



UN22: Stem the Tide of Asia's Riverine Plastic Emission into the Ocean

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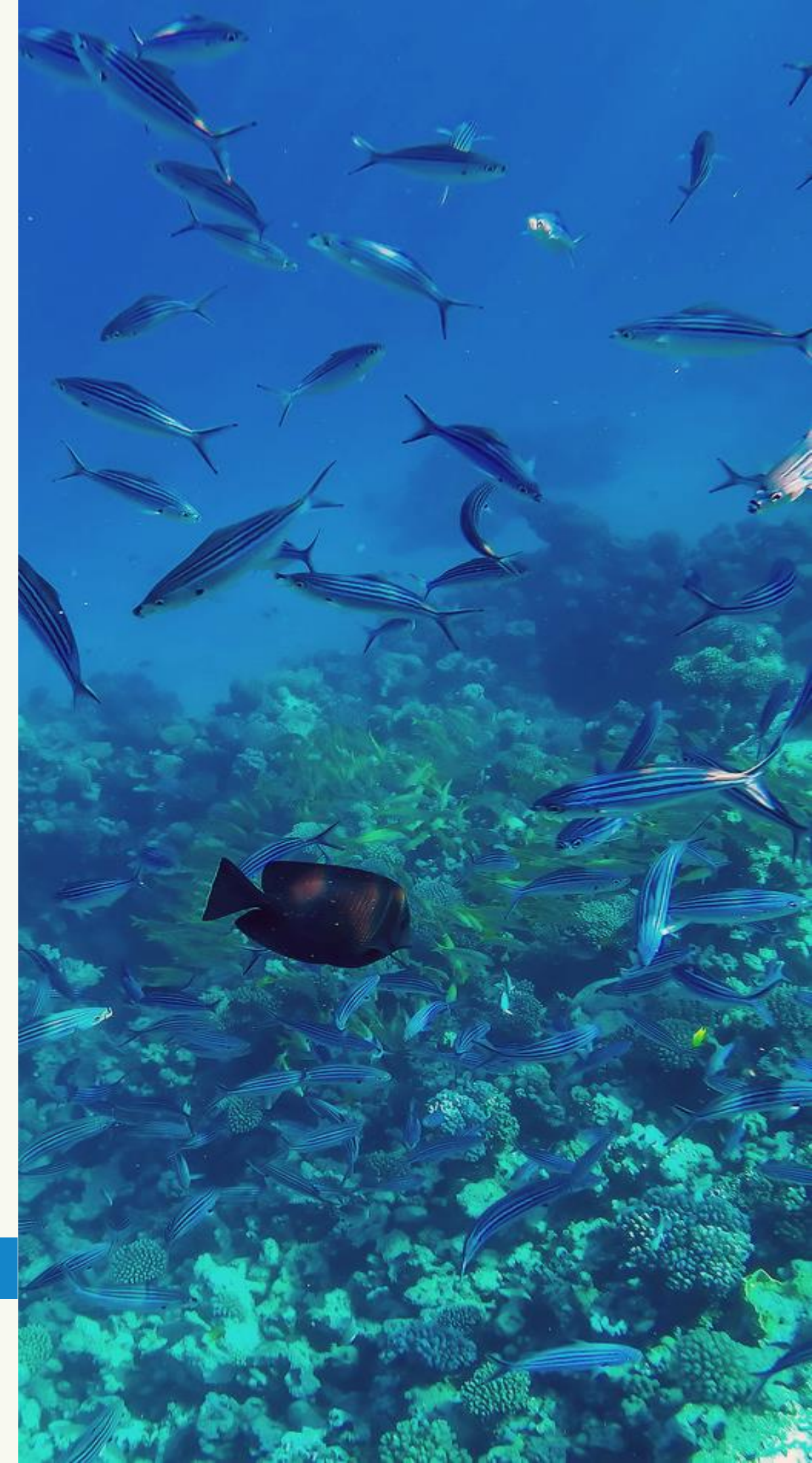
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Summary Outline

