

Intervention policies and regulations on single-use plastics restrictions in the ASEAN +3 region and their effectiveness

Youna Lyons, Yulu Liu, Cheng Ling Lim

Centre for International Law, National University of Singapore

ERIA Online Forum: “The way forward for a stronger regional and international cooperation on Marine Plastic Debris”

23 June 2022

1. Introduction
 - a. The Regional Research Inventory (RRI) 2.0
 - b. Single-use plastics (SUP) in the region
2. Methodology
 - a. Our approach
 - b. Model used for analysis
3. Findings
 - a. SUP regulating policies found in the RRI 2.0
 - b. Evaluating policy effectiveness: SUP Interventions - Bans
 - c. General evaluations by publications
4. Towards an international plastic treaty

We are defining “Single-Use Plastic” (SUP) to include:

food packaging,

plastic bottles,

plastic bags,

microbeads found in cosmetic products ...

a. Regional Research Inventory 2.0

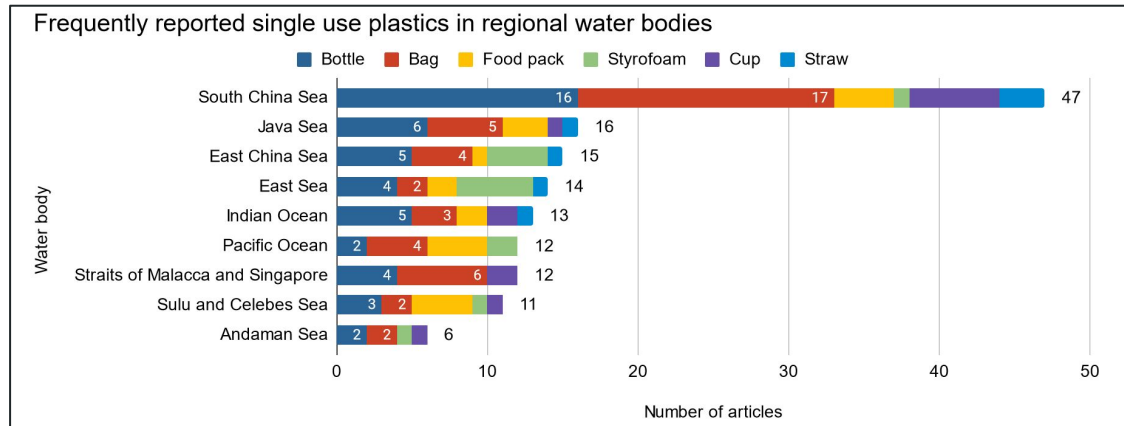
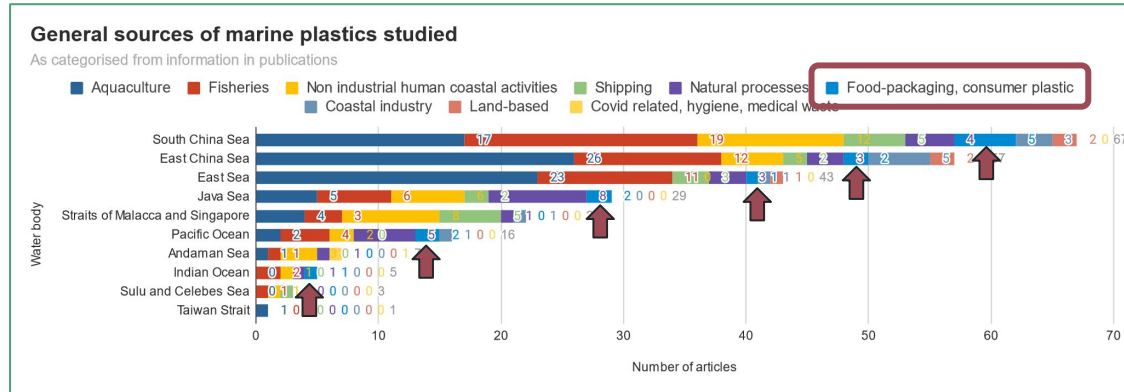
- An inventory of publicly-accessible marine plastic research in the region (ASEAN+3), published between 2001 and June 2021
- As of 21st Feb 2022, the inventory contains 702 publications
- This includes peer reviewed and grey literature such as conference proceedings and NGO reports
- A coordinated effort led by Youna Lyons (NUS-CIL) and Neo Mei Lin (TMSI) with colleagues from NUS and the support of a large regional research team
 - NUS-CIL, **Singapore**: Youna Lyons, Cheng Ling Lim, 刘雨露 (Yulu Liu), Bui Quang Huy (Bui Quang Huy), Dennis Tan, Dita Liliansa, 정다운 (Dawoon Jung), Sng Wen Xin, Vũ Hải Đăng (Vu Hai Dang)
 - TMSI, **Singapore**: Mei Lin Neo, Jenny Fong, Lee Hsien Rong Samuel and Theresa Su
 - Universiti Sains Malaysia, **Malaysia**: Japareng Lalung and his team
 - Swinburne Sarawak, **Malaysia**: Changi Wong and Moritz Mueller
 - Can Tho University, **Vietnam**: Văn Phạm Đăng Trí (Van Pham Dang Tri) and Lê Hoàng Hải Anh (Le Hoang Hai Anh)
 - University of the Philippines-Mindanao, the **Philippines**: Neil Angelo S. Abreo
 - Marine Science Institute, the **Philippines**: Ronan Baculi and Deo Onda
 - Chulalongkorn University, **Thailand**: ชาวลิต เจริญพงษ์ (Chawalit Net Charoenpong), ปิ่นมณัส บูชา (Pinamas Bucha), เพ็ญใจ สมพงษ์ชัยกุล (Penjai Sompongchaiyakul) and ราเชล เมโทรตรา (Rahul Mehrotra)
 - Indonesian Institute of Science (LIPI), **Indonesia**: Sulistiowati and Muhammad Reza Cordova
 - Myanmar Ocean Project, **Myanmar**: သန္တာကိုကြီး (Thanda Ko Gyi)
 - East China Normal University, **China**: 李道季 (Li Daoji) and 朱礼鑫 (Zhu Lixin) and their team

