REIMAGINE RECREATE RESTORE
#GenerationRestoration

WORLD ENVIRONMENT DAY

UN environment programme 50 1972-2022

PAKISTAN 2021

Eco-Poverty & Plastic Waste

~~Vicious~~ Virtuous Circle

~~Circle~~ Circle

Achieving Sustainable Development Goals

July 2021

Plastic Waste impact on Eco-Poverty

	Jobs are lost in tourism, fisheries, food, and other relevant sectors due to plastic pollution
	Health impacts due to air, water and food pollution due to mismanaged plastic waste – medical bills and reduced productivity (DALYs) – gender, children
	Displacement due to flush floods where plastic waste chocks the storm drainage and blocks smooth flow of rain/flood water
	Increased costs to the public for water supply and wastewater management due to increased water treatment costs
	Livestock loss in terms of sickness caused by eating plastics and also in terms of reduced milk
	Informal sector facing increasing work-related risks including from broken plastics (sharps – hazardous) and contaminated plastics (harmful substances)

COVID-19 & Plastic Pollution in AP Region

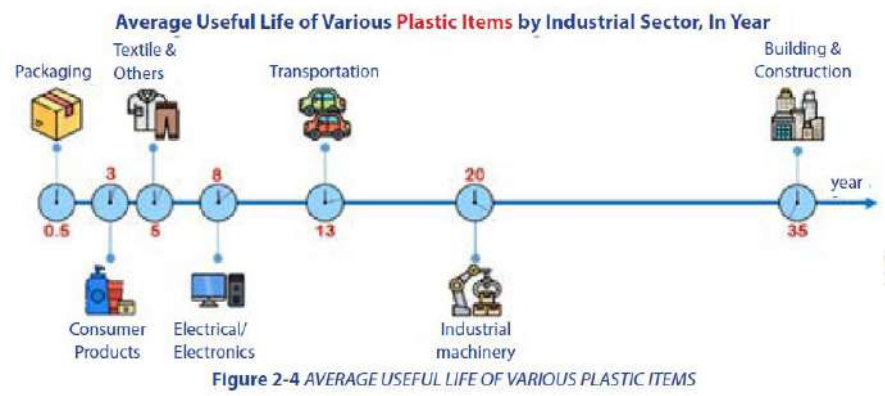
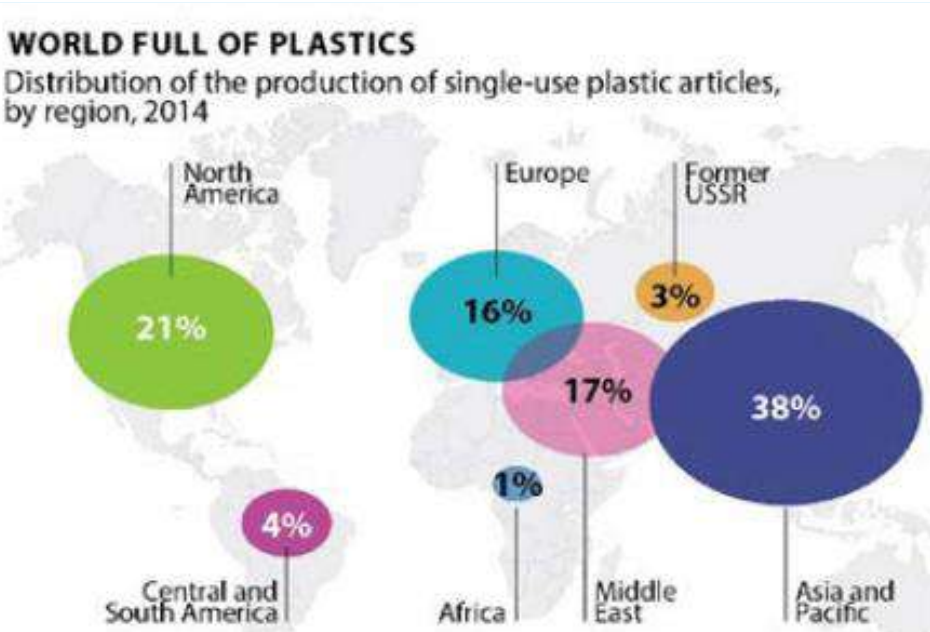


Figure 2-4 *AVERAGE USEFUL LIFE OF VARIOUS PLASTIC ITEMS*

(Source: modified from Heinrich Böll foundation 2019)



