



**Asia-Pacific  
Economic Cooperation**

**Advancing** Free Trade  
for Asia-Pacific **Prosperity**

# **Workshop Summary Report: Workshop on Capacity Building to Improve Economic Reactivation, Resilience and Sustainability of Aquaculture Within the Context of Recovery of the COVID-19 Pandemic**

Oceans and Fisheries Working Group

April 2023



**Asia-Pacific  
Economic Cooperation**

**WORKSHOP SUMMARY REPORT**

Workshop on Capacity Building to Improve Economic  
Reactivation, Resilience and Sustainability of Aquaculture  
Within the Context of Recovery of the COVID-19 Pandemic

Oceans and Fisheries Working Group

April 2023

APEC Project: OFWG 05 2021

**Produced by**

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## I. EXECUTIVE SUMMARY

The International Workshop on Capacity Building to Improve Economic Reactivation, Resilience and Sustainability of Aquaculture Within the Context of Recovery of the COVID-19 Pandemic was held virtually in two sessions (I and II) in two consecutive days on 16-17 March 2023 and organized by the General Direction of Aquaculture from the Ministry of Production of Peru and the consulting company Equilibrium SDC, based in Lima Peru, for the OFWG of APEC. The complete agenda of the workshop (UMT-5, Lima, Peru time zone) can be seen in Annex 1 and the complete list of attendees for both Session I and Session II can be found in Annex 2 and Annex 3 respectively.

The objective of the event was to build the capacity of government officials responsible for policies in the aquaculture sector of APEC economies, through a two-day virtual workshop, to better understand the challenges and benefits of economic recovery initiatives for the aquaculture sector, with an additional approach to enhance digitalization, sustainability and resilience. The workshop focused on small-scale aquaculture, including recommendations to improve the design and implementation of such initiatives in APEC economies, within the context of recovery from the impact of the COVID-19 pandemic.

The first session (16 March 2023) had 58 participants from eight APEC economies (8/21, 38% of members), including Peru with 40 participants, Indonesia (5), Thailand (4), Mexico (3), Malaysia (2), Chile (2), China (1) and Japan (1). The second session (17 March 2023) had 41 participants from four APEC economies, including Peru with 32 participants, Chile (3), Thailand (1) and Indonesia (1), with two speakers from Uruguay, one speaker from Italy and one speaker from the Netherlands. In both sessions of the workshop there were a total of nine international speakers from a diverse group of economies such as Peru, Malaysia, Japan, Thailand, Netherlands, Uruguay, Chile and Italy/China. The speakers included representatives from intergovernmental organizations (INFOFISH, INFOPESCA and FAO), universities and research institutions (Japan International Research Center for Agricultural Sciences and San Marcos National University, Lima, Peru), non-profit organizations (Aquaculture Stewardship Council), as well as government officials from APEC economies (Department of Fisheries, DOF, Thailand and Undersecretary of Fisheries and Aquaculture, SUBPESCA, Chile). One of the objectives of the workshop was to obtain at least 30% female participants, which was accomplished, since the final composition of attendees was 60% female and 40% male. Furthermore, there were four male speakers (44%) and five female speakers (56%).

The opening and welcome remarks were led by Ms. Monica Patricia Saavedra Chumbe General Director of Aquaculture from the Ministry of Production of Peru and Project Overseer. Next, Mr. Victor Alexander Cueva Quiroz from Equilibrium SDC, leader of the consultancy for the project OFWG APEC 05 2021 presented the main findings of the initial research report, while Mr. David Licheri, director of Equilibrium SDC was responsible for the moderation of the event.

The topics and activities of the workshop were structured in nine lectures as follows:

### Session I: **CURRENT POST-PANDEMIC SCENARIO AND EXPERIENCES WITH DIGITALIZATION IN THE AQUACULTURE SECTOR**

1. Presentation of the research report, Mr. Victor Alexander Cueva Quiroz
2. Recent advances in Asia Pacific aquaculture markets, Ms. Shirlene Maria Anthonysamy
3. Thai government support for the economic recovery of aquaculture after the COVID-19 crisis, Ms. Jitlada Sritrakul
4. Do online communities of practice complement or substitute conventional aquaculture extension services?, PhD. Guenwoo Lee

### Session II: **ECONOMIC RECOVERY AND EMERGING FROM COVID-19 WITH A MORE SUSTAINABLE AND RESILIENT AQUACULTURE**

5. Association of small producers in the agricultural sector, PhD. Jhon Valdiglesias Oviedo
6. Policies for aquaculture growth and long-term sustainability, Ms. Froukje Kruijssen
7. Impact of COVID-19 on trade in fishery and aquaculture products, Ms. Graciela Pereira
8. Chilean response for the economic reactivation of aquaculture in the post-pandemic scenario, Ms. Marisol Álvarez

9. Blue Transformation and aquaculture resilience: lessons learned under COVID-19, PhD. Xinhua Yuan

## **RECOMMENDATIONS DEVELOPED DURING THE WORKSHOP**

Summarizing all presentations in both sessions, a list of policy recommendations was framed. Such recommendations include:

1. Governments must increase the collection of high-quality socioeconomic data related to small-scale aquaculture in their economies, including sex-disaggregated data, since this sector may still be experiencing lagging effects from the pandemic. This is key to analyse the benefits of the reactivation policies in place and to adequate such policies when needed. Recommendation came from the discussion of the researcher report and the presentation of Ms. Froukje Kruijissen.
2. There is a need to strength the governance of the aquaculture sector by developing emergency protocols for unforeseen external shocks. Recommendation came from representatives from Peru.
3. APEC economies must embrace the global new customers' trends from the pandemic related to digital services, local consumptions and open markets, and the demand for processed products and promote seafood consumption accordingly. Recommendation came from representatives from Malaysia.
4. A key measure in the development of aquaculture in economies where the small-scale sector dominates the industry is to build an economy-wide strategy to enhance the association of small-scale farmers. Recommendation came from representatives from Peru.
6. The pandemic served as a new momentum for the digital transformation of aquaculture in terms of e-governance, marketing and advanced monitoring technologies which should be discussed by government officials to adopt more actions in this regard. Recommendation came from representatives from Chile.
7. Promoting diversification of products and processes will be key for the future of aquaculture, however the sustainability aspect of such actions must always be considered for the blue transformation of aquaculture. Recommendation came from representatives from Thailand and from the presentation of Mr. Xinhua Yuan.