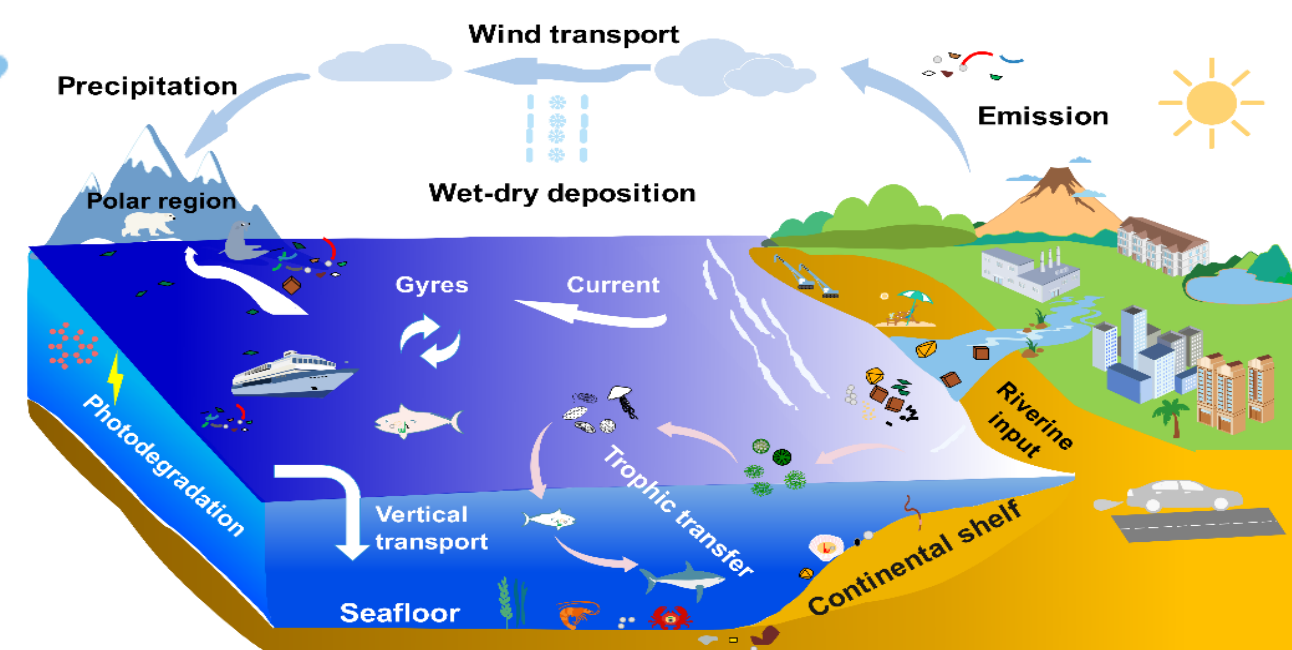
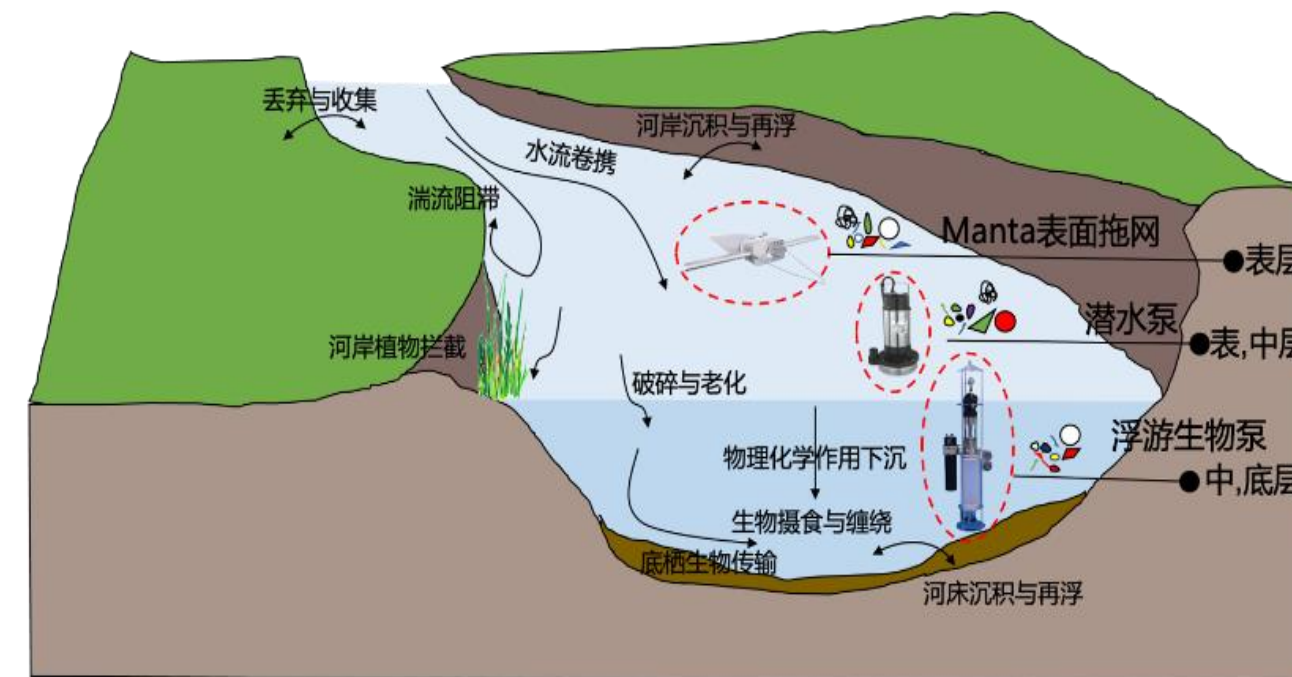