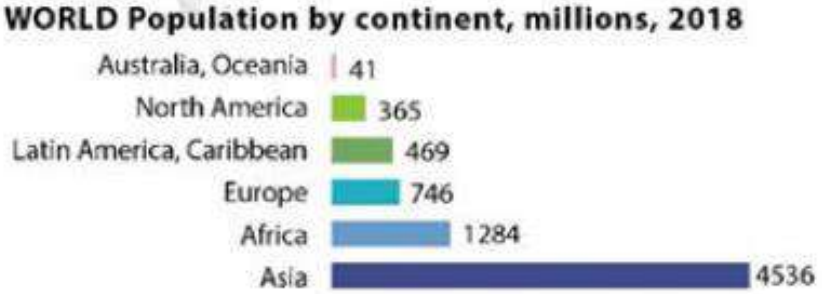
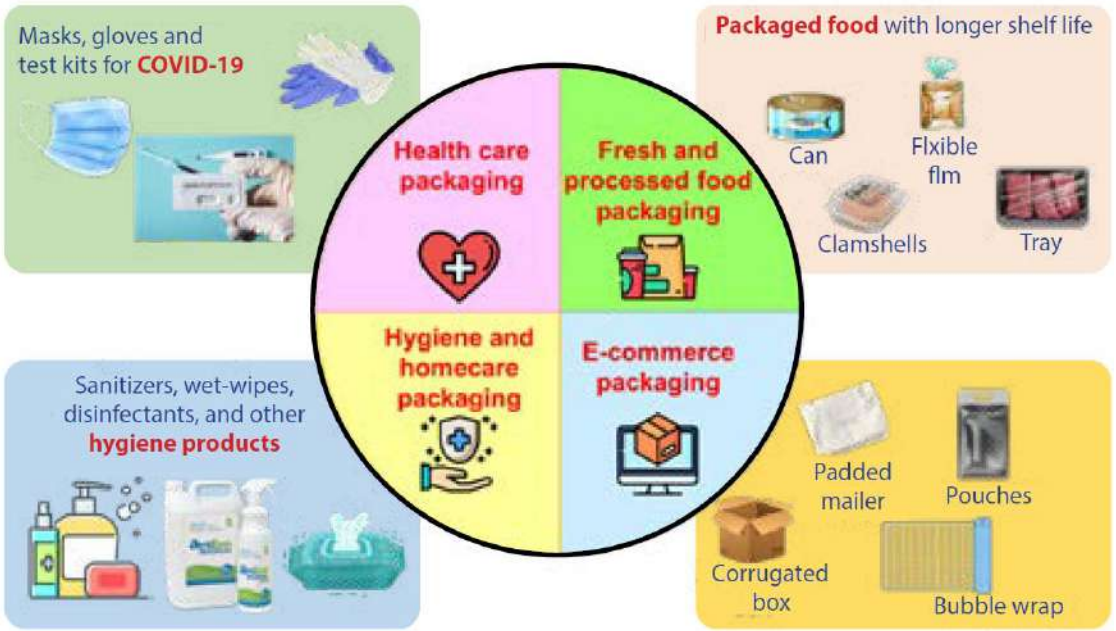


Figure 2-3 *DISTRIBUTION OF THE PRODUCTION OF SUP ARTICLES BY REGION, 2014 AVERAGE USEFUL LIFE OF VARIOUS PLASTIC ITEMS*

(Source: Heinrich Böll foundation 2019)

Surge in Demand due to COVID-19

Pockets Within Packaging that are Experiencing Surge in Demand



Factor	Virgin Plastic Demand	Recycled Plastic Demand	Impact on Plastic Demand
	↑	↓	Oil price reduction has led to **reduced virgin plastic prices**. This has decreased recycled plastic consumption and increased virgin plastic consumption, as **stakeholders have transitioned to virgin plastic** due to its significant price discount.
	↓	↓	The **lockdowns and continued restrictions** on industries/ consumers globally, in addition to the **economic downturn/ low consumer confidence**, have **reduced demand for plastic overall**.