## **II. CONTENT OF THE SESSIONS**

### **II.1. CONTENT OF SESSION I**

#### *Presentation of the research report*

Mr. Victor Alexander Cueva Quiroz, leader of the consulting team of Equilibrium SDC

During this presentation the objective of the main project OFWG 05 2021 was presented, which corresponded to identify economic reactivation policies for small scale aquaculture enterprises in the APEC region designed within the context of the COVID-19 pandemic. The findings from the initial research report structured into four sections were presented, the first was related to the current status of the aquaculture sector in the APEC region, the second, about the major disruptions derived from the COVID-19 pandemic in the aquaculture value chain, the third, comprising the policy mapping of actions and measures taken by APEC economies to support aquaculture and finally, the fourth section which corresponded to conclusions and policy recommendations.

#### *Recent advances in Asia Pacific aquaculture markets*

Ms. Shirlene Maria Anthonysamy, Director of INFOFISH

The presentation started with a brief introduction of INFOFISH, an intergovernmental organization providing marketing information and technical advisory services to the fisheries industry in the Asia-Pacific and beyond. Next, the current state of the aquaculture sector in the Asia Pacific region was discussed, including clear signs of recovery from the main impact of the pandemic, which also served as a catalyst for various innovations along the aquaculture production chain with opportunities and challenges for the industry in the Asia Pacific. Based on the analysis of fish production and trade in recent years, the speaker suggested that aquaculture is expected to be the driving force of the upcoming growth of global production and trade of fish products. The

increase on imports of fish commodities in the region due to improved local production was highlighted, as well as the fact that the Asian market absorbs most of the high value seafood traded globally. Moreover, the Asia Pacific aquaculture has seen considerable growth on the consumption of fish products and trade of high value seafood products particularly those certified and with high added value, with salmon and related sub-products being the main commodities in the region. Trends such as the use of online platforms for trade and the increase of the consumption of processed food were the main positive aspects from the COVID-19 pandemic crisis, as well as exacerbated use of social media for marketing and empowering of local urban communities to produce their own food (e.g. urban aquaponics).

### ***Thai government support for the economic recovery of aquaculture after the COVID-19 crisis***

Ms. Jitlada Srirakul, Fisheries Development Policy and Planning, Department of Fisheries, Ministry of Agriculture and Cooperation of Thailand

First, the speaker introduced to the participants some facts about the status of fisheries and production of seafood from both capture and culture in terms of volumes and values at the global level and in Thailand. Thailand has reported noticeable growth of total aquaculture production and of the number of fish farms during recent years, showing that most effects of the pandemic have been overcome. Additionally, economic data from the main freshwater and marine aquaculture commodities produced in Thailand were discussed. The impact of COVID-19 in the Thai aquaculture sector was described briefly, mentioning the extended effects of the declared lockdown on the production, trade and demand for aquaculture products, in addition to the expansion of the online trade of fisheries products. The main strategies for the improvement of the production efficiency were presented, which were: (1) integration of technologies and use of big data for aquaculture, (2) online distribution of products and (3) prioritization of high-quality products with technology related added value, which was considered by the Department of Fisheries from Thailand as the most effective measure.

### ***Do online communities of practice complement or substitute conventional aquaculture extension services?***

Dr. Mr. Guenwoo Lee, Researcher Social Science Division at Japan International Research Center for Agricultural Sciences

The discussion started with the importance of available technical information for small-scale aquaculture farmers as a tool for the improvement of productivity and rural welfare, while also describing the most common problems when using this information incorrectly. In addition, the improvement of the technical knowledge of all individuals involved in the farming process of aquatic species is essential for the prevention of diseases and conventional extension services are a method commonly used to increase such technical skills. The main types of conventional extension services were presented, which are: (1) extension agents and (2) farmer-to-farmer extension. The availability of extension agents is a widespread limitation for the success of the dissemination of such information, as well as the lack of a close relationship among farmers.

Following the introduction of the main topics to understand the research, the speaker discussed the case of online communities of practice (OCoPs) widespread availability of Internet and smartphones and their use as sources of updated technical information by small-scale aquaculture farmers. The OCoPs emerge as non-exclusive, anti-rivalrous digital goods, characteristics that could suggest that they may replace or substitute conventional extension services. The speaker conducted a research on the association between the use of conventional extension services and the use of OCoPs and their benefits, based on Facebook communications from a group of aquaculture farmers (KUVI group) and the analysis of face-to-face and telephone surveys to 1574 fish farmers in Indonesia during 2021. Vast amounts of information were obtained during this process from prices and culture techniques to prevalent diseases and inputs most used. The main findings allowed to conclude that OCoPs have not accessed farmers in Indonesia extensively yet and act as a complement rather than a substitute for conventional extension services.



## CONTENT OF SESSION II

### *Policies for aquaculture growth and long-term sustainability*

Ms. Froukje Kruijssen, Aquaculture Stewardship Council, Netherlands.

Ms. Kruijssen gave insights into policies recommendations for the development of aquaculture with a view on long-term sustainability. Two specific approaches to meet these goals were discussed first the need for high quality disaggregated data across operations for employment, including sex disaggregated data and conducive regulatory environment, which can have several benefits including higher reputation for exporting countries and easier compliance with social standards for companies.

Next, aquaculture improvements projects (AIP), which are considered a new form of multisectoral governance to drive improvements in aquaculture production that are related to environmental productions but also efficiency, were commented in general terms. AIP models are diverse and following the incentive model different incentives can be used to either enable or disable specific desire behaviours not only economic incentives, but also reputational that are related to social/reputational/ connections or moral incentives. Economic incentives can be broken down even further into monetary, market access/competitiveness, risk reduction and efficiency/cost reduction. For small-scale farmers for example, it would be more interesting to participate in AIP to reduce costs, rather than increase profits.

### *Impact of COVID-19 on trade in fishery and aquaculture products*

Ms. Graciela Pereira, Executive Director INFOPESCA.

The speak was about the impact of COVID-19 on the worldwide commerce of fishery products from 2020 to 2023. In 2020, COVID-19 greatly diminished the fishery commerce due to low demand. In 2021, the commerce suffered mostly from insufficiency of containers and high logistics costs. In 2022, the market and demand recovered completely, and the commerce reached new records. The total production of fishery products grew 1.2% in this year, reaching 183.2 million tonnes, while aquaculture grew 2.6%. The following year the total value of fishery products reached USD 193 thousand million and economies such as China, Chile, Ecuador and Noruega will represent most of this increase in value worldwide. Most of the impacts of COVID-19 on fisheries and aquaculture ended in 2021. Nowadays, only input costs remain high. The price of freight has diminished strongly from peaks of USD 9806 in January 2022 to USD 2214 on 27 January 2023, closer to the value on 6 March 2020, USD 1356. For 2023, the fishery commerce is expected to reach over USD 193 thousand million and high inflation rates in the main importers may translate into higher prices.

