

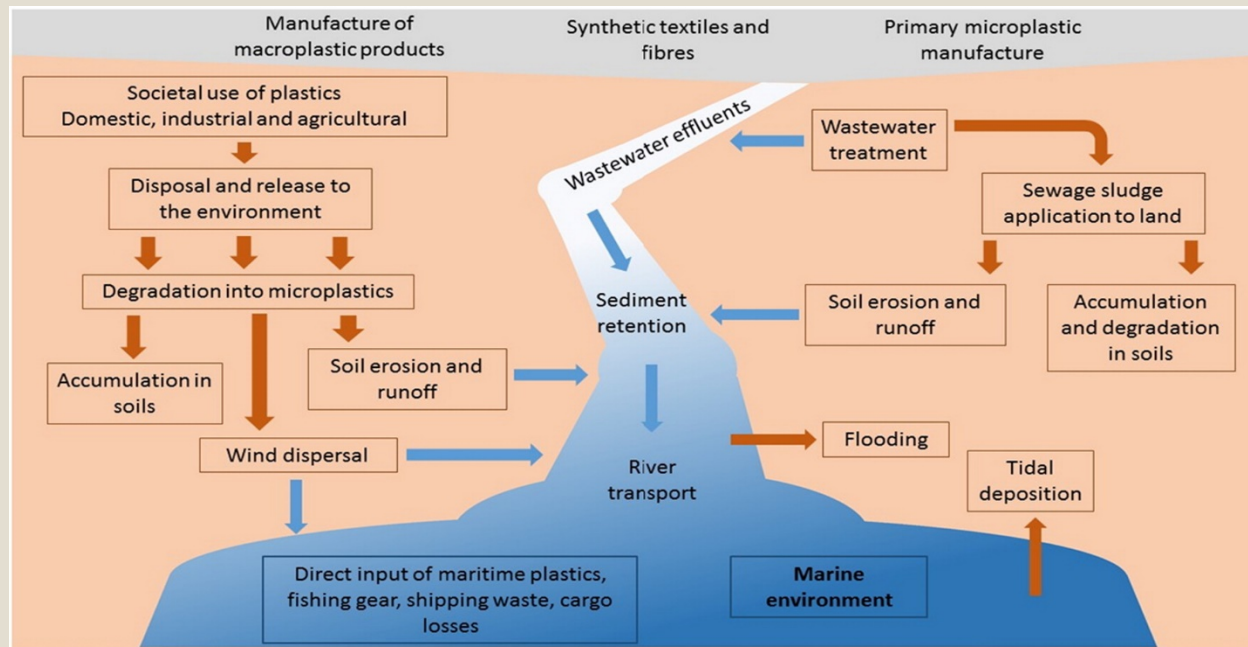


# PLASTIC IMPACT ON OUR OCEANS: THE DECADE AHEAD

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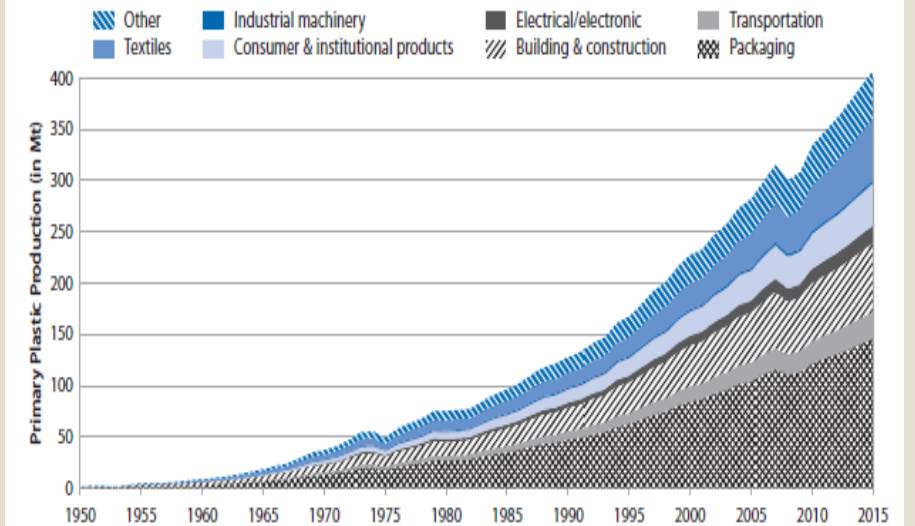
# Marine plastic pollution as an opportunity for promoting a circular economy and society