Plastics Trends during COVID-19

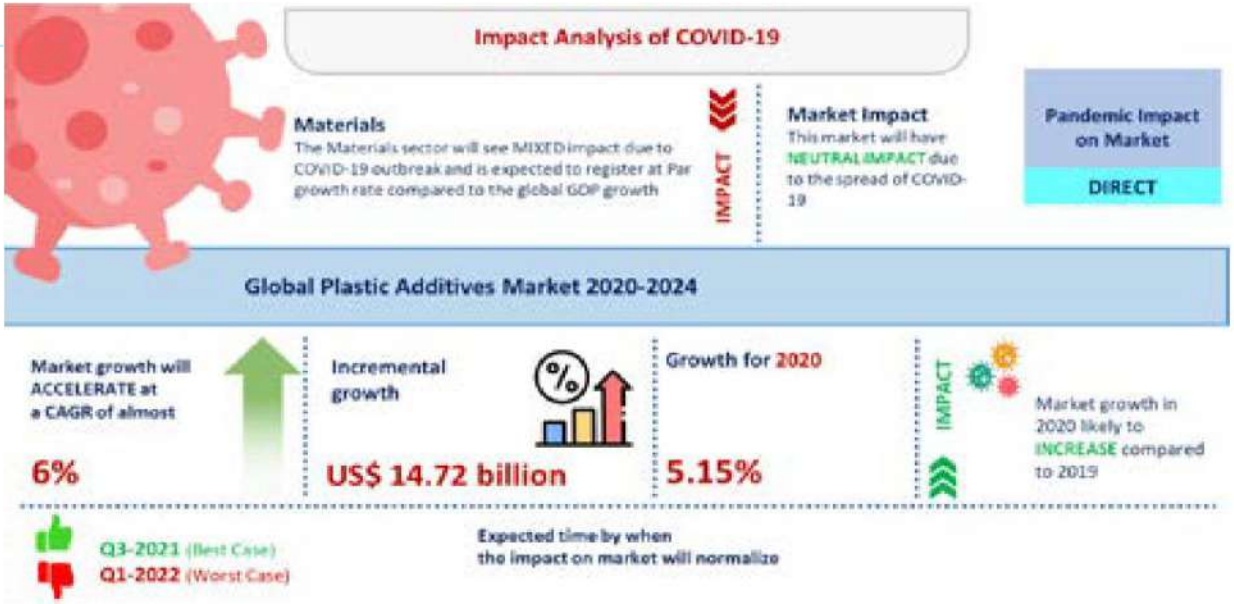


Figure 2-8 *IMPACT ANALYSIS OF COVID-19 ON GLOBAL PLASTIC ADDITIVES MARKET 2020-2024.*

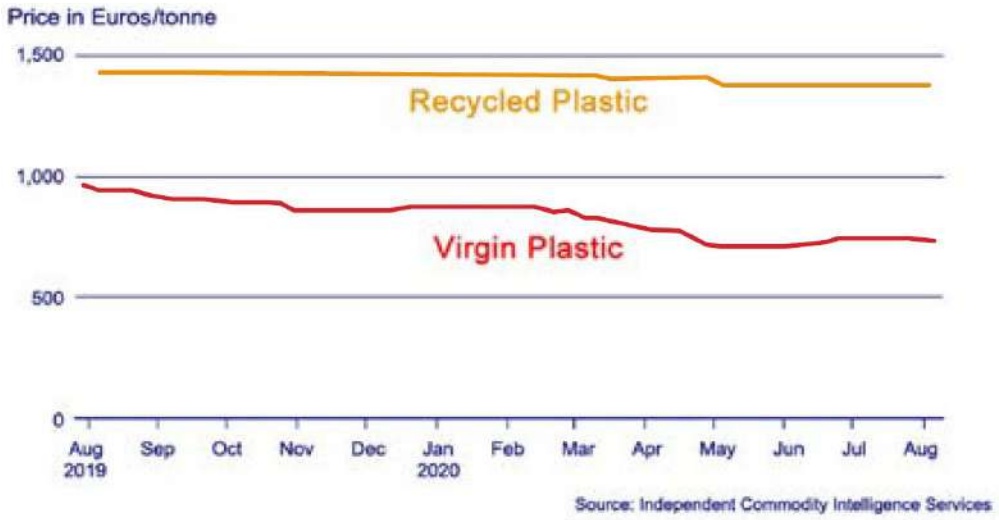


Figure 2-11 *PRICE OF VIRGIN AND RECYCLED PLASTICS*
(Source: Independent Commodity Intelligence Services)

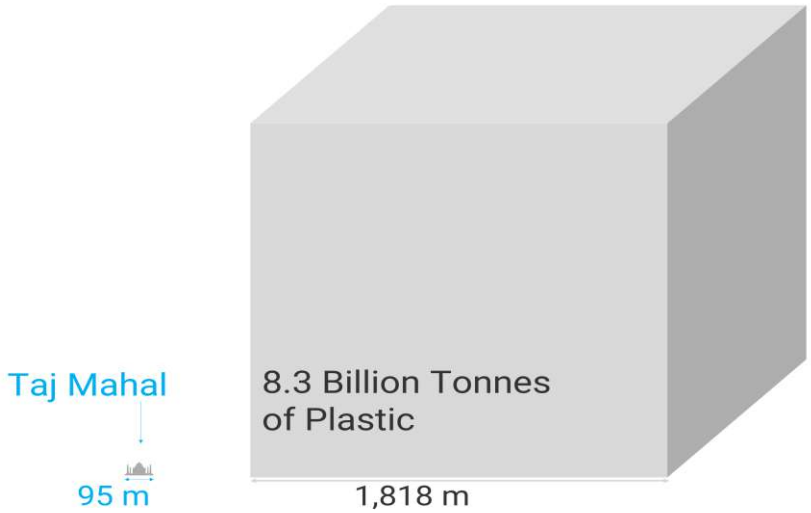
Plastic Waste before COVID-19

	8.3 billion tonnes of plastic have been produced, using 17 million barrels oil each year
	80% remains in **landfill**s or the environment, **100 years** for plastic to degrade in the environment, 13 million tonnes of plastic enter **ocean** each year
	1 million plastic **bottles**, 10 million plastic **bags** bought every minute
	50% of consumer plastics are **single use**, and 10% of all human-generated **waste is plastic**
	100,000 **marine animals** killed by plastics each year
	90% of **bottled water** found to contain plastic particles, 83% of **tap water**

