



EU-REI

Creating a Resource
Efficient India

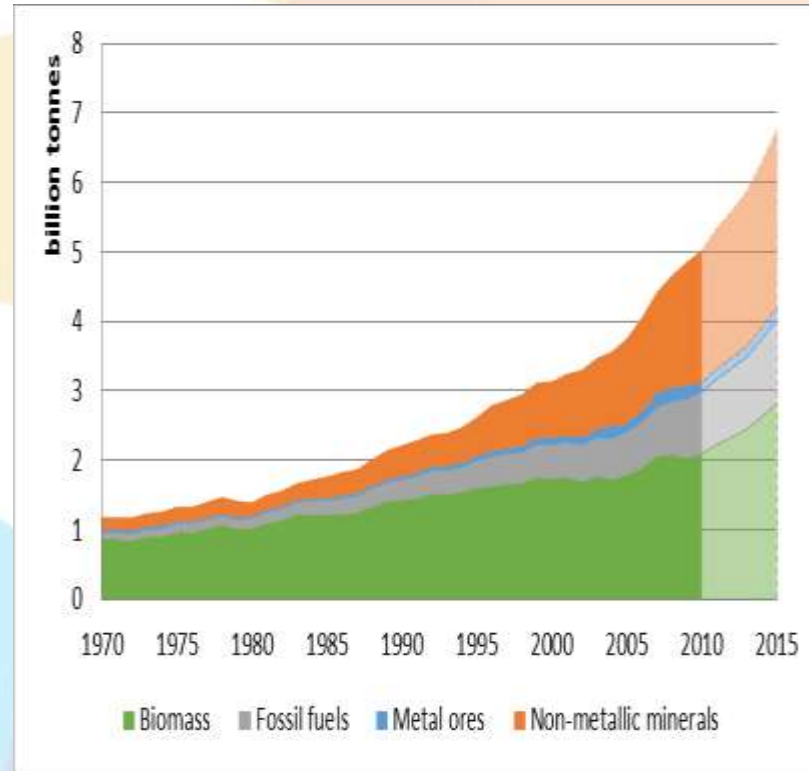


Resources: drivers of economic activity



EU-REI
Creating a Resource
Efficient India

- **Economic development and higher standards of living**
- Extraction of raw material in India up by **420%** between 1970 and 2010.
- Increased extraction causes environmental damage and social pressures.
- Scarcity leads to dependence on imports
- vulnerability to geopolitical pressures.



(Source: UNEP, 2016)

In 2010, India's material demand 3rd largest in world
In 2016, India might have overtaken USA as 2nd largest consumer



