

Waste Management and Efficient Resource use

International Environmental Technology Centre (IETC)

Presented by Claudia Giacvelli UNEP IETC / Osaka
Claudia.giacovelli@un.org



The International Environmental Technology Centre's vision is for countries to implement sustainable solutions to environmental challenges, with focus on holistic waste management.

IETC assists countries to identify and implement sustainable technological solutions to environmental challenges

UNEP (2019) IETC Annual Report 2018

www.unenvironment.org/ietc/report/ietc-annual-report-2018

IETC support to countries around the world

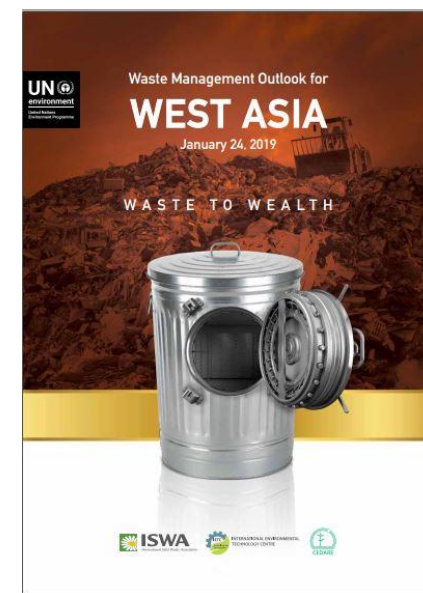
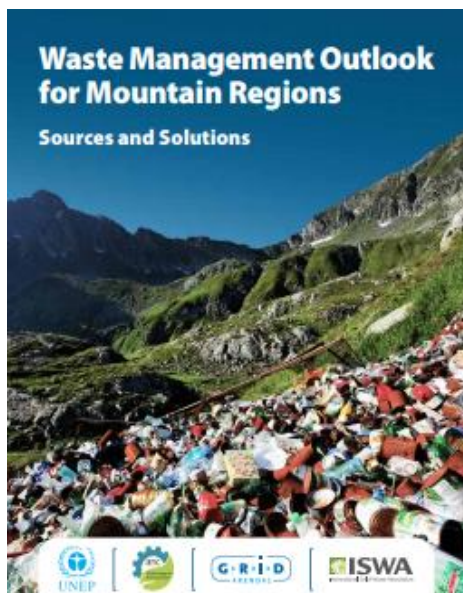
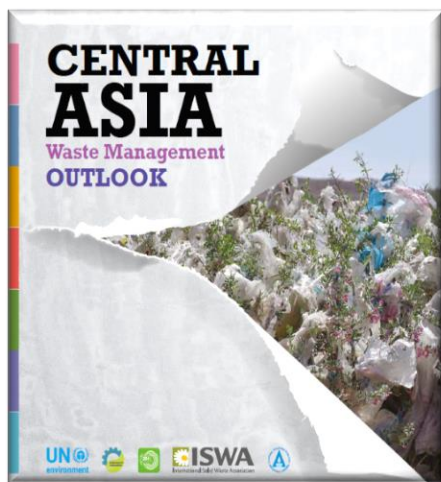
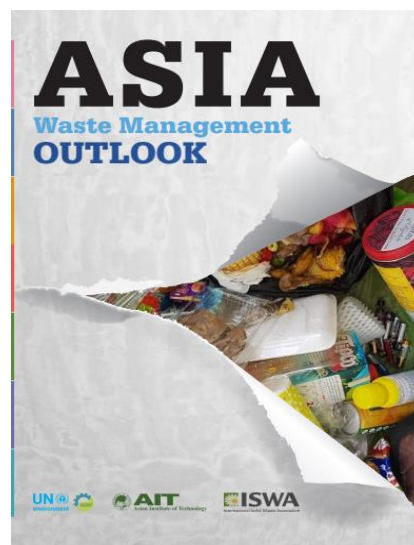
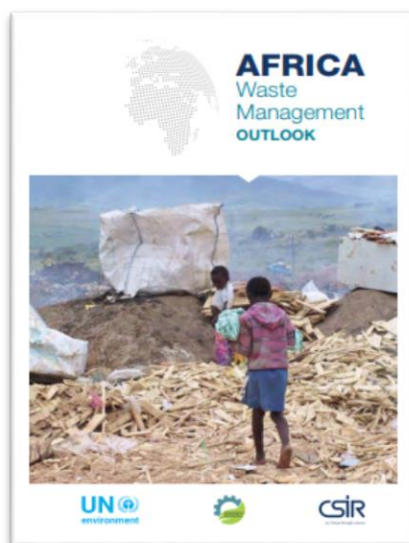
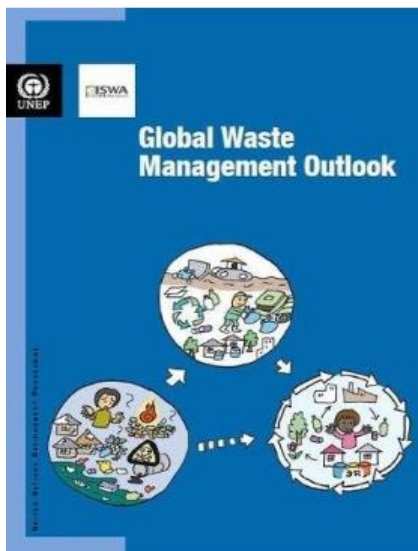
- National and/or city level strategy development
- Implementation