- ◆ Plastic pollution is caused by **lifestyles dependent on mass consumption and production**. Marine plastic pollution is mainly coming from **land-based sources**.
- ◆ Thus, **establishment of a circular economy and society** is a key approach for tackling plastic waste pollution. It is vital to have **stakeholder collaboration and science-based target setting and its follow-up**.



Source : Horton AA, Walton A, Spurgeon DJ, Lahive E, Svendsen C. Microplastics in freshwater and terrestrial environments: Evaluating the current understanding to identify the knowledge gaps and future research priorities. Sci Total Environ. 2017 May 15;586:127-141. doi: 10.1016/j.scitotenv.2017.01.190.

Figure 2.2. Global primary plastics production by sector, 1950 to 2015 (million tonnes)



Source : OECD (2018), Improving Markets for Recycled Plastics



Maldives

Photo by Premakumara Jagath Dickella GAMARALALAGE, IGES

# Generation of plastic wastes and treatment from 1950 to 2015 (Geyer et. al. 2017)

- 6.3 billion tons of plastics waste generated between 1950 to 2015
- Among these, 12% was incinerated, 9% was recycled, rest of it is either landfilled or released to the environment
- By 2050, 44% will be recycled, 50% will be incinerated and 6% will be landfilled (Geyer et. al. 2017)



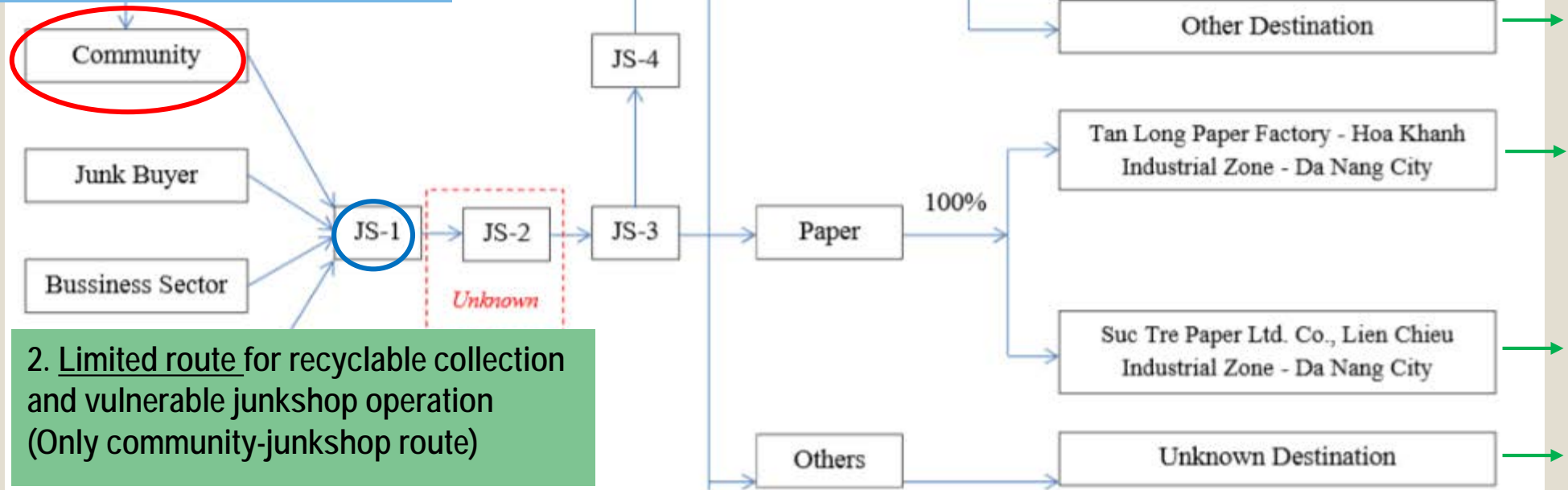
Landfill site near Ho Chi Minh City, Viet Nam  
Photo by Hotta



