



Advancing Marine Citizen Science: Act Local to Go Regional

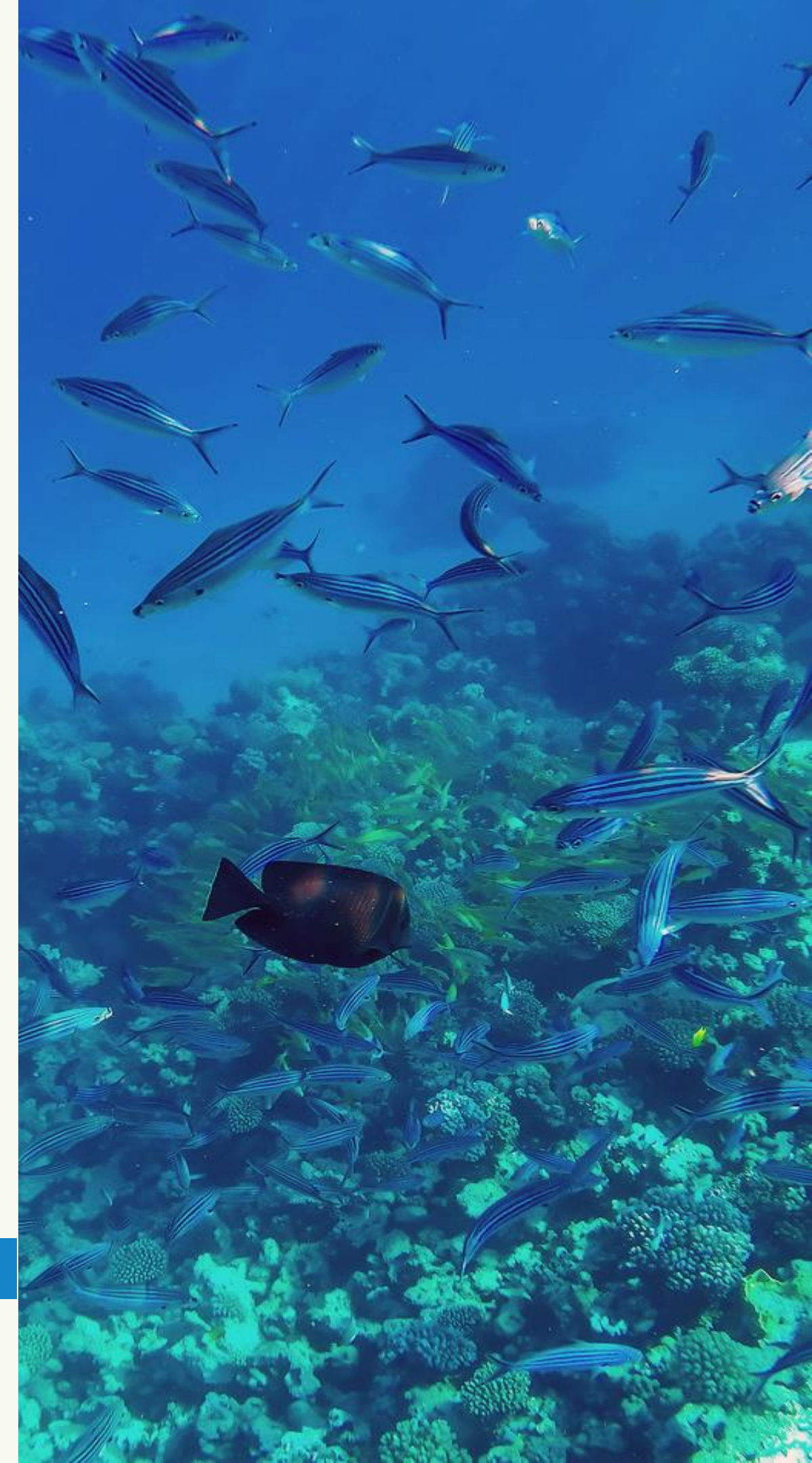
Yuki Minegishi (The University of Tokyo)
Abe Woo Sau Pinn (Universiti Sains Malaysia)



Summary Outline



1. Justification
2. Objectives
3. Major activities, outputs & outcomes (particular those accomplished during 2023-2024)
4. Problems encountered and recommended actions
5. Strategic considerations/thoughts for future development
6. Potential action plans for 2025-2026 and beyond



1. Justification



(Why this programme/project/working group is needed for the Sub-Commission)

The people and societies in the IOC Western Pacific region are tightly linked to the ocean in various aspects such as industries, marine resources, histories, cultures, etc. In this context, **the stakeholder of the ocean is the general citizens**. As general citizens (stakeholders) are responsible for conservation of marine environments and sustainable use of marine resources, **the level of ocean literacy of the general citizens needs to be raised** to share the awareness among communities and countries and take actions for global issues.