Many cities and countries are working with IETC to improve Waste Management Governance

Waste management Outlooks

Global, Regional and Thematic



Main Regional Trends



GENERATION

is expected to increase by up to 50% by 2050

Million tons/year			
Asia	LAC	Afric a	SIDS
280	197	125	56



COLLECTION services have improved but are still inadequate particularly in Africa

Population Covered			
Asia	LAC	Afric a	SIDS
Too diverse	93%	55%	85%



DISPOSAL largely done in uncontrolled dumpsites, landfills, if waste is not openly burned or discarded in the environment.

Unsound Disposal

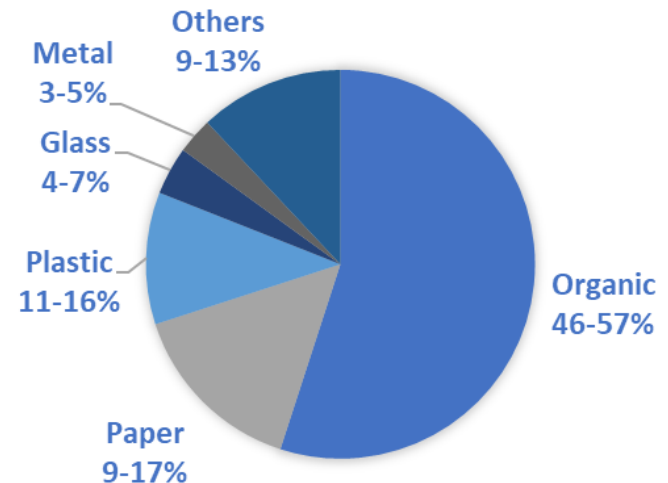
Asia	LAC	Africa	SIDS
Too diverse	27%	90%	80%



COMPOSITION

Organic waste dominates MSW. Other wastes have increased quicker than the technologies and infrastructures to handle them.