Recycling Village near Ha Noi  
Photo by Hotta

# Challenges typically faced by cities in developing Asia (Da Nang: 3<sup>rd</sup> largest city in Viet Nam)

1. Limited option for recyclable collection (Only community-based collection and collaboration with a public corporation)



Note

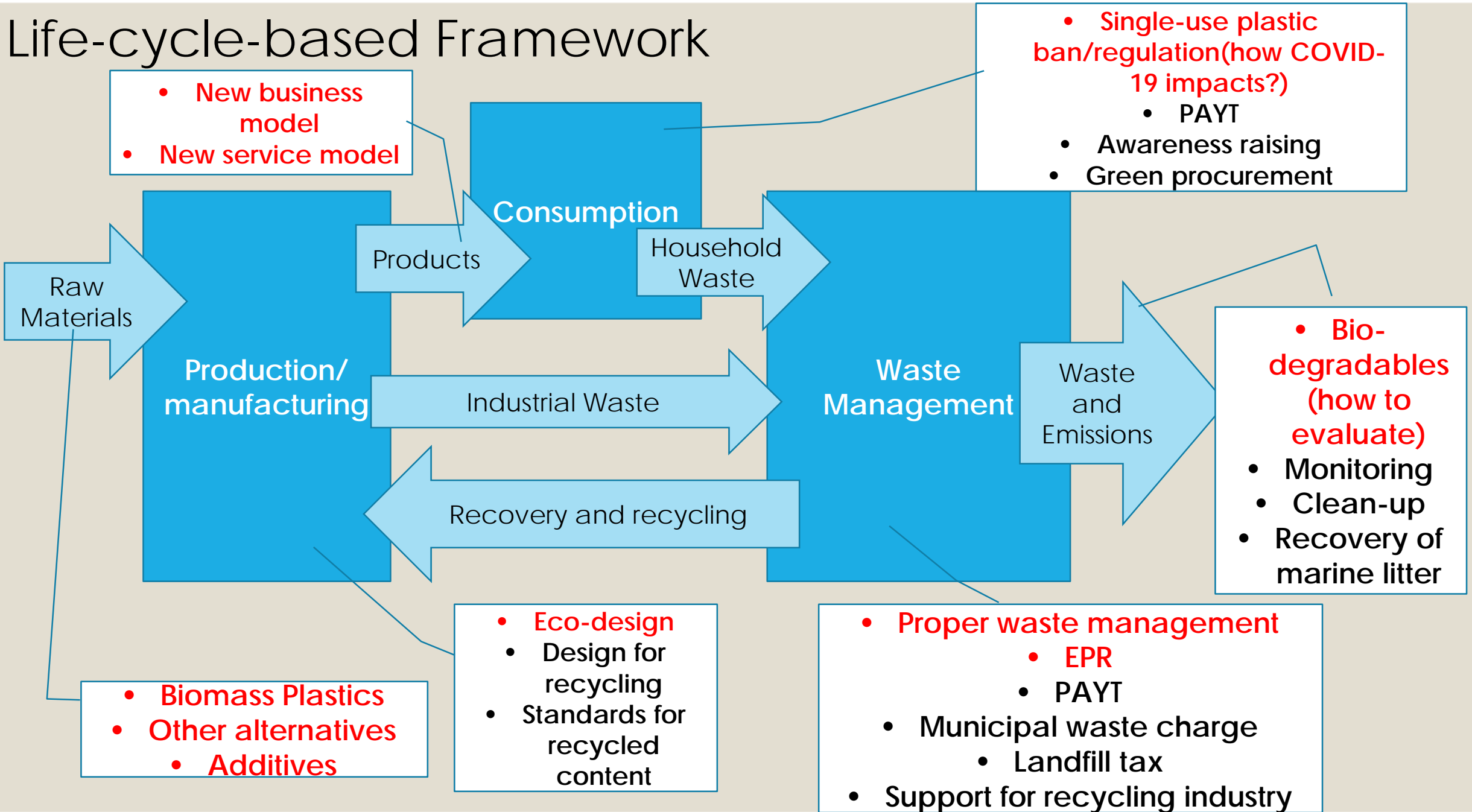
JS-1: Intermediaries purchasing -Level-1 Junkshop (Sale to Level-2 Agent); JS-2: Intermediaries purchasing -Level-2 Junkshop (Sale to Level-3 Agent); JS-3: Intermediaries purchasing -Level-3 Junkshop (Sale to Recycling Factory); JS-4: Recycling directly at Shop

