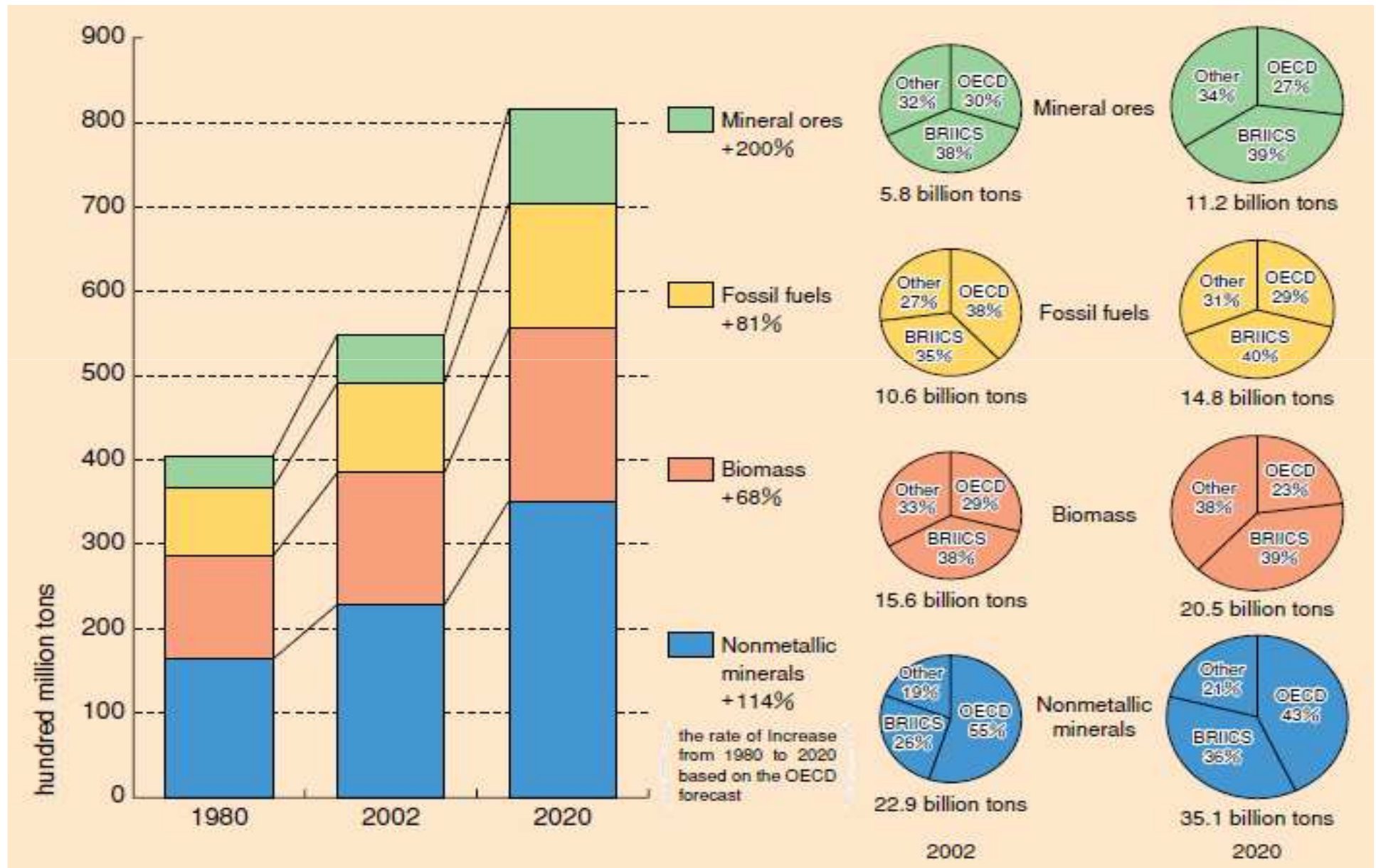


# Resource efficiency and resource flows

**Gev Eduljee**

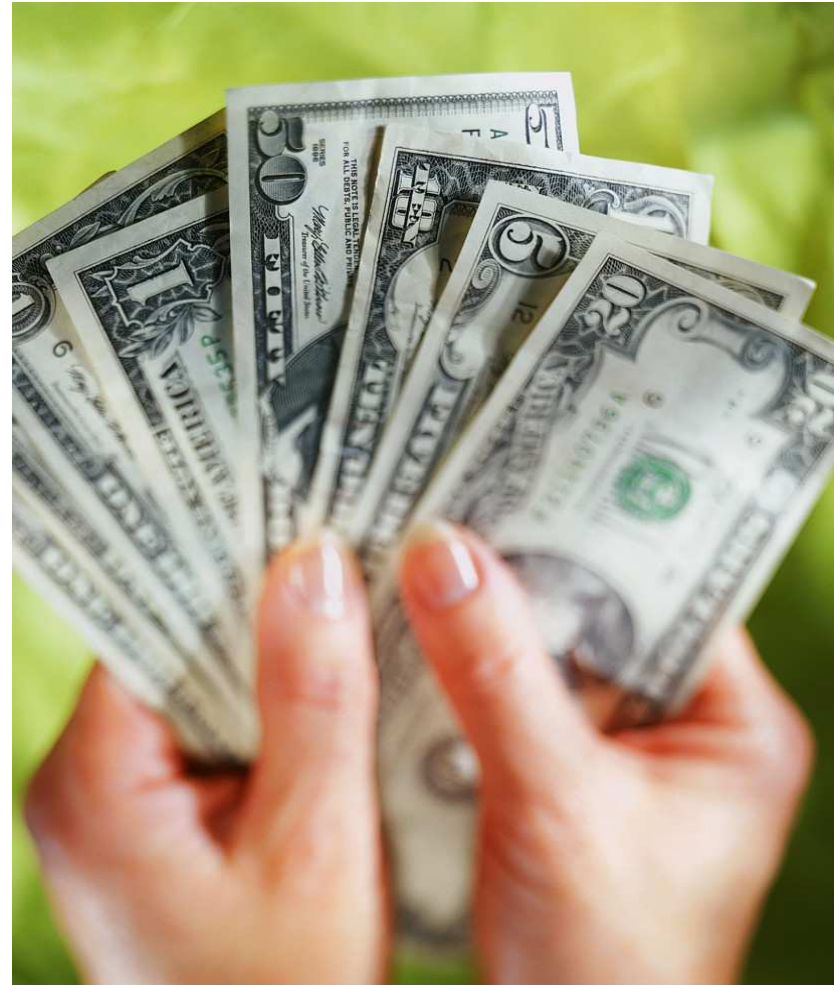


# Global resource extraction to 2020

