



EU-REI

Creating a Resource
Efficient India



Introduction to Resource Efficiency

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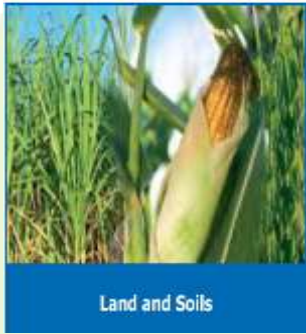
European Union – Resource Efficiency Initiative (EU-REI)

April 3, 2018
Goa

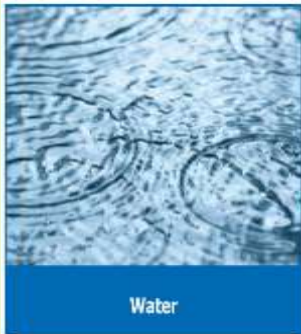




No growth without „Resources“



Land and Soils



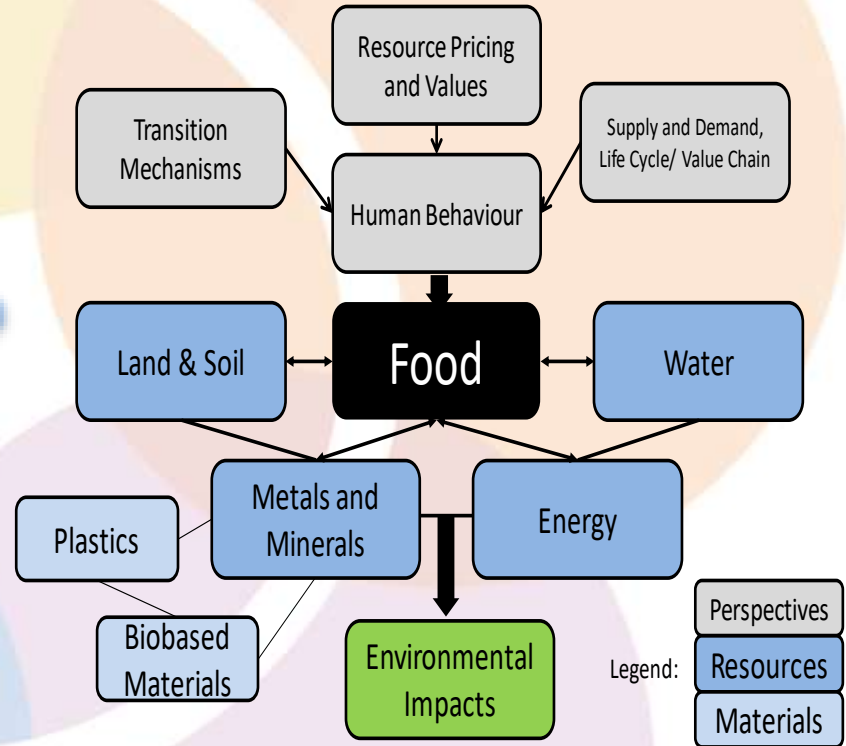
Water



Minerals



Metals



Individual Resources

Systematic Approach





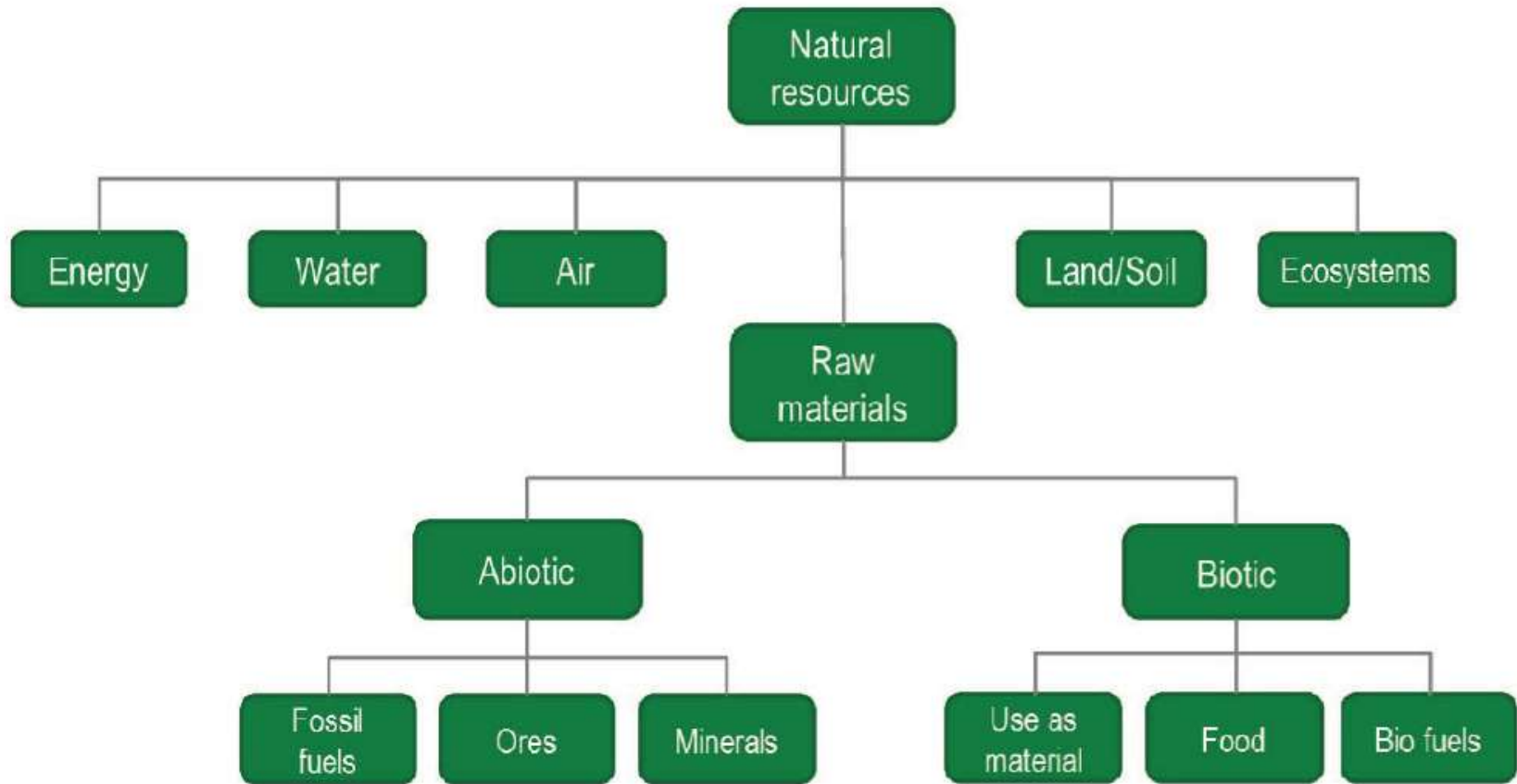
Tragedy of the Commons

- **Our habit is to use natural resources for free:**
 - Clean water falls from the sky, but our farmers don't use it efficiently;
 - Bees and butterflies pollinate our crops, but our pesticides are killing them;
 - Forests clean our air, soak up floods, filter our water, provide habitat for animals, store carbon, yet we value them only for their wood.

- **Our institutions, economic systems, politics, way of life are based on (mostly) free natural resources**



Natural Resources are crucial for our economy and society!