4. Low proportion of plastics as recyclables (6-10%) and relatively low value other than PET

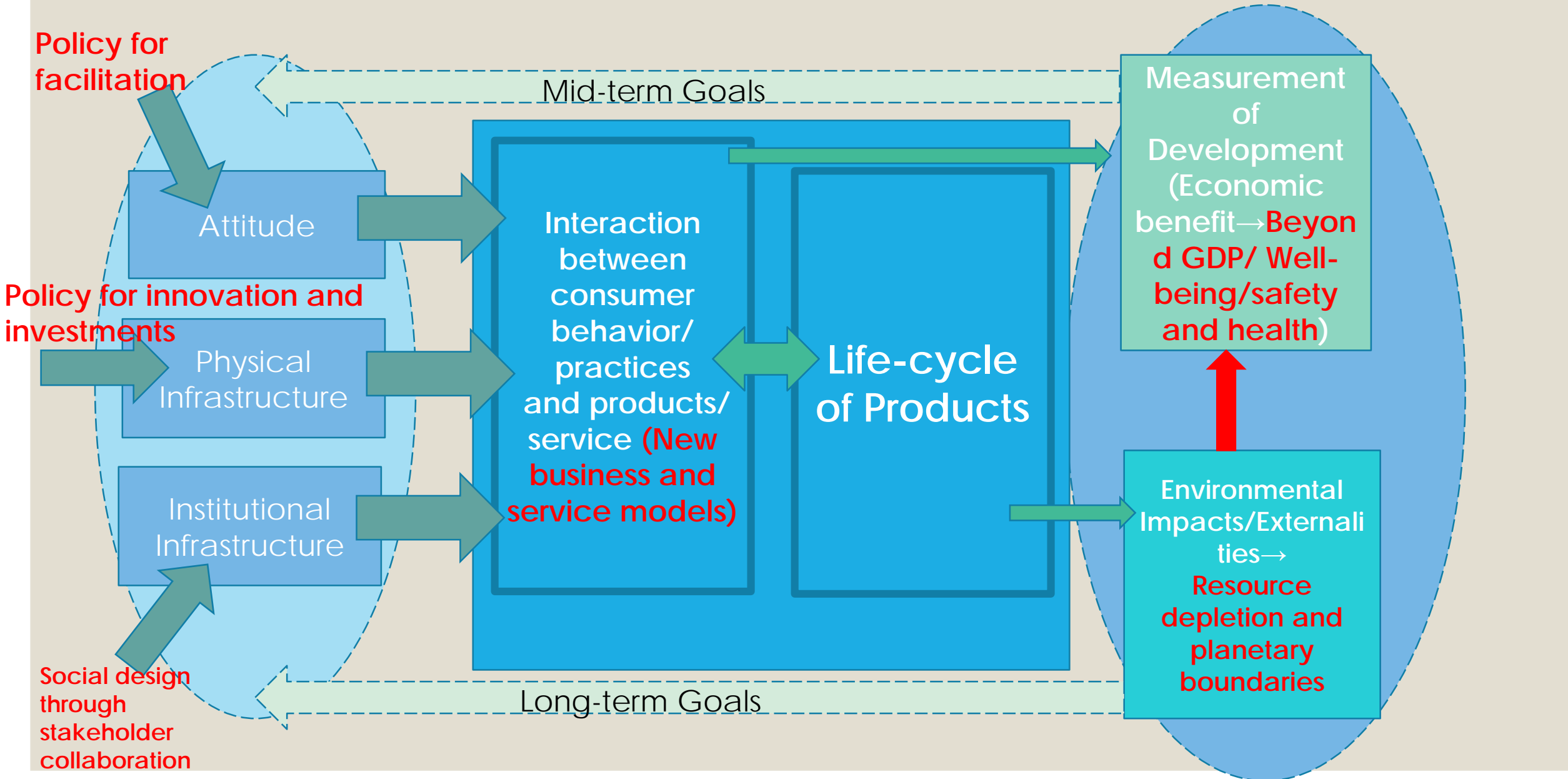
3. Unclear recyclable material flow (Type, Amount & Fate) in each process. Plastics are not likely to be recycled locally but to send to Ho Chi minh or beyond the borders

