

**WESTPAC Program/Project/Working Group**

# **Harmful Jellyfish Research Network**

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Centre For Marine & Coastal Studies (CEMACS)

Universiti Sains Malaysia (USM)



Blue Partnership  
Action Fund  
蓝色伙伴关系行动

# Project name: The Jellyfish (Medusae) Monitoring & Blue Citizenship Outreach Program in the Tourist Attractions of Penang, Malaysia

(1<sup>st</sup> December 2023 – 30<sup>th</sup> November 2025)  
RMB 298,615 RMB

## 项目名称

马来西亚槟城旅游景点的水母监测与蓝色公民科普宣传计划

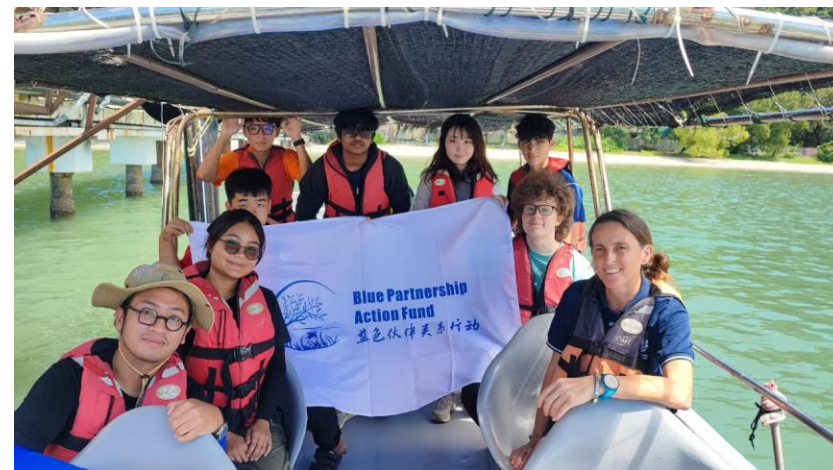
## 申请机构

马来西亚理科大学、海洋与海岸研究中心 (Centre For Marine & Coastal Studies, University Sains Malaysia)



## 项目简介

槟城Penang，亦称槟榔屿，是马来西亚重要的岛屿城市，马六甲海峡重要的港口，同时也因其美丽的海景沙滩而成为世界知名的旅游胜地。近年来随着全球气候变化、渔业和旅游业活动带来的海水富营养化等一些列因素，槟城海域的水母数量激增，水母蛰伤当地居民和游客的事件时有发生，对当地社会形象和游客生命健康造成不良影响。蓝伙行动将支持马来西亚理科大学、海洋与海岸研究中心在对槟城沿海的水母种群进行详细的研究和监测，收集并测量采样点周围海水的物理和化学参数，以确定外源环境因素如何影响水母物种的月度分布和数量。同时，项目也将通过蓝色市民活动，组织一系列的水母公众科普宣传活动，并为公众和旅游从业人员提供医学协助和能力建设，引导公众正确看待水母等海洋生物，提升全民海洋素养。



Applicant 申请机构	Project Name 项目名称	Country 国家
5 马来西亚理科大学、海洋与海岸研究中心 Centre For Marine & Coastal Studies (CEMACS) Universiti Sains Malaysia (USM)	马来西亚槟城旅游景点的水母监测与蓝色公民科普宣传计划 The Jellyfish (Medusae) Monitoring & Blue Citizenship Outreach Program in the Tourist Attractions of Penang, Malaysia	马来西亚