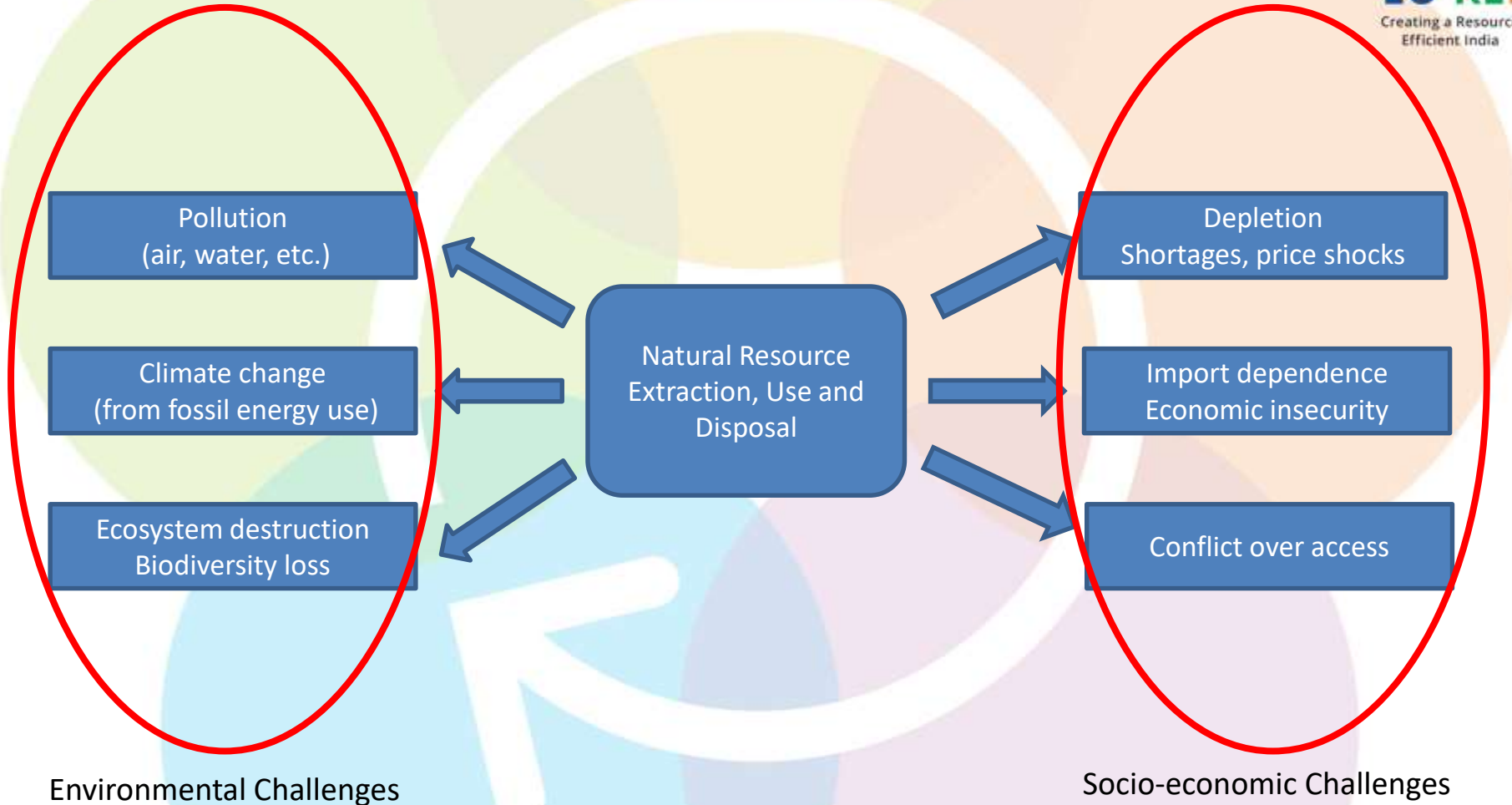


Source: IGEP. (2013). India's Future Needs for Resources: Dimensions, Challenges and Possible Solutions. GIZ, New Delhi.