Source: IGES (2019), JICA Partnership Program on Solid Waste Management Project for Promoting Segregation and Recycling in Da Nang City

# Life-cycle-based Framework



# Transition Framework





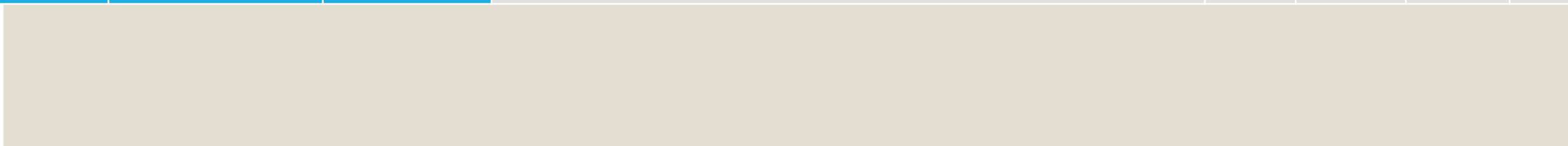
**ANNEX MARINE PLASTIC  
LITTER INITIATIVES IN  
SOUTHEAST ASIA AND EAST  
ASIA**

Actor	Project	Donor	Overview of Activities and	Engagement Strategy			
				Policy	Knowledge and Innovation	Capacity	Business
IDEA Consulting, IGES	ASEAN+3 Marine Plastic Initiative Phase II	JAIF+ATP Fund	<ul style="list-style-type: none"> <li>Assist formulation of National Action Plans.</li> <li>Develop tools for integrated land to sea policy approach and marine debris monitoring.</li> <li>Provide capacity building for SWM Activities. (Target: ASEAN Countries), Myanmar, Cambodia, Lao PDR</li> </ul>	✓ (NAP)	✓	✓	✓
ERIA	Marine Plastic Litter Knowledge Centre	Japan	<ul style="list-style-type: none"> <li>Information and data gathering and sharing. Capacity development for policy makers for the 3Rs. Policy Working Groups.</li> </ul>	✓	✓	✓	
IGES, UNESCAP	Closing the Loop: Scaling up Innovation to Tackle Marine Plastic Pollution in ASEAN Cities	Japan_→UNESCAP	<ul style="list-style-type: none"> <li>This proposed project aims to collaborate with ESCAP to assist four selected cities in ASEAN (Indonesia, Thailand, Malaysia, and Vietnam) to develop their local action plans to improve the plastic waste management. (4 cities in Indonesia, Thailand, Malaysia and Viet Nam)</li> </ul>	✓ (local)	✓	✓	
CCET	Development of national and local action plans to reduce marine plastic from land-based sources (2018-2020)	UNEP/MOE J	<ul style="list-style-type: none"> <li>Support national and local governments in developing plastic waste management strategies and action plans based on a holistic and circular economy approach to reduce marine plastic pollution. (Target: Indonesia, India and Sri Lanka)</li> <li>CCET would play a central role in NAP development and capacity development in other initiatives IGES involves.</li> </ul>	✓ (NAP/LAP)	✓	✓	✓
UNDP, Pirika	Support of Bangkok Declaration 2019 on combating marine debris in cities with private sector in ASEAN cities	JAIF	<ul style="list-style-type: none"> <li>System mapping and pilots in Bin-Duong in Viet Nam</li> <li>Community building, education, and awareness raising in ASEAN cities</li> <li>Viet Nam Bin-DUong</li> </ul>	✓ (local)		✓	✓
SWITCH-Asia, IGES	SWITCH-Asia	EU	<ul style="list-style-type: none"> <li>Support SCP projects in Asia-Pacific region</li> <li>LAO PDR</li> <li>Support to develop plastic action plan in LAO PDR.</li> </ul>	✓ (NAP)		✓	
GIZ, Expertise France	Rethinking plastics – circular economy solutions to marine litter (2019-2022)	EU	<ul style="list-style-type: none"> <li>Supports a transition towards sustainable consumption and production of plastic in East and Southeast Asia to contribute to a significant reduction of marine litter. (Target: China, Indonesia, Japan, Philippines, Singapore, Thailand, Vietnam)</li> </ul>	✓ (NAP)	✓	✓	✓



