Fund supports APEC's strategic objective of supporting balanced, inclusive, sustainable, innovative, and secure growth. The Sub-fund aims to institutionalize and provide ongoing support to advance APEC's objectives of reducing marine debris to promote sustainable development. It will support initiatives related to improving management of land and sea-based sources of marine debris and promoting development of technical and financial innovations to prevent and reduce marine debris. Any interested economy, within any APEC fora, may submit Concept Notes (CNs) which fall within the scope and eligibility criteria of the MDMI Sub-fund.

Future Outlook

The APEC Roadmap on Marine Debris provided a suite of recommended actions APEC fora may undertake to address the issue

of marine debris through Policy Development and Coordination, Capacity Building, Research and Innovation, and Financing and Private Sector Engagement. The Roadmap's guidelines were developed to help focus work of the OFWG and other relevant APEC fora in areas most important for action on this issue and agree on a path forward for APEC member economies and more broadly across the APEC region. The APEC Roadmap on Marine Debris should be seen as a living document. Additional APEC-wide actions could be considered for agreement by consensus to achieve the objectives of this Roadmap. As the relevant fora, the OFWG annual work plan should include activities to implement the Roadmap, and annual economy reports to the OFWG should include information on domestic or regional marine debris activities.

Based on the numerous joint efforts of APEC economies under the APEC framework in recent years, the APEC Roadmap on Marine Debris is intended to help guide APEC's work. It was developed in recognition of the severity of the marine debris problem in the APEC region and the importance of APEC as a key forum through which member economies can set priorities and implement coordinated action to better understand and address the issue of marine debris.



Marine Debris found within the Garbage Patch

III. APEC Roadmap on Combatting Illegal, Unreported, and Unregulated (IUU) Fishing

Background

Illegal, unreported and unregulated (IUU) fishing is a global and regional threat to sustainable fisheries, fishing communities, marine ecosystems and societies. IUU fishing diminishes ocean resources and remains a persistent threat to sustainable development. Our cooperation through APEC, in accordance with its mandates, is aligned with efforts to implement the 2030 Agenda for Sustainable Development, which establishes in SDG14, inter alia, the objective of ending IUU fishing.

The Asia Pacific region accounts for nearly 52% of global marine fisheries catch, and fisheries provide significant benefits to the APEC region in terms of food security, economic value and cultural value. Since the 2005 Bali Plan of Action, Ministers have continued to encourage APEC economies to cooperate to address IUU fishing in the region. At their 2019 Meeting, Ministers Responsible for Trade noted the increasingly adverse impact of IUU Fishing on fish stocks, the marine environment, food security, and livelihoods, encouraged additional work to address these challenges and reiterated their support for the work underway in the World Trade Organization for comprehensive and effective disciplines that prohibit certain forms of fisheries subsidies.

Given the importance of fishing for the economy, food security and sustainable growth of the Asia Pacific region, it is critical for APEC economies to work cooperatively within the context of this regional economic forum on initiatives to prevent and combat IUU fishing, as part of a

joint effort to promote ocean conservation and the sustainable use of marine resources. Combatting IUU fishing can support the achievement of sustainable fisheries and fishing communities and global maritime safety interests. To help address IUU fishing in the Asia Pacific region, while recognizing that APEC supports the development of free and open trade in fisheries products of legal origin, OFWG proposes an APEC roadmap on IUU fishing to be implemented.

The Roadmap on Combatting Illegal, Unreported and Unregulated (IUU) Fishing (the Roadmap) was endorsed by OFWG, and welcomed by Food Security Ministers at the Third Senior Officials' Meeting held in August 2019 in Puerto Varas, Chile. The Roadmap was also endorsed by Senior Officials on behalf of APEC Ministers in December 2019.

Key Content

To prevent and combat IUU fishing, APEC economies are encouraged to strengthen their relevant domestic policies and legal frameworks, by pursuing the following lines of action to achieve the Roadmap's objectives:

Implementation of Port State Measures (PSM)

Reaffirmed with their important roles in combatting IUU fishing, APEC Economies are encouraged to carry out robust and effective PSM based on the principles of implementing the Port State Measure Agreement. In addition, advocate for the adoption of PSM in regional fisheries management organizations (RFMOs) to which they are Members, as well as other measures that detect and prevent IUU fish and fish products from entering through ports to

global supply chain. These measures should apply to foreign-flagged fishing vessels seeking entry to the APEC Economies ports or while they are in their ports, and should include procedures to verify that such vessels have not engaged in IUU fishing or fishing related activities.