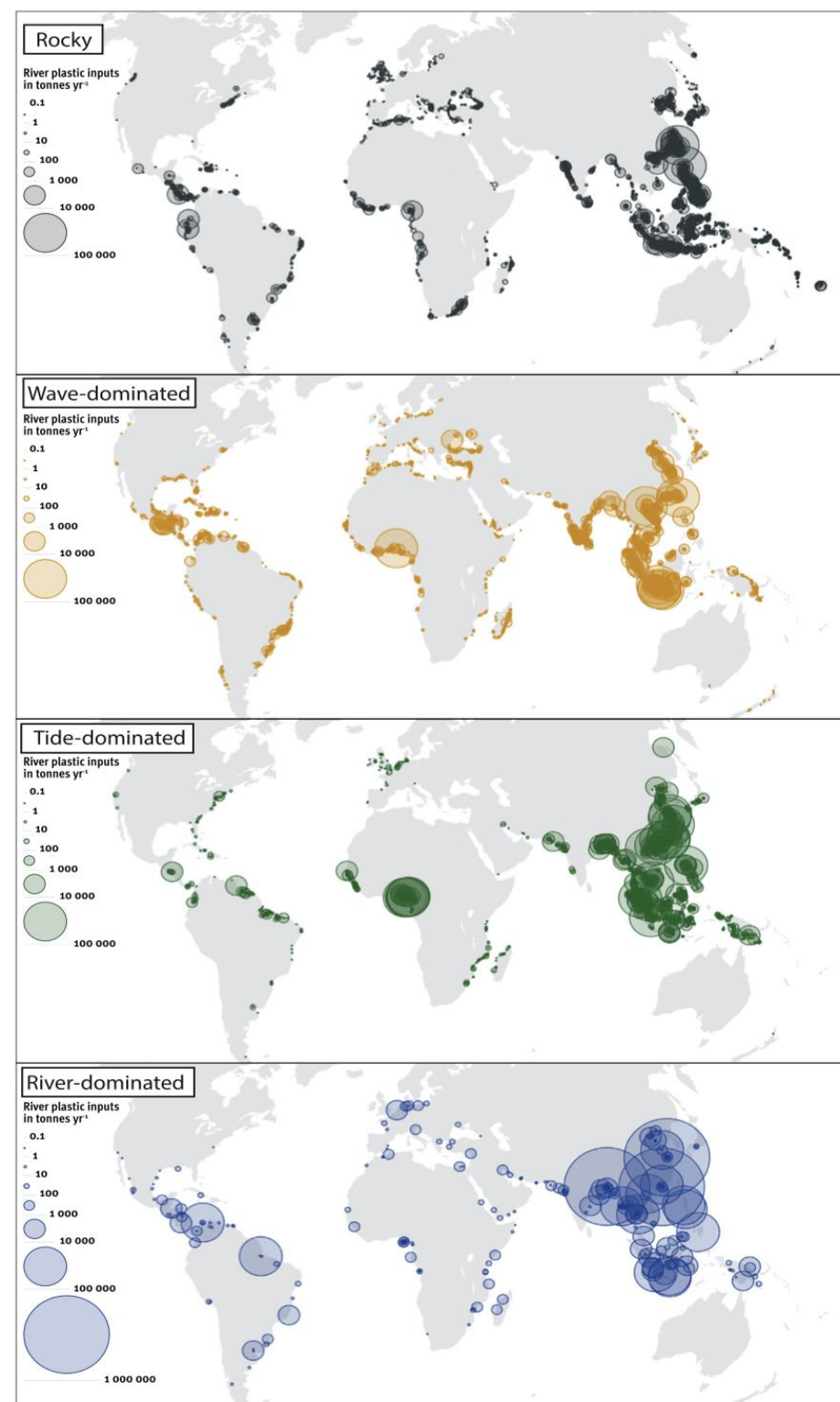


