



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development



ECOP
Early Career
Ocean Professionals

2022-2023 ECOP Asia Report



Survey, National Nodes & Regional Landscape of the UN Ocean Decade Actions

Released on 8 June 2023

Thanks go to all our partners for all their support in 2022-2023, especially our funding partners:



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2022-2023 ECOP Asia Report

Survey, National Nodes & Regional Landscape
of UN Ocean Decade Actions

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List of Acronyms

CFDA	Call for Decade Actions
DCC	Decade Collaborative Centre
DCO	Decade Coordination Office
DCU	Decade Coordination Unit
DIP	Decade Implementing Partner
ECOP	Early Career Ocean Professional
IOC	Intergovernmental Oceanographic Commission
NDC	National Decade Committee
UNESCO	United Nations Educational, Scientific and Cultural Organization
WESTPAC	IOC Sub-Commission for the Western Pacific

Introduction

The regional node of the ECOP Programme in Asia (hereinafter referred to as “ECOP Asia”) was informally established in June 2021, during the Virtual Early Career Ocean Professionals Day ([V.ECOP Day](#)). At the time, ECOP Asia was composed of a dozen volunteer members from countries across East, South and Southeast Asia, including Bangladesh, China, India, Indonesia, Japan, Malaysia, Philippines and the Republic of Korea. The core team met on a monthly basis with the aim of connecting interdisciplinary groups of ECOPs across the continent, and sharing knowledge and experience about the recently launched United Nations Decade of Ocean Science for Sustainable Development (2021-2030) (hereinafter referred to as the “UN Ocean Decade”).

Members of the informal 2021 ECOP Asia group were particularly active and motivated to spread the word about ECOPs and the UN Ocean Decade. Among other contributions, they circulated the [first pan-Asia ECOP survey](#) in early Spring 2021 (with region- and country-specific results available in this [report](#)¹), celebrated “World Oceans Day” on 8 June 2021 by sharing inspiring testimonials from ECOPs across India ([video](#)), made short awareness-raising interventions during online webinars and workshops, and moderated a Decade Action Incubator Session dedicated to ECOPs during the [UN Decade Regional Kickoff Conference for the Western Pacific and its Adjacent Areas](#), a two-day conference co-sponsored by the [Intergovernmental Oceanographic Commission of UNESCO](#) (IOC-UNESCO) and its [sub-commission for the Western Pacific](#) (WESTPAC). The latter session provided perspectives on science communication, inviting speakers from different career stages and ocean sectors² (video recording is available [here](#)).

¹ This intermediary report was prepared by the regional coordinator for ECOP Asia. It was finalized in mid-April 2022 and made publicly accessible online on the ECOP Programme website in August 2022. Other internal reports can also be found at this link: <https://www.ecopdecade.org/ecop-highlights/ecop-publications/ecop-reports/>

² A summary report of the event can be found on the ECOP Programme website at the following link: https://www.ecopdecade.org/wp-content/uploads/2021/12/Summary-report-Incubator-17_2.pdf

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On November 2021, the IOC-UNESCO launched a call for individual consultants to support a variety of tasks related to the development of the regional dimensions of the ECOP Programme, seeking coordinators in Africa, Asia, Oceania and the Caribbean Small Island Developing States (SIDS)³. A regional consultant was subsequently hired for Asia in mid-December 2021 and has remained in this position since then. The hiring process coincided with the official launch of the [ECOP Programme website](#), including dedicated web pages for the first three regional and national ECOP nodes: [Africa](#), [Asia](#) and [Canada](#)⁴. By November 2022, a [national node in Japan](#) and [regional hub in Central America](#) were also established, followed closely by a new regional chapter in the [Caribbean](#). Throughout the first half of 2023, another nine additional national nodes have emerged from all over the world, including in [Brazil](#), [Italy](#), [Morocco](#), [Niger](#), [Nigeria](#), the [Republic of Korea](#), [Senegal](#), [Togo](#) and the [United States](#). Several other ECOP chapters are waiting in the pipeline, currently building their own core teams, drafting concept notes, and engaging with their respective communities (e.g., Australia/New Zealand, Belgium, China, Europe, India, Liberia, Malaysia, Mexico, Mozambique, Spain and the United Kingdom).

Extending from the Middle East all the way to Indonesia in Southeast Asia, and including the Russian Federation⁵, the ECOP Asia community grew significantly throughout 2022 and in the early months of 2023 (see section I). **Figure 1** below provides a non-exhaustive list of [2022 activities and highlights](#) that contributed to the development and expansion of ECOP Asia since the appointment of the regional consultant/coordinator. **Table 1** lists more recent updates and achievements since November 2022, including ongoing work in 2023.

³ Out of the four regional consultants that the ECOP Programme initially targeted, only two were ultimately selected, focusing on Africa and Asia. No candidates from Oceania and the Caribbean SIDS were hired at this stage.

⁴ The ECOP coordinator for Canada was appointed through a different channel than the other 2 regional consultants. They receive funding directly from Canadian partner organizations rather than through the IOC-UNESCO.

⁵ Because the Russian Federation straddles both Asia and Europe, including Russian nationals as ECOP Asia members might not be fully representative of their regional identity, especially ECOPs residing, studying, and working in the populous western part of the country. While waiting for the establishment of a regional node in Europe, registered ECOP members from Russia (regardless of their location) will be included in the ECOP Asia hub.



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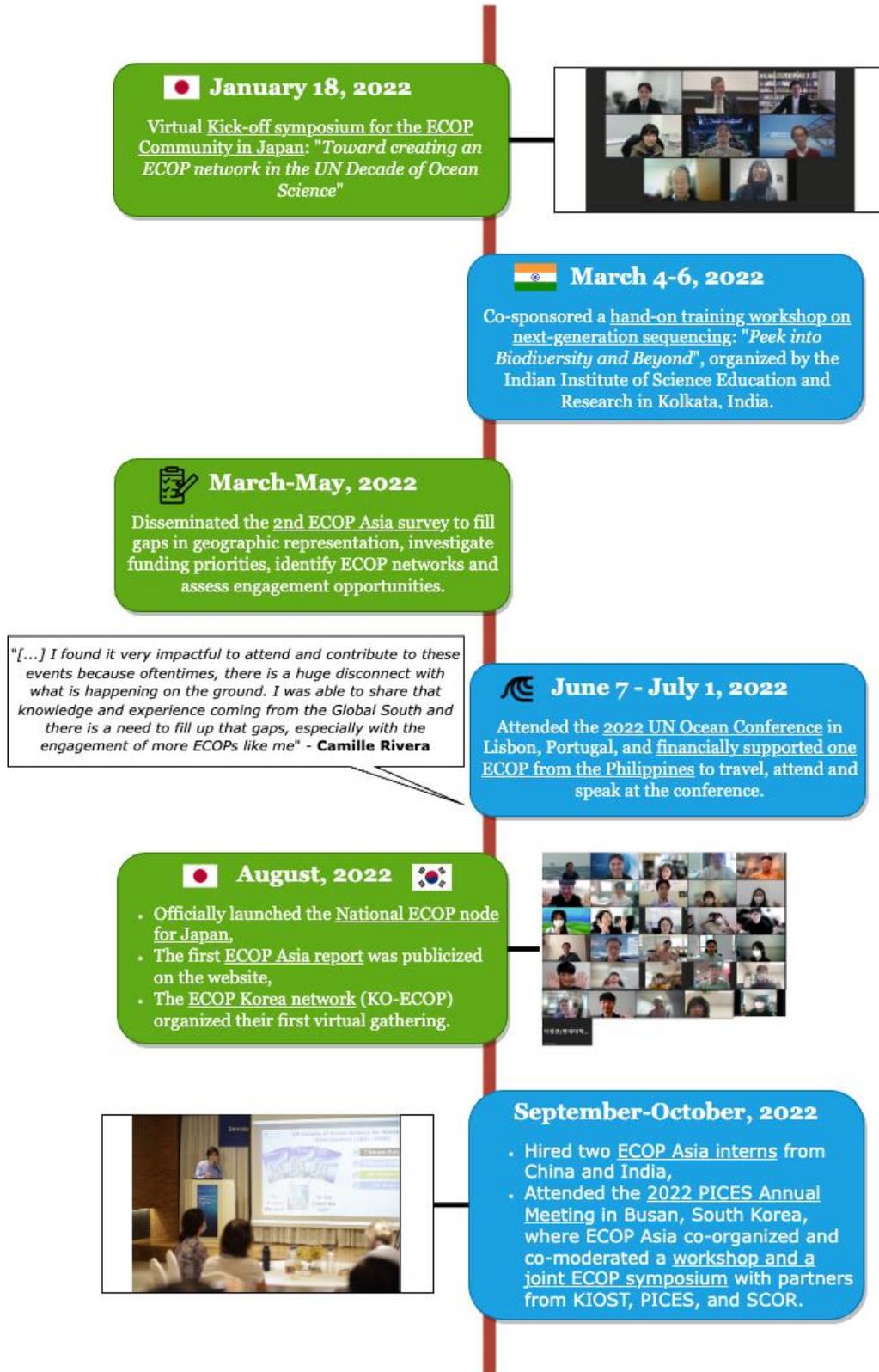


Figure 1. A non-exhaustive timeline of highlights from ECOP Asia in 2022 (January-October).

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Table 1. A non-exhaustive list of achievements and activities from the ECOP Asia node since November 2022

★ Two ECOP Asia Champions from the Philippines and Singapore were interviewed as part of the “ ECOP Conversation ” series	
★ ECOP Japan launched its own series of “ ECOP Japan video letters ”, interviewing ECOPs from a variety of ocean sectors and walks of life (as of June 2023, 6 videos have been released)	
★ A WeChat group was established by our ECOP Asia intern in China, with the aim of enhancing engagement with Chinese ECOPs (> 200 members as of June 2023)	
★ Both ECOP Asia interns designed and circulated national surveys to better understand the needs and priorities of ECOPs in China and India. The surveys were both closed in early 2023 and results will be publicized through short and concise national reports (in all relevant languages)	
★ Together with the Sustainable Ocean Alliance (SOA) , the ECOP Programme co-organized and co-moderated the first episode of their 2023 joint regional webinar series, which was titled: “ <i>Young leaders reimagine a clean ocean without plastic pollution in Asia</i> ”. Recording link	

I. ECOP Asia Membership Distribution

Taking stock of the ECOP landscape in Asia has been a key action item for ECOP Asia during this past year. The regional registry has increased substantially since it was first created in early 2022, and will continue to be diligently curated by the ECOP Asia team. A special registration form is now available on the [ECOP Asia webpage](#) for anyone interested to join, engage and/or contribute in their own capacity. Contact details are treated with the utmost confidentiality.

When compared to April 2022, when the membership database totaled 228 ECOPs⁶, the present version (as of June 5th, 2023) has grown by around 150%, including no less than 566 members (**Table 2**), spanning 25 different countries and covering most subregions (**Figure 2**). As a result, almost 1 out of 3 ECOPs (~28.5%)⁷ affiliated with the ECOP Programme is now based in and/or from Asia.

East Asian countries, namely China, Japan and the Republic of Korea, remain the most active and well-represented nations in the region, occupying the 1st, 4th and 3rd top spots in terms of membership, with 120, 54 and 101 ECOPs, respectively (**Table 2**). The significant increases recorded in China and the Republic of Korea (532% and 359% when compared to April 2022, respectively) were driven by further engagement and coordination with their national ECOP

⁶ For more details, please refer to our intermediary report for ECOP Asia: <https://www.ecopdecade.org/wp-content/uploads/2022/08/ECOP-Asia-Intermediary-Report-public-version2.pdf>

⁷ This statistic was derived from the latest update on global membership within the ECOP Programme, which stood at 1,992 ECOPs as of June 5th, 2022.

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communities. This process was greatly facilitated by the efforts of our ECOP Asia intern based in China, and our ECOP focal points from the Republic of Korea's National Decade Committee⁸.

In **Southeast Asia**, while most countries have at least 1 ECOP registered, around 80% of members are concentrated in Indonesia (n=28), Malaysia (n=31) and the Philippines (n=22). Out of these three countries, membership figures have experienced the greatest growth in Malaysia (+140%) when compared to the previous year. Most other Southeast Asian nations highlighted in **Figure 2** and **Table 2** (i.e., Cambodia, East Timor, Myanmar, Singapore and Vietnam) have no more than 3 officially registered ECOPs each, except for Thailand (n=11). As a result, increasing outreach efforts and networking activities in Southeast Asia will constitute a priority for ECOP Asia in 2023. Future internship opportunities for postgraduate students in the subregion will also be offered by the ECOP Programme, building on the success of its 2022 trial.

ECOP membership from **South Asia** is unsurprisingly dominated by India, which totals 118 ECOP members (or 21% of all ECOPs registered in Asia, the 2nd largest percentage). The number of ECOPs from India grew significantly when compared to April 2022 (247% increase), which can be credited, in part, to the outreach efforts of the ECOP Asia intern in India. Bangladesh (n=15) and Sri Lanka (n=9) are also important reservoirs of young ocean talents and early-career champions, without forgetting Nepal (n=1), the Maldives (n=2), and Pakistan (n=5), whose ECOP communities have yet to be engaged in the UN Ocean Decade.

Central and West Asia remain relatively under-represented, with Kuwait (n=1), Lebanon (n=4), Saudi Arabia (n=4), Turkey (n=7), and Yemen (n=1) being the only countries with registered ECOPs so far. ECOPs from unrepresented nations bordering the Caspian Sea, Persian Gulf and Indian Ocean have yet to be integrated within the ECOP Programme. Further engagement and outreach efforts need to be spent connecting and building bridges with individual ECOPs and their networks in these subregions. The Islamic Republic of Iran is one example of an active Ocean Decade player that ECOP Asia ought to start communicating with.

⁸ National Decade Committees (NDCs) are multi-agency and multi-stakeholder platforms facilitating national coordination of UN Ocean Decade activities. They are an integral part of the Ocean Decade's governance and coordination structure. More information on the current NDC ecosystem can be found in **Section III** of this report and at the following link: <https://www.oceandecade.org/national-ocean-decade-ecosystem/>

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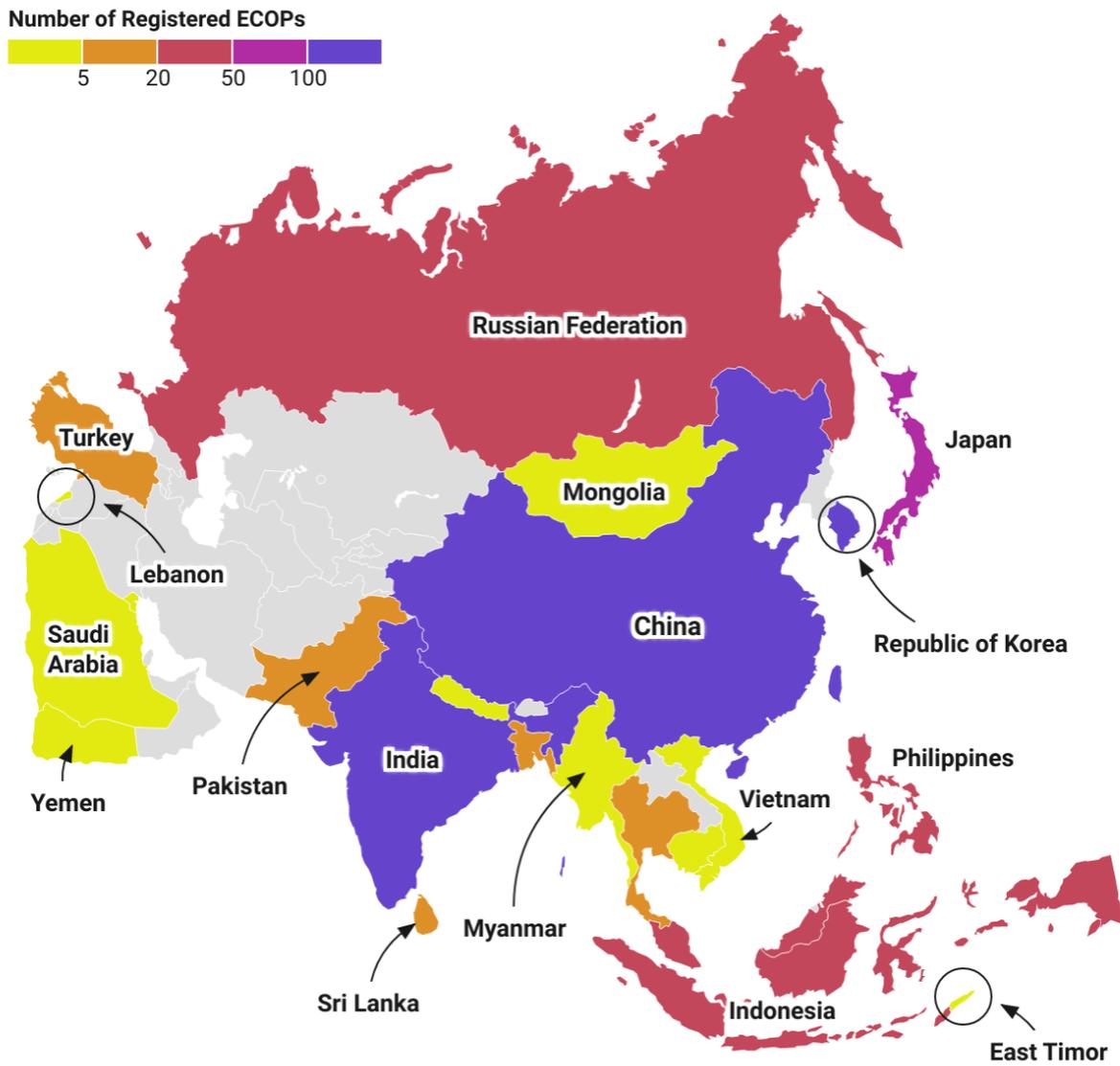


Figure 2. Geographic distribution of registered ECOPs per country in Asia, as of June 2023. This choropleth map was created with [Datawrapper](https://dataviz.com/).