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**JSPS**

## FIELD GUIDE to the JELLYFISH of WESTERN PACIFIC

• BANGLADESH • INDONESIA • MALAYSIA  
• PHILIPPINES • SINGAPORE • SRI LANKA • THAILAND



## General Management Guide for Harmful Jellyfish Stings in the Western Pacific and Adjacent Areas



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# JellyGo

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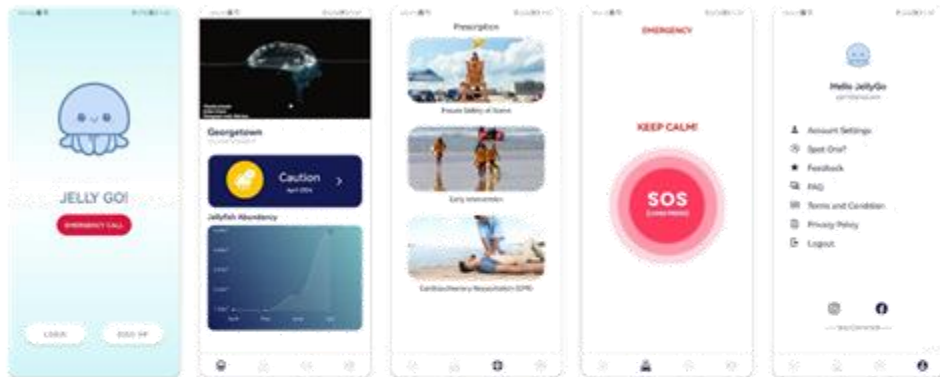


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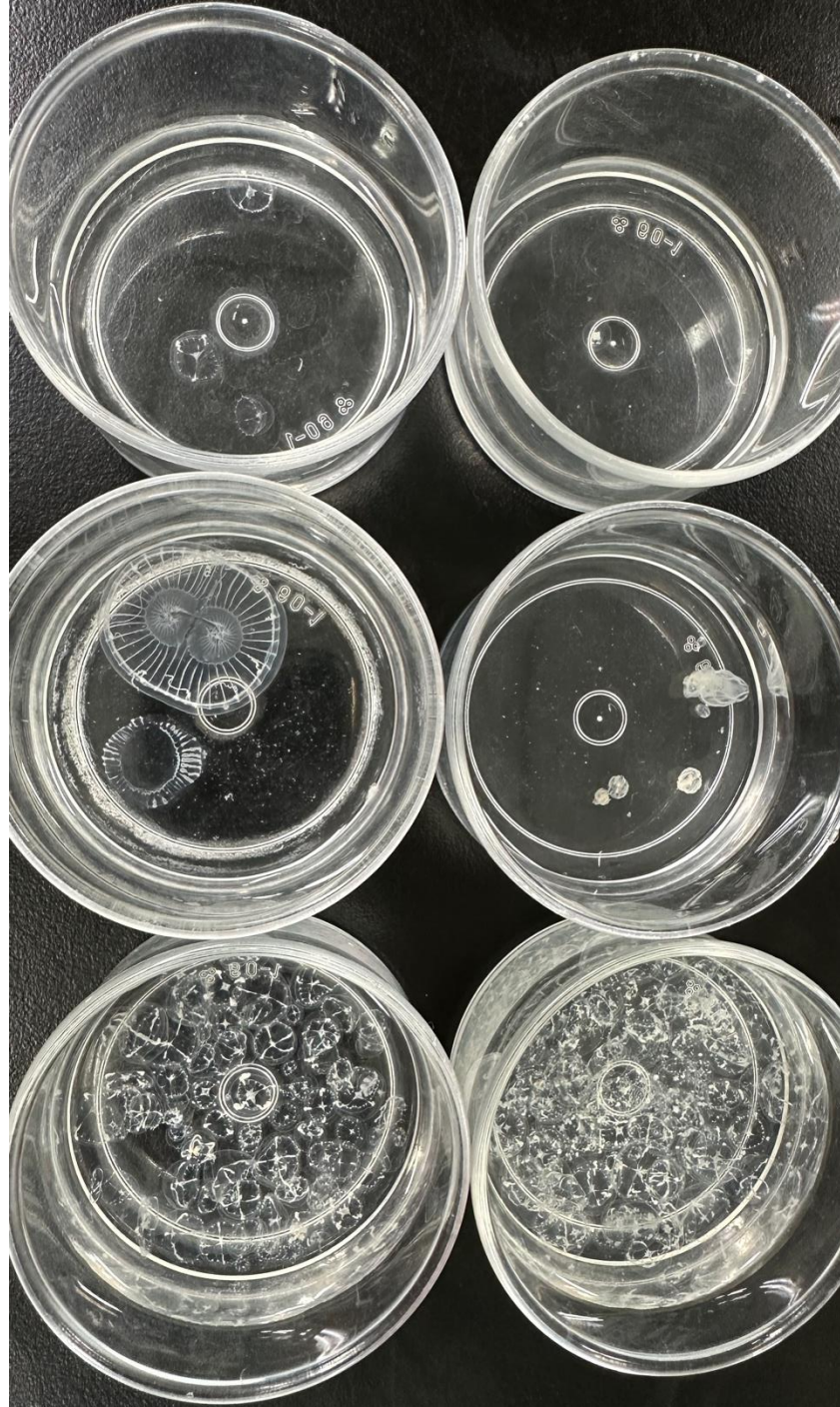