1. **Justification** and project/WG duration
2. Project/WG **objectives**
3. **Major activities and outputs** (particular those accomplished during 2025-2026)
4. **Anticipated activities and outputs** in 2027
5. **Biennial workplan and budget** for 2028-2029, structured around the IOC HLOs
6. **Strategic recommendations** for future development



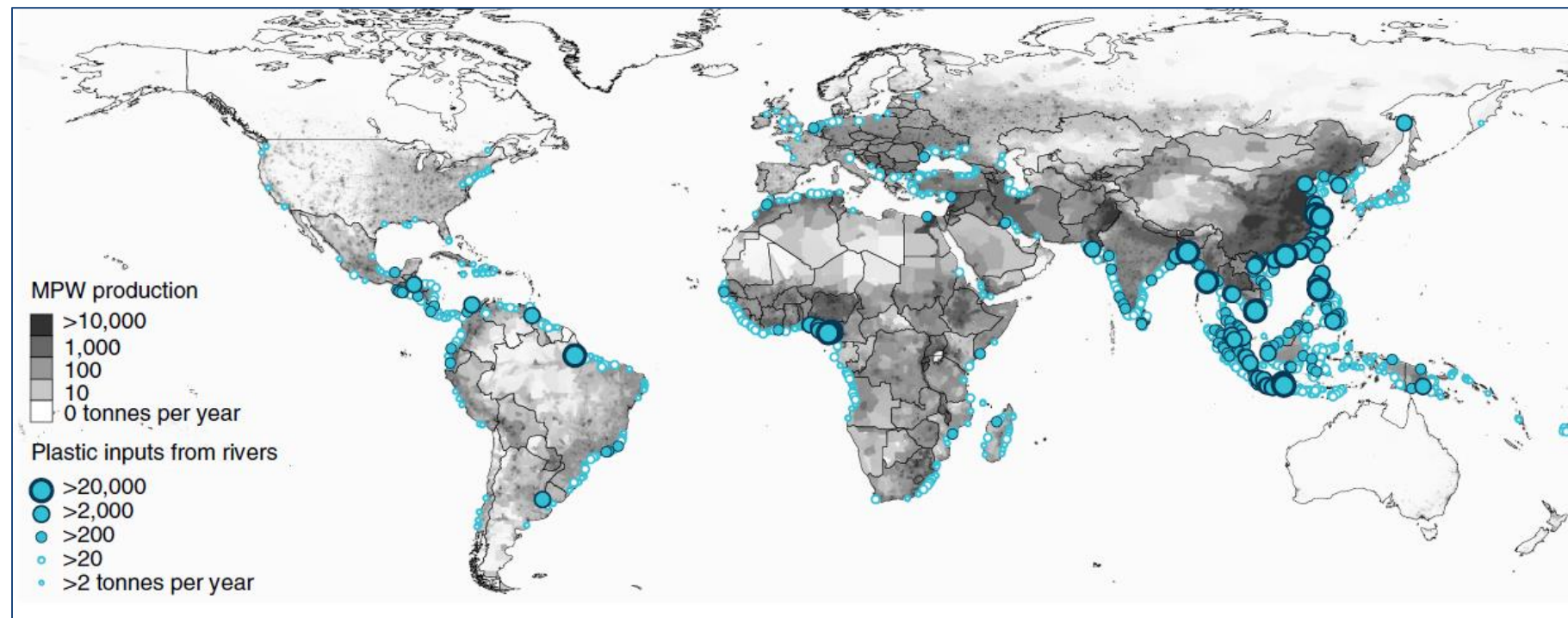
1. Justification and project/WG duration

Rivers are major pathways transporting land-based plastic waste to the Ocean, especially for the rivers in Aisa-Pacific region