### *Chilean response for the economic reactivation of aquaculture in the post-pandemic scenario*

Ms. Marisol Álvarez, Head of the Management and Policies Unit, Aquaculture Division, Undersecretary of Fisheries and Aquaculture (SUBPESCA).

The main topics addressed were: (1) general introduction of aquaculture in Chile, (2) consequences of COVID-19 in the sector, (3) challenges during the pandemic, (3) sectoral actions, (4) mitigation measures, (5) economic reactivation measures and (6) conclusions. The main challenges during the initial stage of the pandemic were protecting the health of people with a priority sense, safeguarding the production chain, maintaining the distribution of food, assuring the exportation process, giving continuity to the surveillance and verification programs, moving forward with regulations and management actions scheduled and maintaining the development of research programs that allows the monitoring of the activity. The sectoral actions of the government included: reinforcement of measures to protect people's health, updating of contingency plans against unwanted events, implementation of online procedures, COVID effects studies, private public work instances, telecommuting, adaptation of control and surveillance measures, adaptation of certificate measures and suspension of deadlines, extension of validity and other measures.

In addition, several transversal (not fisheries and aquaculture exclusive) mitigation measures were established seeking to avoid stockpiling, employment protection law, employment subsidy, guarantee fund for small and medium sized enterprises, emergency postnatal, SMEs bonus and work step by step. Regarding the measures of economic reactivation there were employment subsidy, sustainable work and investment plan, support to SMEs (measures of direct support, development, re-entrepreneur feasibilities, workshops and follow-up, tax measures and improvement and acceleration of paperwork. Moreover, facilitation of the system “Chile Compra” and postponing mortgage loans.

### ***Blue Transformation and aquaculture resilience: lessons learned under COVID-19***

PhD. Xinhua Yuan, Deputy Director of the Fisheries and Aquaculture Division, FAO.

The presentation started with an introduction to the global food system transformation, a program from the United Nations, including the FAO strategy framework 2022-2031: “Better production, better nutrition, better environment, better life, leave no one behind”. This transformation seeking a more sustainable aquaculture worldwide starts with the “Blue transformation roadmap” with different objectives for aquaculture, fisheries and the value chain and specific targets for each industry. Next, a review of challenges of sustainable development and pandemic were discussed: lack of concrete and actionable policy and governance, call for inclusive social security program for aquafarmers, business model innovation, efficient and quality input: seed, feed, chemicals, mechanization and facilities, climate change mitigation and adaptation and consumption driven vs production driven.

Finally, a summary of recommendations for governments to meet the blue transformation goal in relation to the pandemic crisis were presented including strengthening the disaster early-warning system and local capability of risk mitigation as well as supporting the development of modern trade/marketing methods for aquaculture products and needed infrastructure and others. Some suggested innovations were also highlighted such as better planning and zones to optimizing resource use, improving aquaculture engineering and the use of energy, diversify source of aquafeed ingredients, improved nutrition and feeding, application of biotechnology including nanotechnology, bioremediation and probiotics in effluents and pathogens management, promote use of digital and information and communication technology and adoption of aquatic biosecurity.

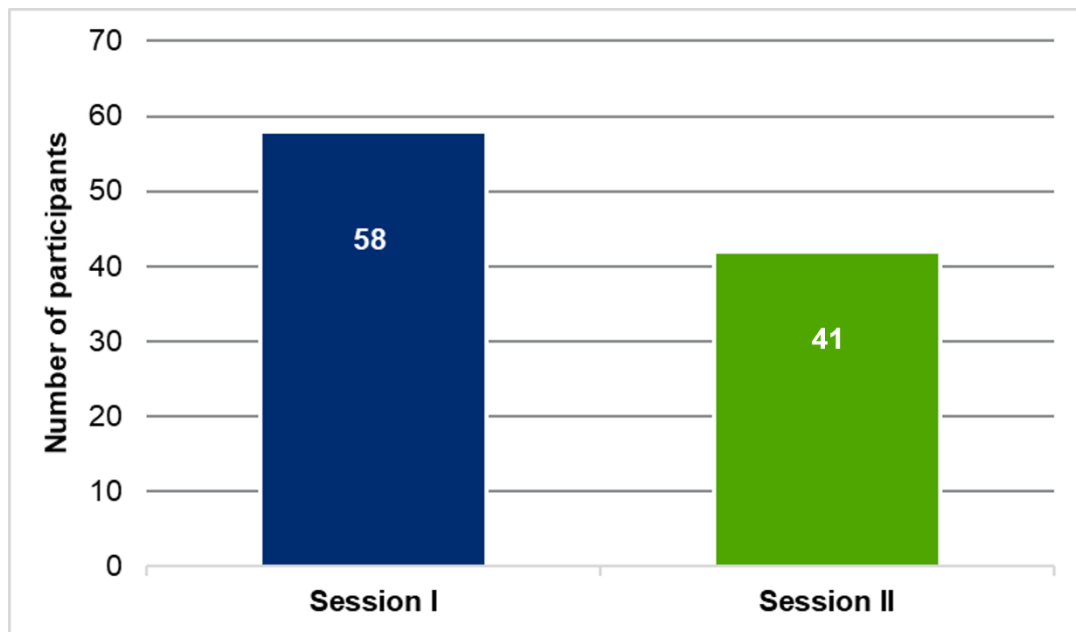
## **III. INDICATORS OF THE WORKSHOP**

Data from the surveys applied at the end of each session were used to evaluate the performance of the workshop with different indicators.