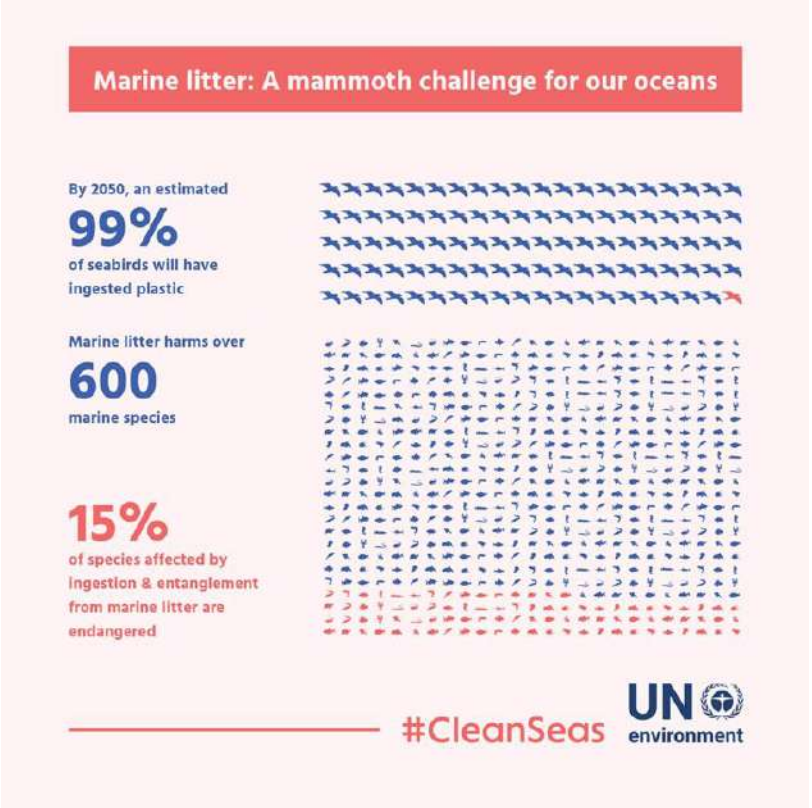
UNEP/EA.5/8: Progress in the implementation of resolution 4/6 on marine litter and microplastics

Resolution adopted by the 4th United Nations Environment Assembly on 15 March 2019 4/6
Marine plastic litter and microplastics

Plastic Waste before COVID-19



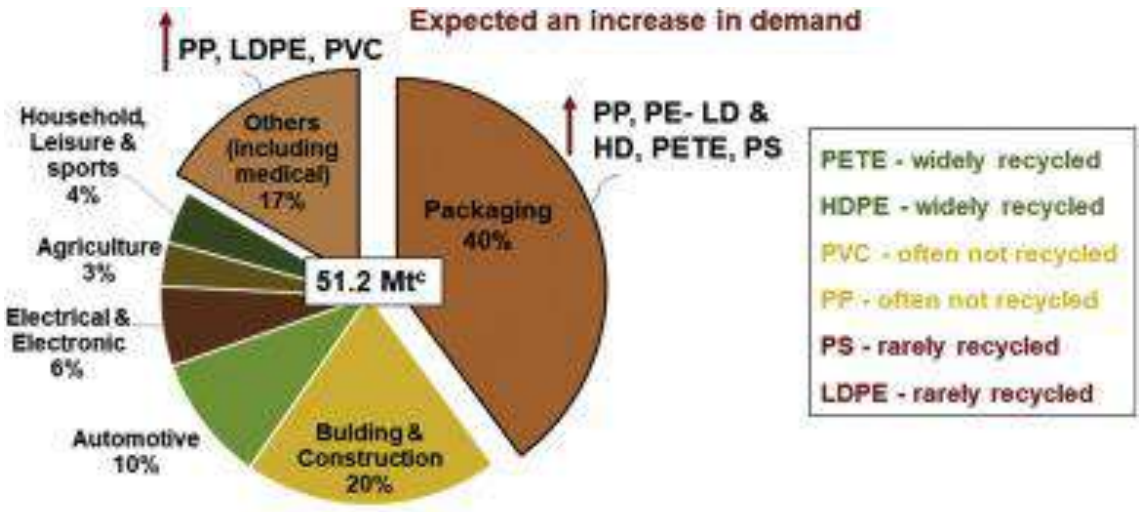
Source: WED Toolkit 2018



Pandemic and Plastic Waste

	An alarming increase in waste plastics and a substantial decrease in its recycling.
	Main sources of increased waste plastics are related to the use of plastics in medical and packaging.
	The global, regional and national net plastic demand is yet to be assessed in the context of this pandemic.
	The plastic demand in the medical sector to help in combating the COVID-19 including the face shield (PP), gown (LDPE), vinyl gloves (PVC), disposable bag, tube, masks (plastic sheet and non-woven fabric) etc.
	The vast demand for food delivery or takeout as well as grocery delivery increase PP, LDPE, HDPE, PETE and PS, which are the common packaging materials