On the other hand, marine ecosystems and societies in the Western Pacific region are particular in each country, even in each local area within a country. Those particularities shape high natural and social diversities in a region and should be conserved for next generations and the globe. Although this fact needs to be understood by the stakeholders, i.e., the local people, **there is a big gap of knowledge on local natures and societies between citizens and scientists, and between local communities**.

The importance of and potential for citizen science has been realized in the last decade, and recently progressed, especially as beach-based projects. **Citizen science increases the public knowledge through the process of research**. Moreover, if local people play a major role in a scientific project, it will accelerate their understandings on their own local areas and even rediscovery the values of their area/sea, which consequently raises the ocean literacy from local citizens to a level of entire regional communities.

2. Objectives



To raise ocean literacy through cooperative surveys of marine environments by public and scientists

To achieve our objective, we will

- (1) engage general public and scientists in cooperative surveys of marine environments** such as marine microplastics and debris pollution and marine aquatic biodiversity monitoring etc.
- (2) set up four study sites** with protocols/guidelines to prepare sampling/survey, collect, gather and analyze the samples, and to return to and share the results with citizens, **to establish long-lasting survey/monitoring networks** in the Western Pacific region (at regional scales)
- (3) transfer the knowledge** of survey techniques from scientists to citizens through development of modules
- (4) organize lectures, meetings, open workshops and public symposia** about the basic knowledge on marine science to the general public across the region, **to connect local communities/scientists**

2. Tools & Strategy



<https://anemone.bio>

<https://db.anemone.bio>

<https://pogo-ocean.org/innovation-in-ocean-observing/activities/collect-citizen-observation-of-local-litter-in-coastal-ecosystems/>

3. Major activities, outputs & outcomes



Latest accomplishment, particular those during 2023 to 2024

Major activities (some photos on the next slide)

- WESTPAC scientific conference 2024 incubator (“ECOP’s Effort in Citizen Science”)
- eDNA international biodiversity monitoring and its application for endorsement of UN Ocean Decade action (No. 07/2024)
- School engagement by Malaysia team started with COLLECT Project

Outputs & Outcomes

- eDNA survey manual (English) and network development
- Contact list of ECOPs who are interested in/working on marine citizen science
- Long-term citizen science with one school in Malaysia established