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Table 2. Detailed breakdown of ECOP members per country in Asia (N=566), as of June 2023.			
Country	ECOP members	Country	ECOP members
Bangladesh	15	Myanmar	1
Cambodia	2	Nepal	1
China	120	Pakistan	5
Mainland	106	Philippines	22
Hong Kong S.A.R.	11		
Macao S.A.R.	1		
Taiwan (ROC)	2		
East Timor	1	Republic of Korea	101
India	118	Russian Federation	22
Indonesia	28	Saudi Arabia	4
Japan	54	Singapore	2
Kuwait	1	Sri Lanka	9
Lebanon	4	Thailand	11
Malaysia	31	Turkey	7
Maldives	2	Vietnam	3
Mongolia	1	Yemen	1



II. ECOP Asia Survey (2022)

II.1 Methodology

The 2nd pan-Asia ECOP survey was first disseminated on March 22nd, 2022, and remained open until May 31st, 2022. It was distributed through Google Form and made available in English only (**Appendix 1**). The survey questionnaire had two separate pages:

(1) The first page contained 7 short questions aimed at gathering socio-demographic details about the regional survey audience (e.g., gender, nationality, country of residence, area(s) of expertise and sector(s)), while gaining a better understanding of what the term “ECOP” means to respondents, how many of them self-identify as such, and who is currently a member of ocean-related and/or early-career networks and initiatives (including UN Decade Actions). The latter question was intended at inventorying and identifying networks, groups, projects and initiatives that ECOPs in Asia are involved in. A final question was investigating how many ECOPs not currently involved in any such networks and initiatives would be willing to join and contribute.

(2) The second page was composed of an additional 7 questions, following up on key results gathered in the [2021 survey](#), and thus drilling down further into funding priorities, outreach and networking activities, and engagement in the UN Ocean Decade. Because the second part of this survey was aimed at leveraging opportunities for ECOPs in Asia, it also looked into the kind of communication skills that ECOPs would like to learn and practice further. In addition, ranked preferences of ocean topics/issues⁹ that ECOPs are most interested to gain knowledge on will help inform future trainings, webinars, and workshops in Asia. Finally, the questionnaire also invited reflections on what a successful UN Ocean Decade would look like in 2030.

Multiple choice questions and open-ended answers were integral to the 2022 ECOP Asia survey. The cleaning, processing and analysis of survey data was performed in R (version 4.0.4), a free statistical software that can be downloaded [here](#). Data visualizations were created in both R and [Datawrapper](#). In order to examine intra-regional nuances, the analysis was also performed at the subregional level, with a particular focus on East (n=55), South (n=31), and Southeast Asia (n=46) (see **Table 3** for a breakdown of countries categorized by subregion). Due to a relatively low proportion of data points (n=3), responses given by ECOPs from and/or based in West Asia were only considered in region-wide results and insights, not at the subregional level. In total, the 2022 ECOP Asia survey was filled in by no less than 135 people (including non-ECOPs).

⁹ These ocean topics/issues were inspired from the Communities of Practice (COPs) that the UN Ocean Decade coordinating bodies created around the ten Ocean Decade Challenges. These included: Blue and Sustainable Ocean Economy; Capacity Development; Coastal Ecosystems and Community Resilience; Deep Sea Research and Management; Fisheries & Blue Food; Indigenous and Traditional Knowledge Systems; Marine Genetic Resources; Marine Pollution; Marine Spatial Planning (MSP); Multi-Hazard Early Warning Systems; Multiple Ocean Stressors; Ocean Acidification; Ocean-Climate Nexus; Ocean Literacy; and Ocean Observations and Seabed Mapping.

Table 3. List of countries from which respondents of the 2022 ECOP Asia survey are from and/or based in, disaggregated by subregion.

Subregion	East Asia (n=55)	South Asia (n=31)	Southeast Asia (n=46)	West Asia (n=3)
Represented Countries	- China (mainland, Hong Kong SAR & Taiwan ROC), - Japan, - Republic of Korea	- Bangladesh, - India, - Maldives, - Sri Lanka	- East Timor, - Indonesia, - Malaysia, - Papua New Guinea*, - Philippines, - Singapore, - Thailand, - Vietnam	- Lebanon, - Kuwait, - Turkey

* Despite being technically part of Oceania in the South Pacific, the geographical proximity of Papua New Guinea with Indonesia justified its integration within the Southeast Asia category (only one respondent).

II.2 Socio-Demographic Characteristics

The gender distribution was well-balanced at the regional level, with 48% and 51% of female and male respondents, respectively (**Figure 3**). When broken down by subregion, gender figures revealed significantly higher participation rates from male (64%) respondents in East Asia and female (65%) ones in Southeast Asia. Gender statistics remained relatively even in South Asia (48% female and 52% male).

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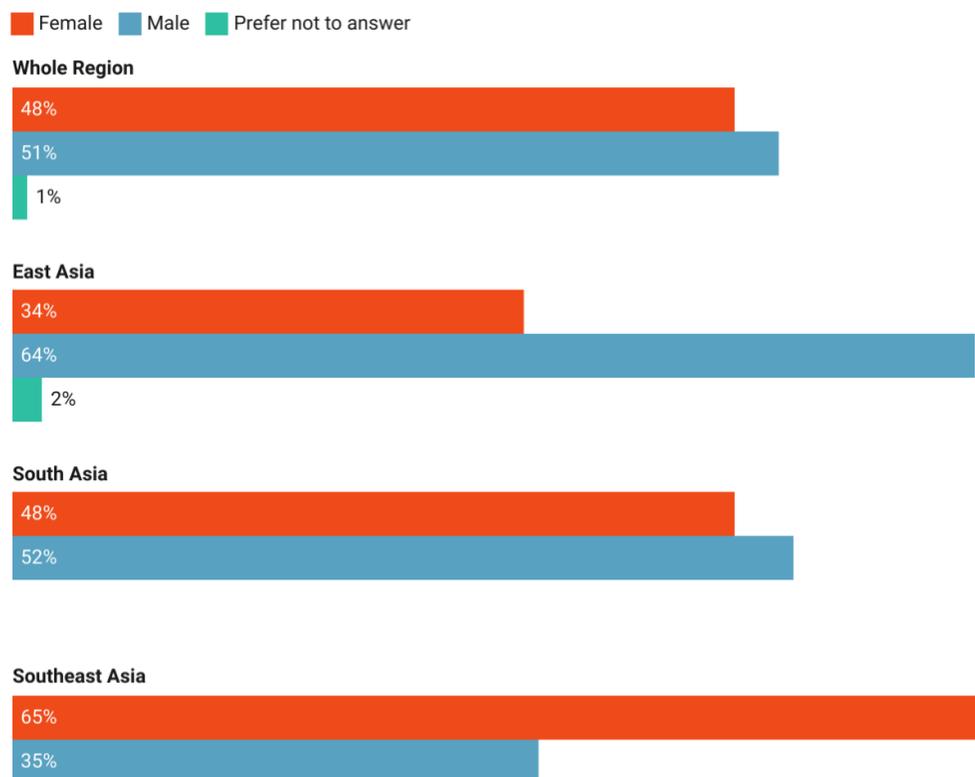


Figure 3. Gender breakdown (%) by geographical unit of analysis. Options available were: ‘Male’, ‘Female’, ‘Prefer not to answer’, and ‘Others’ (allowing respondents to add other gender identities). This bar graph was created with [Datawrapper](#).

Survey participants reported being nationals and/or residents of 17 different Asian countries, spread out across four subregions in East (41%), South (23%), Southeast (34%) and West (2%) Asia (**Tables 3,4**). As shown in **Figure 4**, roughly half of the 135 respondents are nationals and/or residents of either Japan (21%), Malaysia (16%) or India (15%). The Republic of Korea is also well-represented with a 13% participation rate. Other notable countries include China (7%), Indonesia (7%), Philippines (6%), and Bangladesh (5%).

Similar to the [2021 ECOP Asia survey](#), East Asian nations and India provided the bulk of survey responses in 2022 (~58%). However, this time, a much greater diversity of countries was represented, especially across South and Southeast Asia, with a third of ECOPs originating from the latter, notably Malaysia, Indonesia and the Philippines (**Figure 4; Table 4**).

In addition, out of the 135 survey respondents, 5% were Asian nationals living in Europe and North America, in countries such as France, Germany, Sweden, the United Kingdom, USA, and Canada. On the other hand, 3% of respondents identified as foreign nationals residing in Asia, mainly coming from Nigeria and the United Kingdom.

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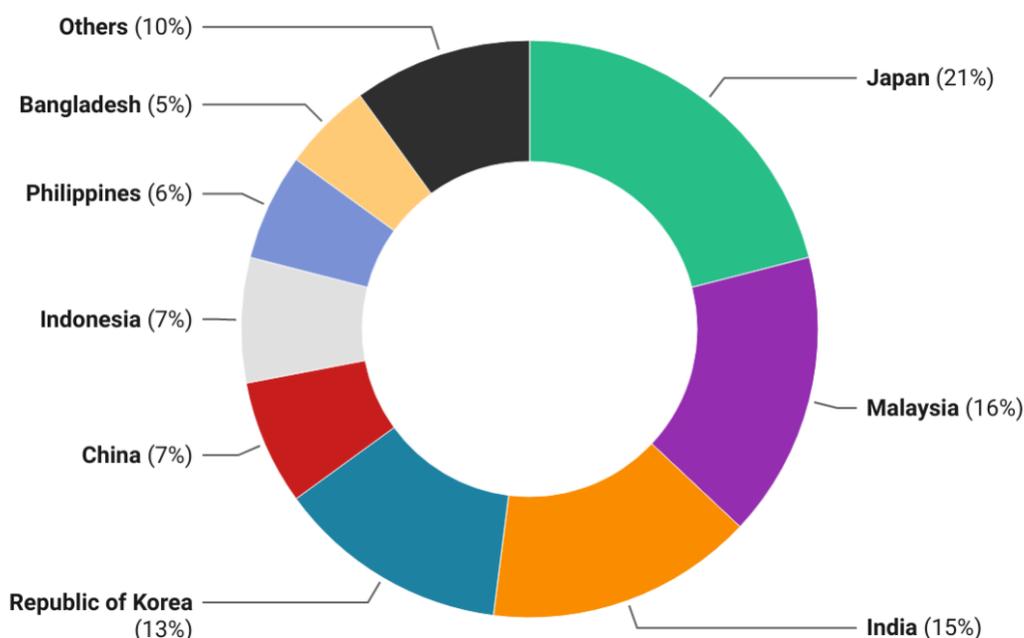


Figure 4. Percentage of survey respondents broken down by country. *This donut chart was created with [Datawrapper](#).*

Subregion	Percentage
East Asia	41%
South Asia	23%
Southeast Asia	34%
West Asia	2%

Table 4. Proportion of survey respondents per subregion.

When asking people about what best described their area(s) of expertise¹⁰, the results for the whole region displayed in **Figure 5** reveal the dominance of oceanography (53%) and other natural sciences, such as biology (29%), ecology (24%), and physics (15%). These are some of the top professions or areas of study selected by ECOPs in Asia. Multidisciplinary disciplines or research fields gathered another significant share of responses, as exemplified by climate (29%), fishery (21%), and data (16%) sciences.

Additionally, 16% of ECOP respondents were involved in education and only 10% identified as engineers. Social sciences and humanities were relatively less represented in Asia, with economics

¹⁰ This multiple-choice question offered 19 pre-selected options with the possibility to append new ones under 'Others' (for more details, see **Appendix 1**).

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(2%), geography (8%), public policy (6%), anthropology/sociology (4%), communication (4%), law/political science (9%), and psychology (2%) being selected by less than 10% of the participants (**Figure 5**). It is also worth mentioning that 70% of survey respondents chose more than one single area of expertise, which could potentially highlight the growing interest and need for interdisciplinarity in the ocean space.

Other areas of expertise that respondents added to the pre-existing list include: aquaculture, bioinformatics, community engagement, coral reef ecology, interdisciplinarity, gender in fisheries, international environmental law, marine science & restoration, marine ecotoxicology, maritime security, microbiology, ocean & human health, ocean literacy, policy research, remote sensing, and social entrepreneurship, among others.

Zooming in on intra-regional dynamics, **Figure 6** reveals differences in the relative importance of each field of expertise/study across the three subregions analyzed in this report: East, South and Southeast Asia. Though oceanography remains the predominant focus area, it is especially true for ECOPs in East (60%) and South (68%) Asia, while less than 40% of Southeast Asian ECOPs selected this area of expertise (**Figure 6**).

When compared to their neighboring subregions, ECOPs in South Asia were also more likely to be working on or studying climate science (52%), ecology (35%), and data science (26%). The difference was especially notable for climate science, which was selected by only 24% and 20% of ECOP respondents in East and Southeast Asia, respectively. In addition, 23% of South Asian ECOPs specialized in geography.

One field in which East Asian ECOPs were seemingly more represented than their counterparts in South and Southeast Asia is fishery science (25%), which constituted the third most popular focus area in the subregion (behind oceanography (60%) and biological science (27%)). Natural sciences are clearly dominating the ECOP landscape in East Asia, with much less representation from social sciences and humanities, especially when compared to their neighbors (**Figure 6**).

As for Southeast Asian ECOPs, while data (4%) and physical (9%) sciences were not as popular as in East and South Asia, their preferences (besides oceanography) gravitated towards biology (30%), ecology (28%), fishery science (22%), and education (22%), with the latter being a potential indicator of the importance of ocean literacy in Southeast Asia. Interestingly, the large majority of ECOPs who complemented the list of pre-selected options proposed in the survey were from Southeast Asia. They added a diversity of focus area, including, *inter alia*: aquaculture, gender in fisheries, international environmental law, ocean and human health, ocean literacy, policy research, and social entrepreneurship.



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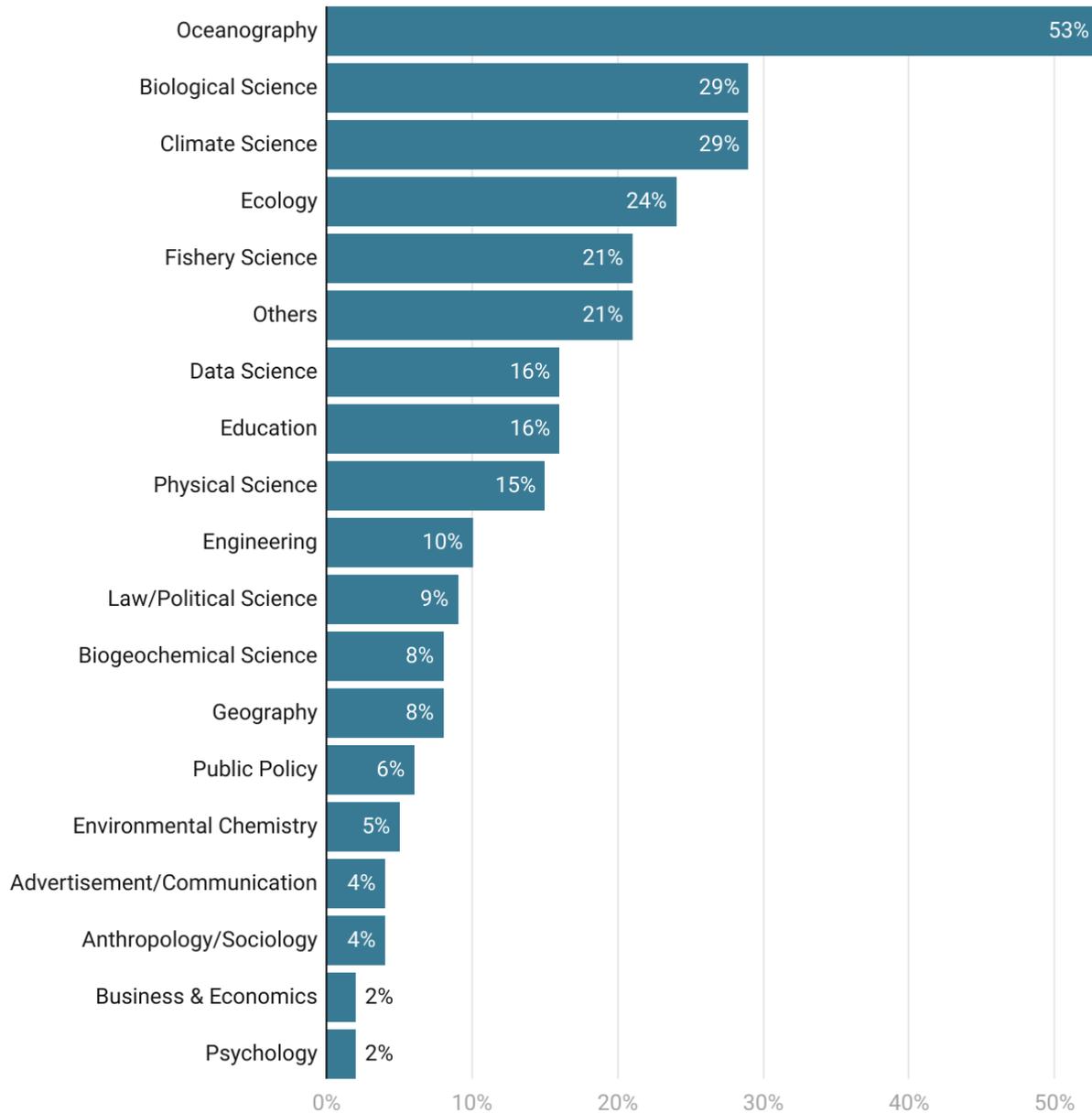


Figure 5. Percentage of survey respondents (%) selecting each area of expertise (multiple choices available) at the region-wide level. The options gathering less than 2% of participants are pooled together under 'Others'. This bar chart was created with [Datawrapper](#).