AVERAGE MSW COMPOSITION



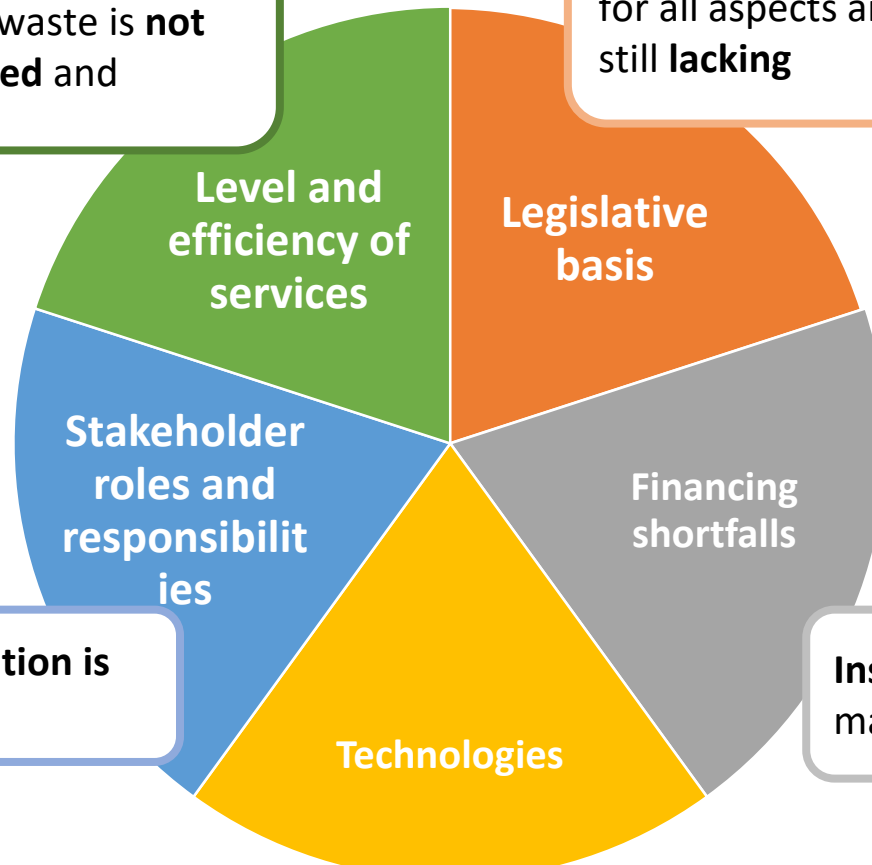
RECYCLING is low and mostly driven by socio-economic needs (**informal sector**). Potentials to develop a second resource economy are still untapped.

Asia	LAC	Africa	SIDS
Too diverse	10%	4%	Low No data

Key Waste Management Challenges

- **Half of the world** population without sound waste management
- Most of the collected waste is **not properly sorted, treated and disposed**

Comprehensive **legislation** and definitions for all aspects and every stream of waste is still **lacking**



Level and efficiency of services

Legislative basis

Financing shortfalls

Technologies

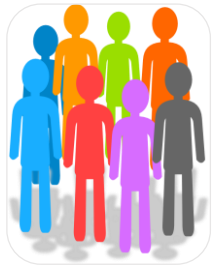
Stakeholder roles and responsibilities

Stakeholders **participation is low**

Insufficient funds for sound management of waste

Many countries still **lack** environmentally sound **technologies** to manage/recycle waste