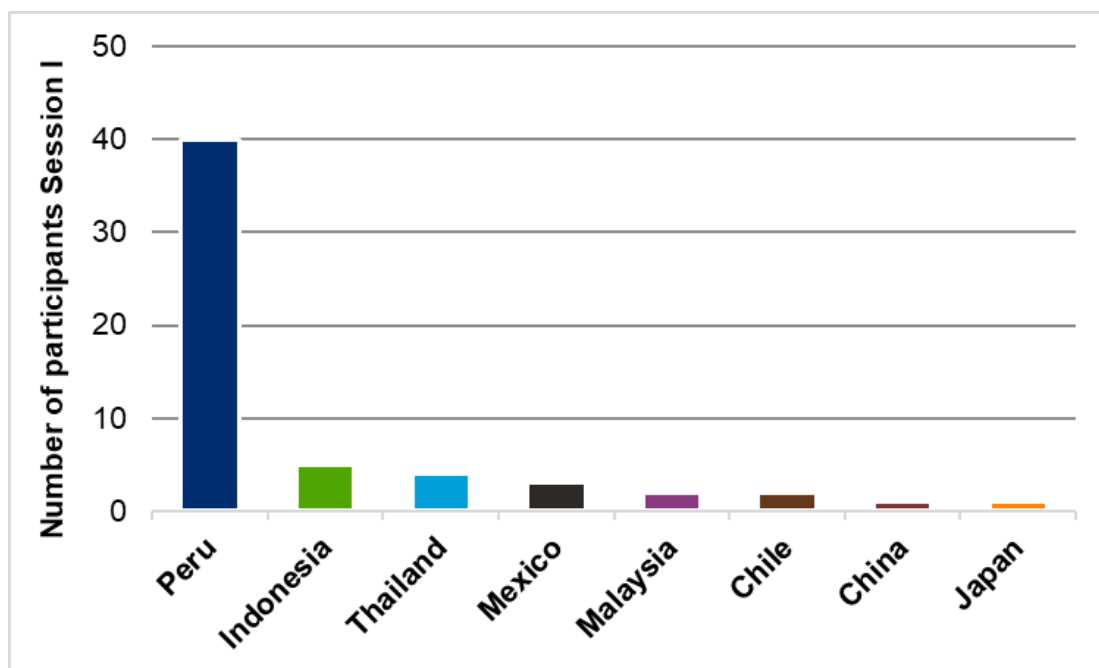
### **III.1. Number of participants and APEC economies representatives present in the workshop.**

There were 58 participants for the first session of the event and 41 for the second session. The first session not only had the maximum number of participants but also the greater number of representatives from different APEC economies with eight (Chile; China; Indonesia; Japan; Malaysia; Mexico; Peru and Thailand), while the second session had representatives from four APEC economies (Chile; Indonesia; Peru and Thailand). Since the first session started on 16 March 2023 from 19:00-21:10 (24 h format, UMT-5 time zone, Lima, Peru), this time allow more participants from the Asia zone to connect. Meanwhile, the second session was developed on 17 March 2023 from 8:00-10:40, a time that was more suitable for participants in the Americas.

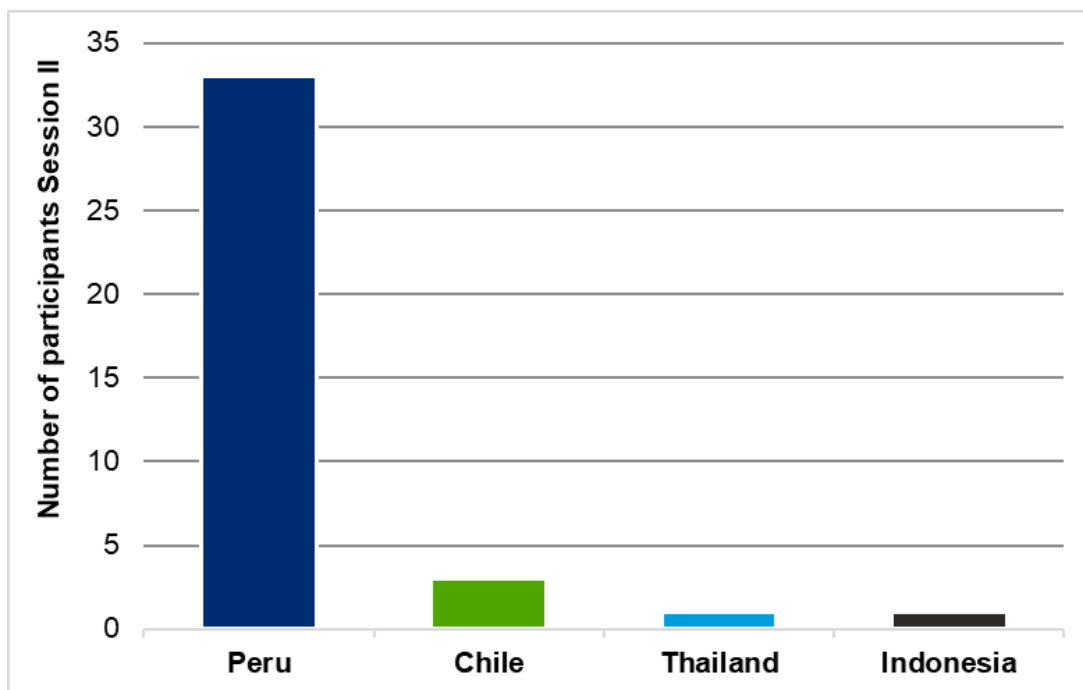




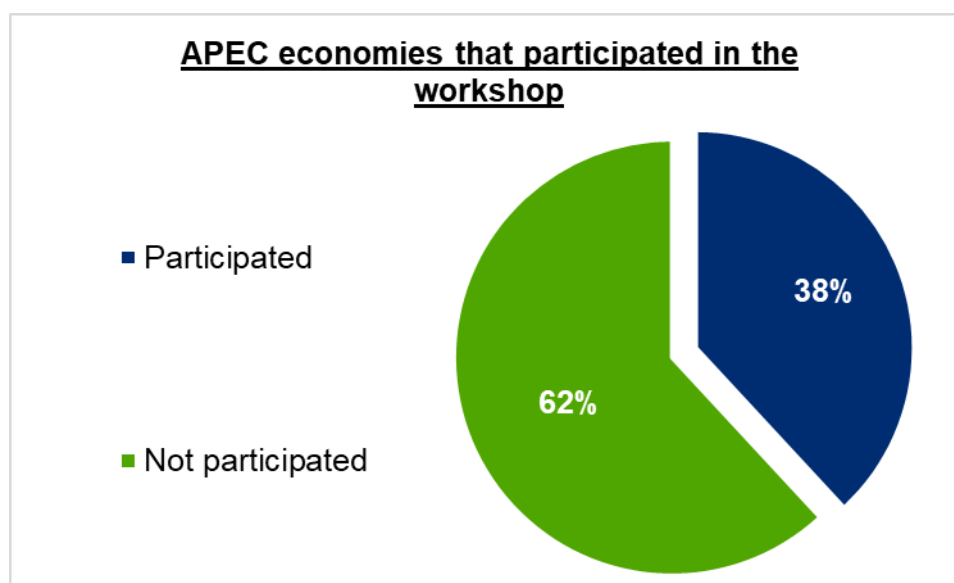
For the first session Peru had 40 participants, Indonesia (5), Thailand (4), Mexico (3), Malaysia (2), Chile (2), China (1) and Japan (1).