Exchange of information regarding traceability and monitoring, control and surveillance of fishing activities

It is encouraged to cooperate so to enhance information sharing of tools to prevent and combat IUU fishing, including those tools for improving the traceability of fish throughout the supply chain through implementing catch documentation or trade certification schemes. Additionally, Economies should consider participating in specific monitoring, control and surveillance networks for sharing and exchanging information, as well as enforcement strategies, to prevent and combat IUU fishing, taking into account the related confidentiality requirements.

Increase the coordination of APEC Economies

It is recommended to develop and implement cooperative activities among agencies within APEC economies responsible for monitoring, control and surveillance of fishing activities and the traceability of fishery products. This cooperation should consider activities to enhance capacity building, training and use of available advanced technologies to support effective implementation of measures to combat IUU fishing. To facilitate this coordination, APEC economies should establish domestic contact points.

Promote collaboration with relevant regional and international fisheries bodies to identify where APEC can contribute

Collaborate with relevant regional and international fisheries bodies, as appropriate, to exchange experiences and best practices, as well as to benefit from their work on combatting IUU fishing, particularly relevant RFMOs and the FAO. This includes the identification of any economic or market-related measure where APEC could contribute.



Schematic diagram of combatting IUU fishing
Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

Strengthen Public-Private Engagement

It is recommended to strengthen public-private engagement and promote collaboration through the exchange of information and the development of studies on the causes, operation and impact of IUU fishing, as appropriate.

Capacity building

It is suggested to enhance the capacity of APEC developing Economies in combatting IUU fishing through technical assistance and training on catch certificate and traceability; the use and application of regulatory instruments; methodologies and operational fisheries enforcement procedures; technologies to combat IUU fishing and fishing-related activities.

Recent Development

Implementation Plan for the Roadmap on Combatting IUU Fishing

The Implementation Plan for the Roadmap on Combatting Illegal, Unreported and Unregulated Fishing identifies possible work streams to guide the work of implementation of the Roadmap and advance concerted actions to be achieved by 2025. It has been developed so as to provide direction for APEC's work on IUU Fishing going forward, helping to ensure that future initiatives are practical, targeted, coordinated, and efficient, by ensuring that the Roadmap on IUU Fishing is effectively implemented. This Implementation Plan is intended to be a flexible, collaborative, living document, wherein Members are able to showcase those initiatives which they are planning to carry out (or in the process of carrying out), and where Members are also able to identify gaps which they could see as valuable areas for other economies to champion.

Review of the Implementation Plan will be undertaken during each first annual OFWG meeting, including sharing information on related activities by Economies and at regional levels, and discussing and addressing related challenges. These reviews will ensure that

APEC-wide and individual actions are in place to complete achievement of the objectives of the Roadmap by 2025.

A final review of the Implementation Plan will be carried out in 2025 and reported to the 2025 APEC Ministerial Meeting. The review will focus on measuring the progress made by APEC and individual economies on combatting IUU fishing. The reviews will take place in the context of the Implementation Plan being a living document, where an ongoing dialogue will be maintained on the achievement of its objectives and new activities can be added at any time.

In the 20th OFWG meeting, the update on the action plan for the implementation of IUU Roadmap was presented by Chile. The third draft was circulated for comment in Dec 2022 and comments were received from four economies. The LS noted that this implementation plan is scheduled for completion in 2025, so economies are encouraged to take action to move the issues forward in the next two years.

Economy Actions

Achieving the objectives set out in the Roadmap will require significant individual action on the part of economies to strengthen institutional capacities and enhance the monitoring, control and surveillance (MCS), and traceability of fishing activities. Through the Implementation Plan, interested economies will be supported to identify and progress domestic actions through capacity building, exchange of information and cooperation with other APEC economies and regional and international organizations, as appropriate. In the 20th OFWG meeting, the following economies presented their updates:

Sustainable Fisheries

Ecosystem Approach to Fisheries Management (EAFM)



The Philippines policy support to eliminate IUU Fishing
Source: REMIA A. APARRI and LILIBETH SIGNEY

♦ Canada

Canada supported the commitment to the IUU action plan, emphasized a 2-pronged approach incorporating policy and operations. Canada is participating in a number of multilateral fora including the High-Level Panel for a Sustainable Ocean Economy with addresses IUU and is working on implementing the Port State Measures Agreement. They welcome the WTO decision on banning harmful fishing subsidies. On the operational side, Canada is working with stakeholders including small island developing states (SIDS) on capacity building and training on how to identify and track dark vessels. In 2022, Canada announced a Shared Ocean Fund of \$84.3 million to support efforts to combat IUU fishing in the Indo-Pacific region.