## About this app →

This is an app for prediction of jellyfish abundance in the waters of Penang, Malaysia. Users are kindly invited to join the citizen science program by uploading data and pictures of jellyfish when spotted any around Penang coastal regions. The app is featured with emergency calling and first-aid procedures to follow through when stung by a jellyfish.

Updated on  
May 17, 2024





Training at School of Marine Biosciences,  
Kitasato University, Kanagawa, Japan  
(Prof. Hiroshi Miyake)

**Duration:**

**18 September - 04 October 2024**





# Programme Book

2<sup>nd</sup> UN Ocean Decade Regional Conference &  
11<sup>th</sup> WESTPAC International Marine Science Conference

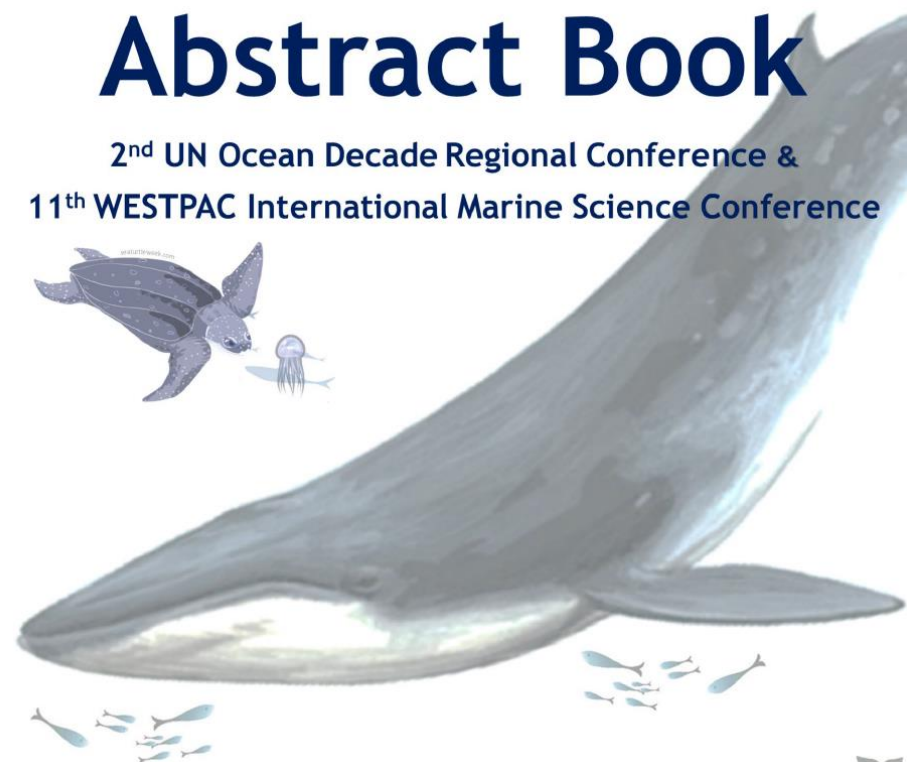
22–25 April 2024

The Berkeley Hotel Pratunam, Bangkok, Thailand



# Abstract Book

2<sup>nd</sup> UN Ocean Decade Regional Conference &  
11<sup>th</sup> WESTPAC International Marine Science Conference