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Figure 6. Percentage of survey respondents (%) selecting each area of expertise (multiple choices available), disaggregated by subregion. The gray shade highlights the range between the dots. *This dot chart was created with [Datawrapper](#).*

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Sector-wise, it is not surprising to see an overwhelming representation (89%) from science and research (public and private) (**Figure 7**), in line with the results of the [2021 ECOP Asia survey](#) and other ECOP surveys circulated around the world in 2022. ECOPs from academia (students, postdocs, researchers and assistant professors) have been our principal and most engaged constituency since the endorsement of the ECOP Programme in the spring of 2021. Diversifying our target audience is a key strategic priority as we move into the third year of the UN Ocean Decade. **Figure 7** shows some promising signs, with close to a third of respondents involved in government/policy work, while another third is engaged with or leading non-governmental/profit organizations (either as their main or secondary occupation). Although selected by less than 10% of ECOPs in Asia, other important sectors include: community-based organizations (9%), innovation and entrepreneurship (9%), multilateral institutions such as the United Nations (7%), and philanthropic organizations (3%).



Figure 7. Percentage of survey respondents (%) selecting each sector (multiple choices available) at the region-wide level. The options gathering less than 2% of participants are pooled together under 'Others'. *This bar chart was created with [Datawrapper](#).*

When disaggregated by subregion, **Figure 8** reveals a greater representation of South and Southeast Asian ECOPs in non-academic sectors. Indeed, while 96% of East Asian ECOPs are either students or employed in science and research institutions (the largest proportion recorded across Asia, compared to 90% and 80% in South and Southeast Asia, respectively), less than 18% of them are also involved in governmental and non-profit organizations. On the other hand, 33% of South Asian ECOPs work in policy and another 33% in non-profits, with these percentages climbing up to 37% and 42% for Southeast Asia, respectively. Furthermore, while the majority of ECOPs working in international and multilateral institutions (e.g., UN, UNESCO, FAO, etc.) are from South Asia (13%), Southeast Asian ECOPs were more likely to identify as community leaders (18%), as well as innovators or entrepreneurs (13%) (**Figure 8**).

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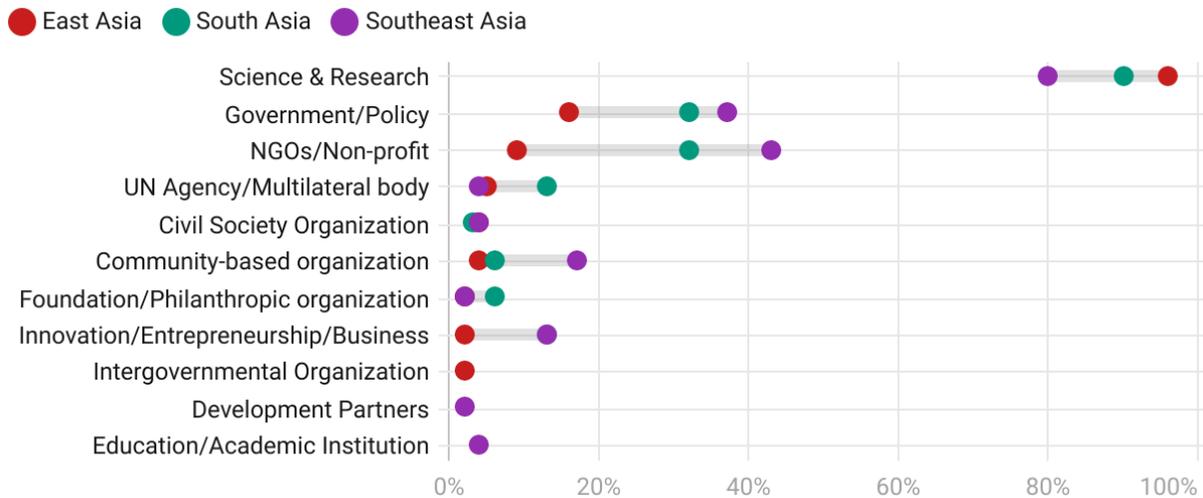


Figure 8. Percentage of survey respondents (%) selecting each sector (multiple choices available), disaggregated by subregion. The gray shade highlights the range between the dots. *This dot chart was created with [Datawrapper](#).*

II.3 Regional ECOP Landscape

To estimate how many survey respondents self-identify as an Early Career Ocean Professional, we provided a comprehensive definition that has been used by the ECOP Programme since its inception. It runs as follows:

“For the purpose of the ECOP Programme, an ECOP is a person that self-identifies as being early in their career (10 years or less of professional experience) within any field related to the ocean (not only employed/paid positions). The term “professional” is used in order to be inclusive of professionals from many different sectors of society.”

With that information in mind, the majority of survey respondents in Asia (87%) self-identified as ECOPs. This number remains relatively constant when comparing responses between subregions (**Figure 9**), although it is worth noticing that it was higher in South Asia (94%) and lower in East Asia (84%). This slight difference could indicate that a greater proportion of East Asian respondents were past the early career stage (i.e., more than 10 years of professional experience). Indeed, the survey was not only targeted to ECOPs. It welcomed insights from any members of the ocean community, including mentors and mid/senior-level professionals.

An optional question asked respondents what word first came to mind when they thought about ECOPs. The answers given to this open-ended question were analyzed through natural language processing and displayed in a Word Cloud (**Figure 10**), where the larger a word is, the more frequent it was mentioned. While the most common responses were: “Opportunities”, “Ocean”, “Young”, “Network”, “Future”, “Conservation”, and “Research”, other keywords highlighted by Asian ECOPs included: “Passion”, “Innovation”, “Sustainability”, “Collaboration”, “Communication”, “Hope”, “Interdisciplinarity”, “Responsible”, “Ambition”, and “Energy”,

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among others. While there were clear references and allusions to research practices and academic life (including some negative ones related to financial strain), the overall feeling of what an ECOP embodies is very positive, stimulating, and hopeful. Several responses were particularly well-aligned with the spirit of the UN Ocean Decade (e.g., “Collaboration”, “Networking”, “Interdisciplinarity”, “Opportunities”, “Explore”), boding well for the future of ECOP engagement and leadership in Asia.

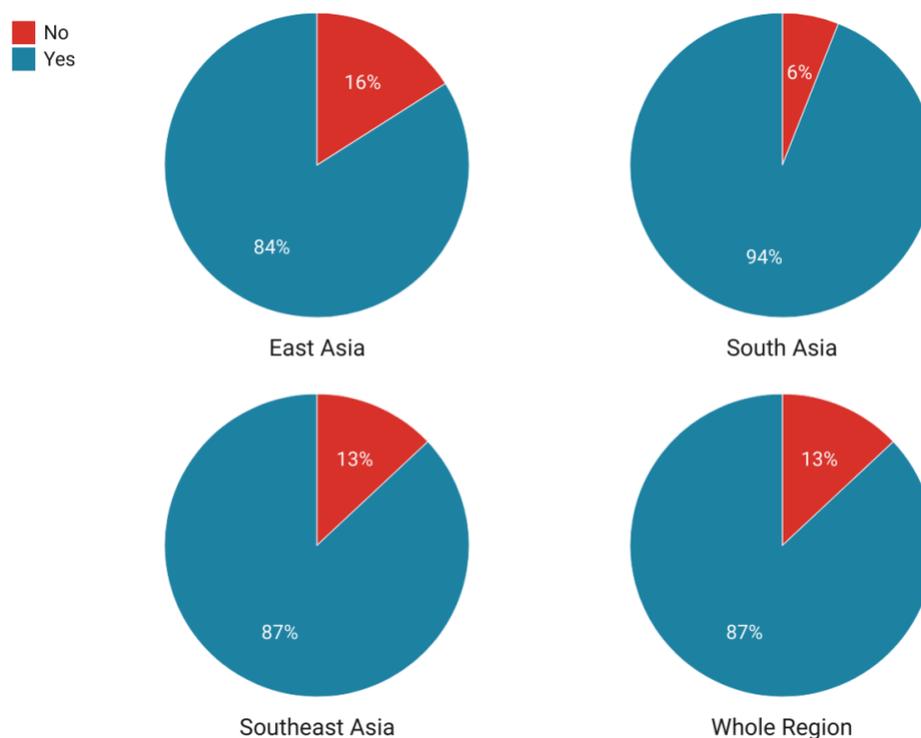


Figure 9. Percentage of survey respondents (%) who self-identify as Early Career Ocean Professionals (ECOPs), disaggregated by geographical unit of analysis. *These pie charts were created with [Datawrapper](#).*

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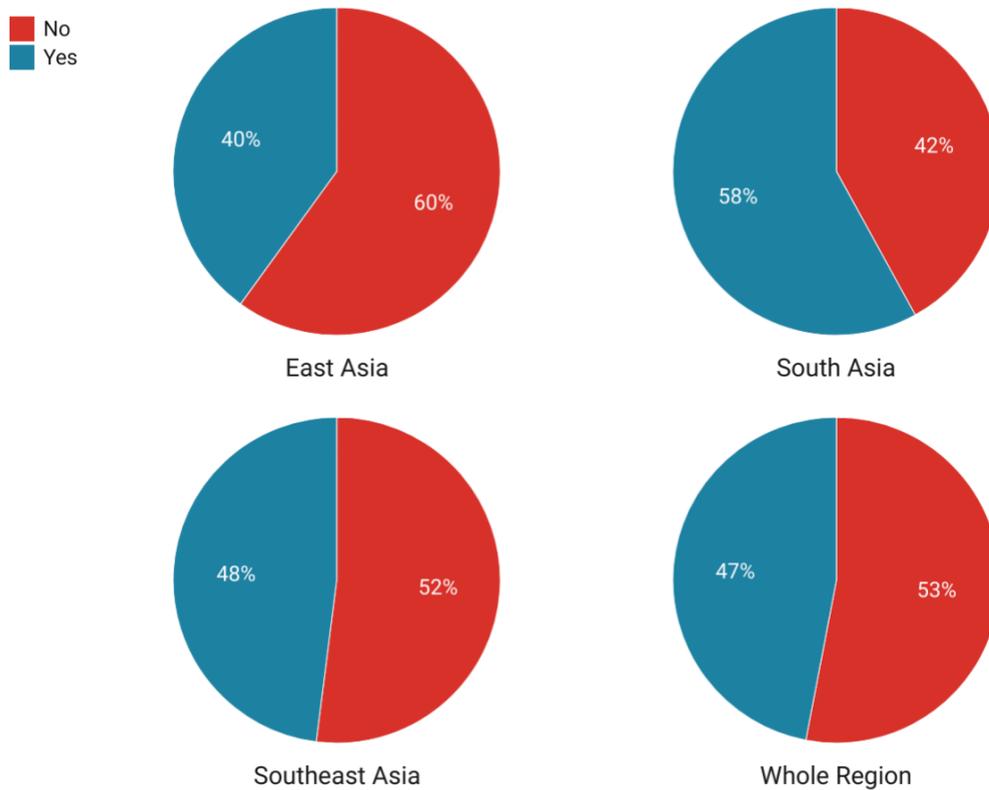


Figure 11. Percentage of survey respondents (%) involved in ocean-related and/or early-career networks/initiatives, disaggregated by geographical unit of analysis. *The pie charts were created with [Datawrapper](#).*

Based on the open-ended answers provided by survey respondents who answered “Yes” to the previous question, a list of ocean-related networks, organizations, groups and initiatives that ECOPs in Asia were actively engaged with are compiled in **Table 5**. A total of 53 networks, organizations and initiatives were recorded, the majority of which (57%) at the global-level, while regional and national ones accounted for 20% and 23% of the total, respectively.

When examining how eager individuals who answered “No” to the aforementioned question would be in joining an ocean-related network or initiative (including UN Ocean Decade Actions), **Figure 12** provides an optimistic perspective for the region. Indeed, in Asia, 79% of respondents expressed their willingness to participate and get further involved, while 18% were unsure and just 3% showed a lack of interest. The level of enthusiasm and eagerness to join an ocean network or initiative was particularly notable in South and Southeast Asia (where 88% and 94% of respondents answered “Yes” to this follow-up question). On the other hand, East Asian ECOPs were more moderate, with ‘only’ 59% showing a willingness to participate and engage in such networks and initiatives, while 32% remained uncertain and another 9% said they were not interested (**Figure 12**).

Table 5. List of ocean-related and/or early-career networks/initiatives that survey respondents were involved in (including geographic span and weblink if existing). Stars (*) identify endorsed Ocean Decade Actions and Decade Coordinating bodies (e.g., UN agencies).

- Asia Oceania Geosciences Society (AOGS) (**Asia-Oceania**) [[link](#)],
- Asia-Pacific Network for Global Change Research (APN) (**Asia**) [[link](#)],
- Association for the Sciences of Limnology and Oceanography (ASLO) (**Global**) [[link](#)],
- Association of Polar Early Career Scientists (APECS) (**Global**) [[link](#)],
- Blue Communities Early Career Researcher Network (**Southeast Asia & UK**) [[link](#)],
- Blue Resources Trust (**Sri Lanka**) [[link](#)],
- Deep Ocean Early Career Researchers (DOERs) (**Global**) [[link](#)],
- *Deep Ocean Stewardship Initiative (DOSI) (**Global**) [[link](#)],
- *Early Career Ocean Professionals Programme (ECOP Programme) (**Global**) [[link](#)],
- Earth Lanka (**Sri Lanka**) [[link](#)],
- *ECOP Asia (**Asia**) [[link](#)],
- *ECOP Japan (**Japan**) [[link](#)],
- Environmental Justice Foundation (EJF) (**Global**) [[link](#)],
- *Global Estuaries Monitoring Programme (GEM) (**Global**) [[link](#)],
- Global Youth Biodiversity Network (GYBN) (**Global**) [[link](#)],
- IEEE Ocean Engineering Society (OES) (**Global**) [[link](#)],
- Integrated Marine Biosphere Research (IMBeR) (**Global**) [[link](#)],
- Interdisciplinary Marine Early Career Network (IMECaN) (**Global**) [[link](#)],
- *IOC Sub-Commission for the Western Pacific (WESTPAC) (**Asia**) [[link](#)],
- Marine Spatial Planning Research Network (**Global**) [[link](#)],
- *Observing Air-Sea Interactions Strategy (OASIS) (**Global**) [[link](#)],
- OceanExpert (**Global**) [[link](#)],
- *Ocean Literacy Task Team of the ECOP Programme (**Global**) [[link](#)],
- OceanObs19 (**Global**),
- OceanObs29 (**Global**),
- Organization of African Academic Doctors (OAAD) (**Africa**) [[link](#)],
- Our Ocean Conference Youth Delegation (Palau, 2022) (**Global**) [[link](#)],
- PICES's Advisory Panel on Early Career Ocean Professionals (**North Pacific**) [[link](#)],
- Reef Check Malaysia (**Malaysia**) [[link](#)],
- *Southeast Asian Ocean Professionals Program (SEAOPP) (**Southeast Asia**) [[link](#)],
- Surface Ocean-Lower Atmosphere Study (SOLAS) Japan (**Japan**) [[link](#)],
- *Sustainable Ocean Alliance (SOA) (**Global**) [[link](#)]; Ocean Decade Contribution [[link](#)],
- Sustainable Ocean Alliance (SOA) Sri Lanka (**Sri Lanka**) [[link](#)],
- Sustainable Ocean Alliance (SOA) Thailand (**Thailand**) [[link](#)],
- The Oceanography Society (**Global**) [[link](#)],
- *United Nations Decade Advisory Board (**Global**) [[link](#)],
- *United Nations Decade of Ocean Science for Sustainable Development (**Global**) [[link](#)],
- United Nations Decade on Ecosystem Restoration (**Global**) [[link](#)],
- United Nations Major Group for Children and Youth (UNMGCY) (**Global**) [[link](#)],
- University of Ruhuna (**Sri Lanka**) [[link](#)],
- University of the Ryukyus in Okinawa (**Japan**) [[link](#)],
- Women for One Ocean (**Japan**) [[link](#)],
- Young Southeast Asian Leaders Initiative (YSEALI) (**Southeast Asia**) [[link](#)],
- Youth for Nature (Youth4Nature) (**Global**) [[link](#)].