♦ Chinese Taipei

Chinese Taipei reported on their work building capacity for fisheries inspectors and plan to have every domestic fishing vessel inspected at least once in 2023. They also reported on work

developing a human rights action plan for migrant fishers.

♦ Korea

Korea pointed out the importance of regional and international cooperation and would like to explore the issues economies share regarding IUU fishing.

♦ Papua New Guinea

Papua New Guinea reported on their work to review PNG's domestic action plan and making progress on IUU fishing that will be shared in the next meeting.

♦ The Philippines

The Philippines reported on their work implementing rules on catch certification for exports and assessment tool, and their work training fishery law enforcement officers and volunteers, including creation of a standardized training module for volunteers. For example, the Bantay Dagat is a community-based program that engages fisherfolk in coastal villages or barangays on a volunteer basis to support the detection and enforcement of illegal fishing in the coastal waters.

♦ Thailand

Thailand shared information on the developments made in fighting against IUU fishing:

1. Thailand's National Plan of Action to Prevent, Deter, and Eliminate IUU Fishing (Thailand NPOA-IUU) had been revised to the second version and completed in 2021.
2. Thailand is currently implementing activities under the Government Policy of IUU Free Thailand which aims to prevent the national supply chain from the IUU fish and fishery products.
3. Enhance the regulations and MCS to the small-scale fisheries to prevent small-scale fishers from IUU fishing.
4. Thailand also strengthens the implementation of Port State Measures and MCS to cope with the current situation of the fish and fishery products importation and fishing operations.

♦ Viet Nam

Viet Nam highlighted the action plan to implement the Port State Measures Agreement with cooperation from National Oceanic and Atmospheric Administration (NOAA) and the U.S. embassy in Hanoi for their training

workshop, and thanked the U.S. for their support.

Future Outlook

Following the guidance of the Putrajaya Vision 2040, "to foster an open, dynamic, resilient and peaceful Asia-Pacific community by 2040, for the prosperity of all our people and the future generations" as well as the implementation plan of the Putrajaya Vision, Aotearoa Plan of Action, the Roadmap demonstrated a collaborative vision, where APEC economies were urged to join efforts to both build technical capacities to prevent and combat IUU fishing, as well as to strengthen institutional capacities and compliance with domestic and international conservation and management measures to address IUU fishing.

APEC economies are encouraged to collaborate in areas of common interest. Actions, success stories and lessons learned from various management approaches, best practices and creative solutions to prevent and combat IUU fishing, should be shared by economies during the first OFWG meeting of each year. As part of the Roadmap implementation commitments, economies have agreed to review of the Roadmap being undertaken during each first annual OFWG meeting, and also report on the implementation of the Roadmap in 2025.



Bantay Dagat Volunteers of The Philippines
Source: REMIA A. APARRI and LILIBETH SIGNEY

Tackling Environmental Challenges: Blue Carbon Economy

Overview

According to the definition provided by the National Oceanic and Atmospheric Administration (NOAA), blue carbon refers to the organic carbon that is captured and stored by the world's ocean and coastal ecosystems. It has gained recognition as a significant component of the blue economy, particularly with the development of market mechanisms for carbon offsets. Coastal marine plants, including sea grasses, mangroves, and tidal marshes, play a crucial role in capturing and sequestering blue carbon.

Research indicates that the conservation and preservation of blue carbon ecosystems are essential to prevent the release of stored carbon back into the atmosphere. Although coastal habitats cover only 2% of the ocean's surface, they are responsible for storing approximately 50% of the carbon within their sediment. This highlights the significant carbon storage capacity of these ecosystems and their potential in mitigating climate change.

