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Ministry of Environment and Forestry
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GPML
Global Partnership on Marine Litter

GPA
Global Programme of Action for the Protection of the Marine Environment from Land-based Activities

COBSEA
COORDINATING BODY ON THE SEAS OF EAST ASIA

Training of Trainers on Monitoring and Assessment of Marine Litter and Microplastics

9-13 September 2019 in Bali, Indonesia

Training report

Contents

1. Background and objectives

This report summarizes topics covered, lessons learned, and key issues identified at the Training of Trainers on Monitoring and Assessment of Marine Plastic Litter and Microplastics held on 9-13 September 2019 in Bali, Indonesia. The training was organized by the Coordinating Body on the Seas of East Asia (COBSEA), the Global Partnership on Marine Litter (GPML) and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), co-hosted by the Ministry of Environment and Forestry of Indonesia and the Regional Capacity Center on Clean Seas (RC3S) and implemented in partnership with Universitas Udayana (Udayana University) and Open Universiteit (Open University of the Netherlands).

The Training was based on the *Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean* developed by the Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP). Participants were provided with the Guidelines and a course manual with additional materials to support training sessions and exercises. All materials are available on the COBSEA website (www.cobsea.org).

The training aimed to build the foundation for course participants to develop monitoring and assessment programmes for plastic marine litter.
The overall learning objective was to enable participants to:

1. Establish/design a programme to monitor and assess the distribution and abundance of plastic litter;
2. Differentiate between different types of monitoring;
3. Apply several methods to monitor and assess the distribution and abundance of plastic litter;
4. Perform site selection appropriate for their own geographic context;
5. Report on the distribution and abundance of plastic litter;
6. Use data to inform and guide policy.

Participants included representatives of government agencies with marine litter-related mandates, research organizations, and focal points of COBSEA participating countries, with varying levels of monitoring knowledge and experience. All nine COBSEA participating countries were represented with exception of the Philippines.

Sessions were led by trainers of the United Nations Environment Programme (UN Environment) and COBSEA Secretariat, Universitas Udayana, Open Universiteit, Centre for Supporting Green Development (GreenHub), Commonwealth Scientific and Industrial Research Organisation (CSIRO), and East China Normal University.

The Global Partnership on Marine Litter (GPML) is a multi-stakeholder partnership that provides a unique mechanism to bring together all actors working to prevent marine litter and microplastics, with the aim of sharing knowledge and experience and advancing solutions to this pressing global issue. Its mission is to protect the global marine environment, human wellbeing and animal welfare by addressing the global problem of marine litter, in line with Target 14.1 of the Sustainable Development Goals (SDGs). Any entity working to prevent and reduce marine litter can join the Partnership at: https://gpmarinelitter.org/form/join-us

The Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA) is the only global intergovernmental mechanism directly addressing the connectivity between terrestrial, freshwater, coastal and marine ecosystems. It aims to be a source of conceptual and practical guidance to be drawn upon by national and/or regional authorities for devising and implementing sustained action to prevent, reduce, control and/or eliminate marine degradation from land-based activities.

The Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) is an advisory body, established in 1969, that advises the UN system on the scientific aspects of marine environmental protection. The GESAMP Working Group 40 (WG 40) of leading global experts focuses on the sources, fate and effects of plastics and microplastics in the marine environment. The GESAMP *Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean* are available at: http://bit.do/gesampguidelines

2. Overview of activities and topics

The training included both classroom sessions and a series of field visits to conduct marine litter sampling and laboratory analysis. The training provided an opportunity for participating countries of COBSEA to present ongoing marine litter planning and monitoring activities, share good practices, challenges and questions, and identify potential follow-up capacity development activities supported by COBSEA and the GPML. For information on methods and concepts mentioned in the following, refer to the *Guidelines for the Monitoring and Assessment of Plastic Litter in the Ocean* and the training Manual.

Day 1: Discussions on the first training day established a common understanding of plastic marine litter definitions, monitoring and assessment concepts and methodologies, key indicators and targets, and to introduce monitoring methods for shorelines (covered in *Guidelines* chapters 1-4). Participants shared updates of marine litter planning and monitoring initiatives in their countries and identified possible follow-up actions to address challenges and country needs and strengthen or develop national monitoring programmes.

Day 2: During the first day of field visits, participants conducted two exercises of shoreline monitoring with support from trainers, namely a coastal transect and coastal cleanup at a sandy beach. Following the practical exercises, the group discussed methods of processing shoreline samples and trainers demonstrated methods to monitor plastic litter in biota, using local university laboratory facilities. Trainers introduced methods of sea surface and seafloor monitoring.

Days 3 and 4: On the two consecutive days of field visits, participants split into two groups to conduct a sea surface trawl and collect a sediment sample from a mangrove forest and practice processing of sea surface and seafloor monitoring samples in the laboratory. Trainers presented examples of data processing of plastic and microplastic samples, requirements and steps for data analysis, shared case studies of monitoring activities in Bali and Vietnam and addressed participants' questions. On Day 4, participants had the opportunity to explore ideas for follow-up activities and additional support with trainers.

Day 5: On the last day of the training, UN Environment and the COBSEA Secretariat shared global and regional updates and upcoming activities on marine litter and participants presented needs and ideas for follow-up activities to the training. Trainers addressed remaining questions and key issues identified by participants throughout the training and presented certificates of participation.