22–25 April 2024

The Berkeley Hotel Pratunam, Bangkok, Thailand



**Session C7**  
**Harmful jellyfish in the Southeast Asian region:**  
**Networking across the oceans**

**Venue:** Jubilee A, 11<sup>th</sup> Floor

**Date:** 22 April 2024

**Conveners:**

Aileen Tan Shau Hwai

Ahmad Khaldun Ismail

Universiti Sains Malaysia, Malaysia

Hospital Canselor Tuanku Muhriz UKM, Malaysia

Time	Presentation Titles	Speakers
<b>Section 1</b>		
10:30–10:45	Jellyfishes (Cnidaria: Medusozoa) reported from the first-ever systematic jellyfish survey carried out in the coastal waters of Sri Lanka	Krishan D. Karunaratne, <i>Wayamba University of Sri Lanka, Sri Lanka</i>
10:45–11:00	First recording of the ctenophore <i>Bolinopsis</i> sp. (Ctenophora, Bolinidae) in Bali coastal waters, Indonesia	Widiastuti Widiastuti, <i>Universitas Udayana Kampus Bukit Jimbaran, Indonesia</i>
11:00–11:15	Jellyfish biodiversity in the southeast coast of Bangladesh	Sadia Sultana, <i>University of Chittagong, Bangladesh</i>
11:15–11:30	Fatal jellyfish envenomation in Sabah from 2006 to 2022	Muhamad Naim Bin Ab Razak, <i>Hospital Lahad Datu, Malaysia</i>
11:30–11:45	Managing an unidentified jellyfish sting with significant clinical effects at a non-coastal hospital	Naresh Kumar Sivanasworn, <i>Universiti Kebangsaan Malaysia, Malaysia</i>
11:45–12:00	Indonesia first aid and traditional first aid	Tri Maharani, <i>Ministry of Health, Indonesia</i>
12:00–12:15	The jellyfish (Medusae) monitoring & blue citizenship outreach program in the tourist attractions of Penang, Malaysia	Sim Yee Kwang, <i>CEMACS, Universiti Sains Malaysia, Malaysia</i>
12:15–12:30	JellyGo: bridging science and application through an in-situ-based jellyfish abundance prediction model	E Chern Wong, <i>Universiti Malaya, Malaysia</i>



## Decade Action Incubator 11

### Jellyfish morphological and molecular identification for ocean health assessment

Venue: Chelsea B, 5<sup>th</sup> Floor

Date: 25 April 2024

Time: 10:00–15:00

#### Conveners:

Libertine Agatha F. Densing

Mohammed Rizman bin Idd

Filipina B. Sotto

Visayas State University – Alangalang, Philippines

Universiti Malaya, Malaysia

Holy Name University, Philippines

Time	Presentation Titles	Speakers
Session 1: Preliminaries (Setting the scene)		
10:00–10:05	Opening remarks and setting the symposium's objectives	Aileen Tan, <i>Universiti Sains Malaysia, Malaysia</i>
10:06–10:51	Developing Global Standards for Understanding Scyphozoan (and other Gelatinous Zooplankton) Diversity and Distributions	Mike N. Dawson, <i>University of California Merced, USA</i>
10:52–11:22	Jellyfish science in Southeast Asia: current status, challenges and way forward	Mohammed Rizman bin Idd, <i>Universiti Malaya, Malaysia</i>
11:23–11:43	Jellyfish Research in the Philippines: Assessing Current Trends, Overcoming Challenges, and Charting Future Directions	Filipina Sotto, <i>Holy Name University, Philippines</i>
11:44–12:00	JellyGo Presentation/Demonstration	Sim Yee Kwang, <i>Universiti Sains Malaysia</i>
12:00–13:00	Lunch Break	
Session 2: Interactive Forum		
13:00–14:00	<b>Brainstorming Session:</b> <ul style="list-style-type: none"><li>Country-specific project ideas addressing jellyfish-specific Ocean Decade Challenges.</li></ul> Commitment towards contributing to the Ocean Decade Outcomes.	<i>Facilitator:</i> Mohammed Rizman bin Idd
14:00–14:30	Presentation of key takeaways, challenges, and opportunities related to jellyfish research and ocean health in their region.	Participant/Country representative
14:31–15:00	<b>Closing and Way Forward</b> <ul style="list-style-type: none"><li>Reflect on the commitments made and the shared knowledge gained during the country-specific sessions.</li></ul> Concluding remarks that encourage ongoing communication, outline the next steps for collaboration, and set a date for a follow-up meeting or symposium.	<i>Facilitator:</i> Mohammed Rizman bin Idd Filipina Sotto