Pandemic and Plastic Waste

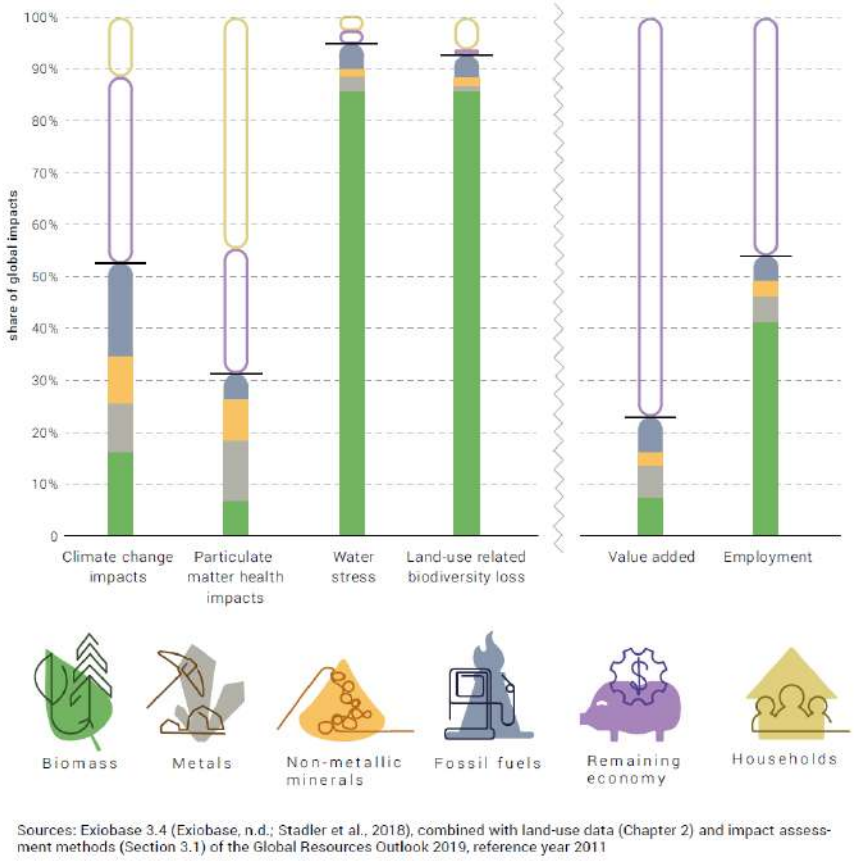


Increase of the plastic types is estimated based on increasing material demand in PPE[a], food delivery[b] etc

Source: Jaromír Kleme, Yee Van Fan a, Raymond R. Tan b, and Peng Jiang c, “Minimising the present and future plastic waste, energy and environmental footprints related to COVID-19” Renewable and Sustainable Energy Reviews 127 (2020)

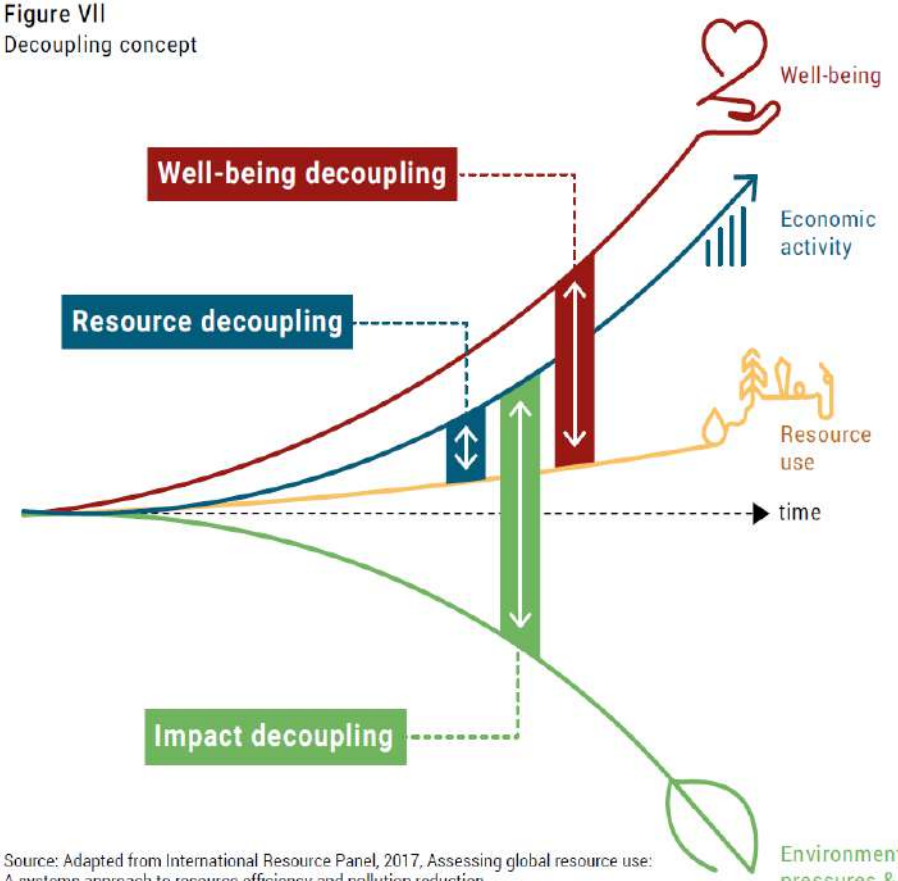
Global Resources Outlook 2019

Figure II
Global impacts split by resource type, remaining economy and households



Sources: Exiobase 3.4 (Exiobase, n.d.; Stadler et al., 2018), combined with land-use data (Chapter 2) and impact assessment methods (Section 3.1) of the Global Resources Outlook 2019, reference year 2011