3. Key issues and needs identified

The training showed a notable variance in stages of development of data collection systems and approaches applied in the East Asian Seas region. While all countries reported conducting different forms of marine litter surveys, including in particular coastal and riverine cleanups, capacity gaps remain with regard to applying standardized methods of monitoring and assessment and establishing national monitoring programmes to inform decision making on marine litter.

In preparation for the training, participants shared information on key needs for capacity building and challenges related to marine litter monitoring through a needs assessment survey. Trainers addressed these and other issues and questions raised by participants to tailor knowledge sharing at this training and follow-up support (see below) to suit regional priorities. Key issues and challenges identified included:

- the lack of a common understanding and use of key concepts and largely interchangeable terms such as marine litter, marine debris, plastic pollution, and microplastic;

- the challenge of integrating localized data collection into national monitoring systems and decision-making frameworks;
- the need for regional harmonization of monitoring methodologies and approaches to enable data comparability and facilitate transboundary tracking of plastic flows;
- the need for robust data to update existing estimates of plastic leakage and material flows and address priority issues in the region such as cross-border movement of plastic;
- the importance of an effective science-policy interface to ensure that understanding of types, sources, accumulation and pathways of pollution inform the development of targeted policies and measures;
- the opportunity to leverage synergies and harmonize approaches across regional frameworks and bodies including COBSEA, Association of Southeast Asian Nations (ASEAN) and Intergovernmental Oceanographic Commission Sub-Commission for the Western Pacific (IOC-WESTPAC) as well as to link national and regional action plans;
- the importance of quality assurance to generate robust and reliable data;
- the need for increased capacity of local authorities, volunteers, and government bodies to develop monitoring programmes and apply monitoring and assessment methods in line with international standards;
- the need for improved access to marine litter resources, tools and methodologies, including guidelines translated into national languages;
- the need to identify and apply methods that are most suitable to address country data collection and policy information needs and capacities;
- the opportunity to assess and internalize the cost of plastic pollution including consideration of social, economic, and environmental impacts to inform people-centred, socially responsible and sustainable solutions.

4. Opportunities for follow up

The Training of Trainers was planned as an initial regional-level event to build foundations for improved monitoring and assessment programmes in East Asian Seas countries with the intention of developing proposals for follow-up capacity building and knowledge sharing initiatives at national and regional level. Technical support will build on existing knowledge and established methodologies to avoid duplication and parallel processes and promote the harmonization of approaches in the region. Opportunities for further support through COBSEA, the GPA and GPML discussed at the training include:

- recruiting national consultants in participating countries to provide technical support for strengthening national monitoring programmes and marine litter planning frameworks;
- organizing national consultations to map out data availability, needs and stakeholders;
- developing webinars and targeted national training, including facilitating access for national stakeholders to the Massive Open Online Course (MOOC) on marine litter and modules on monitoring that are under development;
- technical and financial support to conduct waste leakage and accumulation hotspots and baseline surveys in 2020 and 2021, with support from East China Normal University;

- at the regional level, the COBSEA Working Group on Marine Litter and a monitoring expert group will be leveraged to share technical expertise and provide guidance on developing monitoring programmes;
- access to marine litter related research, knowledge and capacity building support will be available through a COBSEA knowledge hub and GPML Regional Node that is being developed with East China Normal University, National University of Singapore, the Economic Research Institute for ASEAN and East Asia (ERIA) and RC3S;
- participants can engage further through the GPML and join an expert group related to marine litter and/or monitoring.

During the training, country representatives identified follow-up actions and opportunities for further engagement on marine litter monitoring and assessment:

Participants from Vietnam mentioned that the development of their national marine litter action plan will include institutional provisions to improve the coordination between the Ministry of Environment and municipal-level authorities and communities. They identified resulting better vertical and horizontal integration as an opportunity to strengthen monitoring of local pollution as part of a national programme to inform planning.

Representatives from Thailand noted the adoption of their Roadmap for Plastic and Solid Waste Management 2018-2030 and highlighted the need for continued efforts to harmonize methodologies and improve reliable data collection by engaging all relevant national stakeholders including universities and communities.

Delegates from Singapore noted the established monitoring system developed with the National University of Singapore and the National Parks Board (NParks), as well as a new Zero Waste Action Plan. Lessons learned from developing planning and monitoring systems and the use of methodologies could be shared across through COBSEA channels to build coherence.

The Malaysian participants emphasized the need for evidence-driven policies, better research and knowledge sharing, for streamlining of institutional arrangements and a joint interpretation of marine litter concepts. Malaysia planned to identify areas to pilot monitoring and hotspot assessments with COBSEA support, building on existing methodologies, and to establish a scientific and technical committee for marine litter and microplastics to coordinate stakeholders and collect and share findings. Delegates invited strategic multi-year capacity building, training and financial support for local researchers, agencies and across ministries to strengthen monitoring.

Representatives of the Republic of Korea emphasized their interest in engaging citizens in monitoring activities to raise awareness and increase participation and noted the opportunity to apply methods discussed to conduct riverine and inland monitoring. They welcomed follow-up

training and capacity building activities for national stakeholders, including local government and students.

Indonesian participants highlighted two opportunities for follow-up support: firstly, to assist in mapping data availability and monitoring activities of different institutions and stakeholders including universities and civil society, to enable data access, harmonizing methodologies, and building on existing efforts. Secondly, to support training for local government agencies to build capacity for monitoring of marine litter.