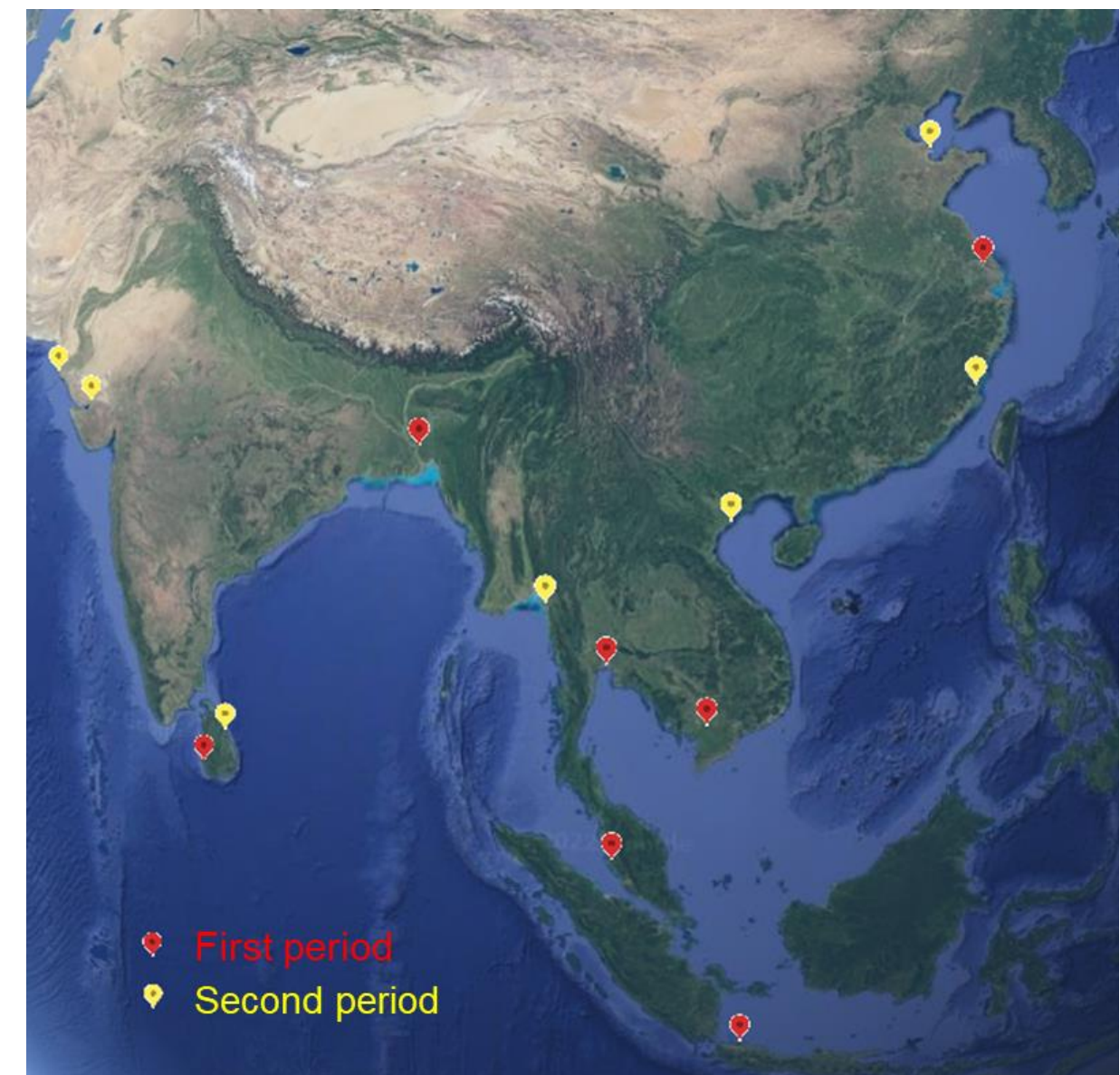


1. Justification and project/WG duration

- Account for 60% mismanaged plastic waste (MPW) in Asia, and 80% Asia's river export of plastic to the sea



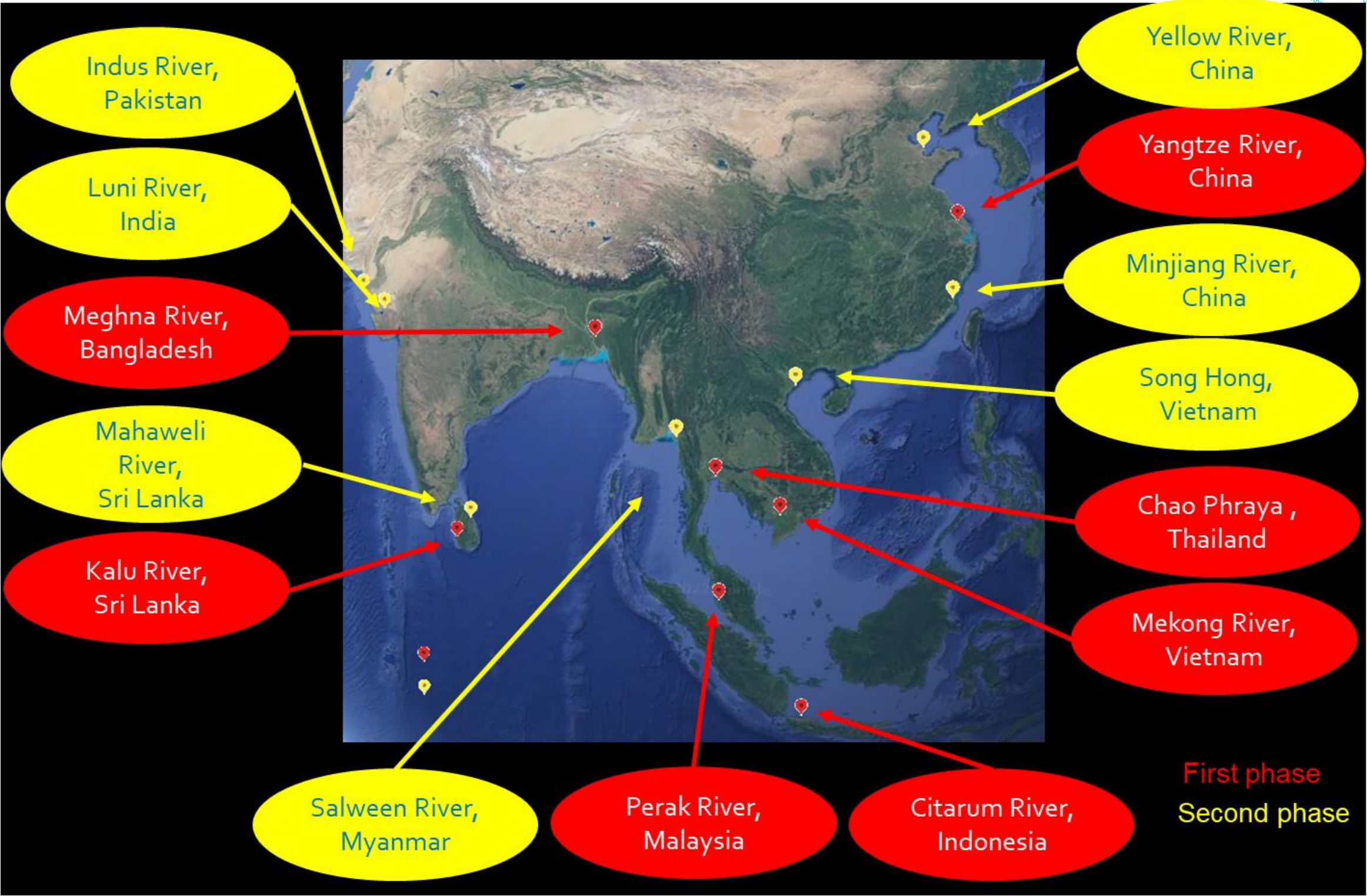
- Lack of in-situ data to provide evidence-based information
- Engagement of local government, communities in combating plastic pollution
- In line with priority interests of national/local governments and researchers