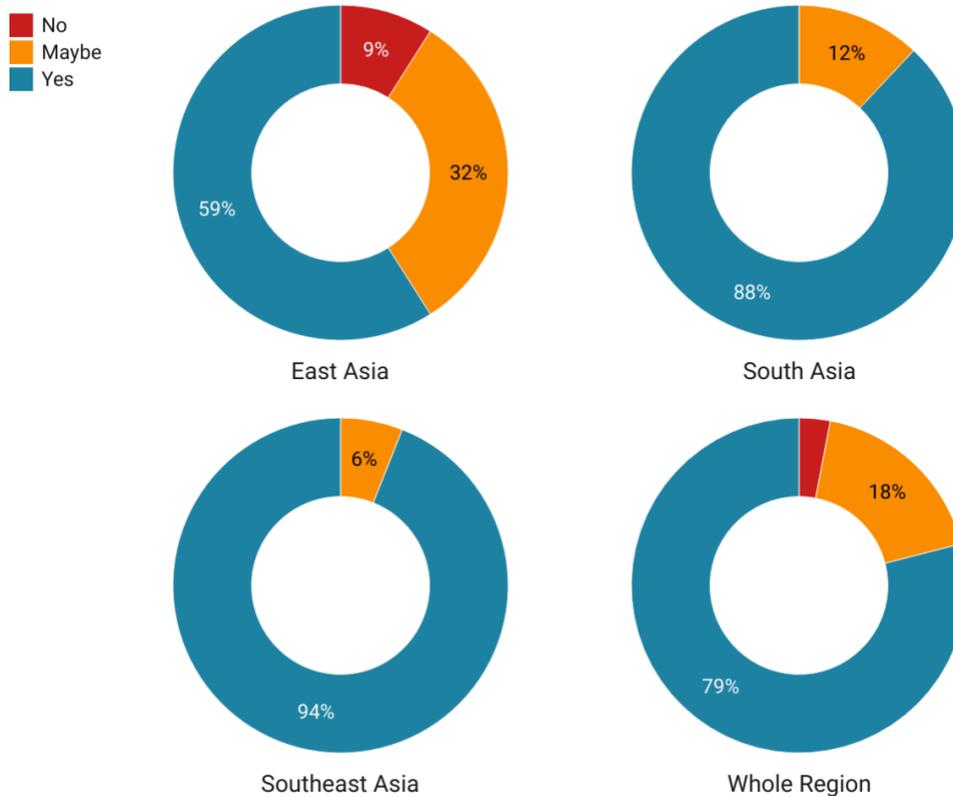


Figure 12. Percentage of survey respondents willing to join an ocean-related and/or early-career network/initiative (including UN Ocean Decade Actions), broken down by geographical unit of analysis. *The donut charts were created with [Datawrapper](#).*

II.4 Funding Options

According to the results of the first ECOP Asia survey in 2021, the greatest barrier or constraint preventing ECOPs to properly contribute to the UN Ocean Decade was a *lack of funding opportunities*¹¹. In this follow-up survey, the intention was to drill further into this matter and identify the importance of several funding options to support ECOPs in Asia. Five pre-selected categories were included in the dedicated question, with an option to add other funding streams and priorities as an open-ended answer (see questions 8a and 8b in **Annex 1**). Using a 5-point Likert scale, respondents were able to convey the degree of importance or priority they attached to each funding category, which is displayed in **Figure 13**.

¹¹ Specifically, 52% of respondents selected that option. It was closely followed by a lack of career opportunities (50%) and a lack of community and network (45%). More information available in the [2022 ECOP Asia Intermediary report](#).

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Unsurprisingly, more than 75% of respondents regarded the majority of funding options as important, with a significant portion considering them to be very important (59% on average), except for virtual events' registration fees, which were viewed as a lower priority when it came to financial support (29% and 30% saw it as important and very important, respectively, while 24% remained neutral). However, it is worth noting that more than 85% of South Asian ECOPs rated this funding option as at least important (**Figure 13**). Indeed, since the Covid pandemic, several international ocean conferences have been testing and adopting a hybrid format, charging non-negligible registration fees to online participants.

The top 2 preferences (in terms of the percentage of respondents rating them as 'very important') were: (1) "*Academic scholarships & Research funding*" (67%), and (2) "*Travel, accommodation & registration fees to attend in-person events*" (62%). These funding categories particularly resonated with South and Southeast Asian ECOPs. Financially supporting ECOPs' travel and accommodation for future events (whether it be a high-level international gathering, regional meeting, or academic conference) was a key recommendation highlighted in the [2022 ECOP Impact Report on the UN Ocean Conference](#), especially regarding ECOPs coming from low and middle-income countries.

Fully-funded internships and seed funding to help young startups and non-profit organizations get off the ground were also regarded as key funding avenues to prioritize (55% and 54% of respondents viewed them as very important, respectively). Once again, ECOPs from South and Southeast Asia emerged as the foremost proponents of these funding options (more than 65% rated them as very important, compared to less than 35% in East Asia).

Complementing the list of pre-selected funding options were the following comments from a few respondents:

- "*Funding to organize events*",
- "*Premium versions of online communication platforms*" (e.g., Slack),
- "*Publication fee waiver*",
- "*Funding options for young NGOs and non-profit project leaders*"
- "*Supporting the dissemination of basic research outputs to the public and frontline stakeholders*".



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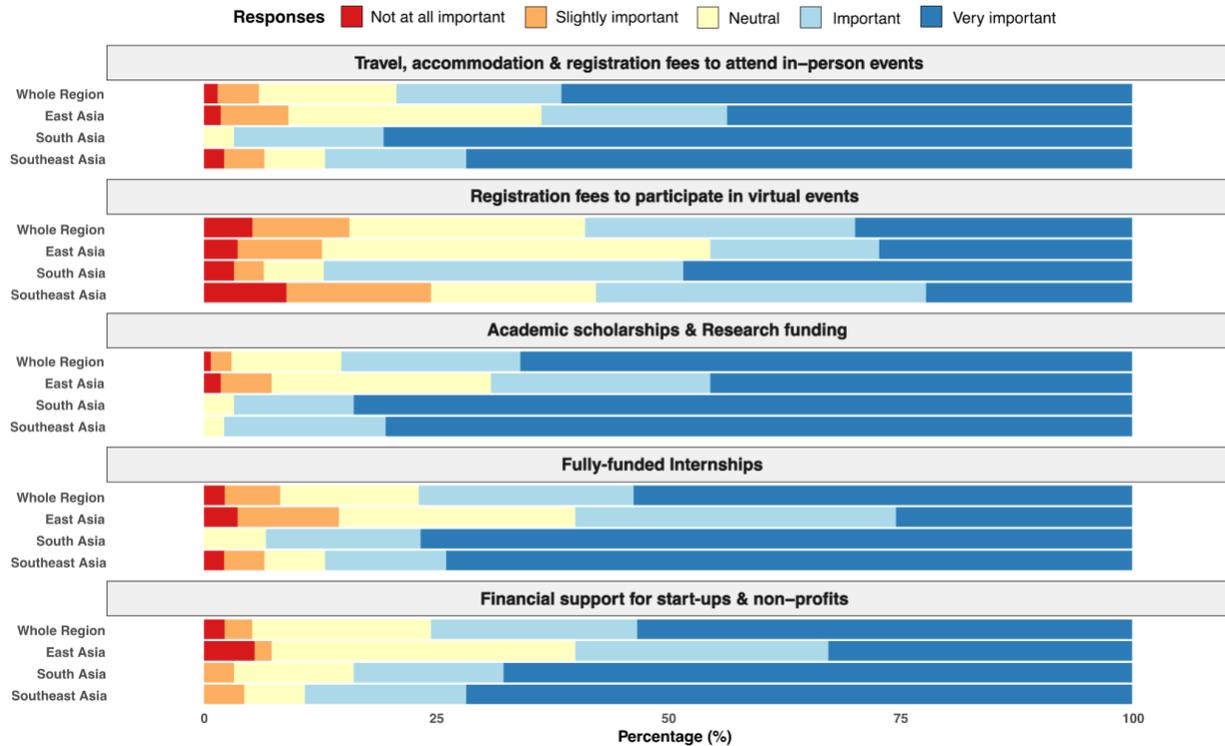


Figure 13. Ranked preferences (%) of funding options for ECOPs in Asia, using a 5-point Likert scale and disaggregated by geographical unit of analysis. *The bar chart was created with R.*

II.5 Networking and Outreach Initiatives

Using a similar 5-point Likert rating scale, the survey was also aiming to gauge regional interest on the best ways for the ECOP Programme to communicate and disseminate opportunities (e.g., events, jobs, internships, scholarships, Ocean Decade-related news, etc.), coordinate activities and projects at the national level, and connect ECOPs to one another but also to more experienced and knowledgeable professionals (i.e., through a mentorship platform).

As shown in **Figure 14**, all proposed initiatives (some being already operational such as the [monthly ECOP newsletter](#), [national ECOP nodes](#), and the [ECOP group on the Ocean Decade Network](#)) were viewed as ‘important’ by more than 70% of respondents. Specifically, the mentorship platform and the establishment of national ECOP nodes¹² were the most popular options, with 49% and 45% of regional survey participants considering them as ‘very important’, respectively. They were closely followed by the idea of hosting virtual (and in-person) ocean dialogues (43%) and by joining ECOP groups on the Ocean Decade Network (40%).

¹² In Asia, as of June 2023, two national ECOP nodes have been formally established in Japan and The Republic of Korea, with their web pages up and running (see [here](#) for Japan, and [here](#) for South Korea). The national ECOP nodes for China and India are expected to have an online presence later in the Summer of 2023, while other countries, such as Malaysia, are in the early discussion stages. More information about these national ECOP nodes is provided in **Section III** of this report: “National Decade Committees and ECOP Nodes’ Ecosystem in Asia”.

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Surprisingly, the ECOP newsletter was perceived as relatively less valuable than the other listed initiatives, considered as ‘very important’ by only 27% of respondents (**Figure 14**). Now that the global ECOP newsletter has been consistently released on a monthly basis for over a year, it is possible that these preferences may have changed since then.

When broken down by sub-region, a pattern observed for funding options (**Figure 13**) repeated itself for this particular question (**Figure 14**). Indeed, South and Southeast Asian respondents appeared to be much more in favour of the different initiatives proposed (especially with regard to mentorship platforms, national nodes, and virtual ocean dialogues), while a greater proportion of East Asian ECOPs remained relatively moderate and neutral in their preferences. National needs and priorities, as well as cultural contexts may be playing a non-negligible role, thus warranting further investigation at the national level, which is something the ECOP Asia node is currently coordinating, with the help of national ECOP leads.

Based on these results, the benefits of creating mentoring programs for ECOPs and facilitating mentor-mentee pairings are clear and of special relevance to South and Southeast Asia. Since its endorsement, the ECOP Programme has committed time and resources to develop this idea further¹³, and would certainly gain from connecting with other Ocean Decade partners who have expertise on the subject (e.g., [AGU’s Mentoring365](#)). Together, they could try building an integrated platform that would complement mentorship programs that already exist for early career ocean scientists and conservationists.

Regular meetings, virtual dialogues, webinars or symposia, and in-person gatherings are all opportunities to better network, connect and enhance a sense of community-building. While more efforts are needed at the regional level, the ECOP Programme has been launching its very successful [webinar series](#) (which started in September 2022 with speakers from Asia) and plans to continue doing so on a bi-weekly or monthly basis. In addition, as part of their contribution to the UN Ocean Decade and in cooperation with the ECOP Programme, the [Sustainable Ocean Alliance](#) (SOA) has recently launched a joint regional webinar series to foster cross-pollination between both networks, spread knowledge about the UN Ocean Decade, and discuss how the SOA and ECOPs can collaboratively contribute to specific Ocean Decade Goals. The [first episode](#) was launched in Asia and focused on plastic pollution, while the second one happened the same week (April 24-28, 2023), this time discussing the role of Central America in the UN Ocean Decade (held in Spanish)¹⁴. Follow up networking events and more interactive sessions are already in the pipeline for 2023. It is also worth highlighting that several national ECOP hubs are meeting on a regular basis and organizing in-person sessions, workshops, and informal gatherings during planned conferences and other major ocean events.

¹³ The recently assembled Training and Mentoring Task Team has appointed members specifically dedicated to the creation of a future mentorship platform for the ECOP Programme. More information is available here: <https://www.ecopdecade.org/training-and-mentoring/>

¹⁴ To access more ECOP webinar recordings, including the ones from the joint ECOP-SOA series, visit this link: <https://www.ecopdecade.org/webinars/>

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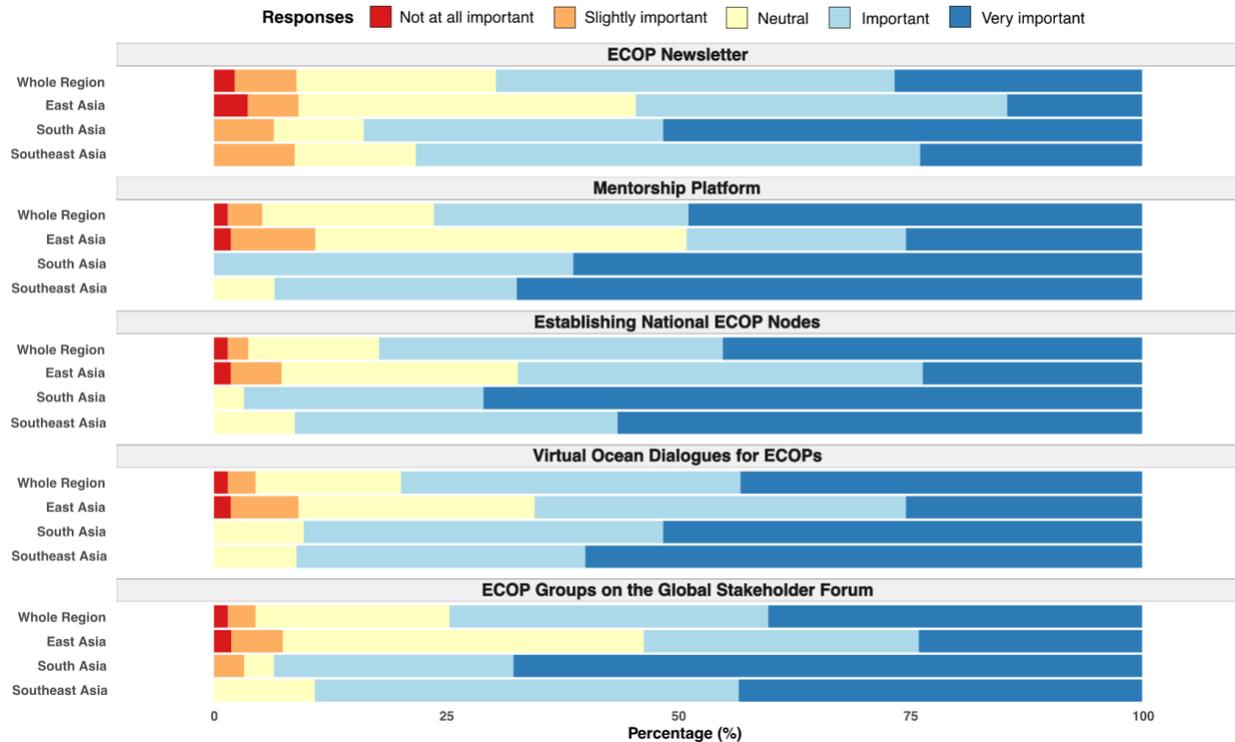


Figure 14. Ranked preferences (%) of networking and outreach initiatives, using a 5-point Likert scale and disaggregated by geographical unit of analysis. *The bar chart created with R.* Note: since early 2023, the Global Stakeholder Forum has been renamed as the Ocean Decade Network (ODN).

II.6 Science Communication Skills

Effectively communicating scientific insights to a broader audience, including members of the general public and non-professional stakeholders, is a critical skill embraced by many researchers and scientists. It has gained a lot of traction and interest among students and other early career professionals, and will be instrumental in spreading information about the UN Ocean Decade Outcomes and Challenges.

Back in November 2021, the ECOP Asia network conducted an incubator session at the [UN Ocean Decade Kick-off Conference for the Western Pacific and its Adjacent Seas](#)¹⁵. This ECOP-led session aimed “to share existing knowledge and past experience of science communication efforts organized in Asia/Western Pacific and its adjacent areas, and to discuss effective ways and technical tools to engage more non-professionals and stakeholders in the UN Ocean Decade and WESTPAC communities”. The diverse perspectives shared on science communication from all across Asia and the results of the pre-event survey (which can be consulted in this [Summary Report](#)) inspired the design of a science communication question in the 2022 ECOP Asia survey, which results are displayed in **Figures 15 & 16**.