The delegation from China highlighted the need for a better understanding of land-based and sea-based sources and pathways to inform policy making and reduce pollution at source. Participants mentioned their interest in establishing a national standard for monitoring for all stakeholders and agencies to ensure data interoperability and harmonization and welcomed sharing of best practices and strengthened international cooperation.

Representatives of Cambodia welcomed regional peer learning and knowledge sharing to strengthen the capacity of relevant national institutions and suggested a range of follow-up activities, such as establishing a multi-stakeholder community/expert group including NGOs and universities at national and subnational level to enable cooperation; translating guidelines into Khmer and harmonizing the understanding of terms and concepts; strengthening cooperation between provincial and national authorities and stakeholders to build ownership and participation; and identifying priority issues and impacts through national consultation and planning workshops. The delegation welcomed the opportunity to start activities with COBSEA support in early 2020, including an assessment of hotspots; facilitation of stakeholder engagement and outreach; enabling peer learning and capacity building between universities (e.g. in China and Cambodia); and build regionally coherent monitoring systems in Cambodia based on existing methodologies and lessons learned from the region.

Participants called for continued knowledge sharing and peer learning through COBSEA mechanisms and for a harmonization of monitoring methodologies and frameworks based on existing global and regional standards and guidelines. They welcomed additional trainings and support to deepen understanding of survey methods and to build capacity on:

- applying rigorous data analysis;
- establishing quality control;
- integrating findings into a national monitoring programme;
- establishing an effective science-policy interface to inform decision making;
- and mapping existing data and engaging relevant stakeholders across sectors.

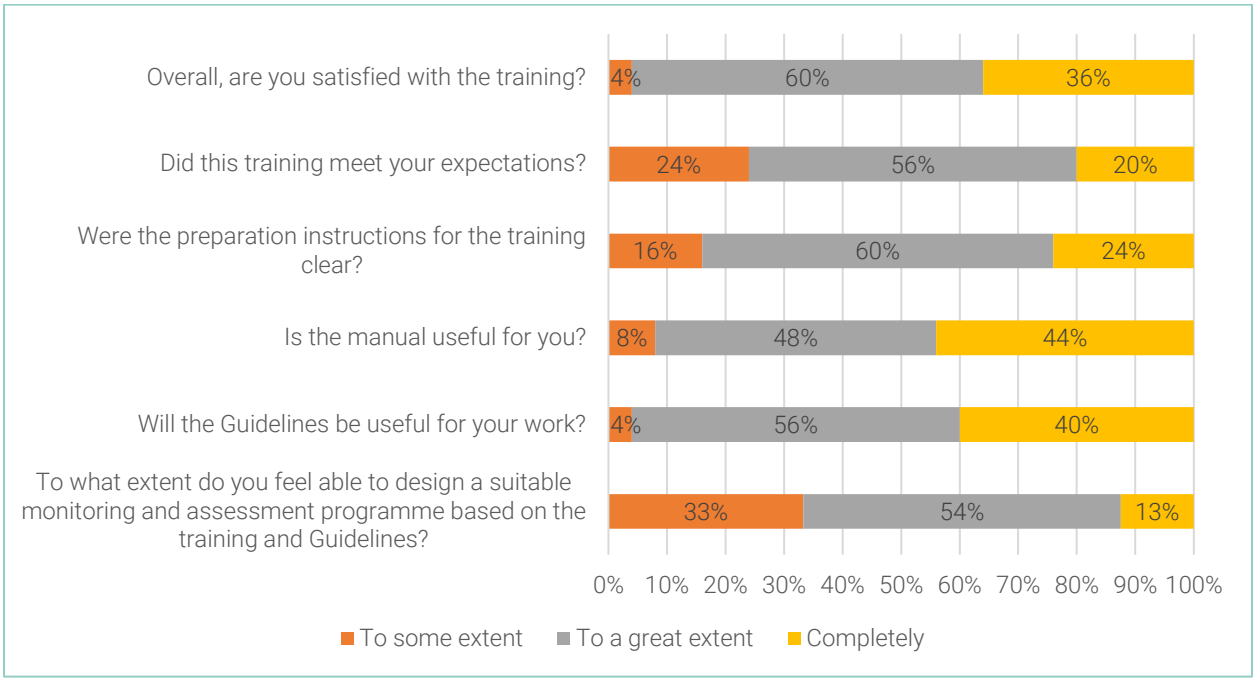
5. Conclusions and lessons learned

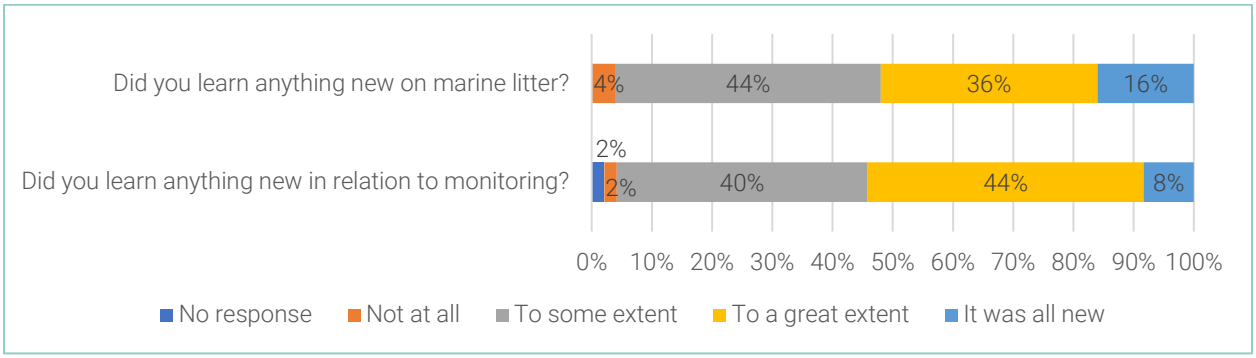
The training successfully demonstrated various survey methods, established a joint understanding of marine litter concepts and terms, built the foundation for marine litter monitoring and