Actor	Project	Donor	Overview of Activities and	Engagement Strategy			
				Policy	Knowledge and Innovation	Capacity	Business
G20 Follow-up	Follow-up of G20 MPL framework and G20 Portal site	MOEJ	<ul style="list-style-type: none"> <li>Following up of G20 Initiative on MPL</li> <li>G20 Portal Site</li> <li>Indonesia, Thailand, Viet Nam, China, Korea etc.</li> <li>IGES involved to follow this up.</li> </ul>	✓	✓	✓	
UN Environment, COBSEA	SEA Circular (2018-2022)	SIDA	<ul style="list-style-type: none"> <li>Solve plastic pollution at source to reduce marine plastic litter and involve stakeholders throughout plastic value chain. Information sharing (Target: Cambodia, China, Indonesia, Republic of Korea, Malaysia, Philippines, Singapore, Thailand, Vietnam)</li> </ul>	✓ (RAP)	✓	✓	✓
World Bank	ProBLUE (2018-2022)	Canada, EU, France, Germany, Iceland, Norway, Sweden, US	<ul style="list-style-type: none"> <li>Improved Fisheries Governance; marine litter and pollution; sustainable development of key oceanic sectors such as tourism, maritime transport and off-shore renewable energy; and building government capacity to manage marine resources. (Target: Africa, East Asia and Pacific, Latin America and the Caribbean, and the South Asia)</li> </ul>	✓ (RAP)	✓	✓	✓
ADB	Action Plan for Healthy Oceans and Sustainable Blue Economies (2019-2024)	ADB and other donors	<ul style="list-style-type: none"> <li>Create inclusive livelihoods and business opportunities in sustainable tourism and fisheries; protect and restore coastal and marine ecosystems and key rivers; reduce land-based sources of marine pollution; and improve sustainability in port and coastal infrastructure development. (Target: Indonesia and Pacific Countries)</li> </ul>	✓	✓	✓	✓
IUCN	MARPLASTICCs (2017 – 3 Years)	SIDA	<ul style="list-style-type: none"> <li>Promote, enact and enforce legislation and other effective measures that contain and reduce marine plastic pollution. (Target: South Africa, Mozambique, Kenya, Thailand and Viet Nam)</li> </ul>	✓ (NAP)	✓	✓	✓
IUCN	Plastic Waste-Free Island (2019 – 3 Years)	NORAD	<ul style="list-style-type: none"> <li>Reduce plastic leakage to the ocean to and repurpose waste into commercially viable products. (Target: Six Small Island Developing States (SIDS))</li> </ul>	✓	✓	✓	✓
IUCN	Tackling marine plastics in Thailand (2018-2019)	Coca-Cola Foundation	<ul style="list-style-type: none"> <li>Raise awareness and change behaviour towards SWM; and reduce marine plastic pollution and catalyse changes in local and national plastic waste management policies. (Target: Thailand)</li> </ul>	✓	✓	✓	✓