¹⁵ The link to the session recording can be accessed here: https://www.youtube.com/watch?v=p-cunlXu7-I&ab_channel=IOC-WESTPACofUNESCO

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At the region-wide level, **Figure 15** reveals that more than half of survey respondents would like to learn and acquire more experience in public speaking (59%), and on how to write short-form content such as opinion pieces, news stories and blog posts (67%). South Asian ECOPs expressed greater interest in developing the latter skill (78%), while public speaking is a competence that East (68%) and South (61%) Asian respondents felt a greater need to practice and improve upon, when compared to Southeast Asian participants (48%) (**Figure 16**).

While long-form media content such as podcasts only gathered 15% of responses (**Figure 15**), other creative skills such as producing videos (31%) and designing graphics and visuals (40%) attracted significant interest at the regional level, especially from ECOPs based in Southeast Asia (**Figure 16**). Leveraging the outreach potential of social media platforms (41%) was another important skill that mainly resonated with Southeast Asian respondents.

Just 3% of survey participants declared having no interest in developing science communication skills (**Figure 15**), while 4 ECOPs shared other professional communication competencies they would like to work upon and become more comfortable with, as listed below:

- “English listening and speaking”,
- “Participation at various platforms of international negotiations (e.g. CBD COP, UNFCCC, etc.)”,
- “Communicate with other researchers via email”,
- “Networking”

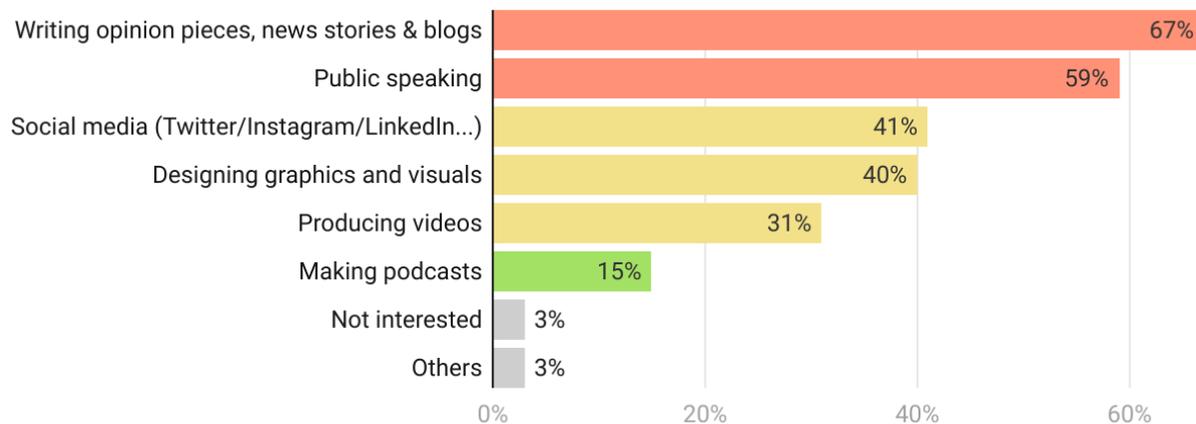


Figure 15. The communication skills ECOPs in Asia are most interested to learn about and improve upon, arranged by % of survey respondents (multiple choices available). *The bar chart was created with [Datawrapper](#).*

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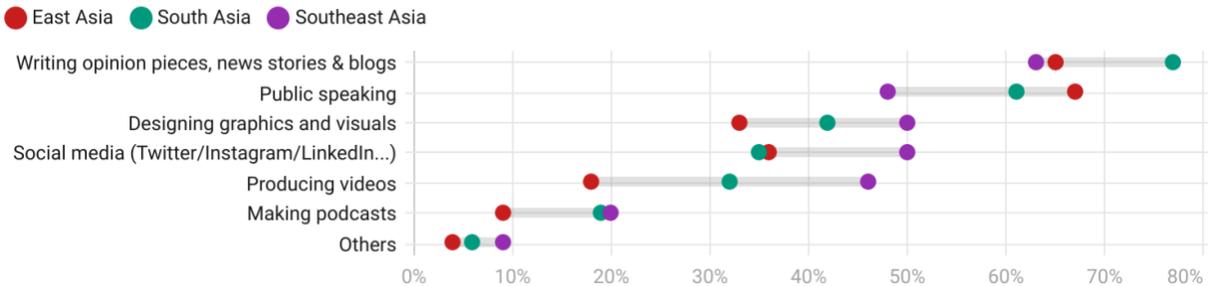


Figure 16. The communication skills ECOPs in Asia are most interested to learn about and improve upon, arranged by % of survey respondents and disaggregated by subregion (multiple choices available). *The dot chart was created with [Datawrapper](#).*

II.7 Regional ECOP Perspectives on the UN Ocean Decade

In the 2021 ECOP Asia survey, an important question aimed to assess the level of awareness that ECOPs in Asia had on the UN Ocean Decade, 6-months after its official launch in early January 2021. Survey results from the [2022 ECOP Asia report](#) revealed that a majority of respondents (63%) were aware of the UN Ocean Decade, while another quarter (25%) did not know about it. These figures appeared to diverge significantly when disaggregated by country.

In order to extract additional ECOP perspectives and updated insights on the UN Ocean Decade, and thus help inform future engagement and outreach priorities in the region, the 2022 ECOP Asia survey asked participants to rate how much they agreed on four different statements, with results shown in **Figure 17**.

The ECOP Programme core team frequently receives inquiries about how ECOPs can effectively contribute to the ongoing efforts of the UN Ocean Decade (e.g., by participating in Decade Activities, becoming actively involved in endorsed Decade Projects and Programmes, etc.). Interestingly, **Figure 17** reveals that around half (51.5%) of survey respondents do understand how to contribute to the UN Ocean Decade, though only 21.5% ‘strongly agree’ with that statement, with an equal proportion staying neutral. The majority of South and Southeast Asian ECOP participants agreed with that statement. On the other hand, East Asian ECOPs are a lot more uncertain about how they can contribute to Ocean Decade efforts, with close to 25% disagreeing with that statement.

When it comes to the idea of increasing engagement with policy-makers and local communities, more than 70% of respondents agreed with it. It was a very popular statement across Asia, which resonated the most with South and Southeast Asian ECOPs (>50% strongly agreed with it) (**Figure 17**). There was also strong regional consensus towards the need to translate communication materials (from the ECOP Programme and UN Ocean Decade¹⁶) in different languages (>60% agreed, of which >25% strongly agreed, regardless of the subregion)). Doing so

¹⁶ The Ocean Decade Team (DCU) has been translating several of their official publications in different languages. For instance, its Implementation Plan (Summary and/or Full version(s)) has been published in Chinese, Korean and Japanese. See: <https://unesdoc.unesco.org/ark:/48223/pf0000376780>. It is also worth highlighting that both the [UN Ocean Decade](#) and [ECOP](#) websites allow users to browse and interact with their content using preferred languages.

would attenuate language barriers¹⁷ and be more inclusive of the diversity of stakeholders who are connected to the ocean.

A little more than one year after the launch of the UN Ocean Decade, only half of the survey respondents agreed that their fellow country ECOPs were aware of the UN Ocean Decade, with a mere 10% strongly agreeing with it (**Figure 17**). A total of 15% of regional participants disagreed, meaning that they did not think ECOPs in their country were aware of the Ocean Decade. When examining results at the subregional level, East Asian ECOPs were the most positive about this statement (>60% agreed with it), while South and Southeast Asian respondents believe more efforts are needed to raise awareness of the UN Ocean Decade in their respective countries.

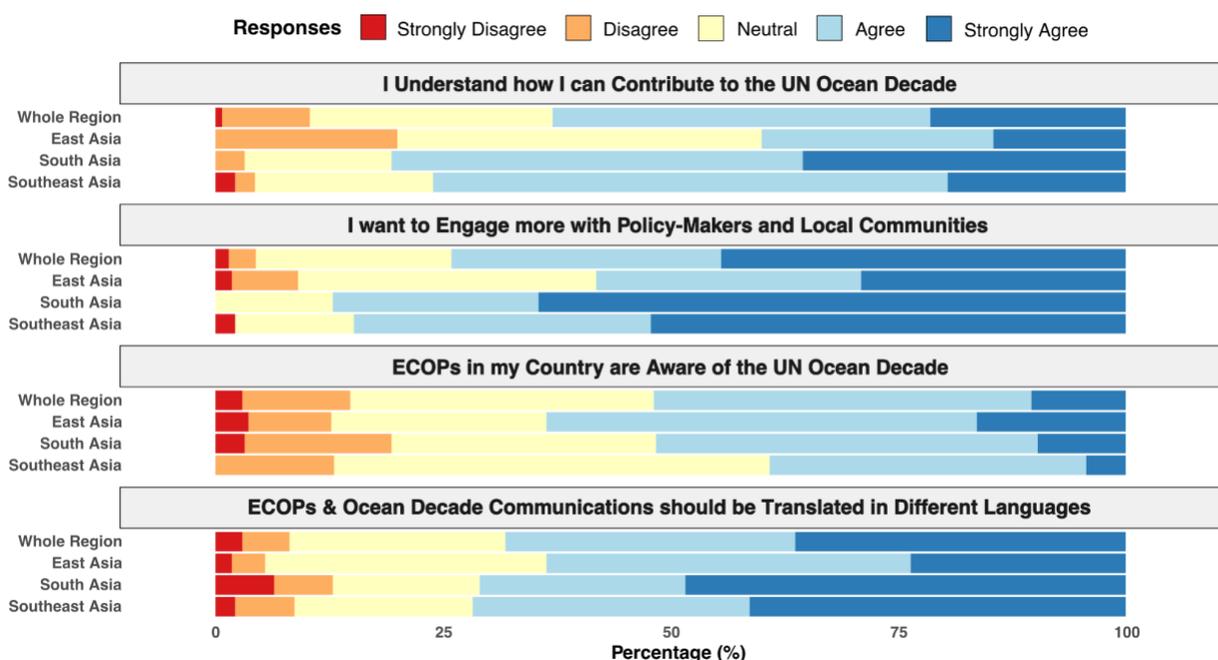


Figure 17. Level of agreement (%) with UN Ocean Decade related statements, using a 5-point Likert scale and disaggregated by geographical unit of analysis. *The bar chart was created with R.*

II.8 Regional Learning and Training Opportunities

To better understand and gauge which ocean topics and/or issues are of greatest interest to ECOPs in Asia, a pre-selected list of 15 different options (aligned with the UN Ocean Decade’s 2021-2022 Communities of Practice) was laid out in the survey, including open-ended answers (see Question 12, **Annex 1**). Specifically, survey respondents were able to select whichever topics they were the most eager to learn about and further their knowledge on, either through webinars, workshops, training sessions or online courses. The results displayed in **Figure 18** are helping inform the ECOP Programme’s future capacity development programming.

¹⁷ While not the most prominent issue, the [2022 ECOP Asia report](#) revealed that a significant number of ECOPs (between 16% and 32% depending on the country) identified the language barrier as a clear impediment to their engagement with the international ocean community. This was especially true for East and Southeast Asian ECOPs.

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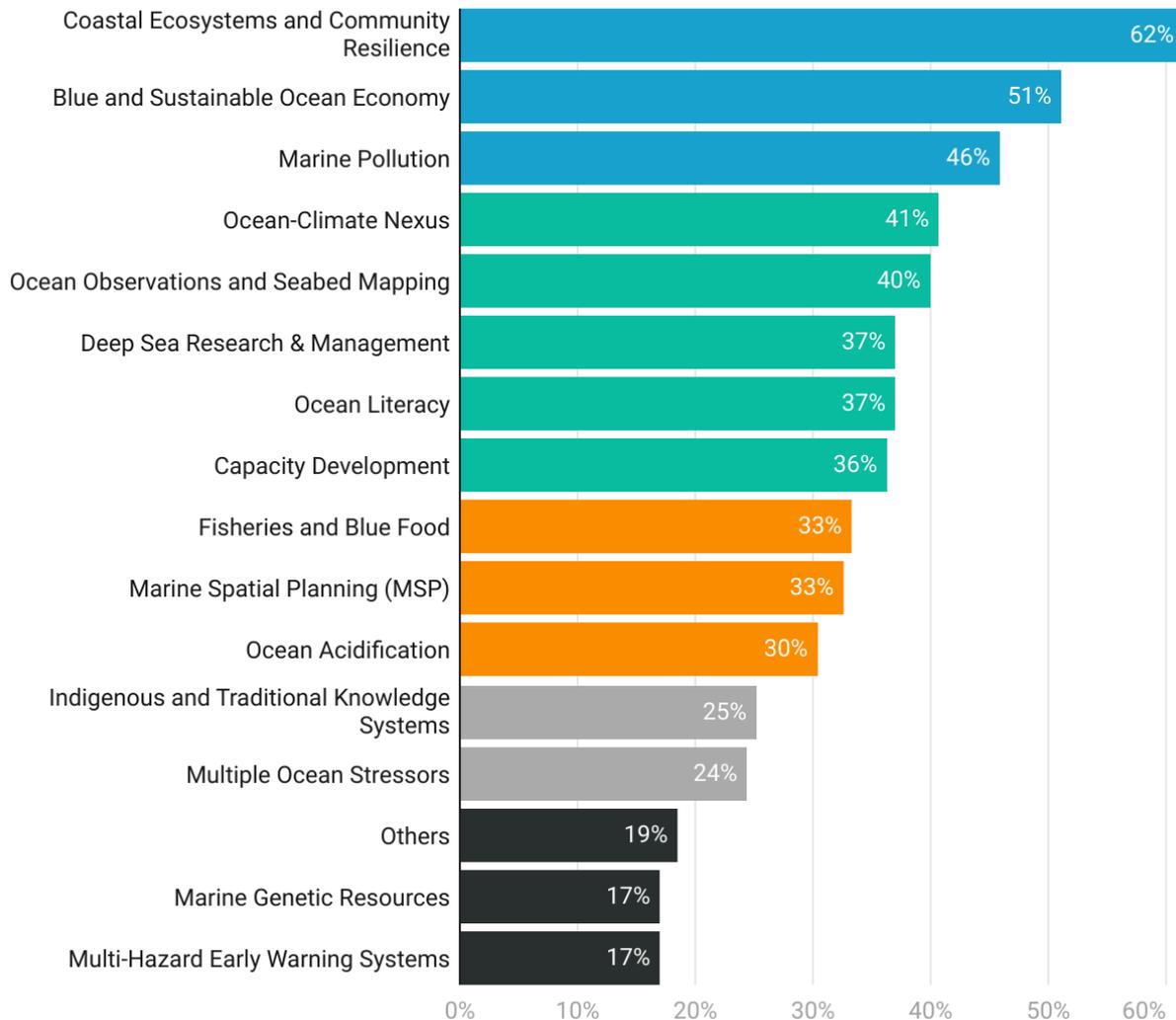


Figure 18. Percentage of survey respondents (%) selecting each ocean topic/issue (multiple choices available) at the region-wide level. *The bar chart was created with [Datawrapper](#).*

The top three most popular options among ECOPs in Asia pertained to: “*Coastal Ecosystems and Community Resilience*” (62%), a “*Blue and Sustainable Ocean Economy*” (51%), and “*Marine Pollution*¹⁸” (46%). These three ocean topics/issues were particularly relevant to South and Southeast Asian ECOPs, gathering on average 57% and 64% of votes, respectively, compared to only 39% in East Asia (**Figure 19**). It is worth noting that more than 70% of Southeast Asian respondents resonated with the first two options on “*Coastal Ecosystems and Community Resilience*” and a “*Blue and Sustainable Ocean Economy*”, the greatest subregional totals recorded in this question.

¹⁸ Together with the [Sustainable Ocean Alliance \(SOA\)](#), the ECOP Programme co-organized and co-moderated the first episode of their 2023 joint regional webinar series, which was titled: “*Young leaders reimagine a clean ocean without plastic pollution in Asia*”. The recording can be accessed at the following link: <https://www.youtube.com/watch?v=y8YhIVU38JQ&list=PLIJVW7Wt8pT7Mcs54XZwopAVBExPRaLJe&index=1>

Contemporarily important and innovative research fields such as “*Marine Genetic Resources*” (17%), “*Multi-Hazard Early Warning Systems*” (17%), “*Multiple Ocean Stressors*” (24%), and “*Indigenous and Traditional Knowledge Systems*” (25%) did not attract as much interest from ECOPs in Asia (less than or equal to a quarter of votes each) (**Figure 18**). However, the proportion of respondents selecting the latter one (25%) is encouraging, considering how critical and necessary it is to meaningfully and inclusively engage indigenous communities and traditional knowledge holders during the UN Ocean Decade. Similar to what was previously observed for the top 3 ocean topics, these lower-rated options are mainly resonating with and inspiring South and Southeast Asian respondents (**Figure 19**).