1. Introduction

b. Single-use plastics in the region

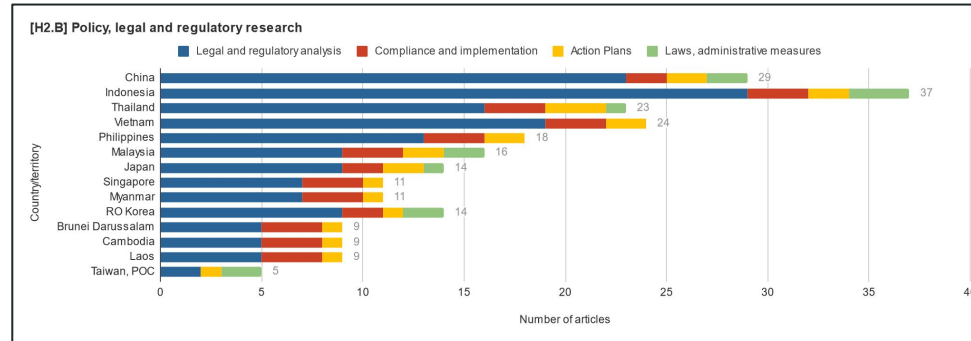
Based on the articles captured in the regional research inventory 2.0 ...

- Food packing and consumer plastics are among the top 10 reported sources of marine plastic litter item studied
- Plastic bottles, bags, and food packings are among commonly reported single-use plastic items reported in the regional water bodies