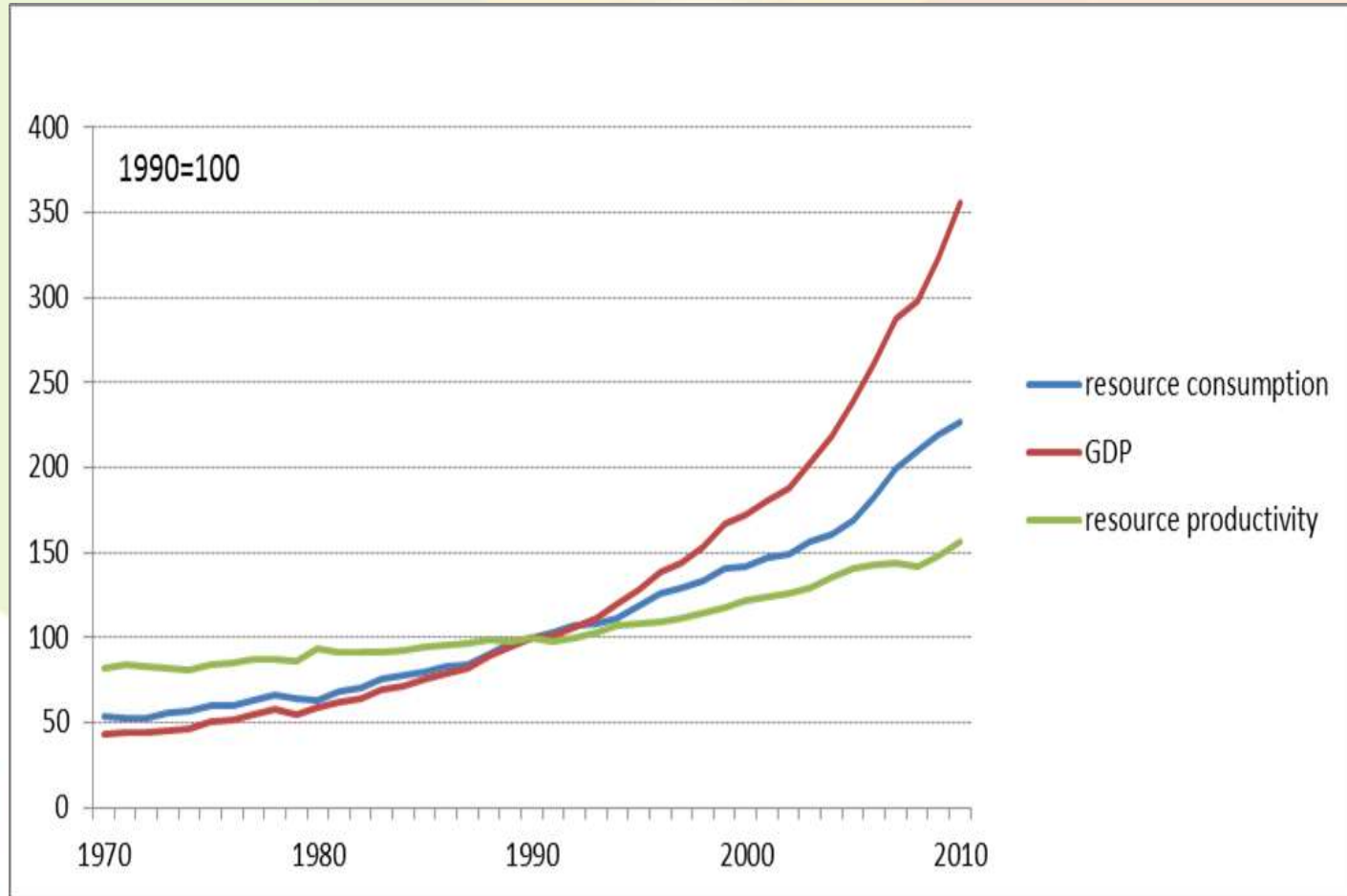
Indian Context



- India's population is 1.2 billion, accounting for 17% of the global population (Gol, 2011)
- Sustained growth and increased consumption over the last two decades has brought millions out of poverty but also relies extensively on natural resource extraction
- This has resulted in enormous pressure on natural resources leading to:
 - Unavailability of resources and import dependencies
 - Increasing costs
 - Higher rate of forest degradation
 - Reduced availability of agricultural land
- Thus need for enhanced resource efficiency (RE) and making better use of secondary raw materials (SRM)



Resource Efficiency Trends in India



Sources: DMC based on UNEP, 2016; GDP based on Government of India, 2016





What is Fostering Resource Efficiency?