While East Asian ECOPs are consistently showing the least interest in the presented options, one exception concerns “*Deep Sea Research & Management*”, which accounted for 40% of regional votes (**Figure 18**), and close to 50% in East Asia (**Figure 19**). For East Asian respondents, this topic is on par with how much interest they expressed in “*Coastal Ecosystems and Community Resilience*”.

Several other ocean topics/issues gathered a significant number of votes (i.e., accounting for more than a third of regional respondents), including “*Ocean-Climate Nexus*” (41%), “*Ocean Observations and Seabed Mapping*” (40%), “*Ocean Literacy*” (37%), “*Capacity Development*” (36%), “*Fisheries and Blue Food*” (33%), “*Marine Spatial Planning*” (33%), and “*Ocean Acidification*” (30%). All of these ocean focus areas are critical to the success of the UN Ocean Decade, many of which fall under the purview of some endorsed Decade Actions (especially overarching Programmes) and Decade coordinating agencies/bodies.

In addition to the pre-selected ocean topics/issues that survey respondents could choose from, more than 15 other valuable ideas and options were shared as open-ended answers, including, *inter alia*: “*Coral Reef Ecosystems*”, “*Polar Studies and Research*”, “*Gender Equity and Gender Studies*”, “*Food Security*”, “*International Environmental Law*”, “*Marine Policy and Ocean Governance*”, “*Climate Justice*”, “*Ocean data management*”, “*Ocean predictions*”, “*Environmental, Social and Governance (ESG) investing*”, and “*Citizen science*”.



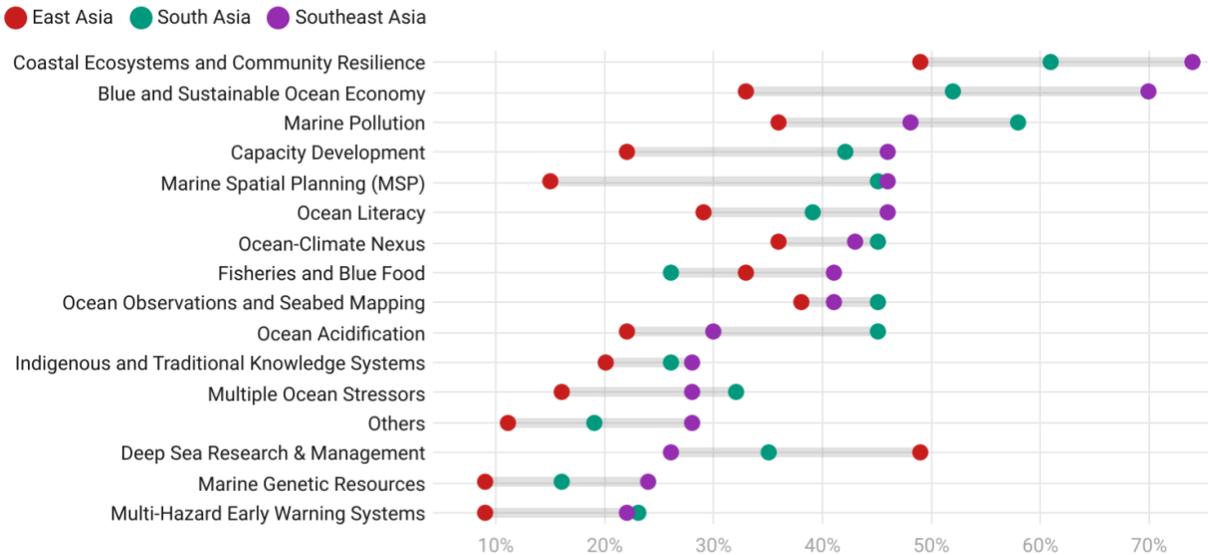


Figure 19. Percentage of survey respondents (%) selecting each ocean topic/issue (multiple choices available), disaggregated by subregion. *The dot chart was created with [Datawrapper](#).*

II.9 Vision for 2030

The final (and optional) question of the survey sought to encapsulate the vision of ECOPs for achieving a successful conclusion to the UN Ocean Decade in 2030 in Asia, using only a few words. The creative and hopeful nature of this open-ended question aimed at capturing what matters the most to ECOPs in Asia and whether the spirit of the Ocean Decade is permeating through their responses.

A non-exhaustive list of powerful and inspiring statements, insights and ideas are compiled in **Table 6** below, while a natural language analysis was performed to extract the most popular keywords used by survey respondents, and displayed as a word cloud in **Figure 20**.

Table 6. Non-exhaustive list of statements, insights and ideas openly shared by survey respondents when answering Question 13 (see Annex 1)

- ❖ “Clean healthy ocean”
- ❖ “Protection of a significant amount of the ocean whilst prioritizing equitable sharing of both costs and benefits to all involved stakeholders”
- ❖ “Sustainable Ocean, more responsible about Environment and be aware of what you do and how your actions can combat Climate Change and Global Warming”
- ❖ “Transdisciplinary network of ocean stakeholders”
- ❖ “Enhancing people’s behavioral based habits & actions to understand climate change impacts on nature & human life, minimizing plastic waste and food waste, reducing carbon emissions to significant extent, implementing reduce/reuse/recycle system in our daily life including transportation, food supply/consumption, water saving and not wasting [...]”
- ❖ “Coastal resilience improved by MSP”
- ❖ “ECOPs around the world complement each other producing actionable solutions”

- ❖ *“Understanding deep ocean environments”*
- ❖ *”More understanding by citizens”*
- ❖ *”Resilient coastal communities”*
- ❖ *“More balanced development in ocean research among the countries”*
- ❖ *“Most people appreciate taking custody of the ocean”*
- ❖ *“Much more people are aware about ocean pollution”*
- ❖ *“All markets and seafood buyers prioritizing sustainable seafood”*
- ❖ *“Discover the unknown”*
- ❖ *“More collaborative efforts among ECOP members”*
- ❖ *“Learning that there is different progress on different marine initiatives, corals are less bleached and getting restored, less marine debris, less overfishing and strong pull towards circular economy”*
- ❖ *“Thriving coral reefs in the ocean”*
- ❖ *“No deep seabed mining”*
- ❖ *“Equitable, Just, Peaceful World/Ocean”*
- ❖ *“MPAs in place & marine pollution under control”*
- ❖ *“Ocean sciences and engineering would become more mainstream, there would be more ocean science courses even at bachelors’ level, it would be much easier to get funding for ocean science/engineering other than just from Navy/defense sources”*
- ❖ *“Local-scale ecological understanding”*
- ❖ *“Our country has achieved 20% of mangrove protection by 2030”*
- ❖ *“Sustainable use of ocean service to develop national and international communities to alleviate poverty. Develop a comprehensive knowledge on the combination of physical, chemical, biological, meteorological oceanography to fully understand the ocean and utilize it for humankind.”*
- ❖ *“Public is aware about ocean health”*
- ❖ *“Sustainable ocean economy”*
- ❖ *“People are feeling closer to the ocean”*
- ❖ *“Sustainability in ocean-based carbon-dioxide removal”*
- ❖ *“Community participation”*
- ❖ *“Ocean would be free from all types of pollutions”*
- ❖ *“Food security especially for poor coastal communities. SIDS & coastal areas not submerged”*

As shown in **Figure 20**, the most frequent words mentioned in the 80 open-ended responses received (~60% of survey respondents) were: “Awareness”, “Sustainable”, “Community”, “Pollution”, “ECOPs” and “People”. Increasing awareness of ocean issues (especially plastic pollution) among the general public, understanding the impact that people have on the ocean and climate, reconnecting with our blue minds, and sailing towards a more sustainable healthy future where local communities and ECOPs play a central role as agents of change were some of the strongest themes that emerged.

The spirit of the UN Ocean Decade was reflected in the hope for more multi-stakeholder participation, knowledge generation, and international collaborations around ocean health. In addition, from the perspectives of ECOPs in Asia, the five most important Ocean Decade

III. National Decade Committees and ECOP nodes' Ecosystem in Asia

[National Decade Committees \(NDCs\)](#) are an essential part of the UN Ocean Decade coordination structure. Voluntary in nature, NDCs are multi-agency and multi-stakeholder national platforms translating the international Decade framework into local contexts. As national coordinating bodies, they are expected to: disseminate information pertaining to the UN Ocean Decade and enhance its awareness at the national level, implement national communication and outreach activities, facilitate engagement, dialogue, and collaborations between diverse national stakeholders and ocean initiatives, assess national priorities and needs, and support as well as advise the development of future Ocean Decade Actions¹⁹.

Back in April 2022, the [ECOP Asia Intermediary Report](#) compiled a list of NDCs in Asia which were either officially established or in the process of becoming so. At the time, five countries had established their own NDC, in India, Iran, [Japan](#), Russia, and the Republic of Korea, while four others expressed interest in developing one, in Bangladesh, China, the Philippines, and Turkey.

One year later, two out of the four countries which initially expressed interest in establishing an NDC did so, namely China and Turkey. They were subsequently joined by three other nations, with NDCs being officially launched in Indonesia, Oman and Thailand. As a result, by mid-2023, 10 NDCs have been established across Asia (see **Figure 21**), representing all subregions and accounting for 30% of the global total (N= 33). To remain up-to-date with the latest additions and changes in the global NDC landscape, access relevant materials (e.g., online recordings), and find the contact details of national focal point(s), the following [webpage](#) should be consulted.

Along the same vein, the ECOP Programme has dramatically expanded its number of national coordinating bodies over the past year, starting from only one national node in [Canada](#) in December 2021, to more than 20 national hubs (both informal and formal ones) by early June 2023, four of which are located in Asia (China, India, [Japan](#) and [Republic of Korea](#); **Figure 21**).

Essentially, national ECOP nodes are self-organized and voluntarily run by a coordination unit, which, in some cases, receives guidance and advice from a steering committee. They will determine their own processes for membership and participation, and are free to pursue any projects, activities, and initiatives of their choosing in order to grow, connect, support, and engage their national ECOP communities. This can include coordinating domestic events, workshops and other opportunities alongside national ocean stakeholders and Ocean Decade partners.

To coordinate this increasingly complex ecosystem, the core team of the ECOP Programme is adopting a collaborative governance approach, building trust and leadership at the national level. Specifically, regional coordinators are responsible for overseeing the operations of their national hubs, staying regularly in touch through their preferred communication channels, and providing guidance and support (whether in-kind and/or financial), according to the needs of the national node team. To facilitate the integration of new and prospective national ECOP nodes, a best practices manual will be prepared by the ECOP Programme later in 2023.

¹⁹ A new Best Practices manual for National Decade Committees (NDCs) has recently been published by the DCU team at IOC-UNESCO. It can be accessed here: <https://unesdoc.unesco.org/ark:/48223/pf0000385533>



Figure 21. Geographic distribution of all established National Decade Committees (NDCs) in Asia (as of June 2023), which are filled in blue. ECOP logos identify the four national ECOP nodes that have been active so far in the region (China, India, Japan and the Republic of Korea), alongside icons/visuals illustrating their different communication and engagement pathways. *This map was created with [Datawrapper](#).*

The four national ECOP chapters currently active in Asia (i.e., China, India, Japan and the Republic of Korea) are identified with the ECOP logo in **Figure 21**. They all emerged through the leadership of a few ECOP focal point(s), some of whom started as ECOP Asia interns in 2022 (i.e., China), while others were already active in informal ECOP groups since 2021 (i.e. India, Japan and the Republic of Korea). The governance structure, planned activities, and current engagement pathways differ for each national node. Their characteristics and current development stage (as of June 2023) are outlined in **Table 7**. It is worth highlighting that ECOP Malaysia is another national hub currently in progress in the region, which is planning to come together later in 2023.

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Table 7. List of national ECOP nodes in Asia and their development stage (as of June 2023)	
<p>1. Japan (informal group since Jan. 2022, formalized in July 2022)</p>	<ul style="list-style-type: none"> - Led by 2 coordinators. 54 members in total. Established their webpage in 2022, - Co-organized and co-moderated a kick-off symposium in January 2022, titled: “<i>Toward Creating ECOP Network in UN Decade of Ocean Science</i>”, - Launched their own video interview series in 2022. They release monthly ECOP stories to highlight the work done by ECOPs from different sectors and walks of life in Japan. Recorded in Japanese with English subtitles (available on YouTube), - Regularly circulates a bilingual newsletter to ECOP members. Currently designing a national ECOP survey and planning a new ECOP symposium in early 2024.
<p>2. Republic of Korea (informal group since Aug. 2022, formalized in May 2023)</p>	<ul style="list-style-type: none"> - Organized their first virtual gathering in August 2022, convening more than 30 ECOP members from all around Korea. Regular meetings are held every few months, - Led by 6 coordinators. 101 members in total. Established their webpage in 2023, - On May 3, 2023, during the spring meeting of the Korean Society of Oceanography in Busan, they organized a “dissertation symposium” for early career scientists, - Planning to develop mentoring initiatives to prepare the next generation of ocean professionals in the Republic of Korea.
<p>3. China (informal group since Oct. 2022, plan to be formalized in 2023)</p>	<ul style="list-style-type: none"> - A Steering Committee and coordination/support teams are currently being established. 120 members in the national registry, - Created a WeChat group called “ECOP China Network”, to offer a communication and networking platform for Chinese ECOPs. Currently composed of > 200 members, - Disseminated a national bilingual ECOP survey from November 2022 to January 2023, to enhance understanding of the needs, priorities, and challenges confronting Chinese ECOPs. A national report is currently in preparation, - Collaborates closely with China’s NDC and other Ocean Decade coordinating bodies in China, such as the Decade Collaborative Centre on Ocean-Climate Nexus (DCC-OCC).
<p>4. India (informal group active since 2021, plan to be formalized in 2023)</p>	<ul style="list-style-type: none"> - A Steering Committee and coordination/support teams are currently being established. 119 members in the national registry, - Released a YouTube video sharing testimonials from ECOPs across ocean-related institutions in India, in celebration of the UN Ocean Decade and “World Oceans Day” on June 8, 2021, - Created a WhatsApp group to provide a communication and networking platform for Indian ECOPs, - Disseminated a national ECOP survey from November 2022 to April 2023, to raise awareness of the UN Ocean Decade among ECOPs in India, and to better understand their needs and priorities. A national report is currently in preparation, -Plans to organize ocean literacy workshops benefiting the general public. Built relationships with key ocean institutions and Decade Coordinating bodies in India,
<p>5. Malaysia (in progress)</p>	<ul style="list-style-type: none"> - Already identified a local ECOP lead. Several expressions of interest have also been received from other ECOPs and partner institutions across the country.



IV. Taking stock of the Endorsed Decade Actions' Landscape in Asia

To achieve the 10 Ocean Decade Challenges²⁰ laid out in the [Implementation Plan](#), the Decade Coordination Unit (DCU) of the IOC-UNESCO releases biannual Calls for Decade Actions (CFDAs), a process that was first initiated in October 15, 2020 when the [first call was officially launched](#). CFDAs invite submissions for tangible initiatives that generally follow a particular theme and/or geographic focus, and which can take the form of:

- **Programmes:** long-term and interdisciplinary, which consist of component Projects and enabling Activities, with the aim of achieving one or more of the Ocean Decade Challenges. Usually global or regional in scale;
- **Projects:** discrete and focused undertakings, which will typically be hosted under the umbrella of an endorsed Programme and contribute to its overall mission. It can be regional, national or subnational in scale;
- **Activities:** one-off standalone initiatives, which can include, *inter alia*, workshops, training opportunities, conferences/symposia, hackathons, publications, exhibitions and awareness-raising events. Can be instrumental in helping Programmes or Projects achieve the Challenges they hope to tackle during the Ocean Decade; or
- **Contributions:** support either the implementation of an endorsed Ocean Decade Action (e.g., Programme, Project or Activity) or the coordination costs of the Ocean Decade. Resources provided by endorsed Contributions can be in-kind and/or financial.

The first CFDA in 2020 was not targeting a particular theme or geographic focus, instead, it was intended to be as broad as possible, attracting no less than 230 submissions, all types of Actions included (according to the [2021-2022 Ocean Decade Progress Report](#)). As a result of this first CFDA, 31 Decade Programmes, 92 Projects and 42 Contributions were ultimately endorsed, including the ECOP Programme, which was officially launched 2 years ago on “World Oceans Day” (June 8th, 2021). In terms of geographical representation (i.e., location of lead partner institution(s) from each endorsed Action), Asia was trailing behind Europe and North America, with 10% and 26% of endorsed Programmes and Projects being led by partner institutions based in Asia, respectively. These endorsement figures were even lower when looking at partner institutions with homes in Africa, Central/South America and Oceania²¹.

The [second Call for Decade Actions](#) was released in October 2021, nine months after the first CFDA closed. It was focusing on addressing priority issues related to three different Ocean Decade Challenges, namely: “*Marine Pollution*” (#1), “*Protection and Management of Marine Ecosystems*” (#2), and the “*Ocean-Climate Nexus*” (#5). The 2nd CFDA also welcomed additional Contributions, and listed the names of endorsed Programmes that were open for Project submissions during this Call (including the ECOP Programme). A total of 134 submissions, all Actions included, were received.