2. Project/WG objectives

- Develop a better understanding of the sources, pathways, fluxes, leakage and accumulation hotspots of river plastic and microplastics via co-designed field samplings, site visits, analysis, and modeling.
- Catalyze management, infrastructure, technological and behavioral solutions to reduce riverine plastic waste, via the conduct of joint research, capturing and sharing of lessons learned and best practices, technology innovation, and engagement of local authorities, NGOs, business and private sectors, and other stakeholders if relevant.
- Develop research capacity of young scientists and students in developing countries for marine plastic and microplastic research and monitoring.

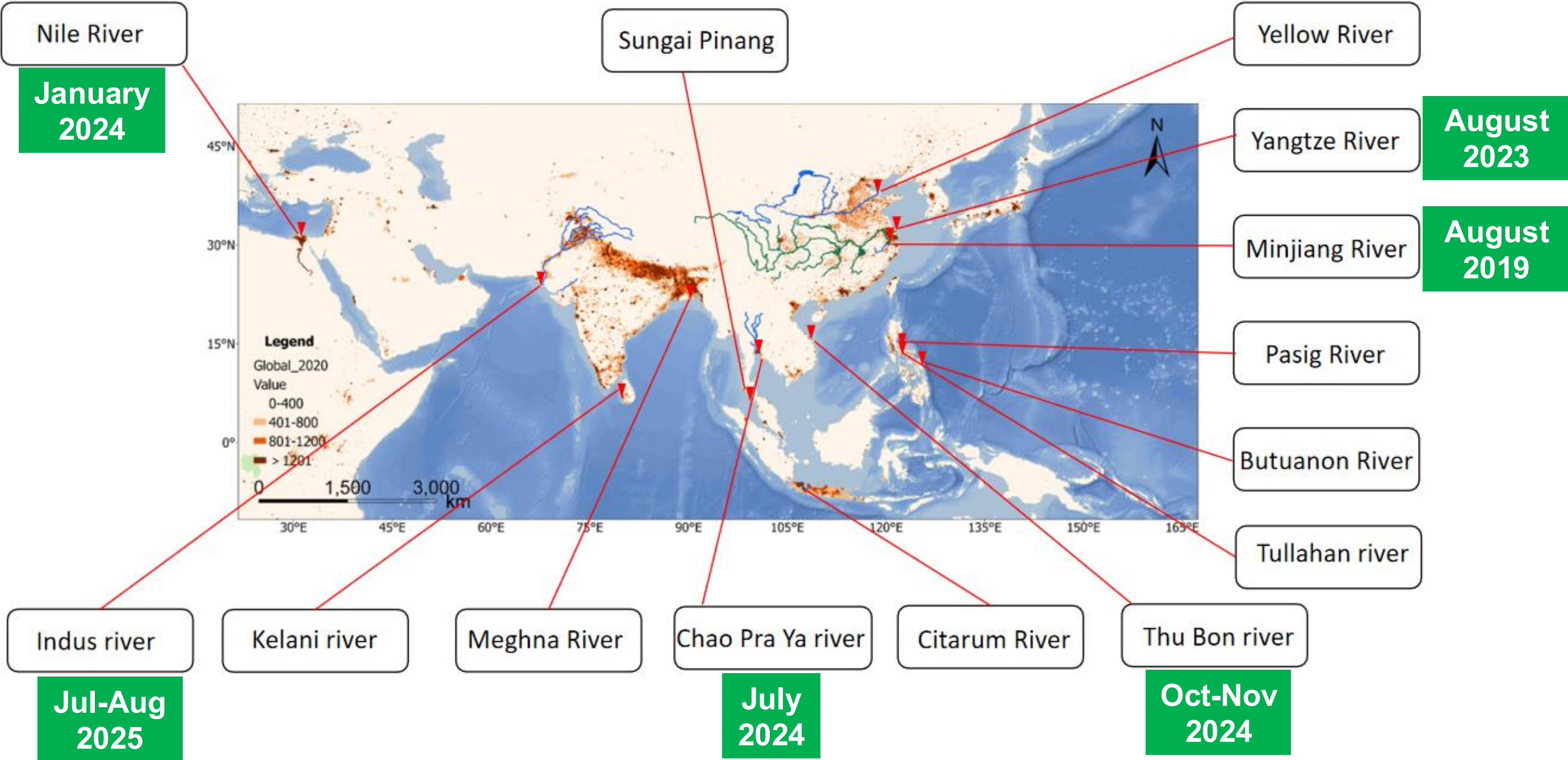
Phases of investigation



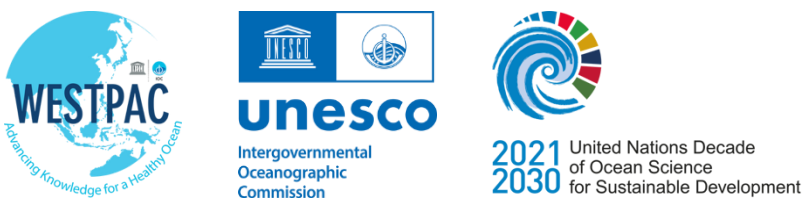
Status of field investigation: sampled/unsampled rivers



Sampled / unsampled



Status of investigation: from sample analysis to compiling results



Sr#	Year	River	Sampled/ unsampled	Stage of analysis			
				extraction	microscopic observation	polymeric analysis	compiling results
1.	2019	Minjiang River	√	√	√	√	√
2.	2023	Yangtze River	√	√	√	√	√
3.		Yellow River					
4.	2024	Chao Phraya River	√	√	Ongoing		
5.		Sungai River					
6.	2024	Thu Bon River	√	√	Ongoing		
7.	2024	Nile River	√	√	√	√	√
8.	2025	Indus River	√	Ongoing	Ongoing	Ongoing	Ongoing
9.		Pasig River					
10.		Butuanon River					
11.		Tullahan River					
12.		Citarum River					
13.		Meghna River					
14.		Kelani River					

3. Major Activities and Outputs

(2025-2026)

Phase I: Summary

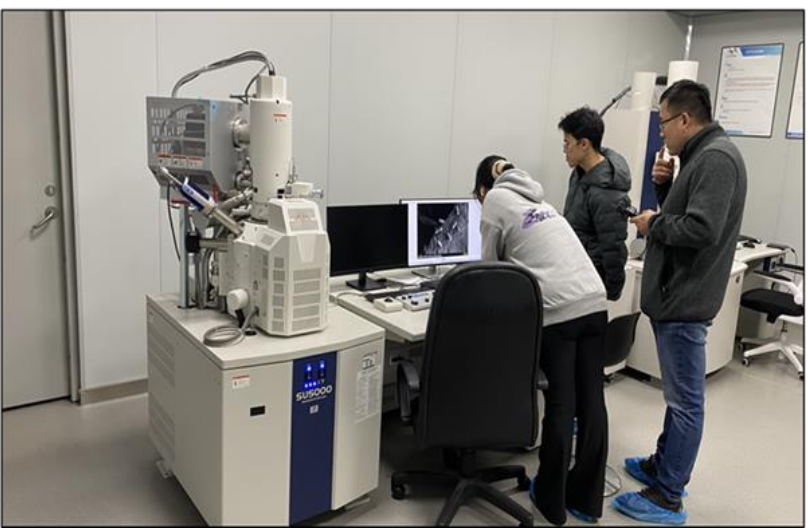