Figure VII
Decoupling concept



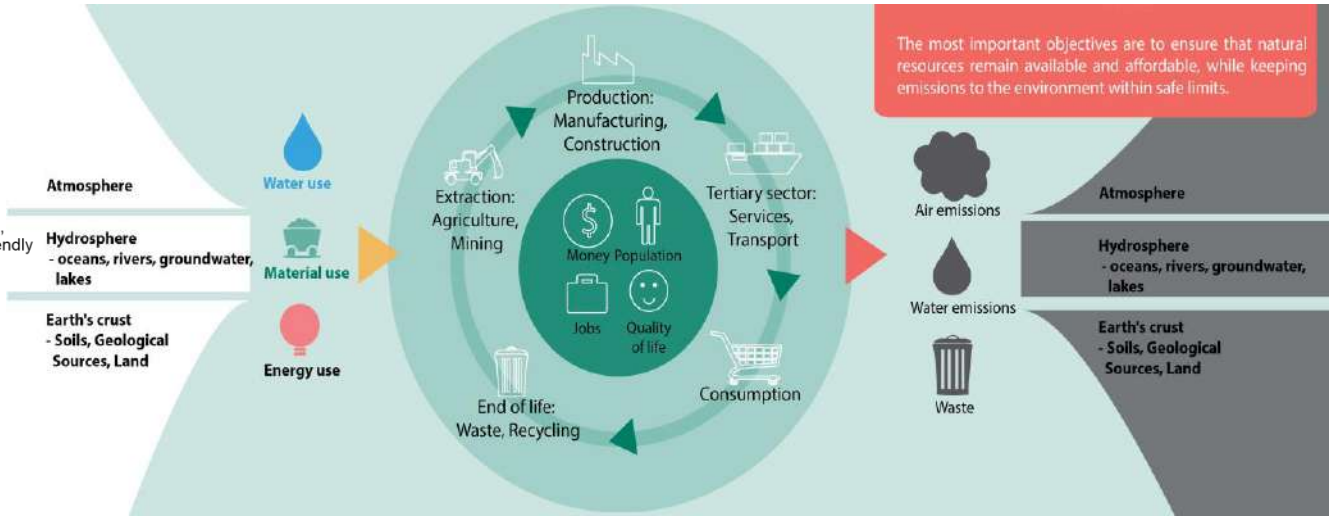
Source: Adapted from International Resource Panel, 2017, Assessing global resource use: A systems approach to resource efficiency and pollution reduction

Identify
Actions

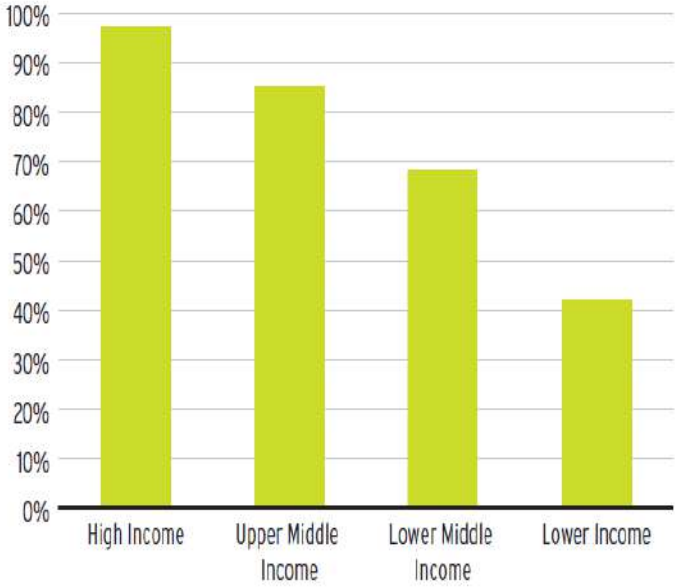
Public Sector
Regulatory framework, institutional setup, tariff designing, subsidies and guarantees

Private Sector
Financial share, technical innovation, managerial role, local knowledge, backward and forward linkages

Community
Willingness to pay, awareness and will, environmentally friendly lifestyles



Downstream Solutions are Expensive!



Waste Collection Rates by Income, World Bank (2012)

Paradigm Shift
Material Sound Society

20th CENTURY

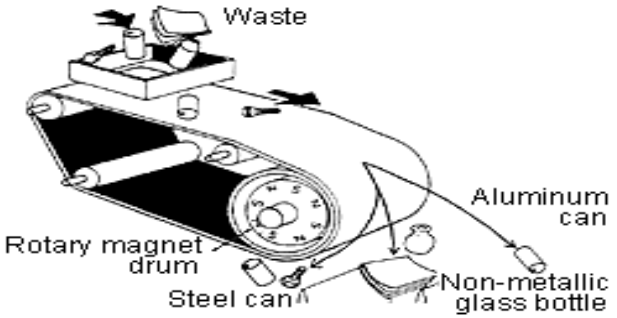
WASTE MANAGEMENT

"How do we get rid of our waste efficiently with minimum damage to public health and the environment?"