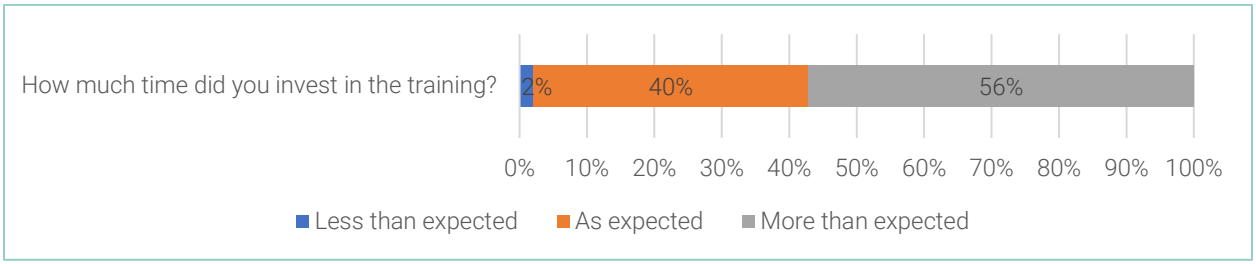
assessment and identified remaining capacity gaps and support needs toward developing regionally coherent national monitoring programmes. During the final session, participants were invited to evaluate the training, including its structure, topics, and learning methods (see section 6 for detailed outcomes). Suggestions and conclusions from participants and overall lessons learned are summarized below and will be taken into account to improve future trainings and follow-up capacity building support:

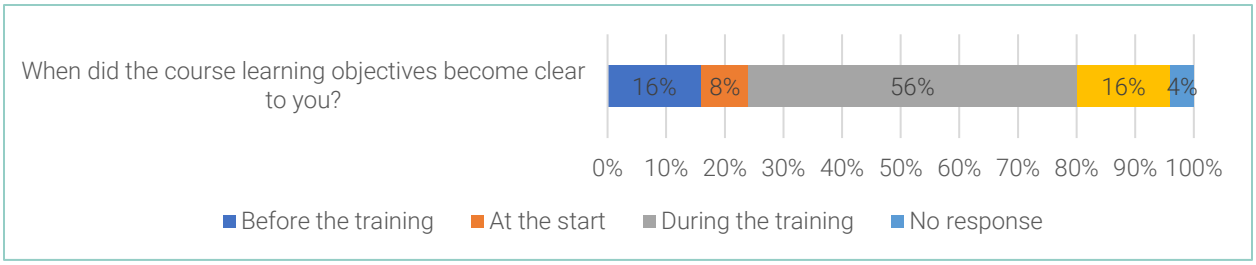
- Participants: Ensuring representation of different agencies can help to improve capacity and coordination across sectors. To ensure effective engagement, training groups should be kept under 25 participants and the targeted groups and level of experience for the foundational training should to be communicated clearly to country focal points. Communicating tasks and activities to participants clearly before and throughout the training facilitates knowledge sharing and engagement.
- Content and structure: A clear training structure and agenda is key to cover a wide range of topics and avoid overwhelming participants. More time can be dedicated to demonstrating methods in steps in classroom and/or using audio-visual material to prepare field work. Sessions should be clearly linked to chapters of the *Guidelines* and participants encouraged to read relevant resource material beforehand. Retaining some flexibility allows for adjustment to local circumstances and participant needs. Reserving time for bilateral discussions with trainers is very useful to identify country needs and follow-up activities.
- Learning methods: Samples and a photo gallery of findings can be prepared and shared for the demonstration of methods and data analysis steps to complement group exercises. This may include demonstrating how to recognize different materials using a microscope. The use of good case studies and peer learning, and of audio-visual material before and during the training can make the application of learning more tangible. Translation of key guidance material and data sheets could be considered where needed.
- Implementation: The use of locally available equipment and facilities, including university laboratories and the identification of local approaches and limitations creates realistic settings for the application of methods and enables joint problem solving. Engaging local trainers and graduates/university students creates ownership and capacity for follow-up activities and increases flexibility to adjust to local circumstances. Establishing clear roles for trainers, a good understanding of processes, and using mobile communication channels facilitates coordination and smooth implementation. Careful selection of field sites, organization of permits and transportation maximize time spent on exercises.
- Topics: Within the limitations of the training, practical exercises and demonstration of methods should be linked clearly to next steps such as data analysis, integration of findings into a monitoring system, and channels to inform policy making. Future or follow-up trainings could also cover issues of quality assurance; overcoming limited capacity or lacking equipment; measuring impact over time; addressing transboundary material flows and regional harmonization; steps to building monitoring programmes; and engagement of stakeholders including private sector, academia and local communities.