For the second session Peru had 32 participants, Chile (3), Thailand (1) and Indonesia (1), there were additional participants (speakers) from Uruguay, Italy and the Netherlands.

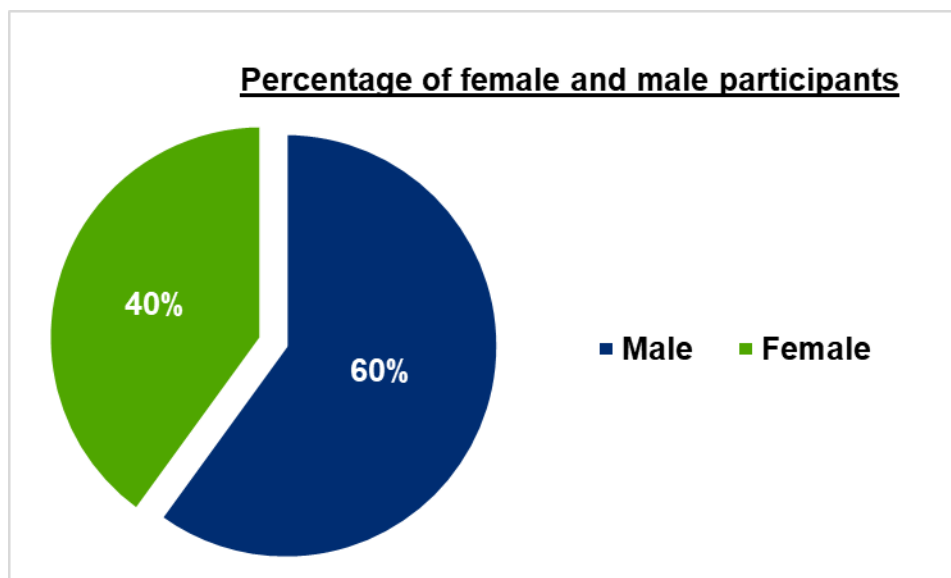


The total 21 APEC economies were invited to the Workshop by official contact from the OFWG to its delegates and official invitations from the Ministry of Foreign Affairs of Peru. From them, eight economies (8/21, 38%) attended to the event with at least one member during either of the two sessions, which were: Chile; China; Indonesia; Japan; Malaysia; Mexico; Peru and Thailand.



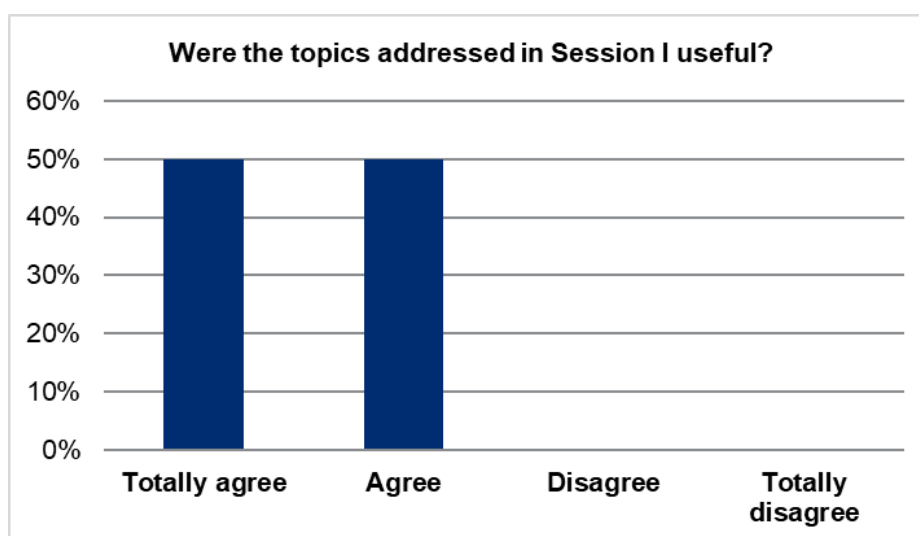
### III.2. Indicators of gender

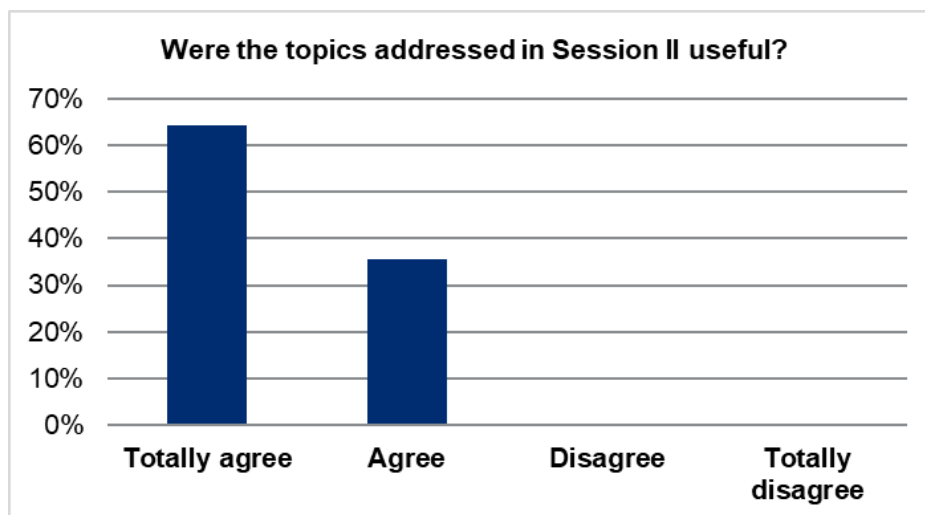
Overall, on both sessions, the percentage of male participants was 60%, while 40% of the audience was female. Regarding the speakers, there were four male speakers (44%) and five female speakers (56%). In both sessions of the workshop there were a total of nine international speakers from a diverse group of economies such as Chile; Italy/China; Japan; Malaysia; Netherlands; Peru; Thailand and Uruguay.