²⁰ The Ocean Decade Challenges represent the most immediate and pressing needs of the Ocean Decade. They were diligently identified through a multi-stakeholder participatory process that took place during the preparatory phase of the Ocean Decade. These 10 Challenges (which might evolve and be updated throughout the Decade, while new ones may be added as emergent issues surface) are grouped under 3 larger themes or categories: **(1)** “Knowledge and Solutions Challenges”, **(2)** “Essential Infrastructure Challenges” and **(3)** “Foundational Challenges”.

²¹ These statistics, alongside additional information, are all available in the first progress report of the UN Ocean Decade (2021-2022), which is freely accessible here: <https://unesdoc.unesco.org/ark:/48223/pf0000381708>

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The [third Call for Decade Actions](#) was released in mid-April 2022 and closed at the end of August. With the United Nations General Assembly declaring 2022 to be the [International Year of Artisanal Fisheries and Aquaculture](#), this 3rd CFDA was targeting Programmes aiming to address Ocean Decade Challenge #3 on “*Sustainable Blue Foods*” and Challenge #4 on a “*Sustainable and Equitable Ocean Economy*”.

From January 2021 to mid-April 2022, more than 270 endorsed Decade Activities took place around the world (mainly events), 11% of which were led by partner institutions in Asia, while 50% happened solely in Europe, as shown in the [2021-2022 Ocean Decade Progress Report](#). North and South America hosted more Decade Activities than in Asia, accounting for 18% and 13% of the total, respectively, while Africa (5%) and Oceania (3%) were shown to be the least active regions when it came to Decade Activities.

Since the publication of the [first Ocean Decade Progress Report](#) in June 2022, two additional CFDA's have been released. The [fourth Call for Decade Actions](#) opened in October 2022 and closed in January 2023. This time, the Ocean Decade solicited Programmes and Projects pertaining to Challenge #6 on “*Coastal Resilience*” and Challenge #8, which focuses on a “*Digital Representation of the Ocean*”.

At the time of writing this report, the [5th Call for Decade Actions](#) is currently open to Decade Programmes addressing priority sub-themes of Challenge #1 on “*Marine Pollution*”, namely plastic and nutrient pollution, and Challenge #2 on “*Ecosystem Restoration and Management*”, targeting submissions related to area-based management, ecosystem restoration and multiple ocean stressors. These two Decade Challenges were already part of the [2nd CFDA](#) in the fall of 2021. The renewed focus on Challenges 1 and 2 likely mirrors the current dynamics in global policy processes. Indeed, the Kunming-Montreal Global Biodiversity Framework was successfully adopted in December 2022, while the second session of the ‘intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution’ took place at the UNESCO headquarters in Paris from May 27 to June 2, 2023.

Since the very first Call for Decade Actions in 2020-2021, the ECOP Programme has always been inviting submissions from prospective Decade Projects. As of June 2023, [seven different Projects](#) are being hosted under the umbrella of the ECOP Programme²², two of which being of direct relevance to Asia: (1) “[The East-West Center’s Southeast Asian Ocean Professionals Program](#)” (EWCSEAOPP), which was endorsed in 2021 during the 1st CFDA, and (2) “[Devising Early-Career Capacity Development in the Indian Ocean Region](#)” (DECCaD-IO), a recently endorsed Project, which was submitted during the 3rd CFDA.

²² More information about these endorsed Decade Projects is available on the ECOP website: <https://www.ecopdecade.org/endorsed-projects/>

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Drawing from the available Decade endorsement data obtained during the initial three Calls for Decade Actions, which included decisions taken between January 2021 and March 2023, a list of endorsed Actions from lead institutions in Asia was compiled at the country-level (**Table 8; Annex 2**) and mapped accordingly, as shown in **Figure 22**. Over this period of time, 93 Ocean Decade Actions were endorsed in Asia, representing only 11.3% of the global total (N=824). When disaggregated by type of Actions: 4 Programmes, 34 Projects, 79 Contributions and 46 Activities were endorsed across countries in Asia, accounting for 8.5%, 14.5%, 11.5% and 10% of the global endorsement figures, respectively.



Figure 22. Geographic distribution of officially endorsed UN Decade Actions in Asia following the first three Calls for Decade Actions (as of March 2023). UN Decade Actions include (i) Activities; (ii) Contributions (including DCCs, DCOs and DIPs); (iii) Programmes and (iv) Projects. *This choropleth map was created with [Datawrapper](https://dataviz.com/).*

When examining the intra-regional distribution of Ocean Decade endorsements in Asia (**Figure 22**), the data reveal a noticeable concentration centered around three particular countries. In fact, more than half (56%) of all regionally endorsed Actions since 2021 have been hosted by institutions based in either China (n=20), Japan (n=18) or India (n=12).

Regarding their participation and level of engagement in the UN Ocean Decade convening framework, China has been, by far, the most active and ambitious country in Asia. Indeed, China has the most diverse endorsement portfolio in the region, being the only country hosting at least one of the four main types of endorsed Actions (i.e., Activities, Contributions, Projects & Programmes) (**Table 8**). Specifically, 80% of all endorsed Programmes in Asia are concentrated in China (**Table 8**; see **Appendix 2** for more details about these Programmes), and the country has also established three notable Decade Coordinating Agencies and Implementing Partners, including the recent [Decade Collaborative Centre on Ocean-Climate Nexus \(DCC-OCC\)](#).

On the other hand, while no Decade Programmes have been launched and led by institutions located in either Japan or India, both countries have been spearheading impactful Decade Activities, Contributions and Projects since the start of the Ocean Decade in January 2021. Importantly, during the first semester of 2023, India inaugurated its [Decade Collaborative Centre for the Indian Ocean Region \(DCC-IOR\)](#), thus strengthening and expanding the regional Decade coordinating capacity, alongside the DCC-OCC in China and the [Decade Coordination Office for the Western Pacific](#) hosted by [WESTPAC](#) in Thailand (**Table 8**; **Appendix 2**).

Established in 1989 and with a Secretariat office in Bangkok, Thailand, the IOC-Subcommission for the Western Pacific (WESTPAC) consists of 22 Member States from around the world, with notable representation from East, South and Southeast Asia. In 2022, WESTPAC was leading or co-leading (alongside [IOC-UNESCO](#) and [UNESCO Bangkok](#)) no less than 5 different endorsed Actions (1 Programme, 1 DCO and 3 Projects; see **Appendix 2** for more details), which were denoted as UN-led in **Table 8**. All UN-led endorsed Actions are concentrated in Thailand, the sixth one being managed by the [UN Economic and Social Commission for Asia and the Pacific](#) (UNESCAP), which is also headquartered in Bangkok, Thailand.

Outside of China, Japan, India and Thailand, a few other countries have also been playing a significant role in the regional Ocean Decade ecosystem, receiving endorsement for more than one Decade Action and/or having more than one type of Decade Action endorsed (e.g., 3 Activities and 2 Projects). In Asia, this situation applies to Indonesia (n=5), Israel (n=3), the Republic of Korea (n=6), the Russian Federation (n=6)²³ and Turkey (n=6).

Although Bangladesh, Iran, Malaysia, Pakistan, the Philippines, Singapore, Vietnam and Yemen have only been awarded 1 or 2 endorsement(s) each (either Activities or Projects, **Table 8**), it is remarkable to see endorsed Actions spanning all Asian sub-regions, despite an evident bias towards East Asia.

²³ When it comes to the Russian Federation, only endorsed Actions with relevance to ocean basins in Asia were retained (i.e., Caspian Sea, Indian Ocean, and Pacific Ocean).

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Table 8. Total number of endorsed Decade Actions in Asia (March 2023), disaggregated by country and endorsement type, i.e., Activities, Contributions, Programmes and Projects.

Note: Decade Collaborative Centers (DCCs), Decade Coordination Offices (DCOs), and Decade Implementing Partners (DIPs) are counted as Contributions. Some Decade Actions are hosted by United Nations entities and thus specified as ‘UN-led’.

Country	Total Endorsed Actions	Activities	Contributions	Programmes	Projects
Bangladesh	1	0	0	0	1
China	20	9	3 (incl. 1 DCC and 2 DIPs)	4	4
India	12	9	1 (incl. 1 DCC)	0	2
Indonesia	5	3	0	0	2
Iran	1	0	0	0	1
Israel	3	2	0	0	1
Japan	18	10	2	0	6
Malaysia	1	0	0	0	1
Pakistan	1	1	0	0	0
Philippines	2	2	0	0	0
Republic of Korea	6	3	0	0	3
Russian Federation*	6	0	0	0	6
Singapore	2	2	0	0	0
Thailand	7	0	2 (incl. 1 DCO and 1 UN-led)	1 (UN-led)	4 (incl. 3 UN-led)
Turkey	6	4	1	0	1
Vietnam	1	0	0	0	1
Yemen	1	1	0	0	0

* When it comes to the Russian Federation, only endorsed Actions with relevance to ocean basins in Asia were retained (i.e., Caspian Sea, Indian Ocean, and Pacific Ocean).

VI. Recommendations, Key Takeaways and Next Steps

- ❖ While disparities in access to resources and capacity development initiatives may be contributing factors to the current endorsement landscape in Asia, several measures could bolster regional participation in the UN Ocean Decade. Specifically, enhancing information sharing (e.g., Calls for Decade Actions), providing robust technical support, fostering cross-stakeholder collaborations on an international scale, promoting multilingual engagement, and offering inter-generational guidance are all crucial steps towards strengthening regional involvement,
- ❖ More than one year after the official launch of the UN Ocean Decade, awareness levels among ECOPs were not as high as initially anticipated, especially in South and Southeast Asia. Levels of awareness among ECOPs appear to be correlated with how engaged and active countries are in the Ocean Decade framework (e.g., number of endorsed Actions),
- ❖ Despite living in a subregion with an extensive and diverse portfolio of endorsed Actions, East Asian ECOPs consistently remained the most ‘conservative’ or neutral audience. It is not clear why that is the case, but a lack of channels to receive relevant information, language barriers, and differing cultural contexts and priorities are potential factors driving this trend. The ECOP Programme is dedicating time and resources to increase its understanding of cultural nuances, including disseminating national bilingual surveys,
- ❖ The top 5 ocean topics that ECOPs in Asia are the most eager to learn about and further their knowledge on are: (1) Coastal Ecosystems and Community Resilience; a (2) Blue and Sustainable Ocean Economy; (3) Marine Pollution; the (4) Ocean-Climate Nexus and (5) Ocean Observations and Seabed Mapping,
- ❖ Science communication skills, particularly public speaking, writing short-form content, social media engagement and graphic design, garnered considerable interest from ECOPs in Asia. These skills will be instrumental in sharing knowledge and spreading information about the UN Ocean Decade, especially through multiple languages,
- ❖ As National Decade Committees and ECOP Nodes emerge alongside each other in Asia, there is a strong potential for synergies and fruitful collaborations. In addition, with a regional Decade ecosystem that keeps on expanding and diversifying, ECOPs should be given opportunities to contribute and engage as equal partners, and to receive adequate support for their ideas, initiatives and career development. Travel support, internships, research grants/scholarships, and seed capital for young start-ups and nonprofits are important funding priorities identified by ECOPs in Asia,
- ❖ There is a need for greater engagement with ECOPs in West, South and Southeast Asia. The ECOP Programme is slowly but surely expanding its reach in these subregions, creating new bridges with key ocean stakeholders, including local ECOP champions. An interactive story map illustrating this network of networks will be unveiled later in 2023.



VI. Acknowledgement

The author is indebted to the whole Decade Coordination Unit (DCU) at IOC-UNESCO for their administrative and organizational support, and to the Norwegian Agency for Development Cooperation (NORAD) for financially supporting this work. Sincere appreciation goes to Monique Lima and Ana Elisa Bini for kindly compiling a list of all endorsed Decade Activities hosted by partner institutions based in Asia, over the period January 2021 to March 2023. The author would also like to extend his heartfelt thanks to Evgeniia Kostianaia (Global ECOP Programme Coordinator) for reviewing and enhancing the quality of this report, and to all ECOP focal points in Asia who are volunteering their time to develop vibrant and inclusive networks at both the subregional and national levels. Last but not least, the author wants to acknowledge the whole ECOP community in Asia for their invaluable inputs to the 2022 ECOP Asia survey, and for engaging with the ECOP Programme in their own capacity. This report would not have been possible without their voices, contributions, support and unwavering enthusiasm.

VII. Appendices

Appendix 1. 2022 ECOP Asia Survey content. Asterisks (*) identify mandatory questions. This questionnaire was created and made accessible on Google Forms.

2022 ECOP Asia Survey

 This online survey is brought to you by the Asian node of the Early Career Ocean Professionals (ECOP) Programme (www.ecopdecade.org/), which was endorsed by the UN Decade of Ocean Science for Sustainable Development in 2021.

 After launching our first Asia-wide survey last year, we are now aiming to reach an ever-larger number of ocean professionals across Asia, and further our understanding of the diverse needs and priorities of ECOPs in the region. This will be critical as we strive to co-design meaningful capacity-building approaches for ECOPs, co-deliver professional development opportunities and build a stronger sense of community belonging.

☆ We would highly appreciate your participation in this survey, which should take between 5-10 minutes to complete. Responses given to this survey will be treated with the utmost confidentiality. We will make sure to report results, insights and impacts back to you! For any inquiries on the survey and our Asian ECOP node, contact us: asia@ecopdecade.org.

Section 1/2

1. Which gender do you identify with?*

- Female,
- Male,
- Prefer not to answer
- Other (*open-ended answer*)

2. What is your nationality?*

[short answer]

3. What is your current country of residence?*

[short answer]

4. Which best describes your area(s) of expertise? (Select all that apply)*

- Advertisement/Communication
- Anthropology/Sociology
- Biogeochemical Science
- Biological Science
- Climate Science
- Data Science
- Ecology
- Business & Economics
- Education
- Engineering
- Environmental Chemistry
- Fishery Science
- Geography
- Journalism
- Law/Political Science
- Oceanography
- Physical Science
- Psychology
- Public Policy
- Others (open-ended answer)

5. Check all that apply to your current ocean profession/field*

- Science & Research
- Government/Policy
- NGOs/Non-profit
- UN Agency/Multilateral body
- Innovation/Entrepreneurship/Business
- Foundation/Philanthropic organization
- Civil Society Organization
- Community-based organization
- Others (open-ended answer)

6a. Do you self-identify as an ECOP?*

For the purpose of the ECOP Programme, an ECOP is a person who self-identifies as being early in their career (10 years or less of professional experience) within any field and sector related to the ocean (not only employed/paid positions).

- Yes
- No



6b. What is the first that comes to your mind when you think about Early Career Ocean Professionals (ECOPs)? *(In one word) [Optional]*

[short answer]

7a. Are you part of any Ocean related or Early Career Networks and initiatives? (Including UN Decade Actions)*

- Yes
- No

7b. If “Yes”, can you share their names and key focus areas? *[Optional]*

[short answer]

7c. If you answered “No”, would you be interested in becoming part of a network and/or in joining a UN Decade Action? *[Optional]*

- Yes
- No
- Maybe

Section 2/2 - Leveraging opportunities for ECOPs during the Ocean Decade

8a. How important to you are the following funding options for ECOPs in Asia?

(The rating of each option followed the Likert scale: (i) ‘Not at all important’, (ii) ‘Slightly important’, (iii) ‘Neutral’, (iv) ‘Important’, (v) ‘Very important’, and (vi) ‘I Don’t know’)

- Travel, accommodation & registration fees to attend in-person events
- Registration fees to participate in virtual events
- Academic scholarships & Research funding
- Fully-funded internships
- Financial support for start-ups & young non-profits

8b. Others? (Please specify)

[short answer]

9a. How would you rate the following networking and outreach initiatives for ECOPs?

(The rating of each option followed the Likert scale: (i) ‘Not at all important’, (ii) ‘Slightly important’, (iii) ‘Neutral’, (iv) ‘Important’, (v) ‘Very important’, and (vi) ‘I Don’t know’)

- ECOP newsletter (biweekly or monthly)
- Mentorship platform
- Establishing National Hubs for ECOPs
- Virtual ocean dialogues for ECOPs (1-2 times per year)
- ECOP groups on the Global Stakeholder Forum²⁴

9b. Others? (Please specify)

[short answer]

²⁴ As of June 2023, the Global Stakeholder Forum has been renamed as the [“Ocean Decade Network” \(ODN\)](#).