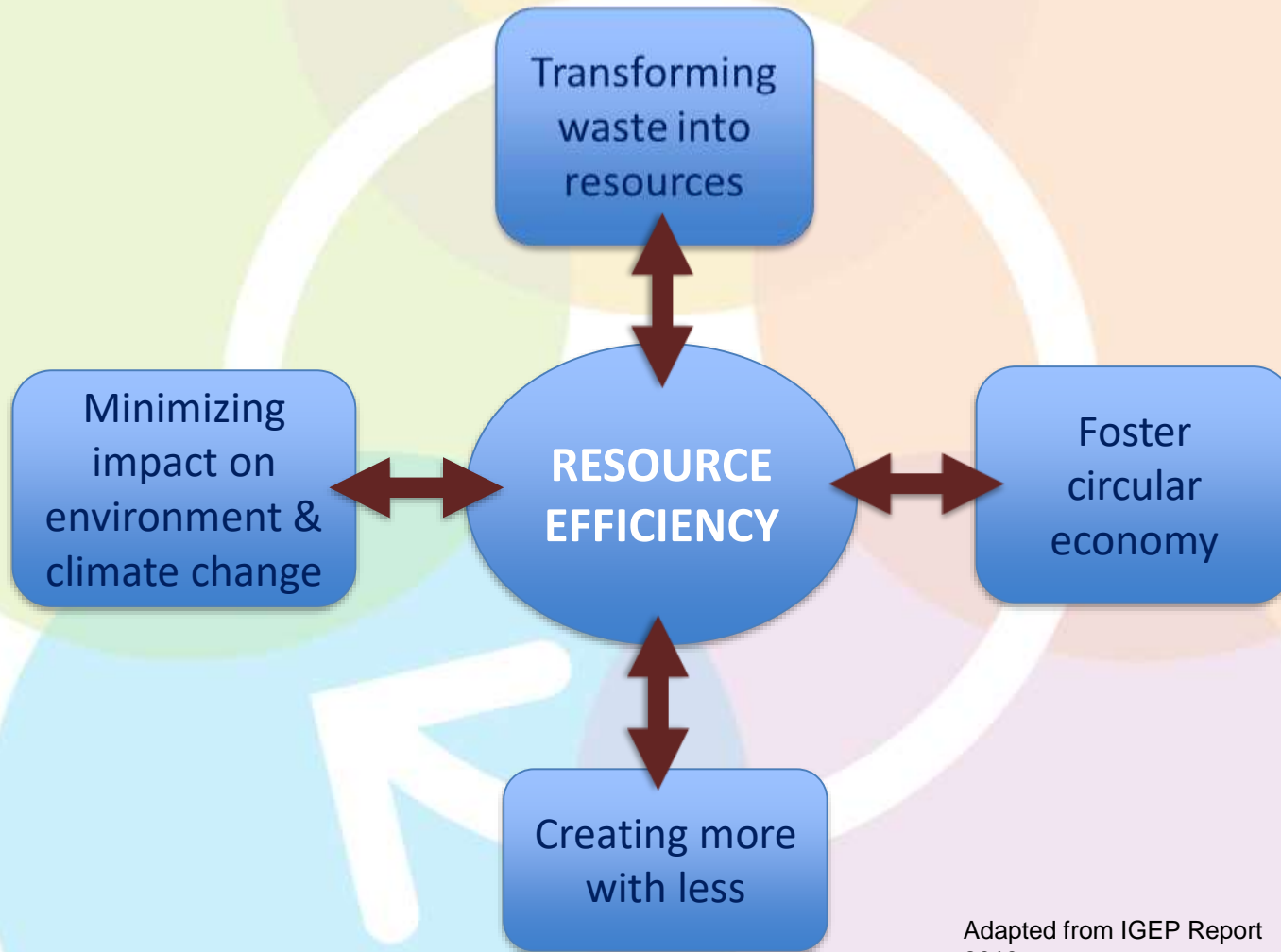


Natural Resource Sustainability Challenges





Resource Efficiency means....



Adapted from IGEP Report 2013





Resource Efficiency opportunities are everywhere!