Drivers for resource demand in a Region of Diversity: Asia and the Pacific



Growing population
from >4.2 billion
people today to 9
billion by 2050



**Economic develop-
ment** and increasing
global trade

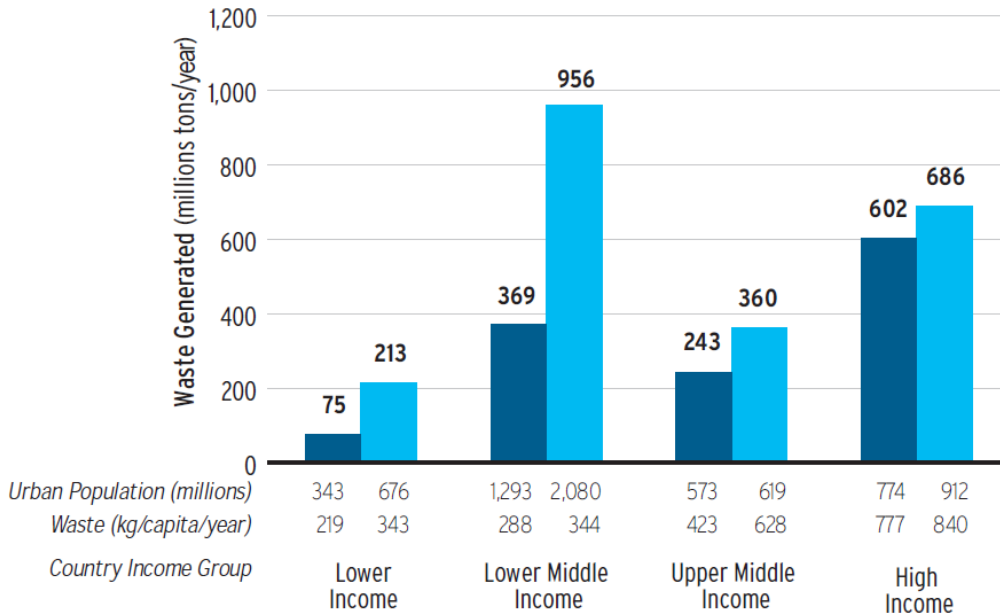


Increasing
consumption
of biomass



Growing middle-class
with **changing con-
sumption patterns**

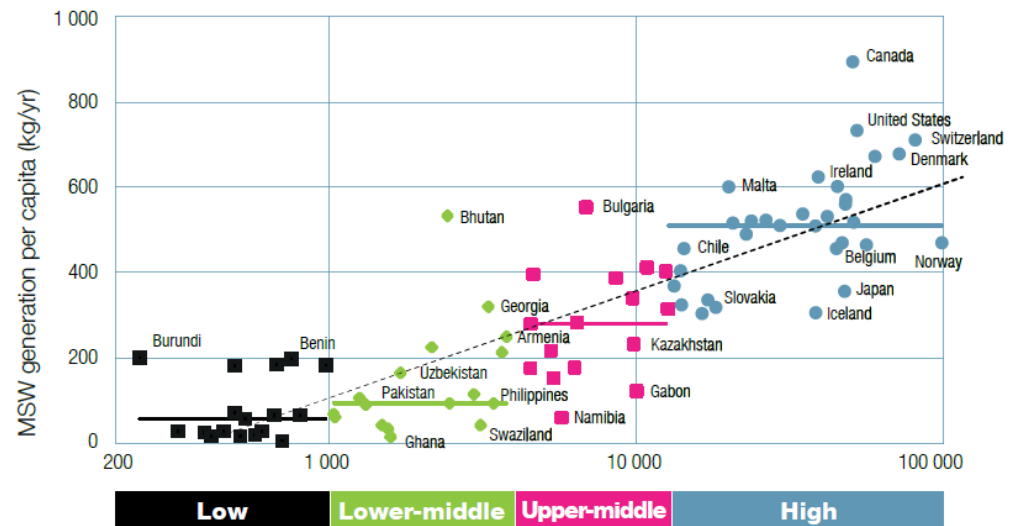
Increasing Waste Generation



Urban waste generation by income level and year, World Bank (2012)