2. Methodology

a. Our Approach



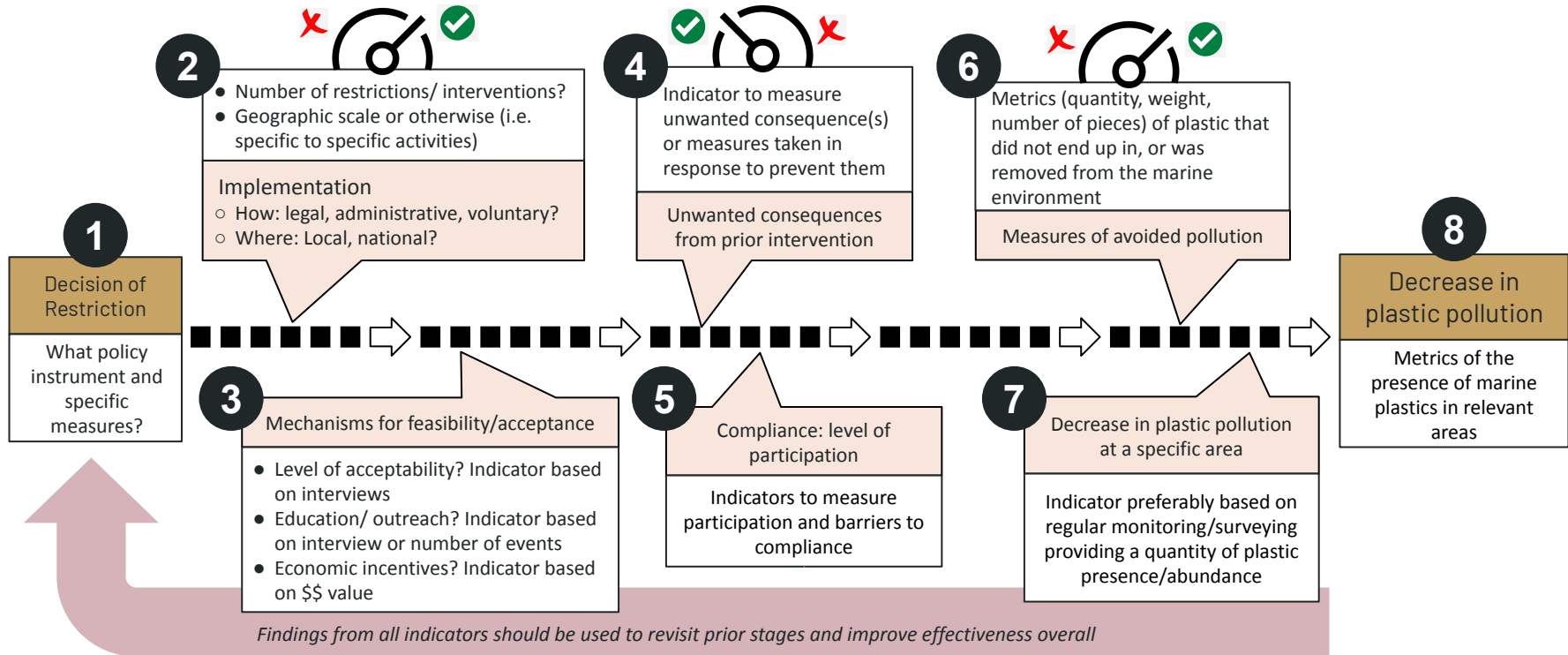
Out of 702 articles in the RRI 2.0, 116 papers were relevant to policy, legal and regulatory research.

1. Review the 702 articles captured in the RRI 2.0
2. Extracted a subset of papers within the RRI 2.0 that examined ...
 - a. existing regulatory policies in the region and/or
 - b. provided elements to evaluate the effectiveness of regulatory policies
3. Analyse the regulations/regulatory policies using our model

2. Methodology

b. Model to evaluate policy effectiveness

Indicators can be considered at different stages of development of intervention and its implementation to evaluate its effectiveness



a. Single-use plastics regulating policies found in the RRI 2.0

Macroplastics:

- **Prohibition:** Ban on certain types of SUPs including thin plastic bags, plastic cutlery (plastic cups and plates), SUPs used in food packaging and delivery (styrofoam containers)
- **Alternative products:** promoting thicker and reusable plastic bags
 - Covid-19 pandemic adds to the difficulties of this issue
- **Economic incentives:** return schemes, scattered reports in some regional countries, usually start-ups; seldom discussed at the national level
 - Informal sector of waste management is especially important in the region

Microplastics:

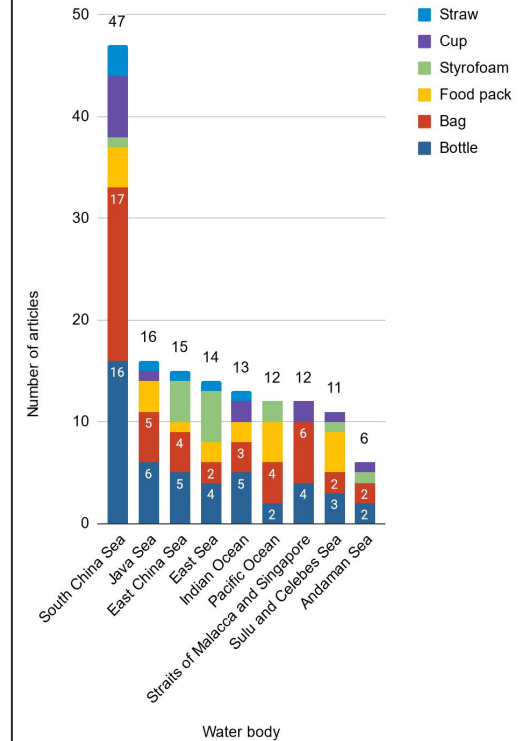
- Research on microplastics have revealed negative impacts on human health, but have not yet been reflected in common policies in the region
- Banning microbeads added in personal care products is a common practice in other countries and regions

3. Findings

b. SUP bans

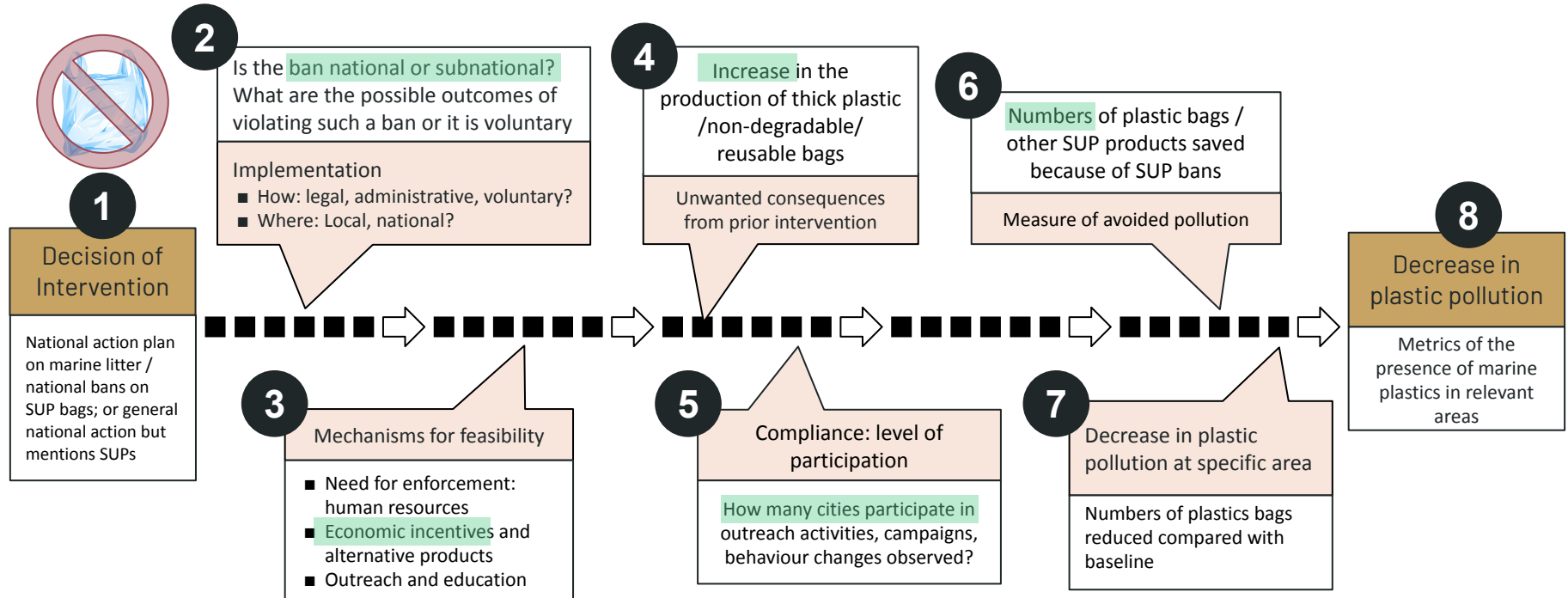
- **Several cities (in the Philippines, in Bali, Indonesia, etc)** have **banned the use of SUPs** in food packaging, goods delivery (#00144) and SUP bags, plastic straws and styrofoam containers (#00106).
- **In Brunei, plastic bags were banned in supermarkets** in 2019, and the customers were encouraged to shift to reusable bags. Similarly, a ban on plastic straw was imposed in Malaysia in 2018 (#00105).
- **In 2008, Mainland China introduced a charging system** to impose restrictions on using **ultra-thin plastic bags in markets** (#00234), plastic bags <25µm thick were banned from 2008 (#00052). Similarly, in Taiwan, plastic straws were banned in all food and beverage outlets (#00087).
- The city of **Yangon in Myanmar** prohibited the production, use and sale of plastic bags in 2011 (#00052).
- **Vietnam** National Action Plan on Sustainable Consumption and Production focused on **limiting the use of SUPs** by introducing eco-friendly packaging in the supply chain by establishing a linkage between distributors, retailers and suppliers (Ministry of Industry and Trade The Socialist Republic of Vietnam, 2020).
- Publications relating to interventions that do not refer to marine plastics have not been captured in RRI 2.0