Timeframe

Project start year: 2023

3. Major activities, outputs & outcomes

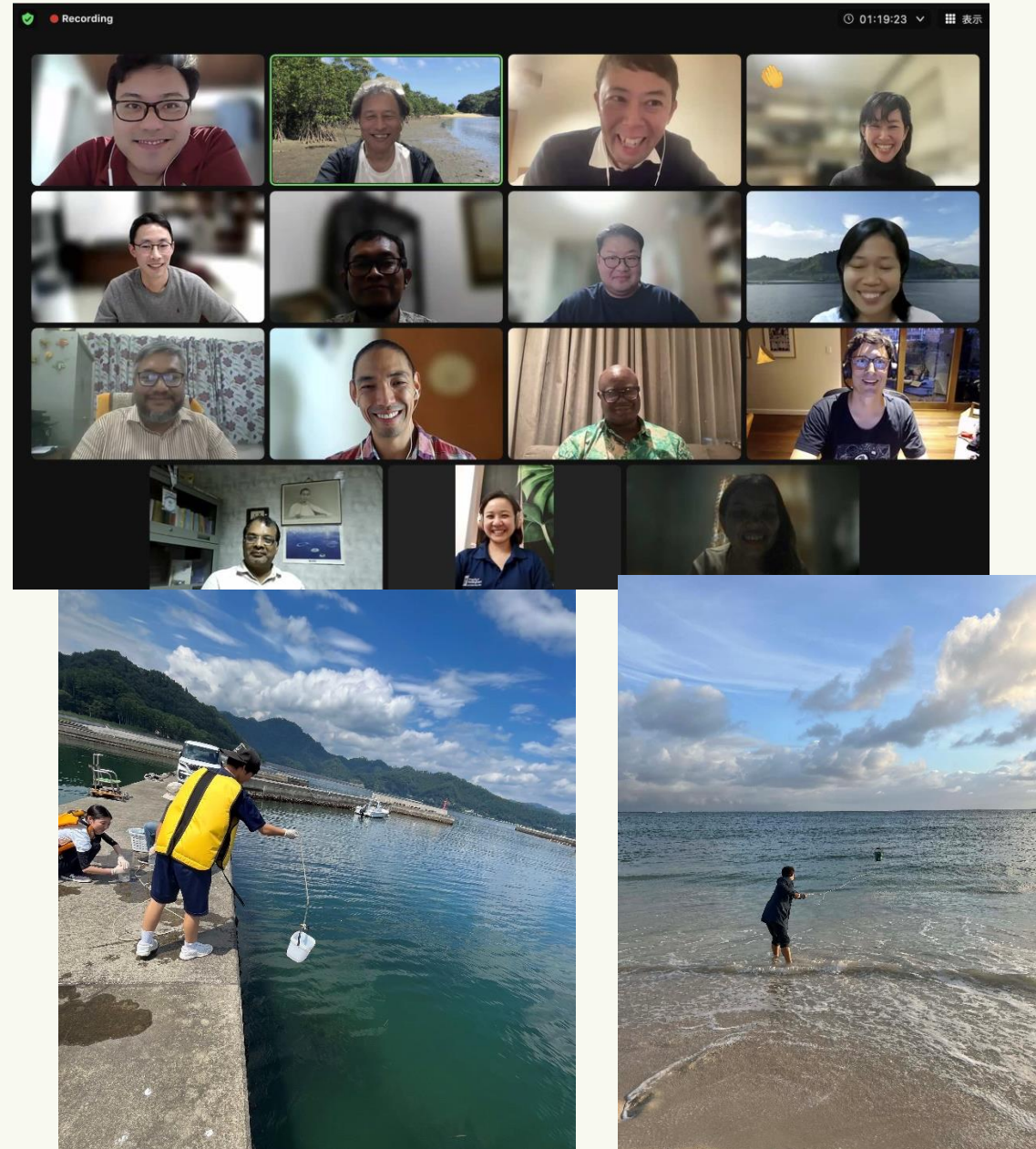


Latest accomplishment, particular those during 2023 to 2024

WESTPAC scientific conference 2024 incubator "ECOP's Effort in Citizen Science" (April, 2024)



eDNA international biodiversity monitoring Kick-off meeting (upper) and sampling (lower)



School engagement by Malaysia team with COLLECT Project



4. Problems encountered & recommended actions



Problems encountered

- Budgets for eDNA biodiversity monitoring
- Lack of engagement with members of the network and WG

Actions

- Application of eDNA international survey network for endorsement of UN Ocean Decade action (No. 07/2024)
- Collaborations with other projects and foundations to establish an international survey network involving citizens (and citizen groups)
- Need of more frequent engagement with members (perhaps online)

Timeframe

Project start year: 2023

5. Strategic considerations/thoughts for future development



- Collaborations with other projects and foundations to establish an international survey network involving citizens (and citizen groups)
- Application of eDNA international survey network for endorsement of UN Ocean Decade action (No. 07/2024)
- Application for endorsement of a Citizen Science Project for UN Ocean Decade Action
- Expanding network beyond scientist by including teachers in school or local NGO leaders



6. Potential action plans for future implementation

for the period of 2025-2026 and beyond

- Protocol and manual development in multiple languages (English, Thai, Malay/Indonesia, Tagalog..) for Citizen Science eDNA Monitoring and COLLECT Project. A workshop in Malaysia is proposed (April 2025?)
- Implementation of Citizen Science eDNA Monitoring and COLLECT in multiple partner countries (trial run) in Thailand, Philippines, and Indonesia
- Data analysis and lessons learned discussion through online webinar, output in terms of report/paper

Planned activities



Program	Plan				Funding Required		Remark
	Activities	Objectives	Expected outputs/outcomes	Date and place	IOC	Other sources (i.e. from national or international)	
	1. Protocol and Manual Development Workshop	Develop a standard protocol for the region on citizen science for eDNA monitoring and Marine Litter Monitoring	- Manual in different languages	April 2025 Penang, Malaysia	USD 5000	USD 1000	
	2. Implementation of eDNA Citizen Science Monitoring (Pilot)	Pilot citizen science on eDNA monitoring and evaluate manual produced	- Data and report	Malaysia, Thailand, Philippines	-	USD 3000	
	3. Implementation of COLLECT Project	Pilot citizen science on COLLECT and evaluate manual produced	- Data and report	Malaysia, Thailand, Philippines	-	USD 3000	



Thank You

Yuki Minegishi



+81 193 42 5611



y.minegishi@aori.u-tokyo.ac.jp



Abe Woo Sau Pinn



+60 11 5140 9300



abe_woo@hotmail.com