EUROPEAN UNION

In its simplest expression: Resource Efficiency can be thought of as:

- Low carbon
- resource availability and access
- Enhance competitiveness in industry
- Reduce environmental burden & social cohesion

Resource efficient production process
(Clean India, Make in India, CC – Gol)

Use of secondary raw materials
(Clean India – Gol)

Reducing environmental risks & ecological scarcities
(Zero Defect, Zero Effect, Gol)

Creation of employment
(Make in India, Gol)

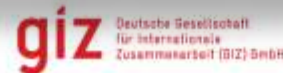


24 July 2015



CII-ITC Centre of Excellence for Sustainable Development

First PSC Meeting

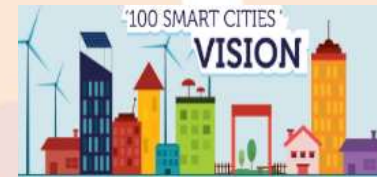




Resource Efficiency: The key for sustainable economic development



- To contribute to India's ambitious economic and social targets for better access of resources
- To support India's commitment to international agreements (e.g. NDCs, SDGs and G20 contributions)
- RE is on G20 Agenda with Resource Efficiency Dialogue
- Synergies with existing government plans and missions (Make in India, Zero Effect-Zero Defect, Ganga Rejuvenation, Swacch Bharat etc)
- Improves availability of resources domestically, less price hikes and imports
- Potential to create jobs by integrating informal sector and enhance livelihood through capacity development





RE integral part of SDG and SCP Approaches



- Unparalleled **growth in demand for raw materials**
- **No achievement of the SDGs without RE IRP: 10 of 17 SDGs can be achieved only if consumption efficiencies for land, water, energy (fossil fuels and bio-fuels), materials and other finite resources are raised substantially**
- Essential for implementing the **Paris Agreement** By 2050 policies to improve RE and tackle climate change could cut global GHG emissions by around 60%
- Efficient use **critical to decoupling** growth from environmental degradation



Cross-Cutting Approach 1: Promotion of Standards

Standards and their importance

A standard is “a document that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose” (ISO, 2016).

Standard Development Organizations

National: BIS, ASTM, BSI, DIN

International: CEN, ISO

Benefits of Standards

- Help businesses to reduce costs, promote innovation and expand into new markets
- Help customers by providing confidence
- Help governments reduce regulatory load

Types of Standards

- Fundamental standards
- Testing methods and analysis standards
- Specification standards
- Organization standards



International best practice in Standards for RE/CE



- EU EcoDesign Directive (2009) is a framework directive that allows for setting eco-design requirements for various product categories
- Association of German Engineers (VDI) 4800 series of Standards specifically devoted to RE
- ISO 14000 series of Standards covers many aspects of RE/CE



Cross-Cutting Approach 2: Promotion of Business Models

Necessity of RE/CE Business Models

RE can reduce material cost and thus generates savings: potential for business model

If savings are obvious, then won't firms do it on their own?

Barriers to successful business models for RE/CE

- Lack of knowledge (including inadequate business info networks)
- Lack of financial resources
- Lack of government support
- Lack of internal motivation

Pricing negative externalities (through policy) will make RE/CE business models more viable!



Examples of Successful RE “External” Business Models



- 1. RE Product model:** AEP Pvt Ltd (recycling C&D waste into paver blocks)
 - Key to success: free land by govt.; longer supply chains for virgin aggregates of competitors
- 2. RE Service model:** Cartiff (recycling of ELVs)
 - Key to success: end-to-end incentives to customers; good sales of salvaged parts
- 3. RE Product and Service Integrated model:** SAFECHEM (industrial cleaning solvents)
 - Key to success: provision of cleaning “service”, not product thus saving solvent use



Examples of Successful RE “Internal” Business Models



1. Cost reduction based business model

- Example: Bosch (recovery of metals from industrial waste and diversion of waste from landfilling)

2. Customer value creation based business model

- Example: Dell (using certified recycled plastic for making computers and marketing “green” product to conscious consumers)

3. Quality improvement based business model

- Example: use of hanger system for electroplating instead of dumping in bath

4. First mover based business model

- Example: anticipating pollution/waste rules and upgrading before competitors





Measures for Supporting RE/CE Business Models

- Awareness creation (especially through business/industry associations)
- Credit for overcoming financial barriers
- State supported measures
 - financial incentives, public procurement, etc.



Thanks for your attention
Contact: Rachna.arora@giz.de