# Incubator 11: Jellyfish morphological and molecular identification for ocean health assessment

## Way Forward

### 1. Standardization & Methodology:

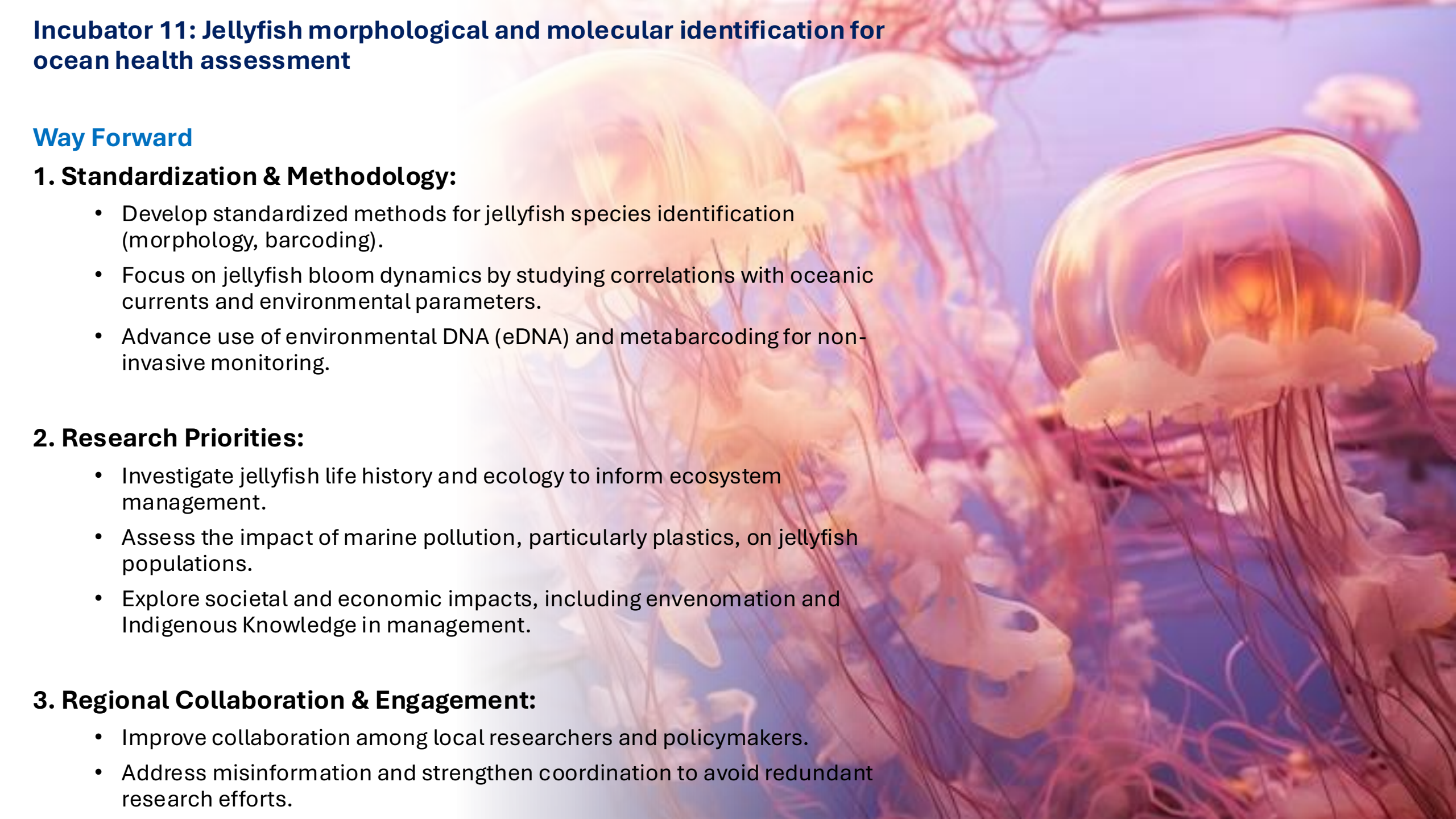
- Develop standardized methods for jellyfish species identification (morphology, barcoding).
- Focus on jellyfish bloom dynamics by studying correlations with oceanic currents and environmental parameters.
- Advance use of environmental DNA (eDNA) and metabarcoding for non-invasive monitoring.