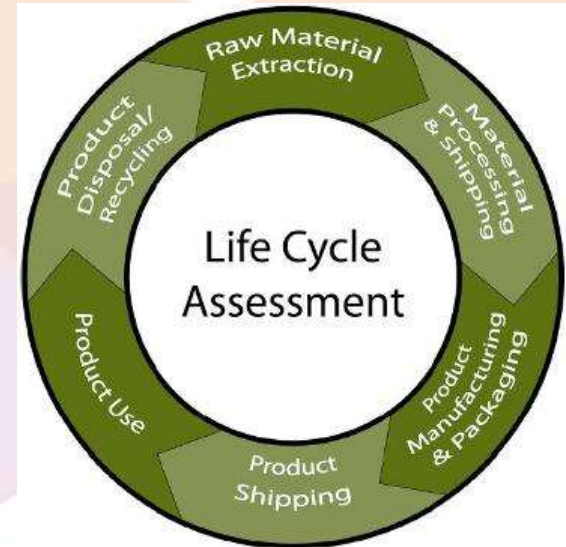


Life Cycle Assessment



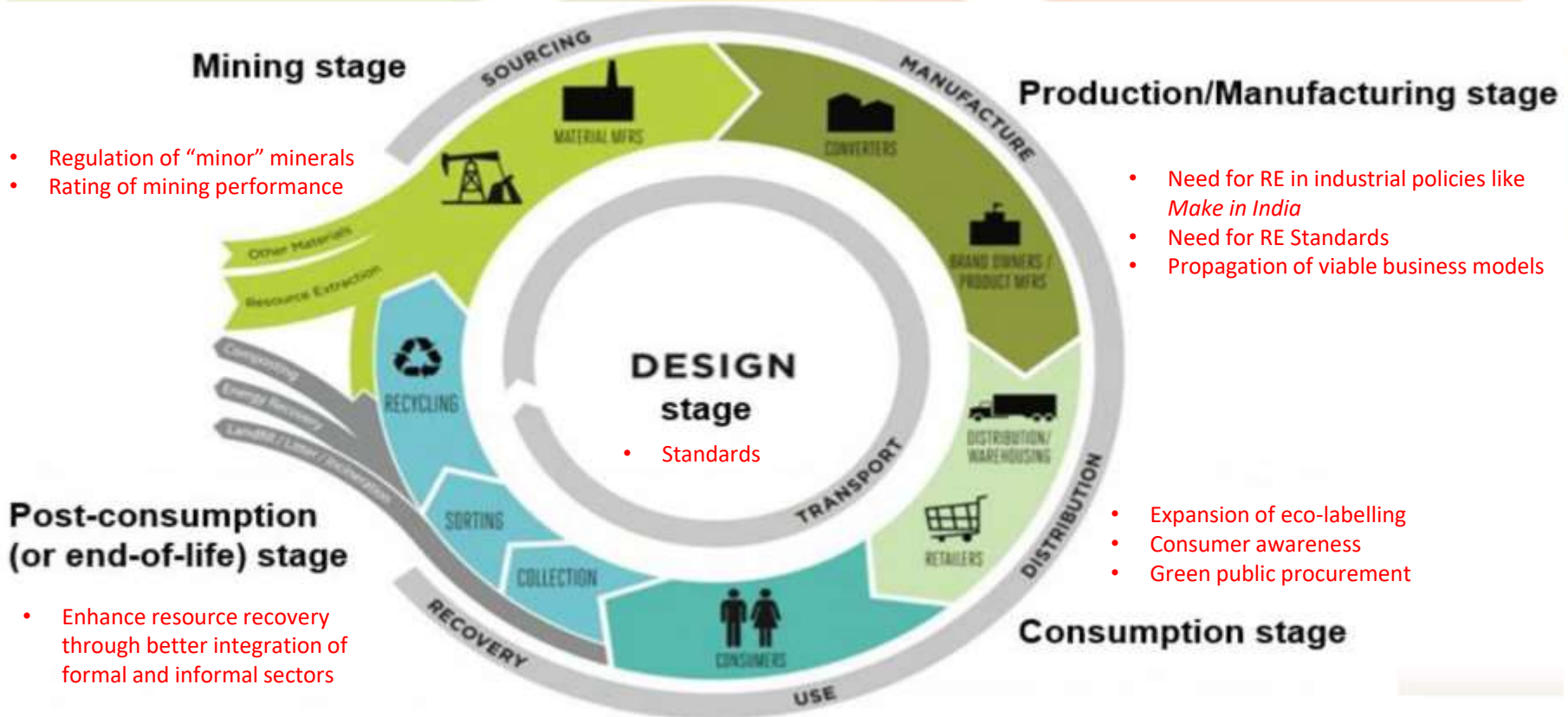
LCA seeks to identify and quantify all kinds of environmental impact in a product's life cycle

- resource depletion
- energy use
- water use
- air and water pollutant emissions
- GHG emissions
- etc.