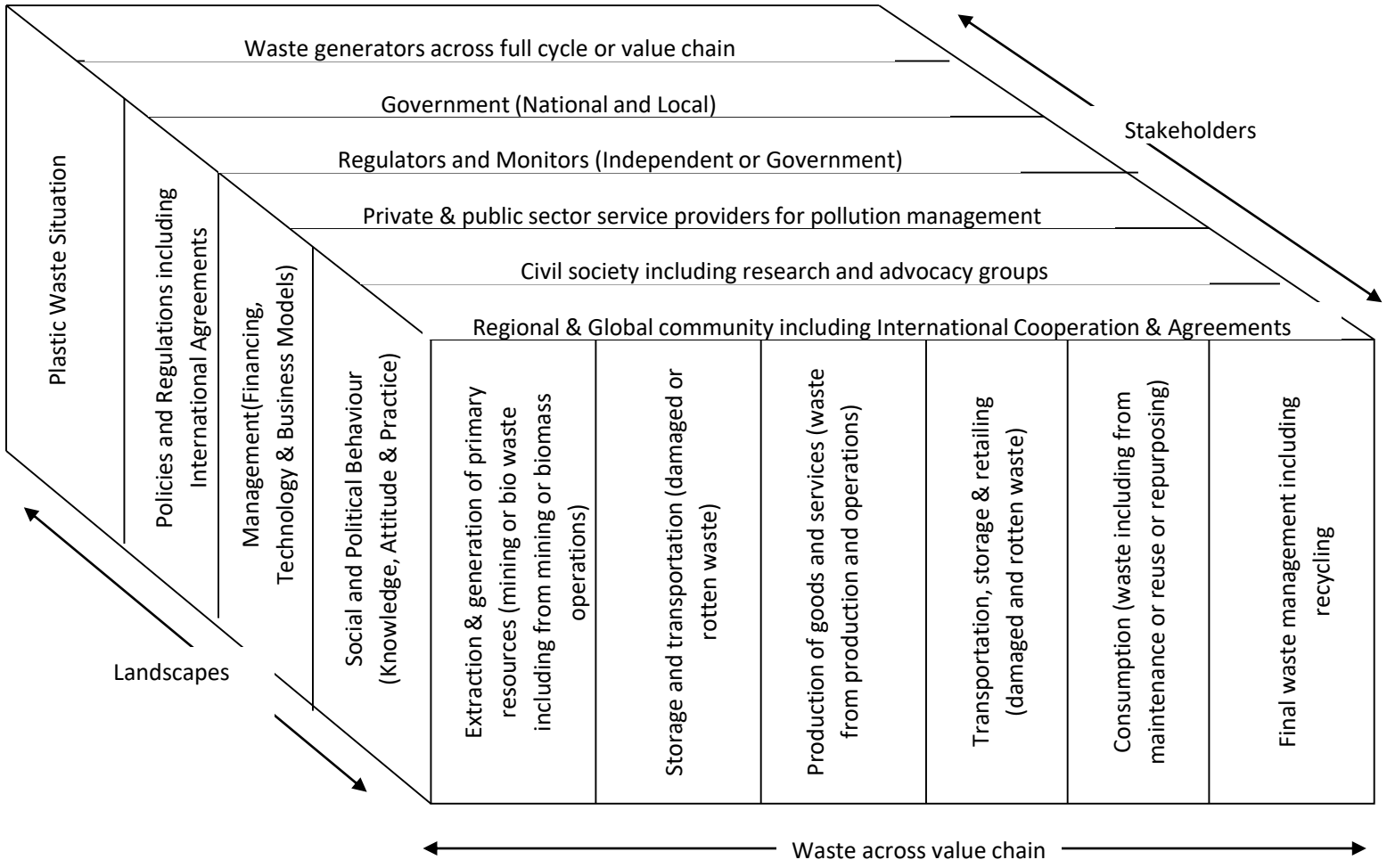
21st CENTURY

RESOURCE MANAGEMENT

"How do we handle our discarded resources in ways which do not deprive future generations of some, if not all, of their value?"