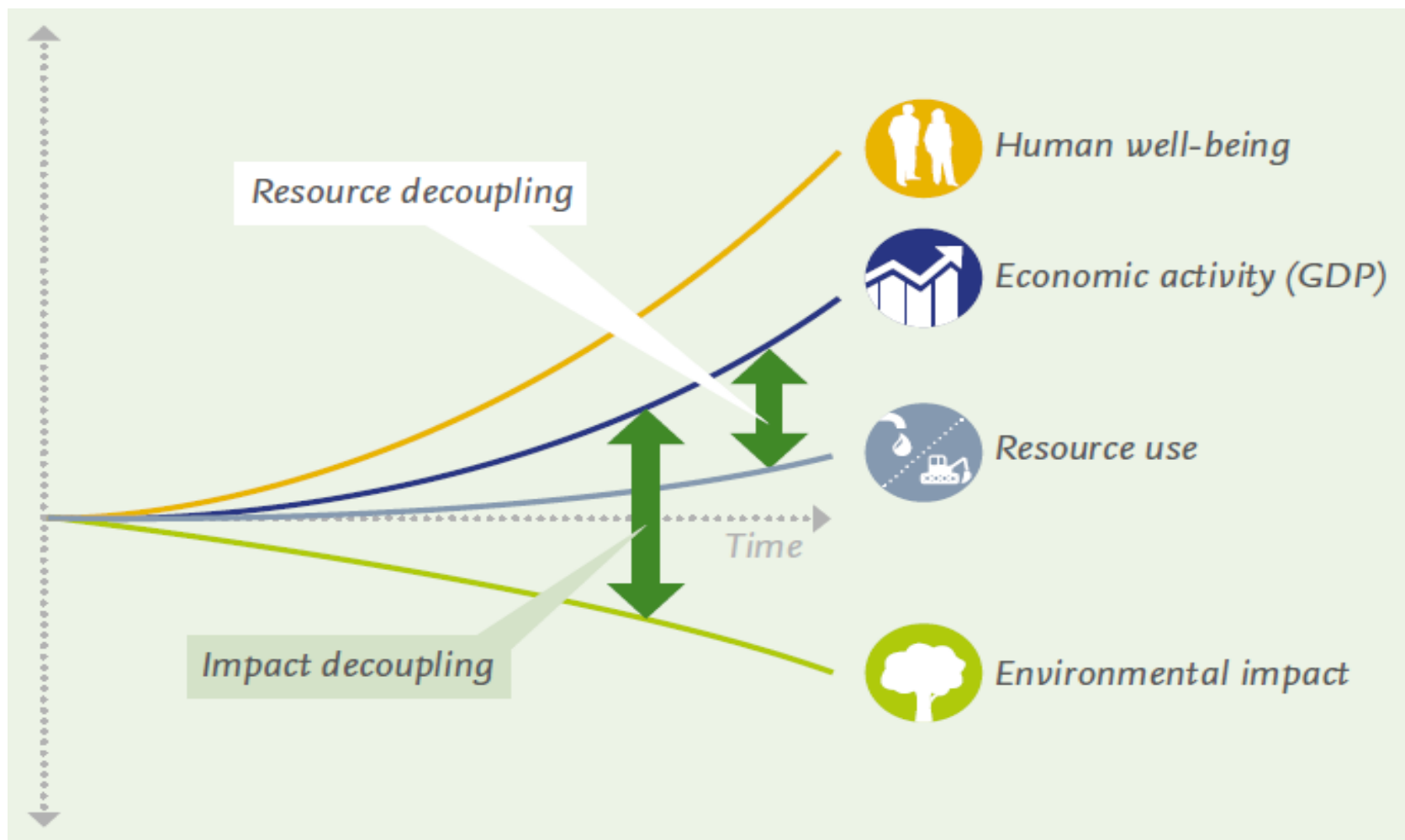
“Lower income cities in Africa and Asia will **double** their municipal solid waste generation within next 15-20 years”

“The richer we get, more we discharged”



Waste generation versus income level by country, UNEP/ISWA (2015)

What is needed is decoupling...