Need for RE/CE Policy Interventions Across the Life Cycle



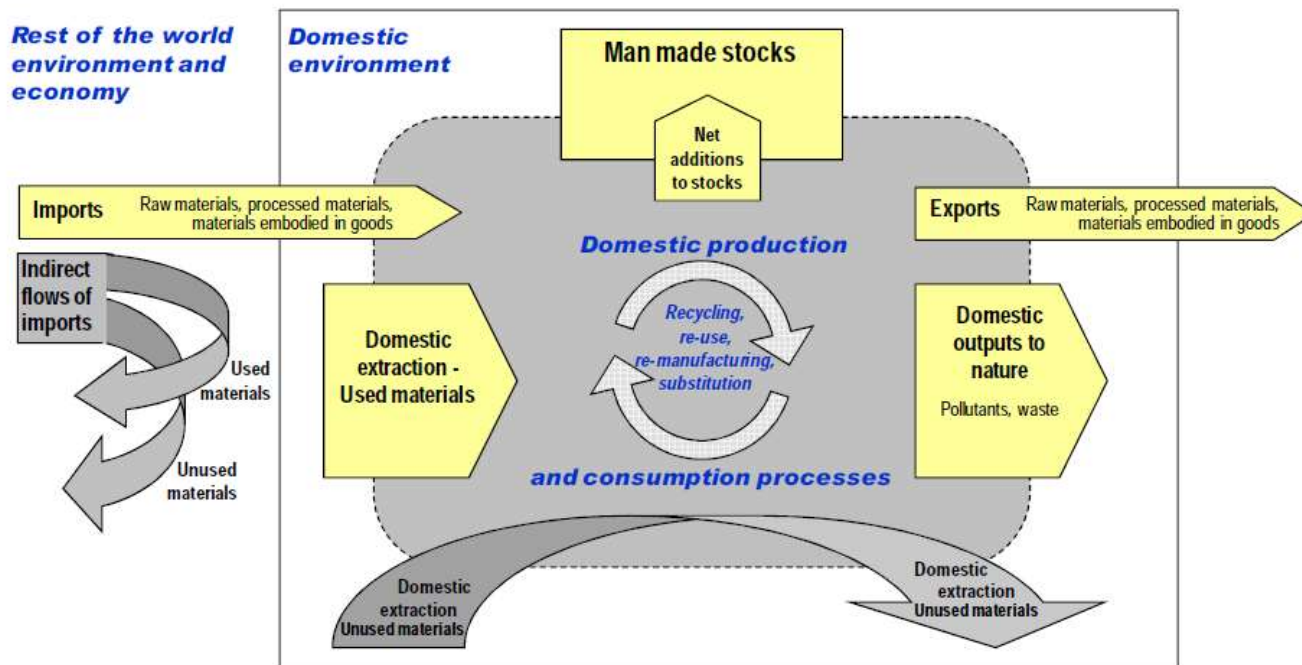


Material Flow Analysis



MFA is a technique used to measure the amount of materials that flow through or are used by an economy in a given period of time.

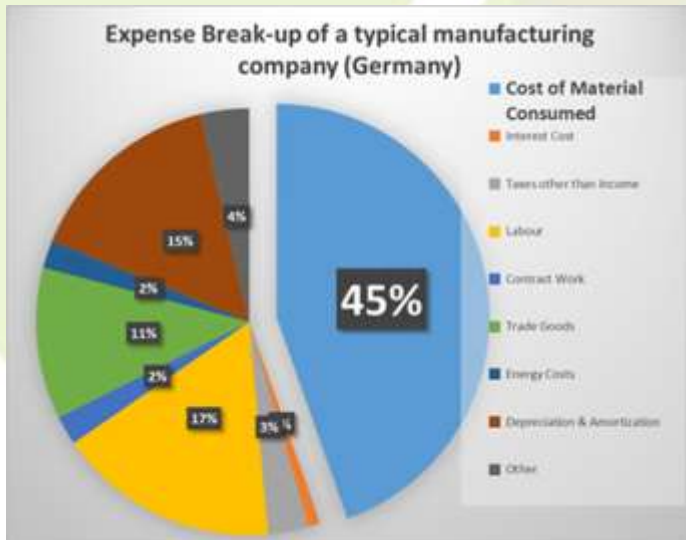
- Air and water are typically excluded
- Can be used for a state/region or industrial sector
- Indicators derived from MFA are useful to understand resource use and efficiency