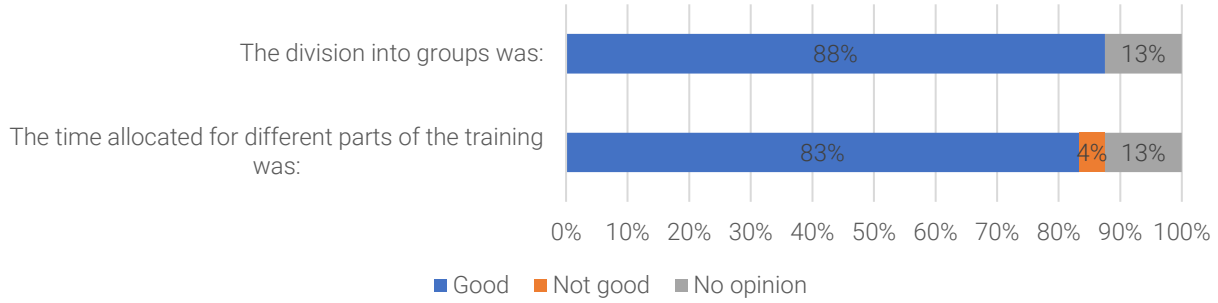
6. Evaluation











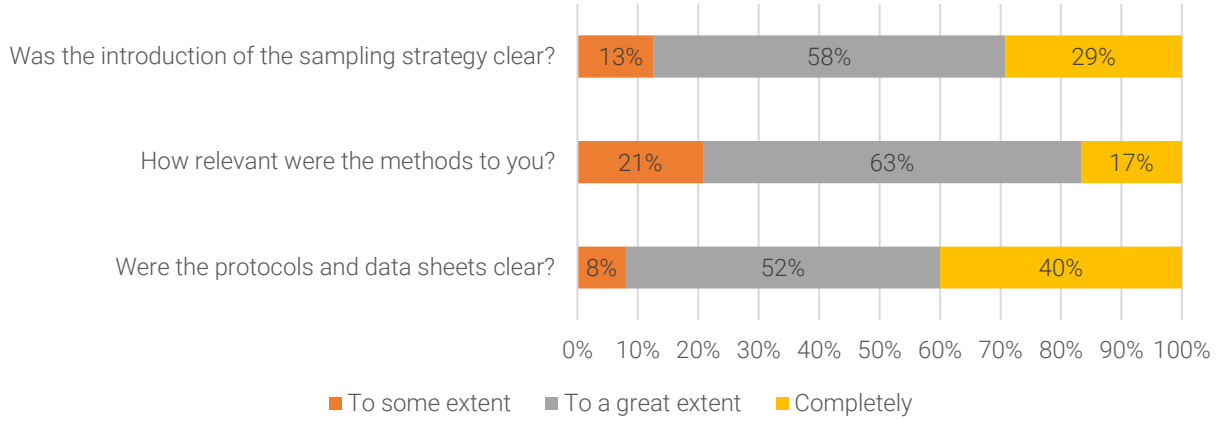
Comments – I would have liked more time for:

- Sampling, sorting and analysis
- Lab time for data processing analysis, including sediment samples
- Discussion, including with trainers and on results of sampling
- Preparation of field work, including use of videos

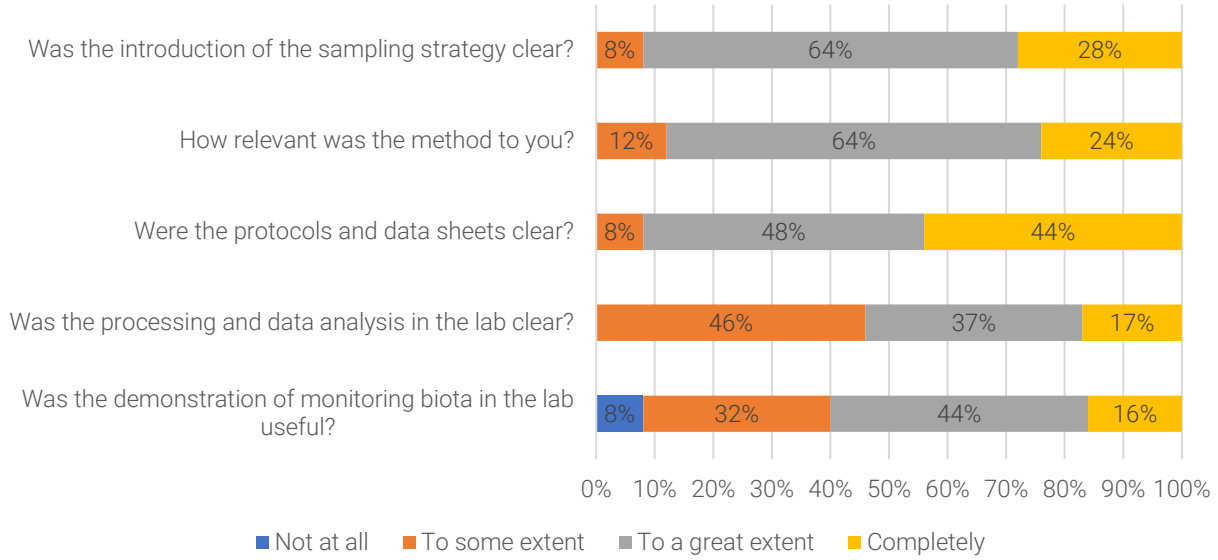
Comments – I would have liked less time for:

- Travelling and logistics
- Coastal litter monitoring
- Experiments in the lab
- Eating – you fed us a lot on the trip