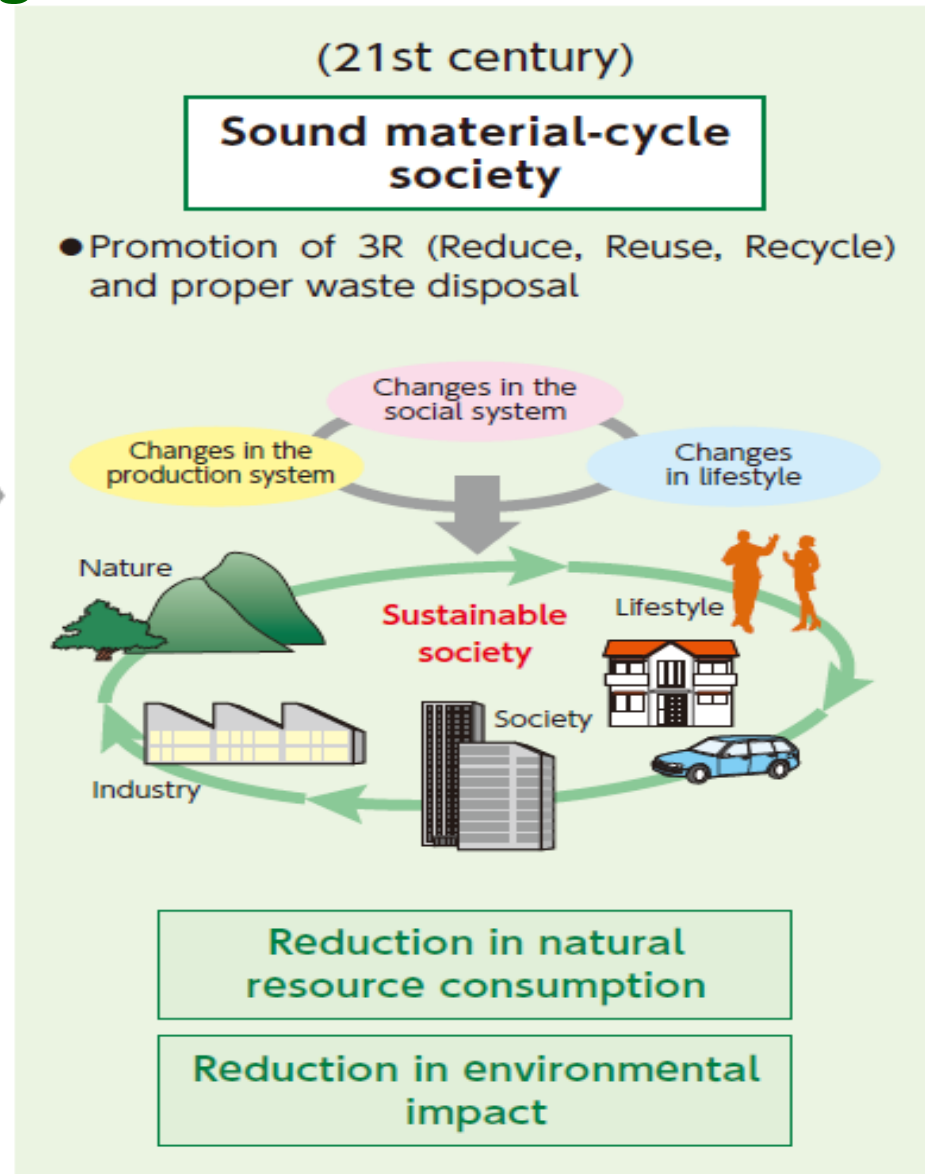
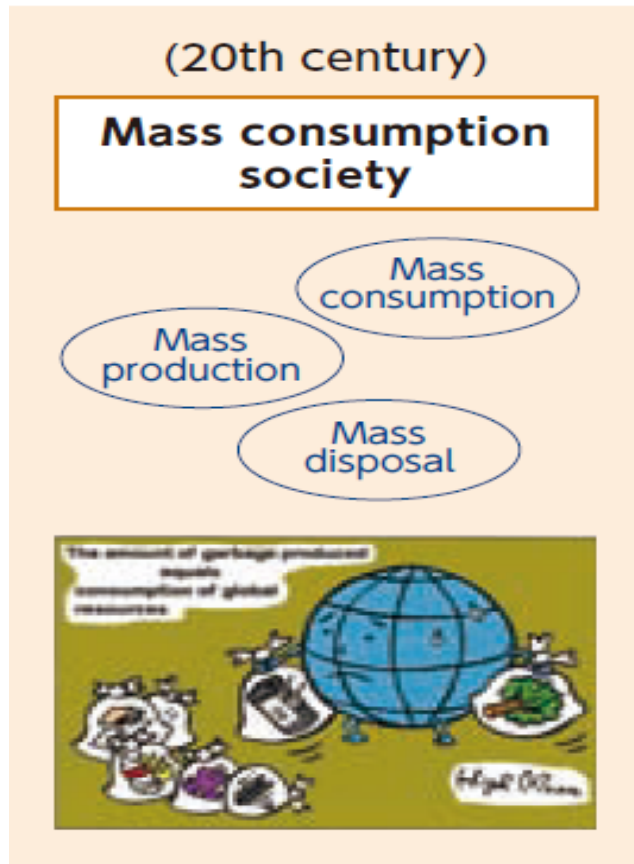
Success stories – Putting decoupling in practice

Resource Decoupling:

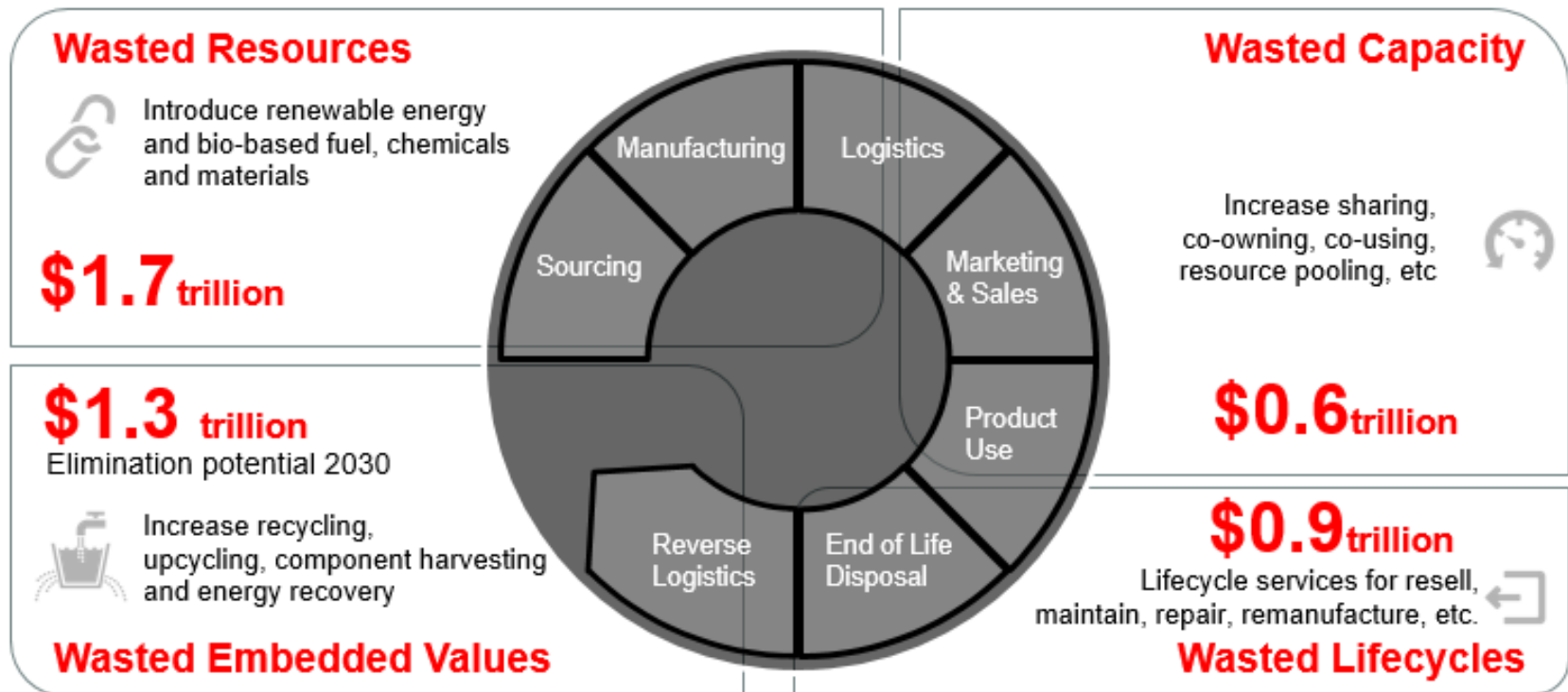
Japan reduced its materials consumption by 2010, down to the level of 1970 (absolute decoupling).



Moving towards a new paradigm in Waste Management



Estimated Benefits of Circular Economy in India



How to Achieve the Vision: Proposed actions



Lessons learned!

Area of improvement	What is needed
International development assistance impact	Political will, stakeholder participation and technical support at national and local level is important
Coverage of all the waste streams in each sector	National and city level waste management strategies are essential
Efficiency of waste management services	A comprehensive legislative framework at national level to cover all the waste streams and sectors can help
Financing and technology	Remove barriers for investments and trade in the waste management sector to generate funds and implement sound technologies
Facilitate private sector participation and transfer of technical know-how	The regulatory basis should be designed accordingly

Thank you



Presented by Claudia Giacvelli/ Economy Division / IETC / Osaka
Claudia.giacovelli@un.org

www.unep.org/ietc