Recognizing the importance of blue carbon ecosystems, the APEC region has actively responded to this global issue by undertaking domestic and regional projects. Within the APEC system, the OFWG plays a crucial role in promoting synergy and collaboration among economies in addressing blue carbon actions within the region. This aligns with APEC's 2023 Policy Priorities, which include the objectives of "Enhancing Climate Mitigation and Resilience" and "Tackling Environmental Challenges."



Mangroves, Hsinchu County, Chinese Taipei
Source: Ocean Conservation Administration, Ocean Affairs Council (Chinese Taipei)

The Update of APEC's Blue Carbon Actions

During the 19th and 20th OFWG meetings, the conservation of blue carbon ecosystems and the recognition of blue carbon as a valuable component of the blue economy were important topics of discussion. Economy members highlighted the significance of blue carbon and its potential contributions to sustainable development. China, for instance, has taken active steps in addressing blue carbon issues by implementing projects and conducting workshops within the OFWG framework.

Recognizing the importance of blue carbon issues and their relation to regional ecosystems,

Chinese Taipei has proposed self-funded projects in the OFWG to support regional blue carbon actions. One such self-funded APEC project is the "21st APEC Roundtable Meeting on the Involvement of the Business/Private Sector in the Sustainability of the Marine Environment (OFWG 02 2022S)", which emphasizes the significance of blue carbon potential.

With the productive discussions and valuable insights shared during the 21st roundtable meeting, Chinese Taipei has put forward a proposal to the OFWG in 2023. The proposal entails organizing the "22nd APEC Roundtable Meeting on the Involvement of the Business/Private Sector in the Sustainability of the Marine Environment (OFWG 02 2023S)", which will once again serve as a platform for public and private sectors from APEC regions to engage in discussions, exchange insights, and provide updates on the blue carbon economy. The meeting is scheduled to take place in early September 2023.

The Synergy of Public and Private Sectors

According to the 2023 IPBC Dialogue, the realization of the blue carbon potential necessitates concerted efforts from both the public and private sectors. For public sectors, key actions include adopting policies that promote climate and biodiversity strategies, specifically accounting for coastal blue carbon ecosystems in domestic greenhouse gas inventories. It is also essential to draft comprehensive blue carbon policies, regulations, and management plans to provide

a robust framework for conservation and sustainable use of blue carbon ecosystems.

To ensure the effectiveness and fairness of blue carbon markets, it is crucial to foster collaboration between the public and private sectors. This synergy is necessary for the successful implementation of carbon credits and finance mechanisms within the blue carbon economy. As conservation, protection, and restoration efforts for blue carbon ecosystems gain momentum, the OFWG has actively promoted projects that support blue carbon actions. These initiatives align with the global commitment to safeguard and restore coastal blue carbon ecosystems. By encouraging cooperation between public and private stakeholders, the aim is to achieve high-quality and integrity in blue carbon markets, while advancing the overall goal of protecting and restoring these vital ecosystems.

As a key global actor, APEC is playing a crucial role in synergizing the capacity of member economies for blue carbon actions through the OFWG mechanism. By implementing OFWG projects, economies have been able to enhance their cooperation and capacity in the development of blue carbon initiatives. This concerted effort is aimed at maximizing the impact of blue carbon actions, promoting sustainability, and addressing the challenges posed by climate change. Through collaborative initiatives and knowledge-sharing, APEC economies are working toward the common goal of realizing the full potential of blue carbon ecosystems in combating climate change and ensuring a sustainable future.

The 22nd APEC Roundtable Meeting on the Involvement of the Business/Private Sector in the Sustainability of the Marine Environment

6-7 September 2023

The Caesar Park Hotel, Taipei

CHINESE TAIPEI

On behalf of Chinese Taipei, I cordially invite all APEC economies to attend the APEC Roundtable Meeting. The Meeting aims to serve as a platform where stakeholders from public and private sectors can have comprehensive dialogues so as to enhance the sustainability of the marine environment. It will be a great pleasure for us to have your presence in the meeting.

Four major themes which are closely related to the business/NGO/private sectors will be discussed:

- 1. Balance between Offshore Wind Farm Development and Marine Conservation**
- 2. Marine Spatial Planning and Marine Ecosystem Environmental Impact Assessment**
- 3. The Potential and Contribution of Blue Carbon to the Net-Zero Development Goal**
- 4. Improving the Carbon Sequestration Capacity for Marine Ecosystems**

Sincerely,

Invitation

Dr. Hsiang-Wen Huang
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