Method 1: Monitoring of the shoreline



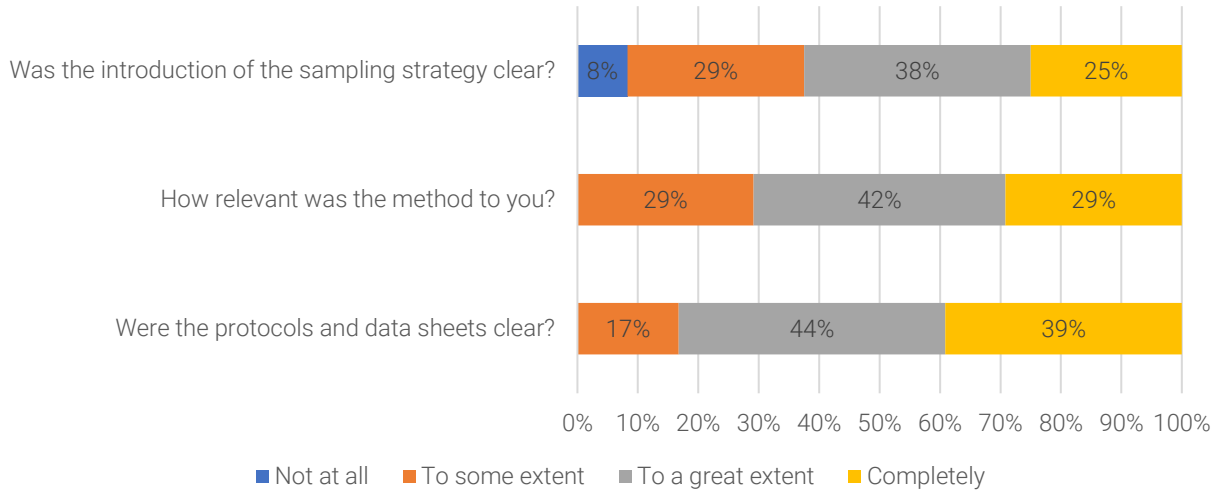
Method 2: Monitoring of the sea surface



Comments – Method 2:

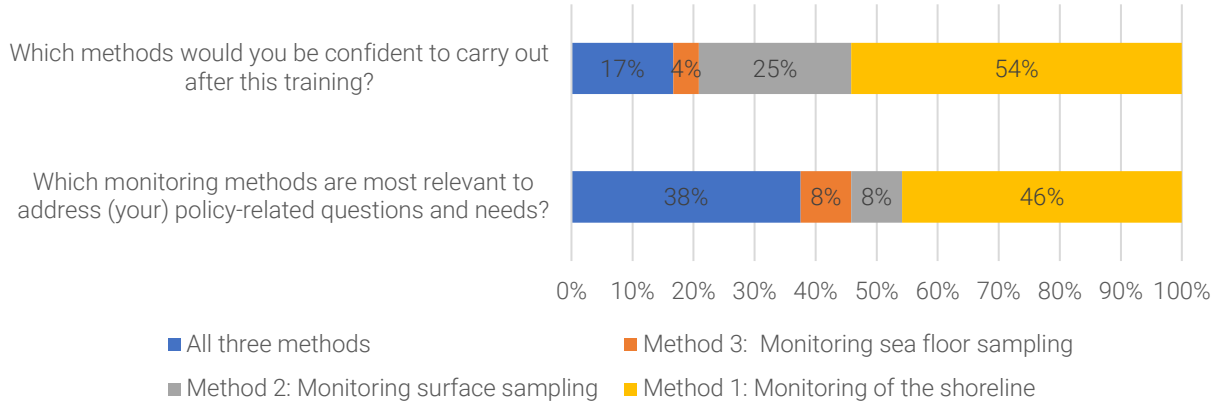
- It would be useful if explanation was given on why the National Oceanic and Atmospheric Administration (NOAA) method was used and why it is widely used.
- This method is not related to my tasks.
- More time is needed.

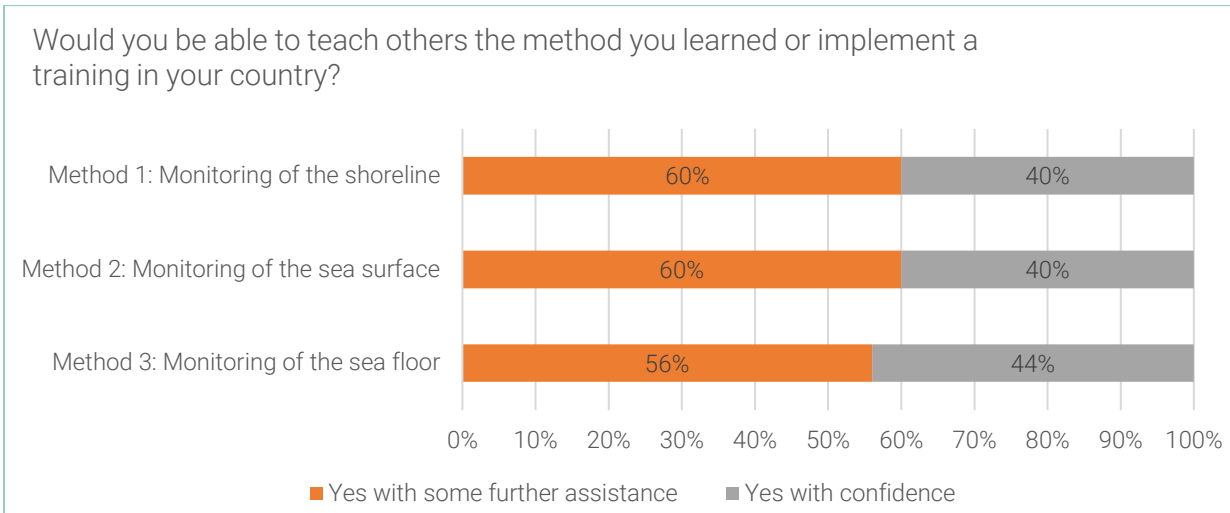
Method 3: Monitoring of the sea floor



Comments – Method 3:

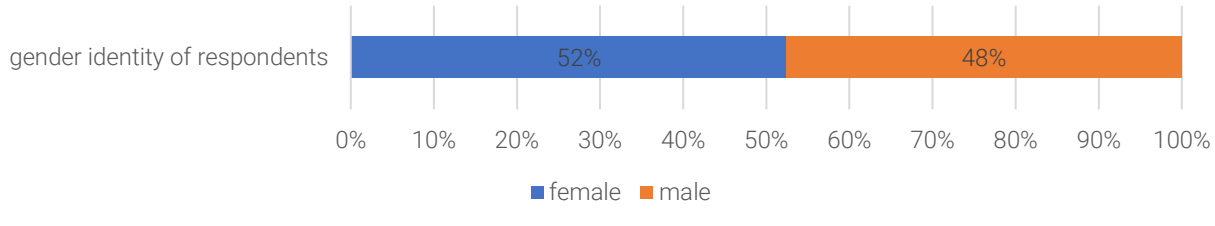
- Would be great if we actually got to process the sediment samples pouring of chemicals etc. to help retain knowledge. We should also be taught the use of a Van Veen Grab for taking sea floor samples as we only took samples in the mangrove forest.





Additional comments:

- We didn't experience the complete sample collection and sample processing, thus I am not too confident in teaching the methods but more confident in implementing them instead.
- Overall, the training is acceptable, but it would be good if the training were extended to ensure the trainee can train their country colleagues.
- Great learning opportunity. Well done organizers and resource persons.
- Welcome more trainings in future and exchange of ideas to promote the prevention of marine litter.



For further information and documentation of the training, please visit:
www.cobsea.org

Contact:
unep-cobsea@un.org

7. Annexes

Annex 1 – Agenda

Annex 2 – List of participants

Annex 1 – Agenda

Training of Trainers on Monitoring and Assessment of Marine Litter and Microplastics
9-13 September 2019 in Bali, Indonesia

Monday	
9:00 - 9:30	Coffee
9:30 - 9:45	Welcome remarks - UN Environment Programme (Heidi Savelli) - Ministry of Environment and Forestry (MOEF) & Regional Capacity Centre for Clean Seas (RC3S) (Dida Migfar Ridha, Director of Coastal and Marine Pollution and Degradation Control of MOEF, and *ex officio* Executive Director of RC3S) Short introduction on the training schedule (Ansje Löhr)
9:45 - 10:45	Introduction of Marine Litter pollution (Prof. Daoji Li) - *(Guidelines chapters 1 and 2)* - Background of the marine litter issue - Definitions and terminologies General outlook on the region and regional needs (Jerker Tamelander)
10:45 - 11:15	Break
11:15 - 12:15	Three participants: presentations on the planned national follow up activity (15 min per country) (Ansje Löhr) (Cambodia, South Korea, China)
12:15 - 13:15	Lunch
13:15 - 14:15	Three participants: presentations on the planned national follow up activity (15 min per country) (Ansje Löhr) (Singapore, Thailand, Malaysia)

14:15 – 14:45	Two participants: presentations on the planned national follow up activity (15 min per country) (Ansje Löhr) (Indonesia, Vietnam)
14:45 – 15:15	Break
15:15 - 16:15	Presentation on designing monitoring and assessment programmes (Denise Hardesty) – *Guidelines: Chapter 3* Get acquainted with the role of monitoring and assessment - Definition of main concepts and terminologies - Indicators and targets (significant risks and associated indicators) - Method differentiation
16:15 – 16:45	Introduction of monitoring of the shoreline (Denise Hardesty, Trang Nguyen, Gede Hendrawan) – *Guidelines: Chapter 4* - Description and relevance of the method - Sampling strategy
16:45 - 17:15	Introduction of monitoring biota (Prof. Daoji Li) – *Guidelines: Chapter 7* - Description and relevance of the method - Sampling strategy (indicator species)
Tuesday	
7:00 - 11:00	MONITORING OF THE SHORELINE (Denise Hardesty, Trang Nguyen, Gede Hendrawan, tbd) Groups 1-4
11:00 – 11:30	Recap and questions
11:30 - 12:30	Lunch

12:30 - 15:00	PROCESS SHORELINE SAMPLES (Denise Hardesty, Trang Nguyen, Gede Hendrawan, tbd) DEMONSTRATE MONITORING BIOTA in the lab (Gede Hendrawan and team)
15:00 - 15:45	Presentation on designing monitoring and assessment programmes (Denise Hardesty) - Reporting research findings
15:45 – 16:00	Introduction of sea surface monitoring method (Denise Hardesty, Trang Nguyen) *Guidelines Chapter 5* - Description and relevance of the method - Sampling strategy
16:00 - 16:15	Introduction of seafloor monitoring method (Prof. Daoji Li, Gede Hendrawan) – *Guidelines Chapter 6* - Description and relevance of the method - Sampling strategy
Wednesday	
7:00 - 11:00	SEA SURFACE MONITORING (Denise Hardesty, Trang Nguyen) - Sampling/ processing/ analysis (Groups 1-2)
7:00 - 11:00	MONITORING OF THE SEAFLOOR (Prof. Daoji Li, Gede Hendrawan) - Description and relevance of the method - Sampling strategy (Groups 3-4)
11:00 – 11:30	Recap and questions
11:30 - 12:30	Lunch