### **III.3. Indicators of relevance of the information**

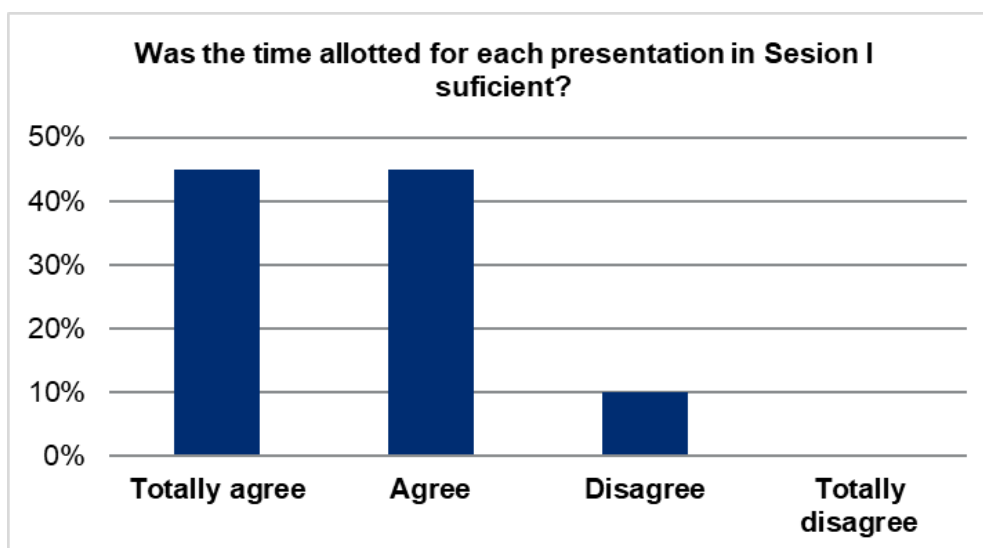
When participants were consulted about the usefulness of the topics addressed in Session I, all participants responded positively (50% totally agree and 50% agree). Similar feedback was obtained from Session II with 64% respondents that answered totally agree and 32% that agree.

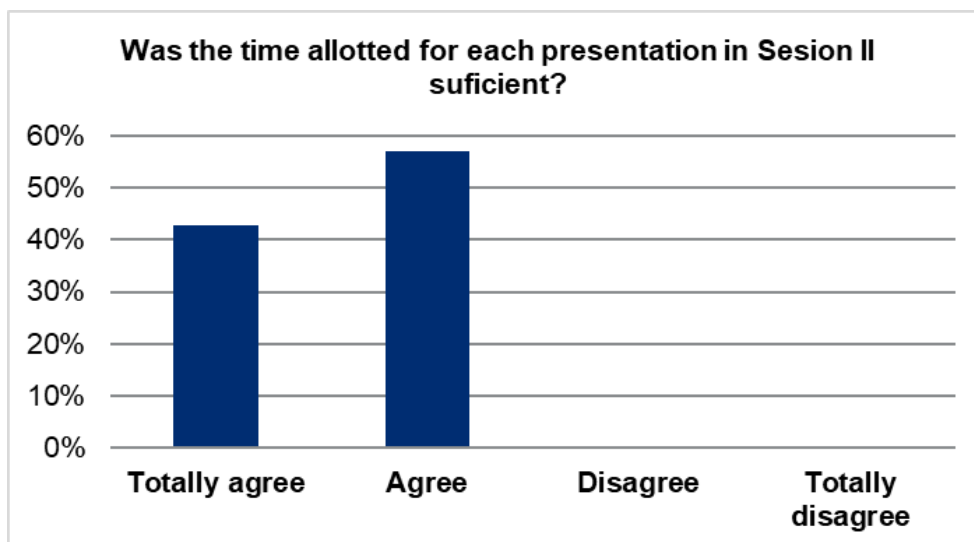




#### **III.4. Fitness of time allotted for each presentation**

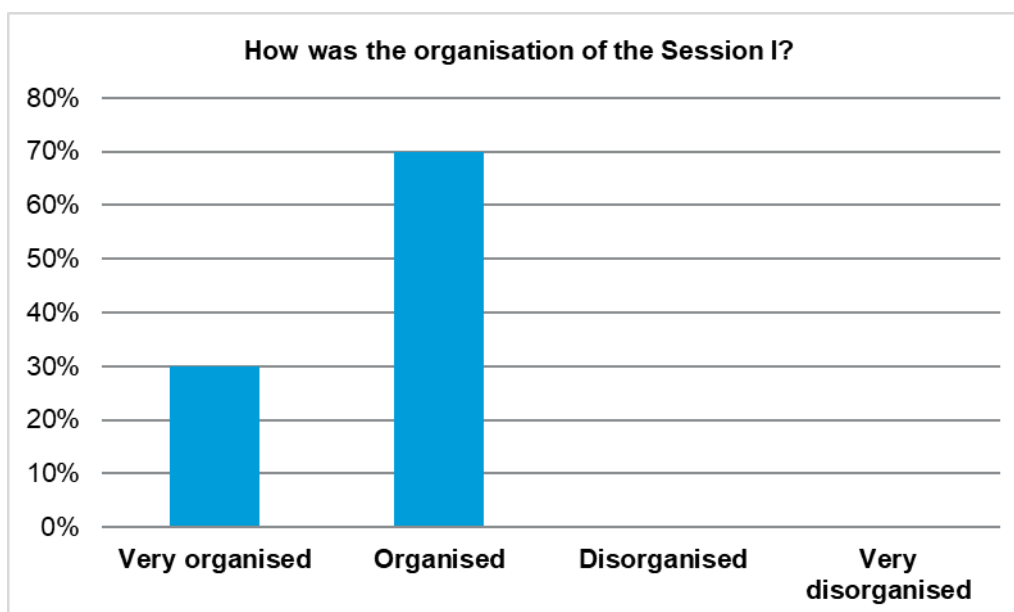
Attendees were consulted about the time allotted for each presentation, regarding if it was sufficient to cover each discussion properly. For Session I, 90% responded positively (45% totally agree and 45% agree) while only 10% disagree with this remark. For Session II 43% totally agree, 57% agree and there were no negative responses.