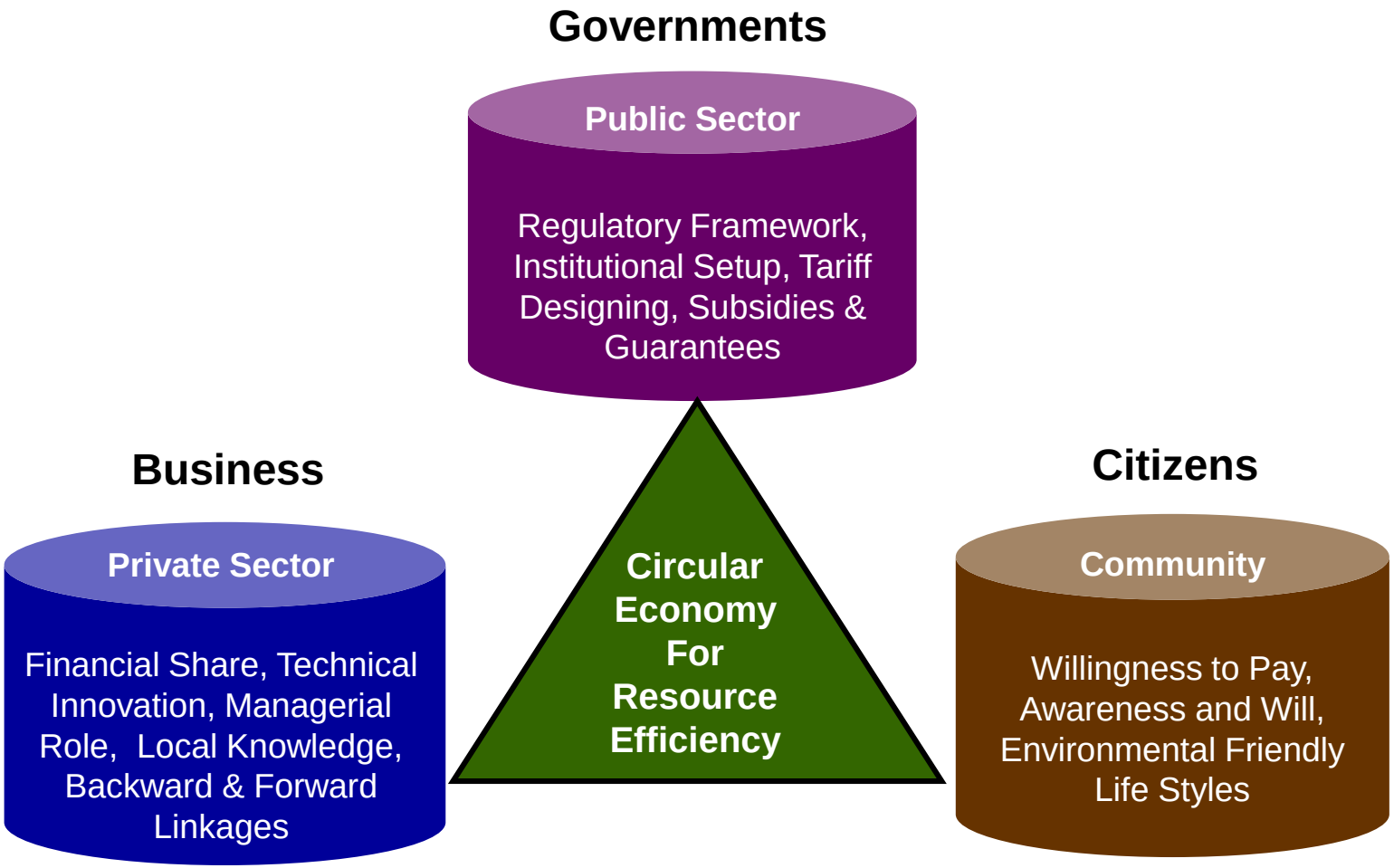
Processes and Stakeholders (Example – Plastics)



Plastic Waste Management impact on Eco-Poverty

	Green Jobs
	Improved health and productivity – gender & children
	Municipal services
	Reduced costs
	Better businesses and opportunities
	Better work related environment

Tools to Establish Circular Economy



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Thank you!

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Annexures

Optimizing Resource Efficiency through Circular Economy

	Policies and Regulatory Framework	Institutional Arrangements including Private Sector	Financing Mechanisms including PPP, EPR, CSR	Technology Support & Capacity Building	Innovations and Business Models	Awareness-raising for Stakeholder Engagement and Behaviour Changes
Eco-Design						
Green Supply Chain						
Sharing Platforms						
Extended Product Life & Product Use						
Product as a Service						
Green Recycling & Recovery						

Resource Efficiency in Asia-Pacific

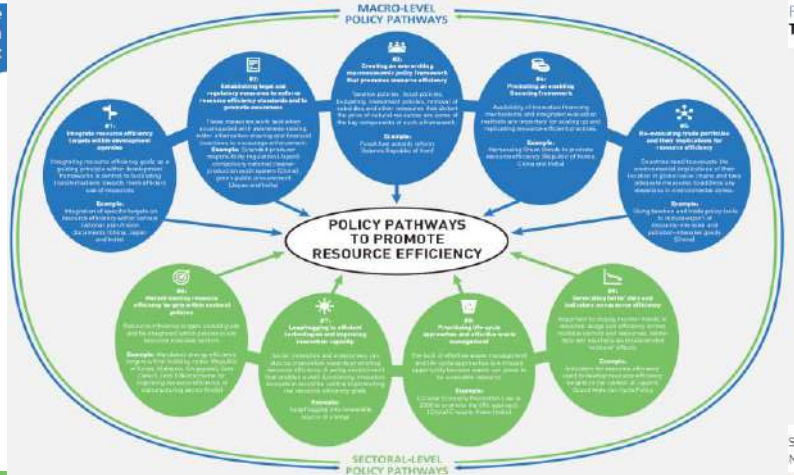
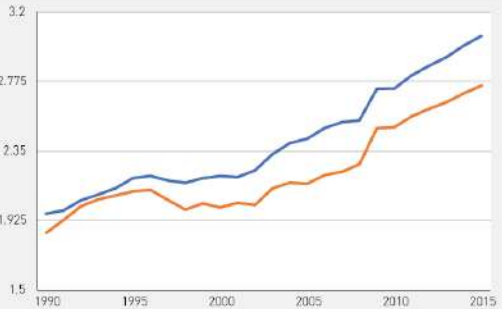


Figure 1
Trends in resource intensity, 1990–2015 (kg per US$)



Source: ESCAP calculations based on ESCAP Statistical Database; see http://data.unescap.org/escap_stat/#data/.
Note: The aggregated value is weighted using GDP.