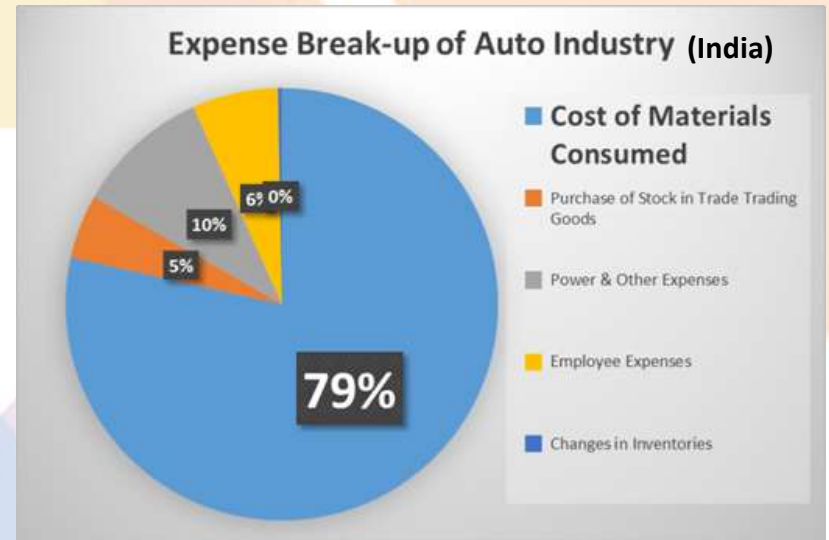
Source: OECD. (2008). Measuring Material Flows and Resource Productivity: The OECD Guide. Paris.



Material cost affects industrial competitiveness



Source: Association of German Engineers (VDI) 2013 data



Source: Ashok Leyland Financial Statement 2012





State Best Practice: Andhra Pradesh → Industrial Park planning



- GIZ technical collaboration with AP Industrial Infrastructure Corporation Ltd.
- Baseline surveys and Site Master Planning
- Retrofits of existing infrastructure/land use
- Process optimization
- Climate change adaptation and disaster risk
- Waste management & recycling; wastewater treatment
- Engagement and capacity development of businesses



For more information: <http://seip.urban-industrial.in/e63552/e66395/e66503/>



State Best Practice: Maharashtra → Sand Mining



- Sand Mining Approval and Tracking System (SMATS) created by the state Revenue Dept. in 2016
- Based on mobile phone SMS and electronic tracking to check illegal sand mining
- Cheap to implement and foolproof

For details: <https://smats.maharashtra.gov.in/Accounts/Login.aspx>

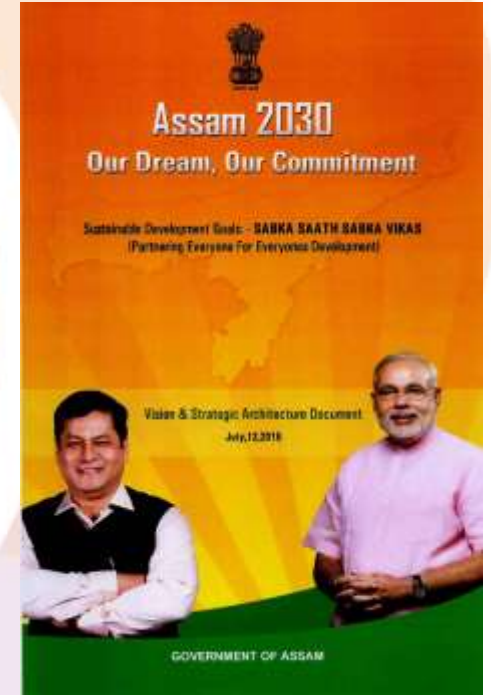




State Best Practice: Assam → SDG Implementation Plan



- Assam Vision 2030
- Designated Nodal Dept.; established Center for SDGs as technical body
- State Strategy and Action Plans by Working Groups
- Baseline survey and development of indicators
- Monitoring and Evaluation Platform
- Clustering of Depts. Around SDGs (11 and 12: Urban Dev., Agri., Env. & Forests, Water Resources, Disaster Management)
- Active collaboration with UNDP



For more information: <https://transdev.assam.gov.in/portlet-innerpage/sdgs-implementation-status-in-assam>

http://www.unescap.org/sites/default/files/Session_6_Shiladitya_Chatterjee_Speeding_towards_the_Sustainable_Development_Goals_The_Assam_Case.pdf





LESSONS LEARNT UNTIL NOW



- Starting simple in a complex setup
- RE is a process with many actors
- RE is attractive for many stakeholders
- RE needs commitment and initiatives by stakeholders:
 - policy-makers, business, science, civil society, regions
 - Participations, Consultations and regular round tables are mandatory for a well accepted programme
- Commitment of entire government is beneficial but not mandatory
- The more attractive the programme becomes the more contributions and proposals are articulated
- RE is a business case, but it will not happen by market forces alone
- Soft measures are important: awareness-raising, information, education and training, incentives for voluntary action



Thanks for your attention