- (1) 2025.07-08: Assessments on distribution and leakage hotspots, major sources, transport, fluxes of plastics and microplastics in the Indus River Basin.
- (2) Continuing the assessments and analysis of collected samples from Chao Phraya, Tho Bon, and Indus Rivers.
- (3) Connecting ties with potential partners for the development and implementation of Phase II.
- (4) Trained young researchers from Asian countries on riverine plastic and microplastic research.

Training through researcher based on target rivers



Participating Institutes		
 Jashore University of Science and Technology (JUST) Bangladesh	 East China Normal University (ECNU) China / Pakistan	 Jiangxi Normal University (JXNU) China
 Henan Normal University (HNNU) China	 Chang'an University (CHD) China	 Hainan University (HNU) China
 Ludong University (LDU) China	 Tianjin University (TJU) China	 Universiti Malaysia Terengganu (UMT) Malaysia

Extracted samples obtained through:
Pump Mana net



4. Anticipated activities and outputs in 2027



Phase I: Consolidation, Assessment and Regional Knowledge Exchange

1. Preparation of an Assessment Report on Investigated Rivers (April, 2027)

- Compile and synthesize the findings from the rivers investigated during Phase I.
- Assess the occurrence, distribution, sources, transport pathways, and potential hotspots of plastic pollution.
- Identify knowledge gaps, priority areas, and opportunities for targeted intervention.
- Develop recommendations to support riverine plastic pollution reduction and sustainable management.

2. Organization of a Session and Workshop at the 12th WESTPAC International Marine Science Conference & 3rd UN Ocean Decade Regional Conference. April 2027 | Manila, Philippines.