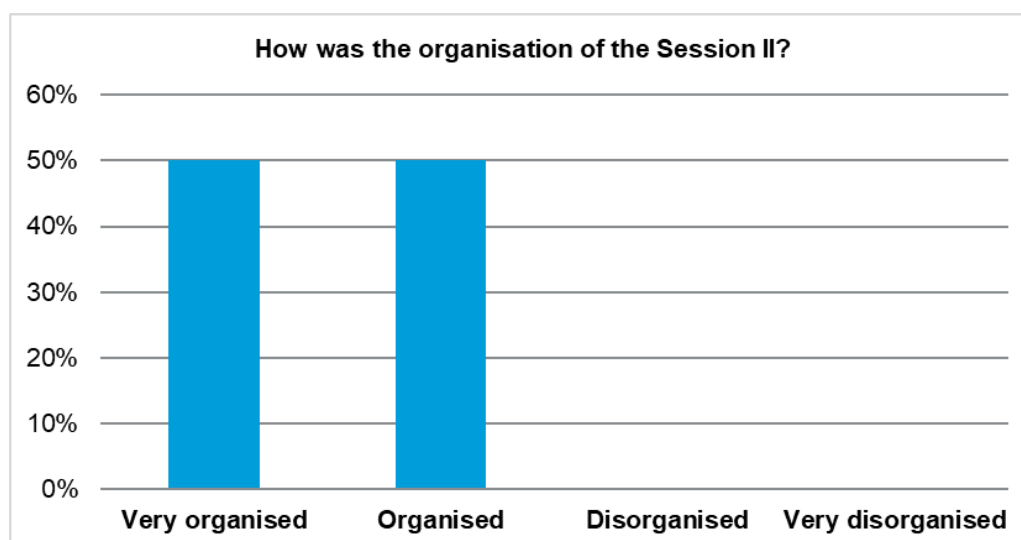




### III.4. Organisation of the workshop

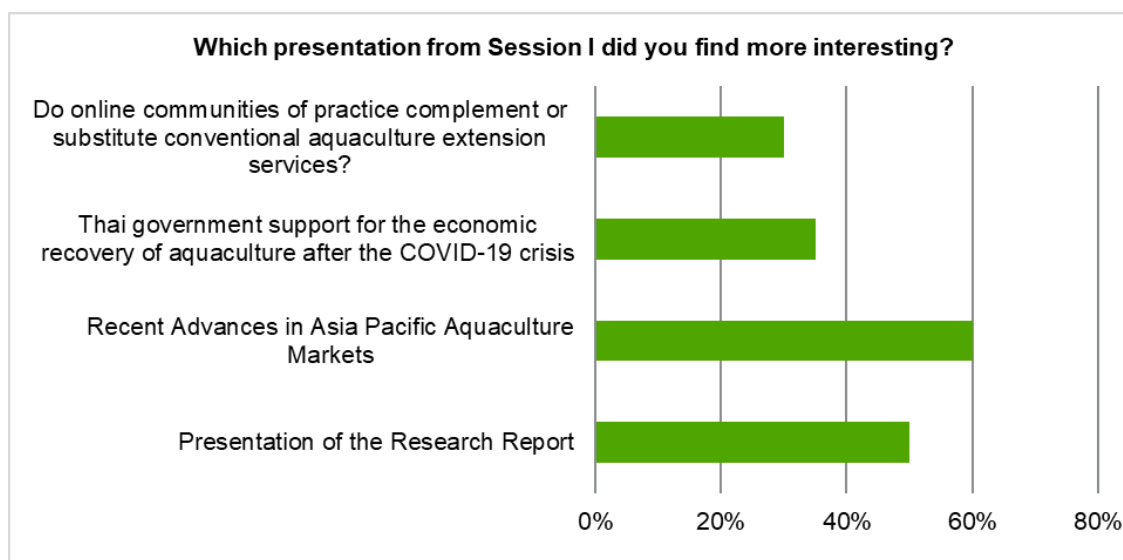
For Session I, the general appreciation of the organisation of the workshop was that 30% of the participants considered that it was very organised and 70% organised, while for Session II 50% responded that it was very organised and 50% organised. No participant declared that it was either disorganised or very disorganised for neither of the sessions.





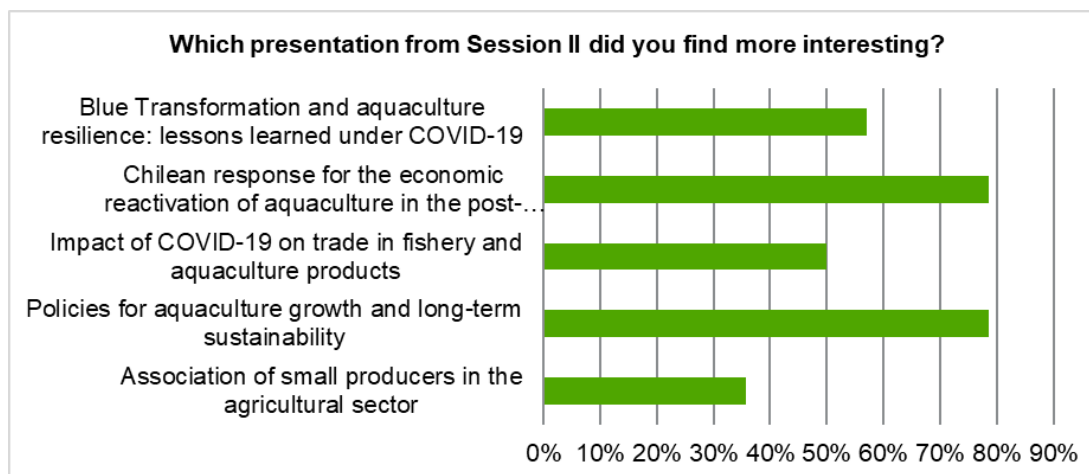
### III.5. Most interesting discussion

Participants were inquired about which of the discussions presented during both sessions of the workshop were more interesting to them. For Session I, most participants marked the discussion “Recent Advances in Asia-Pacific Aquaculture Markets” from Ms. Shirlene Maria Anthonysamy as the most interesting (60%), followed by the “Presentation of the Research Report” (50%), “Thai Government to Support the Economic Recovery of Aquaculture After the COVID-19 Crisis” (35%) from Ms. Jitlada Sritrakul and finally “Do Online Communities of Practice Complement or Substitute Conventional Aquaculture Extension Services?” (30%) from PhD. Guenwoo Lee.