Frequently reported single use plastics in regional water bodies



3. Findings

b. Evaluating policy effectiveness: SUP Interventions - Bans



c. General evaluations by publications

- Regulations described do not focus on all types of single-use plastics
 - They focus on specific applications instead (e.g. plastic bags, bottles) and often limited geographic areas
- Mechanisms for compliance, monitoring and enforcement appear generally weak
- Consumers are the primary focus of these regulations
 - Regulations can be designed to target other sectors of activities, as identified in the literature as major sources of plastic pollution (e.g. manufacturers, aquaculture, tourism, construction)
- There was a lack of information on return schemes and other economic incentives
- Funding appears lacking for research on new interventions and the evaluation of effectiveness

4. Towards an international plastic treaty

Genesis of global governance of plastic pollution

- The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) was created in 1995 as an intergovernmental mechanism to tackle the issue of land-based pollution.
- Formation of UNEA followed the 2012 UN Conference on Sustainable Development
- UNEA Res 1/6, 2/11, 3/7, 4/6, 4/7 and 4/9 affirm “the urgent need to strengthen global coordination, cooperation and governance to take immediate actions towards the long-term elimination of plastic pollution, in marine and other environments, and of avoiding detriment from plastic pollution to ecosystems and the human activities dependent on them.”

4. Towards an international plastic treaty

2022 UNEA 5.2 Resolutions

- 14 Resolutions adopted at 2022 UNEA 5.2
- Relevant to marine plastics:
 - **Resolution to End plastic pollution: Towards an international legally binding instrument**
 - UNEP/EA.5/Res.14: Requests the Executive Director to convene an intergovernmental negotiating committee, to begin its work during the second half of 2022, with the ambition of completing its work by the end of 2024;
 - Resolution on an Enhancing Circular Economy as a contribution to achieving sustainable consumption and production
 - Resolution on the Sound Management of Chemicals and Waste
 - Resolution on the Future of the Global Environment Outlook

The negotiation of the new treaty is expected to include regulations, definitions and guidance on upstream processes, which are relevant to the regional context.

Regional best practices in single-use plastics interventions could also contribute to the discussion at the international level. ASEAN + 3 region as a global hotspot of plastic pollution, countries' perspectives and national interests are expected to be critical during the negotiation of the global treaty.

Thank you for your kind attention

We welcome feedback and enquiries: cilv109@nus.edu.sg or lcl@nus.edu.sg