12:30 - 13:30	Presentation on designing monitoring and assessment programmes - data analysis (Denise Hardesty/ Prof Daoji Li) - *Guideline chapter 3* - Data requirements - Data analysis - Uncertainties
13:30 - 16:00	Discussion of participant's questions (All trainers)
Thursday	
7:00 - 11:00	SEA SURFACE MONITORING (Denise Hardesty, Trang Nguyen) - Sampling/ processing/ analysis (Group 3-4)
7:00 - 11:00	MONITORING OF THE SEAFLOOR (Prof. Daoji Li, Gede Hendrawan) - Description and relevance of the method - Sampling strategy (Group 1-2)
11:00 - 11:30	Recap and questions
11:30 - 12:30	Lunch
12:30 - 13:30	Case studies (Trang Nguyen, Gede Hendrawan) - Case study Vietnam - Case study Bali
13:30 - 14:30	Work on proposals and discuss with the trainers
14:30 – 15:00	Break

15:00 - 16:00	Work on proposals and discuss with the trainers
Friday	
8:00- 9:00	UN Environment Programme (Heidi Savelli) and COBSEA (Jerker Tamelander) - Global outlook and way forward
9:00 - 10:30	Short presentations on follow-up activities (5 min per country) (Ansje Löhr)
10:30 - 11:30	In-depth presentations on specific topics (All trainers) - Baseline, site selection, sub-sampling, sample size, reporting research findings etc.
11:30 – 13:00	Lunch
13:00 – 14:00	Wrap up and concluding remarks

Annex 2 – List of participants

Training of Trainers on Monitoring and Assessment of Marine Litter and Microplastics
9-13 September 2019 in Bali, Indonesia

Trainers and Organizers

Nr.	Name:	Organization:
1	Dr. Ansje Löhr	Open University of the Netherlands (OU)
2	Nguyen Thi Thu Trang	Centre for Supporting Green Development (GreenHub - NGO)
3	Dr. Denise Hardesty	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
4	Gede Hendrawan	Udayana University (Denpasar University)
5	Prof. Daoji Li	East China Normal University
6	Heidi Savelli	UN Environment Programme
7	Jerker Tamelander	Coordinating Body on the Seas of East Asia (COBSEA) / UN Environment Programme
8	Natalie Harms	COBSEA / UN Environment Programme
9	Heru Waluyo Koesworo	Regional Capacity Center for Clean Seas (RC3S)

Participants

Nr.	Name:	Organization:	Country:
1	Kim Nong	Ministry of Environment	Cambodia
2	Than Monomoyith	Department of marine and coastal zone conservation, ministry of environment	Cambodia

3	Dek Vimeanreaksmey	General Directorate of Environmental Protection, Ministry of Environment	Cambodia
4	Zhao Xiao	South China Institute of Environmental Sciences, MEE	China
5	Lihui An	Chinese Research Academy of Environmental Sciences	China
6	Qu Ling	National Marine Environmental Monitoring Center	China
7	Rotua Lelawaty Simamora	Ministry of Environment and Forestry	Indonesia
8	Anna Mutiara Krisdiana	Ministry of Environment and Forestry	Indonesia
9	Suryo Prasojo	Ministry of Marine and Fisheries)	Indonesia
10	Triyoni Purbonegoro	Indonesian Institute for Science/LIPI	Indonesia
11	Kinanti Wahyu Asesanti	Ministry of Environment and Forestry	Indonesia
12	Cheryl Rita Kaur Dalbir Singh	Maritime Institute of Malaysia (MIMA)	Malaysia
13	Jayaprakash Murulitharan	Ministry of Energy, Science, Technology, Environment and Climate Change	Malaysia
14	Jacqueline Chang	Consultant, MESTECC	Malaysia
15	Izarena Md. Repin	Department of Fisheries Malaysia	Malaysia
16	Eunkyung Lee	Our Sea of East Asia Network (OSEAN)	Republic of Korea
17	Won, Jong Ho	Korea Marine Environment Management Corporation	Republic of Korea
18	Park Myung Gwan	Ministry of Oceans and Fisheries	Republic of Korea
19	Joleen Chan	National University of Singapore	Singapore

20	Pei Rong Cheo	National Parks Board (NParks)	Singapore
21	Joanne Poh	Environmental Health Institute	Singapore
22	Wuttipong Wongin	Department of Marine and Coastal Resources (DMCR)	Thailand
23	Kittima Budsararat	DMCR	Thailand
24	Ratchanee Puttapreecha	DMCR	Thailand
25	Nguyen Thanh Thao Ms.	Vietnam Administration of Seas and Islands (VASI)	Vietnam
26	Luu Ngoc Cham	Department of Hanoi Urban Environment and Waste Management	Vietnam
27	Tran Quang Hai	Institute of Research on Seas and Islands/ VASI-MONRE	Vietnam