For Session II, most participants indicated that the discussion concerning “Policies for aquaculture growth and long-term sustainability” from Ms. Froukje Kruijssen was the most interesting (79%) along with the presentation “Chilean response for the economic reactivation of aquaculture in the post-pandemic scenario” from Ms. Marisol Álvarez (79%). Next, the speak “Blue Transformation and aquaculture resilience: lessons learned under COVID-19” from PhD. Xinhua Yuan (57%), followed by the discussion “Impact of COVID-19 on trade in fishery and aquaculture products” (50%) from Ms. Graciela Pereira and finally “Association of small producers in the agricultural sector” from PhD. Jhon Valdíglesias Oviedo (36%).





### III.6. Additional topics of interest

Finally, the attendees were consulted regarding the main topics that should have been addressed in greater depth and mentioned several ideas from which those more related to the objective of the workshop are presented next:

1. Analysis of the effectiveness of recovery measures.
2. How do economies prepare for future pandemics or catastrophic events.
3. Presentations on small business that thrived during COVID-19 crisis.
4. Economic monitoring and market projections for the APEC region.
5. IoT and other technologies applied in aquaculture.
6. Informality in aquaculture during the pandemic.
7. Blue transformation.
8. Analysis of the association of small-scale fisheries with aquaculture, a vision for the future.
9. Development of commercial aquaculture species affected by the COVID 19 pandemic.

## IV. CONCLUSIONS AND RECOMMENDATIONS

The event allowed discussions between speakers and attendees with several recommendations developed. Recommendations can be classified into two categories. First, effective measures established by APEC economies to counter the impact of future crises similar to the COVID-19 which included: avoid stockpiling of aquaculture products, employment protection laws, employment subsidies, improvement of e-governance, guarantee fund for small and medium sized enterprises in the aquaculture sector, integration of technologies and use of big data for aquaculture, online distribution of products and prioritization of high-quality products with technology related added value. The second group of recommendations were general recommendations for the long-term sustainable development of aquaculture and included better planning and zoning for aquaculture productions to optimize resource use, improving aquaculture engineering and the use of energy, diversify source of aquafeed ingredients, improved nutrition and feeding, application of biotechnology including nanotechnology, bioremediation and probiotics in effluents and pathogens management, promote the use of digital information and communication technology. Moreover, the need for high quality disaggregated data across operations for employment in the sector, including sex disaggregated data and conducive regulatory environment, that allow easier compliance with social standards for companies. Finally, the necessity to implement adequate aquaculture improvements projects (AIP) that can include in their design several of the proposed actions into one or few plans.

## V. ANNEX

### Annex 1: Agenda of the workshop (UMT-5)

Duration	Activity
<b>Day 1: Thursday March 16<sup>th</sup> 2023</b>	
<b>SESSION I – CURRENT POST-PANDEMIC SCENARIO AND EXPERIENCES WITH DIGITALIZATION IN THE AQUACULTURE SECTOR</b>	
24h format, Time-zone (UMT-5, Lima-Peru)	
19:00-19:05	Introduction by moderator
19:05-19:10	<b>Opening remarks</b> by the General Director of Aquaculture from the Ministry of Production of Peru
19:10-19:40	<b>Presentation of the Research Report</b> <i>Speaker:</i> Mr. Victor Alexander Cueva Quiroz, Leader of the consulting team for Equilibrium SDC
19:40-19:50	Opinion of participants and discussion of the proposed recommendations
19:50-20:05	<b>Recent advances in Asia Pacific aquaculture markets</b> <i>Speaker:</i> Ms. Shirlene Maria Anthonysamy, INFOFISH Director
20:05-20:10	Q&A from participants
20:10-20:25	<b>Thai government support for the economic recovery of aquaculture after the COVID-19 crisis</b> <i>Speaker:</i> Ms. Jitlada Sritrakul, Fisheries Development Policy and Planning, Department of Fisheries, Thailand
20:25-20:30	Q&A from participants
20:30-20:45	<b>Do online communities of practice complement or substitute conventional aquaculture extension services?</b> <i>Speaker:</i> PhD. Mr. Guenwoo Lee, Researcher Social Science Division Japan International Research Center for Agricultural Sciences (JIRCAS)
20:45-20:50	Q&A from participants
20:50-21:05	Discussion of recommendations for economic reactivation of aquaculture: Opinion of participants and speakers (guided by moderator)
21:05-21:10	Application of event survey and closing remarks by moderator
<b>Day 2: Friday March 17<sup>th</sup> 2023</b>	
<b>SESSION II – ECONOMIC RECOVERY AND EMERGING FROM COVID-19 WITH A MORE SUSTAINABLE AND RESILIENT AQUACULTURE</b>	
24h format, Time-zone (UMT-5, Lima-Peru)	
8:00-8:30	<b>Association of small producers in the agricultural sector</b> <i>Speaker:</i> PhD. Mr. Jhon Valdiglesias Oviedo, Principal Professor of Economics at San Marcos National University, Lima, Peru
8:30-9:00	<b>Policies for aquaculture growth and long-term sustainability</b> <i>Speaker:</i> Ms. Froukje Kruijsen, Aquaculture Stewardship Council, Netherlands
9:00-9:15	<b>Impact of COVID-19 on trade in fishery and aquaculture products</b>

	<i>Speaker:</i> Ms. Graciela Pereira, Executive Director INFOPESCA
9:15-9:20	Q&A from participants
9:20-9:35	<b>Chilean response for the economic reactivation of aquaculture in the post-pandemic scenario</b> <i>Speaker:</i> Ms. Marisol Álvarez, Head of the Management and Policies Unit, Aquaculture Division, Undersecretary of Fisheries and Aquaculture (SUBPESCA)
9:35-9:40	Q&A from participants
9:40-9:55	<b>Blue Transformation and aquaculture resilience: lessons learned under COVID-19</b> <i>Speaker:</i> PhD. Mr. Xinhua Yuan, Deputy Director of the Fisheries and Aquaculture Division, FAO
9:55-10:00	Q&A from participants
10:00-10:15	Discussion of recommendations for economic reactivation of aquaculture: Opinion of participants and speakers (guided by moderator)
10:15-10:20	Application of event survey and closing remarks by moderator
10:20-10:40	Closing remarks by the General Director of Aquaculture from the Ministry of Production of Peru

## Annex 2. List of participants of the Workshop – Session I (16 March 2023)

Nº	Name	Economy	Organization	Function	Email
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