### 2. Research Priorities:

- Investigate jellyfish life history and ecology to inform ecosystem management.
- Assess the impact of marine pollution, particularly plastics, on jellyfish populations.
- Explore societal and economic impacts, including envenomation and Indigenous Knowledge in management.

### 3. Regional Collaboration & Engagement:

- Improve collaboration among local researchers and policymakers.
- Address misinformation and strengthen coordination to avoid redundant research efforts.





## Future Plan

### 1. Capacity Building:

- Organize hands-on workshops to train researchers on standardized jellyfish research methodologies.
- Conduct gap analysis programs to identify research deficiencies.

### 2. Publications & Knowledge Dissemination:

- Develop instructional manuals for consistent jellyfish research practices.
- Publish findings in academic journals to contribute to the global knowledge base.

### 3. Sustainable Development Goals (SDGs) Alignment:

- **SDG 14:** Protect marine ecosystems and enhance biodiversity assessments.
- **SDG 13:** Build knowledge to address climate change impacts on ocean health.
- **SDG 4:** Invest in educational programs to boost marine research capabilities.

# Jellyfish Network Budget Overview

Program	Activities	Objectives	Expected Outputs/Outcomes	Date & Place	Funding Required - IOC	Other Sources	Remarks
1. Standardization Workshop	Organize a workshop to standardize jellyfish species identification methods (morphology, barcoding, eDNA).	Develop standardized methods for jellyfish identification.	Standardized protocols for jellyfish research & conservation.	Apr 2025 Penang, Malaysia	\$10,000	-	Includes venue, equipment, travel for facilitators & participants.
2. Jellyfish Bloom Dynamics Research Meeting	Conduct research meetings with key researchers to coordinate studies on jellyfish bloom dynamics across Southeast Asia.	Enhance research on jellyfish bloom dynamics & environmental factors influencing blooms.	Coordinated research efforts & a predictive framework for jellyfish blooms.	Thailand	\$8,000	-	Covers venue rental, travel for participants, & catering.
3. Capacity Building & Training Programs	Organize regional training programs on jellyfish research methods (eDNA, fieldwork, lab analysis).	Build research capacity & train early-career researchers.	Trained researchers skilled in advanced jellyfish research techniques.	Thailand	\$10,000	-	Includes training kits, facilitators' fees, travel, & accommodations.
4. Exchange Programs for Researchers	Facilitate international exchanges to enhance expertise in advanced jellyfish monitoring & management techniques.	Strengthen international collaboration & share knowledge on jellyfish research.	Researchers gain expertise & build partnerships with international institutions.	TBD	\$15,000	-	Includes travel, accommodation, & stipends for participants.
5. Publications & Data Sharing Platform	Develop & disseminate manuals, publications, & an online platform for jellyfish research data & methodologies.	Ensure widespread dissemination of research findings & promote data sharing.	Instructional manuals, peer-reviewed publications, & a centralized online data-sharing platform.	Malaysia	\$10,000	-	Includes platform development, manual creation, & publication fees.