10. What type of communication skills would you like to develop during the ongoing Ocean Decade?*

- Writing opinion pieces, news stories and blogs
- Social media (e.g., Tweets, LinkedIn, etc.)
- Public speaking
- Designing graphics and visuals
- Producing videos
- Making podcasts
- Not interested
- Others (*open-ended answer*)

11. How much do you agree with the following statements?

(The rating of each option followed the Likert scale: (i) 'Strongly Disagree', (ii) 'Disagree', (iii) 'Neutral', (iv) 'Agree', (v) 'Strongly agree', and (vi) 'I Don't know')*

- ECOPs in my country are aware of the UN Ocean Decade
- ECOP & Ocean Decade communications should be shared in different languages
- I understand how I can contribute to the Ocean Decade
- I want to engage more with policy-makers & local communities

12. What Ocean topics would you be most interested to learn about and gain knowledge on?

(Through webinars, training, joint workshops, etc.)*

- Blue and Sustainable Ocean Economy
- Capacity Development
- Coastal Ecosystems and Community Resilience
- Deep Sea Research & Management
- Fisheries and Blue Food
- Indigenous and Traditional Knowledge Systems
- Marine Genetic Resources
- Marine Pollution
- Marine Spatial Planning (MSP)
- Ocean Acidification
- Ocean-Climate Nexus
- Ocean Observations and Seabed Mapping
- Ocean Literacy
- Multi-Hazard Early Warning Systems
- Multiple Ocean Stressors
- Others (*open-ended answer*)

13. Imagine we are now in 2030 towards the end of the UN Ocean Decade. What would achievement/success look like to you? (in 2-5 words) [*Optional*]

[*short answer*]

14. Any other thoughts, comments or questions you would like to share with us?

[*short or long answer*]



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15. Name & Email address [Optional]

[short answer]

Appendix 2. Complete list of endorsed Ocean Decade Actions in Asia, disaggregated by country and endorsement type (i.e., Activities, Contributions, Projects and Programmes). The Actions' name, lead institution(s), endorsement year and webpage (if existing) are also included.

Country	Endorsement type	Name	Lead Institution	Year
Bangladesh	Project	<i>Study of recent behavior of the Cyclones and Marine Heatwaves</i>	National Oceanographic and Maritime Institute (NOAMI)	2021
China	Activity	<i>Integrated Marine Biosphere Research (IMBeR) Program West Pacific Symposium 2021: Changing West Pacific Ocean - Science and Sustainability</i>	Integrated Marine Biosphere Research (IMBeR) International Project Office-China	2021
China	Activity	<i>Children Oceanic Pottery Project (In Local Language: 海中陶園)</i>	UNESCO Hong Kong Association	2022
China	Activity	<i>China Marine Protected Area Management and Monitoring Training Conference</i>	Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China	2022
China	Activity	<i>CLIVAR-GOOS-ICTP Workshop: From Global to Coastal: Cultivating New Solutions and Partnerships for an Enhanced Ocean Observing System in a Decade of Accelerating Change</i>	Climate and Ocean: Variability, Predictability and Change (CLIVAR) project	2022
China	Activity	<i>Physics of Estuaries and Coastal Seas Conferences (2022)</i>	State Key Laboratory of Estuarine and Coastal Research (East China Normal University)	2022
China	Activity	<i>The International Conference Series on Biodiversity, Ecology and Conservation of Marine Ecosystems</i>	The State Key Laboratory of Marine Pollution (City University of Hong Kong, HKSAR, China)	2021



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China	Activity	<i>The Painting Competition of Chinese Estuarine Ecological Features: Moving forward from the Sea and Intoxicated with the Natural Beauty</i>	Project Management Office of Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China	2022
China	Activity	<i>Shenzhen Ocean Decade Forum: S & T and Economics</i>	Southern University of Science and Technology	2022
China	Activity	<u>The BRICS Workshop on Climate Prediction</u>	The First institute of Oceanography, Ministry of Natural Resources, China	2022
China	Contribution (DCC)	<u>Decade Collaborative Centre on Ocean-Climate Nexus and Coordination Amongst Decade Implementing Partners in P. R. China (DCC-OCC)</u>	First Institute of Oceanography, Ministry of Natural Resources of China	2022
China	Contribution (DIP)	<u>Decade Implementing Partner: Administrative Centre for China's Agenda 21</u>	Ministry of Science and Technology	2022
China	Contribution (DIP)	<u>Decade Implementing Partner: Peking University</u>	Peking University	2022
China	Project	<u>Coastal Zones Under Intensifying Human Activities and Changing Climate: A Regional Programme Integrating Science, Management and Society to Support Ocean Sustainability (Coastal-SOS)</u>	Xiamen University	2021
China	Project	<u>Arctic Deep Observation for Multi-sphere Cycling</u>	Second Institute of Oceanography, Ministry of Natural Resources	2022
China	Project	<u>Joint International laboratory of Deltas</u>	State Key Laboratory of Estuarine and Coastal Research, East China Normal University	2022



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China	Project	<u>Demonstration of Chinese estuarine conservation (Est. Project)</u>	Project Management Office of Demonstration of Estuarine Biodiversity Conservation, Restoration and Protected Area Networking in China	2022
China	Programme	<u>Deltas associated with large rivers: Seeking solutions to the problem of sustainability</u>	The State Key laboratory of Estuarine and Coastal Research (SKLEC), East China Normal University	2021
China	Programme	<u>Global Estuaries Monitoring (GEM) Programme</u>	State Key Laboratory of Marine Pollution, City University of Hong Kong	2021
China	Programme	<u>Global Ocean Negative Carbon Emissions (Global-ONCE)</u>	Xiamen University	2022
China	Programme	<u>Ocean to climate Seamless Forecasting system (OSF)</u>	First Institute of Oceanography, Ministry of Natural Resources in China	2022
India	Activity	<i>Global Student Volunteers Meet Prelude to Women Leadership Event on 14 Sept on Marine Technology Engineering and Science</i>	Marine Technology Society India Section	2021
India	Activity	<i>Healthy Ocean</i>	Ministry of Earth Sciences	2022
India	Activity	<i>Indian Ocean Blue Economy Summit - Webinar on Blue economy in the Indian Ocean region towards UN Decade of Ocean Science for Sustainability (2021-2030)</i>	Intergovernmental Oceanographic Commission Regional Committee for the Central Indian Ocean	2021
India	Activity	<i>International Indian Ocean Science Conference (IIOSC) 2022</i>	Indian National Centre for Ocean Information Services (INCOIS)	2022
India	Activity	<i>Online competition for students on the theme 'Ocean for Sustainable Development'</i>	Ocean Society of India	2021
India/USA	Activity	<i>The Ocean Flag</i>	MOJO DESIGN STUDIOS	2022



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India	Activity	<i>Women Leadership Programme Virtual mode - on Marine Technology, Engineering and Sciences - Career opportunities for school and college students</i>	Marine Technology Society - India Section	2021
India	Activity	<i>Hackblue by Sathyabama-TBI</i>	Society of Sathyabama University - Technology Business Incubator	2023
India	Activity	<u>OCEANS 2022, Chennai</u>	IEEE – Oceanic Engineering Society	2022
India	Contribution (DCC)	<u>Decade Collaborative Centre for the Indian Ocean Region (DCC-IOR)</u>	Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Government of India	2022
India	Project	<u>Periodic cyclone effects on Gangetic food web</u>	Estuarine and Coastal Studies Foundation	2022
India	Project	<u>Devising Early-Career Capacity Development in the Indian Ocean region (DECCaD-IO)</u>	Early Career Scientists' Network at IIOE-2 JPO, INCOIS	2023
Indonesia	Activity	<i>Bluing Indonesia: Rebuilding Mangrove Forest in East Java, Indonesia</i>	Karbon Biru International	2022
Indonesia	Activity	<i>Tsunami Ready Board Game</i>	UNESCO IOC - Indian Ocean Tsunami Information Centre	2021
Indonesia	Activity	<i>UNESCO IOC Tsunami Ready Short Animation Videos</i>	UNESCO IOC - Indian Ocean Tsunami Information Centre	2021
Indonesia	Project	<i>Fisherman Weather Field School (SLCN)</i>	Agency for Meteorology Climatology and Geophysics (BMKG)	2022
Indonesia	Project	<u>Tsunami Potential Coastal Area of Indonesia, Mountain Anak Krakatau, Banten, Sunda Strait, Indonesia</u>	Indonesian Agency for Meteorology, Climatology and Geophysics	2021



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Iran	Project	<i><u>The West Asia Blue Waters</u></i>	UNESCO Category II Regional Education and Research Centre on Oceanography for West Asia	2021
Israel	Activity	<i>The 9th Haifa Conference in Marine Sciences: Climate-Ocean-Change</i>	University of Haifa	2022
Israel	Activity	<i><u>SeaAI Artificial Intelligence and Sea</u></i>	University of Haifa	2023
Israel	Project	<i><u>The EMS centre - model system for future oceans</u></i>	Leon H. Charney School of Marine Sciences, University of Haifa	2022
Japan	Activity	<i>Online special exhibitions "Marine Biodiversity" and E-Learning contents for further understanding of Marine Biodiversity</i>	JAMSTEC (Global Oceanographic Data Center; GODAC)	2021
Japan	Activity	<i>Distribution of booklet "Book of Japan's Practices for 'United Nations Decade of Ocean Science'" (tentative title)</i>	Ocean Policy Research Institute, the Sasakawa Peace Foundation	2021
Japan	Activity	<i>Publication of annual newsletter of the Center for International Collaboration of Atmosphere and Ocean Research Institute</i>	Atmosphere and Ocean Research Institute, The University of Tokyo	2021
Japan	Activity	<i>Publication of Japanese book for children "Exploration of the end of the biosphere" and Donation of it to local schools</i>	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	2022
Japan	Activity	<i>Publish a book entitled "Chemical reference materials for ocean science: history, production and certification" as an open access book</i>	The Japan Agency for Marine-Earth Science and Technology	2022
Japan	Activity	<i>Reports and in-train magazine</i>	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	2021



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Japan	Activity	<i>Shinkai no Survival! The Movie</i>	Ministry of Education, Culture, Sports, Science and Technology	2021
Japan	Activity	<i>Web column publication</i>	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	2021
Japan	Activity	<i>Website of Japan National Committee for the United Nations Decade of Ocean Science for Sustainable Development (tentative title)</i>	Ocean Policy Research Institute, the Sasakawa Peace Foundation	2021
Japan	Activity	<u>Marine Socio-Ecological System Symposium (MSEAS-2024)</u>	PICES (North Pacific Marine Science Organization)	2021
Japan	Contribution	<u>J-DESC-IODP Literacy initiative</u>	Japan Drilling Earth Science Consortium (J-DESC)	2022
Japan	Contribution	<u>Ecosystem Studies of Subarctic and Arctic Seas</u>	Japan Agency for Marine-Earth Science and Technology (JAMSTEC)	2023
Japan	Project	<u>Chemistry, Observation, Ecology of Submarine Seeps</u>	Atmosphere and Ocean Research Institute, University of Tokyo	2022
Japan	Project	<u>Establishment of Circulatory Aquaculture, Improvement of Shallow Waters and Evaluation System Aiming for Blue Economy</u>	Aquatic Marine Environmental Education Program, Tokyo University of Marine Science and Technology	2021
Japan	Project	<u>Global Marine plastic litter Monitoring Network Project (GMMN Project)</u>	Ministry of the Environment, Japan (MOEJ)	2021
Japan	Project	<u>Indigenous People, Traditional Ecological Knowledge, and Climate Change: The Iconic Underwater Cultural Heritage of Stone Tidal Weirs</u>	Tokyo University of Marine Science and Technology [UNESCO UNITWIN Network for Underwater Archaeology]	2021
Japan	Project	<u>Monitoring of the deep-sea organisms for MPAs</u>	Japan Agency for Marine-Earth Science and Technology	2022



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Japan	Project	<u><i>Synergistic Observing Network for Ocean Prediction</i></u>	Meteorological Research Institute/Japan Meteorological Agency	2022
Malaysia	Project	<u><i>Fish for Africa Innovation Hub</i></u>	World Fish Center	2021
Pakistan	Activity	<i>Ocean day Seminar, 8 June 2022</i>	National Institute of Oceanography	2022
Philippines	Activity	<i>PROUD-PH celebrates MANAMo</i>	x.1 foundation inc.	2022
Philippines	Activity	<i>Month of the Ocean celebration adopting the UN Ocean Decade's theme</i>	Department of Environment and Natural Resources – Biodiversity Management Bureau (DENR-BMB)	2021
Republic of Korea	Activity	<i>Global Women's Leadership Training Program on Marine Bio-Resources Information System</i>	National Marine Biodiversity Institute of Korea	2022
Republic of Korea	Activity	<i>The 2nd JOISS (Jurisdictional Ocean Information Sharing System) Ocean Science Big Data Contest</i>	Haebom Data Inc.	2022
Republic of Korea	Activity	<u><i>7th International Marine Debris Conference</i></u>	United Nations Environment Programme	2022
Republic of Korea	Project	<u><i>Mesopelagic Ecosystem and Biopump Dynamics and Connectivity in the Pacific (MEBIDyC-P)</i></u>	Korea Institute of Ocean Science and Technology (KIOST)	2021
Republic of Korea	Project	<u><i>Ocean Effects on Climate Variability of the Northwest Pacific</i></u>	Korea Institute of Ocean Science and Technology (KIOST)	2021
Republic of Korea	Project	<u><i>Subseasonal to Seasonal North Pacific Prediction</i></u>	Korea Institute of Ocean Science and Technology (KIOST)	2022
Russian Federation	Project	<i>A framework for effective trans-national consolidation within marine research, education and management in the Northwestern Pacific and Asian Marginal Seas (FREM-PAMS)</i>	V.I. Il'ichev Pacific Oceanological Institute, Far Eastern Branch of the Russian Academy of Sciences	2021



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Russian Federation	Project	<u>Comprehensive multidisciplinary research and monitoring of ecosystems of the Arctic Ocean and its seas</u>	Arctic and Antarctic Research Institute (AARI)	2021
Russian Federation	Project	<u>Development of a warning system for predicting the risk of formation of intense atmospheric vortices of various spatial and temporal scales (water tornadoes, polar mesocyclones) over the seas of the Arctic and middle latitudes</u>	Research and Production Association "Typhoon" (RPA "Typhoon")	2021
Russian Federation	Project	<u>Geosystems and Mineral Resources in The Transition Continent-Ocean Zones and Open Ocean (GEOMIR)</u>	V.I. Il'ichev Pacific Oceanological Institute, Far Eastern Branch of Russian Academy of Sciences	2021
Russian Federation	Project	<u>The Caspian Sea Digital Twin</u>	P.P. Shirshov Institute of Oceanology, Russian Academy of Sciences	2021
Russian Federation	Project	<u>Training-through-Research (Floating University)</u>	Capacity Building Working Group for UN Decade of Ocean Sciences, National Oceanographic Commission of Russian Federation	2021
Singapore	Activity	<u>2022 IEEE/OES Autonomous Underwater Vehicle Symposium</u>	IEEE – Oceanic Engineering Society	2022
Singapore	Activity	<u>Singapore Autonomous Underwater Vehicle Challenge</u>	IEEE – Oceanic Engineering Society	2022
Southeast Asia/USA	Project	<u>The East-West Center's Southeast Asian Ocean Professionals Program (#EWCSEAOPP)</u>	East-West Center	2021
Thailand	Contribution (UN-led)	<u>Accelerating the delivery of SDG14 in Asia and the Pacific</u>	United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)	2022
Thailand	Contribution (DCO)	<u>Decade Coordination Office for the Western Pacific</u>	IOC Sub-Commission for the West Pacific (IOC-WESTPAC)	2022



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Thailand	Programme (UN-led)	<u>Explore the strongest ocean current in the Western Pacific: the 2nd Cooperative Study of Kuroshio and Adjacent Regions - from its sciences to human well beings</u>	WESTPAC, IOC-UNESCO and UNESCO Bangkok	2022
Thailand	Project	<u>Bay of Bengal Large Marine Ecosystem ProjectII</u>	IUCN Asia Regional Office	2022
Thailand	Project (UN-led)	<u>Stem the tide of Asia's riverine plastic emission into the ocean</u>	IOC-WESTPAC, IOC-UNESCO	2022
Thailand	Project (UN-led)	<u>UN21: Accelerate Marine Spatial Planning in the Western Pacific</u>	IOC Sub-Commission for the Western Pacific, IOC/UNESCO	2022
Thailand	Project (UN-led)	<u>UN23: Accelerating capacity development transformations in the Western Pacific - Regional Network of Training and Research Centers (RTRCs) on Marine Science</u>	IOC Sub-Commission for the Western Pacific (WESTPAC), IOC/UNESCO & UNESCO Bangkok	2022
Turkey	Activity	TUDAV Alize Ocean Racing Transquadra Data Survey	Turkish Marine Research Foundation	2021
Turkey	Activity	UNDOS for Sustainable Development Panel	Turkish National Commission for UNESCO	2021
Turkey	Activity	8 June World Ocean Day Panel	Turkish Marine Research Foundation	2021
Turkey	Activity	<u>Marine Spaces – Planning/Culture/Climate</u>	Koç University	2023
Turkey	Contribution	<u>Establishing Turkey's Marine Environment Strategy</u>	Ministry of Environment and Urbanization	2021
Turkey	Project	Advancing the European Seas' Marine Research and Innovation to Support their Biodiversity and Resilience Under Multi-stressors	Middle East Technical University Institute of Marine Sciences	2021
Vietnam	Project	<u>Impact of Black Carbon in Southeast Asia (SOOT-SEA)</u>	French National Research Institute for Sustainable Development	2021
Yemen	Activity	Yemen and Regional Maritime Strategy	The Union of Arab Academics	2022