- Organize a dedicated scientific session on riverine and marine plastic pollution.
- Conduct a workshop focusing on emerging technologies and innovative approaches for plastic pollution research, from assessment to management.
- Facilitate knowledge exchange among researchers, policymakers, practitioners, and other stakeholders from Asian countries.
- Discuss opportunities for strengthening regional collaboration and developing the next phase of the UN22 Project.

4. Anticipated activities and outputs in 2027



Phase II: Expansion, Innovation and Capacity Building

Objective:

Explore the application of emerging technologies, advanced monitoring approaches, and innovative recycling technologies for improved assessment, management, and reduction of plastic pollution.

3. Development and Implementation of Phase II of the UN22 Project

- Develop and implement Phase II based on the outcomes and lessons learned from Phase I.
- Expand the project toward emerging trends and innovative approaches for plastic pollution prevention, control, recycling, and circularity.
- Strengthen collaboration among research institutions, government agencies, industry, and other relevant stakeholders.
- Develop pilot activities or demonstration projects where appropriate.

4. Training and Capacity Building for Young Scientists and Students in Asian Countries

- Provide training related to project methodologies, plastic pollution monitoring, data analysis, risk assessment, emerging technologies, and management approaches.
- Promote hands-on knowledge exchange and networking among participating countries.
- Establish a regional community of young researchers contributing to long-term cooperation on plastic pollution research and management.

4. Anticipated activities and outputs in 2027



In brief:

Phase	Key activities	Expected outputs
Phase I: Assessment & Regional Engagement	1. Assessment report on investigated rivers 2. Session & workshop, Manila, April 2027	1. Regional Riverine Plastic Pollution Assessment Report synthesizing findings, sources, hotspots, transport pathways, and management priorities 2. International scientific session and workshop bringing together researchers, policymakers and practitioners 3. Workshop proceedings / recommendations identifying emerging technologies, research priorities, and potential management solutions 4. Regional collaboration framework identifying institutions, experts and potential partners for Phase II

4. Anticipated activities and outputs in 2027

In brief:

Phase	Key activities	Expected outputs
Phase II: Innovation, Implementation & Capacity Building	3. Develop & implement Phase II	5. Phase II implementation framework/action plan with defined research, technology, pilot and management activities 6. Pilot/demonstration activities for plastic pollution prevention, monitoring, control, circularity and/or recycling 7. Innovative technology applications potentially including AI, digital monitoring, advanced analytical approaches and recycling/circular-economy solutions
	4. Training young scientists & students	8. Continuing regional training program for young scientists and students from Asian countries 9. Trained regional cohort/network of young researchers capable of contributing to plastic pollution assessment and management 10. Training materials, protocols and knowledge resources that can be reused across participating countries

5. Biennial Workplan for 2028-2029



Activities	Objectives to be achieved	Expected outputs	Date and Place	Funding Required	
				IOC (in-cash)	Other in-kind sources
International workshop on harnessing artificial intelligence for plastic pollution research and management	Showcase cutting-edge research, technologies, emerging tools, and their applications	Outlining shared priorities, future directions, connecting academia, industry, and policy institutions	January 15 th 2028, (online)	0	20,000 RMB From East China Normal University
Training workshop on generation of scientific evidence on riverine plastic pollution through collaborative research	Catalyze management, infrastructure, technological, and behavioral solutions to reduce riverine plastic waste	Knowledge generation, system design to reduce plastic leakage into the target river systems	June 26-28 th 2028, Shanghai, China	0	50,000 RMB From East China Normal University
Reviewing Phase II: Discussion on integrated management of riverine plastic pollution through innovative technologies and circular economy practices	Assess the feasibility and applicability of digital solutions and technological innovation, strengthening infrastructure, stakeholder engagement, and behavioral change for sustainable plastic waste reduction, explore opportunities to integrate circular economy practices	Increased adoption of innovative technology, circular economy-based solutions, and enhance capacity building of local institutions and key stakeholders	July-December 2028, Pilot rivers	0	80,000 RMB From East China Normal University

5. Biennial Workplan for 2028-2029



Activities	Objectives to be achieved	Expected outputs	Date and Place	Funding Required	
				IOC (in-cash)	Other in-kind sources
International workshop	Share experiences and discuss the project progress; future planning	Project progress report	May 2029, Shanghai, China	Depends on IOC's budget	50,000 RMB From East China Normal University
Training workshop on management of riverine plastic wastes using innovative technology and shared practices	Train young scientists in the Asia-Pacific region on managing riverine plastics	Young scientists and students will be trained to achieve the targeted number	October 16-18, 2029, Shanghai, China	0	50,000 RMB From East China Normal University
International workshop	Share data, experiences, and discuss the project outcomes	Project report	December 2029, Shanghai, China	Depends on IOC's budget	50,000 RMB From East China Normal University



6. Strategic recommendations for future development

- Financial mechanisms - better chances for funding application from other sources
- Better involvement of other stakeholders
- Collaboration with other UN Decade projects and other networks