Actor	Project	Donor	Overview of Activities	Engagement Strategy			
				Policy	Knowledge and Innovation	Capacity	Business
GIZ	Partnership Initiative: Reducing Single Use Plastic by business match making and piloting (2019-2023)	BMU/German Government	<ul style="list-style-type: none"> <li>Upstream and piloting plastic avoidance and prepare for reuse (no waste management).</li> <li>Innovation making and match making between start-ups and corporation in Germany/EU and SEA partner countries.</li> <li>Local government and/or corporate level: Policy development, such as multi-use obligations, bans and EPR.</li> <li>Upscaling lessons to national level and knowledge management.</li> </ul> <p>(Target: Thailand, Indonesia, Malaysia)</p>	✓	✓	✓	✓
ADB (Existing TA)	Promoting Action on Plastic Pollution from Source to Sea in Asia and the Pacific (2020-2024)	ADB	<ul style="list-style-type: none"> <li>Government led national and city action plans to reduce marine plastic pollution.</li> <li>Plastic pollution reduction investments and pilot demonstrations e.g. ISWM, circular economy, micro-business.</li> <li>Technical studies on infrastructure, technology, investment needs and financing for transitioning to circular economies.</li> <li>Support for knowledge-sharing and regional cooperation.</li> <li>Digital innovation challenges, and Healthy Oceans Technology and Innovation Forum in Manila, Philippines (tentatively Q1 2021)</li> </ul> <p>(Target: Indonesia, Myanmar, People's Republic of China, Thailand, Viet Nam)</p>	✓ (NAP/ City AP)	✓	✓	✓
IGES (leading activity in Davao and Calapan)	Healthy Oceans and Clean Cities Initiative	UNHABITAT	<ol style="list-style-type: none"> <li>Enhanced governance mechanisms and capacities for NPOA localisation and support for the vertical integration of the marine plastic litter (MPL) response</li> <li>Improved technology, processes and systems in place for MPL reduction</li> <li>Key stakeholders support the accelerated reduction of MPL</li> </ol> <p>(Target: Philippines)</p>	✓ (NAP/ City AP)	✓	✓	✓
World Bank	Leveraging the Circular Economy to Reduce Industrial and Marine Pollution in Bangladesh	World Bank	<ul style="list-style-type: none"> <li>Support the Government of Bangladesh develop a strategy / action plan to reduce land based and marine pollution with a special focus on marine plastics.</li> <li>The Technical Assistance focuses on (1) Baseline Study; (2) Policy Dialogue; and (3) Behavior change</li> <li>IGES supports the Government of Bangladesh to develop a EPR-based policy targeting plastic waste, which is tailored to the situation of Bangladesh.</li> </ul>	✓	✓	✓	✓



Actor5	Project	Donor	Overview of Activities	Engagement Strategy			
				Policy	Knowledge and Innovation	Capacity	Business
WWF, UN-Habitat, EUROCITIES	Plastic Smart Cities (under No Plastic in Nature by 2030 Initiative)	NORAD and WWF NL	<ul style="list-style-type: none"> <li>Support cities and tourist destinations in developing an action plan to reduce plastic pollution and transit to a circular economy. Focus areas include reduce use of key waste plastics, separation and collection, improved recycling/reuse, and landfill management.</li> <li>Establish online knowledge platform with plastic smart action best practices .</li> </ul> <p><b>(Target: China and Hongkong, Indonesia, Philippines, Thailand, Viet Nam)</b></p>	✓ (City AP)	✓	✓	✓
WWF	Plastic ACTION (PACT) (under No Plastic in Nature by 2030 Initiative)	WWF	<ul style="list-style-type: none"> <li>Achieve plastic reduction across sector.</li> <li>Champion individual businesses to drastically reduce their consumption and production of virgin fossil fuel-based plastics while contributing to a circular economy.</li> </ul> <p><b>(Target: Businesses)</b></p>	✓	✓	✓	✓
WWF	EPR Project (under No Plastic in Nature Initiative by 2030)	WWF	<ul style="list-style-type: none"> <li>Mobilize governments in target countries to incorporate EPR into their legal framework.</li> <li>Facilitate multi-national and local companies to take responsibility for end-of-life impacts of their products and packaging.</li> </ul> <p><b>(Target: Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam)</b></p>	✓	✓	✓	✓
UNDP, Coca Cola, Uniliver	Circular Economy for Plastics	UNDP, GEF	<ul style="list-style-type: none"> <li>Provide technical and financial support to conduct innovative approaches and practices for plastic waste management through a circular economy approach through recycling, reducing and reusing plastics for new products, influencing consumer use and behavior, or developing better waste collection and management practices. <b>(Target: Asia Pacific Countries)</b></li> </ul>	✓	✓	✓	✓
UNDP	Combating Plastic Pollution in Cambodia	UNDP, SIDA	<ul style="list-style-type: none"> <li>Conduct awareness raising and campaigns.</li> <li>Support research to identify best regulatory and policy measures for single-use plastic, recycling and waste-energy options.</li> <li>Recommend regulations on single-use plastic with a phased approach to support transition to alternatives .</li> <li>Support recycling, waste to energy and alternative enterprise to solve plastic waste challenges while promoting private public partnerships.</li> <li>Promote waste management solutions. <b>(Target: Cambodia)</b></li> </ul>	✓	✓	✓	✓
UNEP	Promotion of Countermeasures Against Marine Plastic Litter in Southeast Asia and India	UNEP, MOFA (Japan)	<ul style="list-style-type: none"> <li>Develop a model for plastic leakage and monitor leakage hotspots along the Ganges and Mekong rivers.</li> <li>Enhance information and knowledge on how to develop and implement countermeasures against marine plastic litter. <b>(Target: Cambodia, Lao PDR, Thailand, Vietnam, India)</b></li> </ul>	✓	✓	✓	
UNESCO	The Plastic Initiative	UNESCO	<ul style="list-style-type: none"> <li>Support countries in Asia-Pacific to improve environmental studies programmes for young people and help governments to develop environmental policies in relation to reuse/reduce/recycle, plastic waste management, and innovation to solve plastic pollution issues).</li> </ul> <p><b>(Target: Asia-Pacific countries)</b></p>	✓	✓	✓	

## Regional stakeholder mapping (international initiatives)

G20 Report on Actions Against Marine Plastic Litter (official report of G20 resource efficiency dialogue process compiled and edited by IGES) showed that **Approx. 2/3 of** bilateral or multilateral initiatives **(23 out of 35)** by G20 countries **concentrated in Southeast Asia.**

- Utilize these emerging opportunities not only about marine plastics but as a step for policy collaboration and coordination for circular economy in the region.
- OECD-style policy analysis and coordination function is necessary to mainstream circular economy in the region (ASEAN+3)
- ASEAN member states should take a lead and donors should collaborate to coordinate international efforts in the region.
- Build on existing efforts and regional initiatives/platforms to respond to country needs as well as explore synergies among stakeholders (ADB, GIZ, IDEA/IGES, IUCN, SWITCH Asia, UN Environment, COBSEA, WORLD Bank etc.) to avoid duplication of work.
- Identify issues and priorities to be translated into national/regional action plans that can be implementable among ASEAN countries given their different institutional settings and level of interests.
- Establish mechanisms to engage stakeholders across different sectors in the process with special emphasis on youth and their environmental curriculums.
- Identify entry point and champion to promote good examples as well as introduce Extended Producer Responsibility (EPR) and Public-Private Partnerships (PPP) schemes for ASEAN countries.

### ◆ T20 2019 (G20 Think Tank Process): Publication of T20 Policy Brief “Six Proposals for Future Policies towards Circular Economy and Society”

1. **Capture the momentum** of public attention on marine plastic pollution not as an isolated issue but as an opportunity to **raise political and social priorities for circular economy and society**
2. Raise the ambition of policies incorporating **Extended Producer Responsibility (EPR)** by envisioning phasing out of single-use items and difficult-to-process products.
3. Policy support for a **business model** for circular economy and society
4. Facilitate **local/community-based initiatives of circular economy and society** (Regional Circulating and Ecological Spheres)
5. **Establish regional mechanism for policy coordination and harmonisation for circular economy and society**, for example under ASEAN+3 or +6 framework.
6. Adopt **a new measurement of wealth and development** by incorporating planetary boundaries