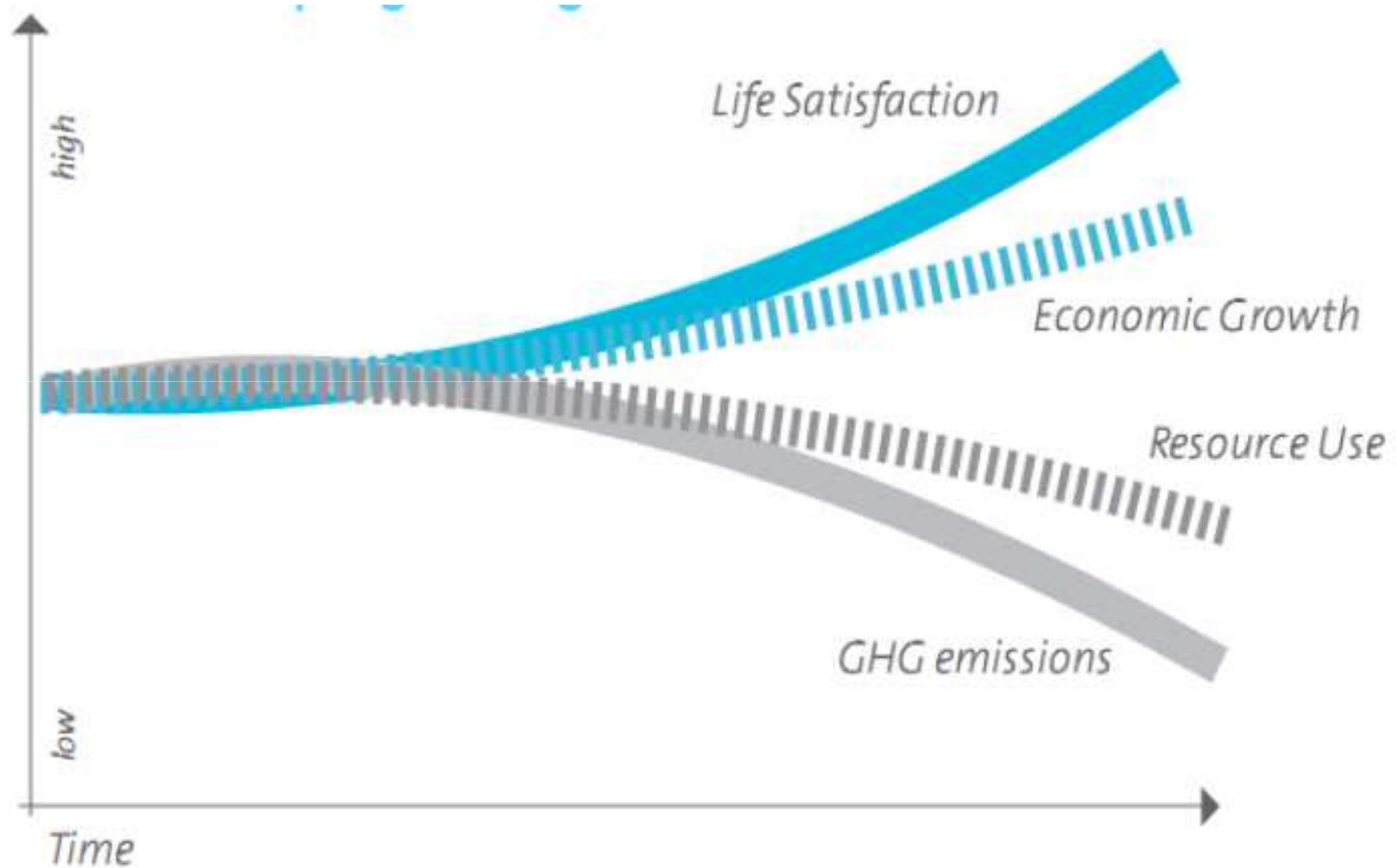


# Savings from resource efficiency (Defra)

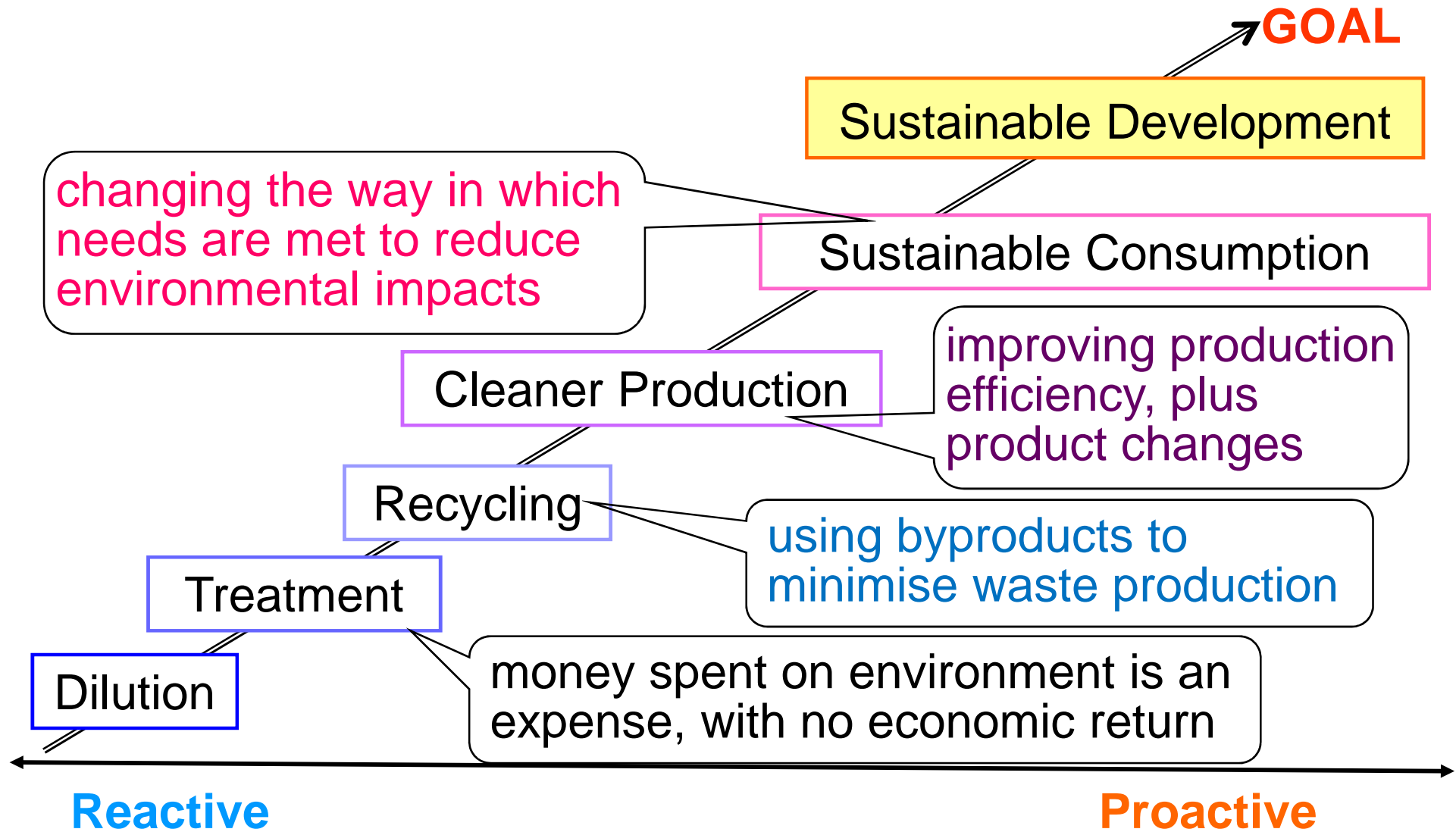
- **£6.4 billion mean savings from no-cost or low-cost business resource efficiency**
- = 0.6% of UK gross value added and 1.9% of gross operating surplus (profit)
- = 34 MT GHG savings (6% of total UK GHG emissions)



# SD through decarbonisation & dematerialisation

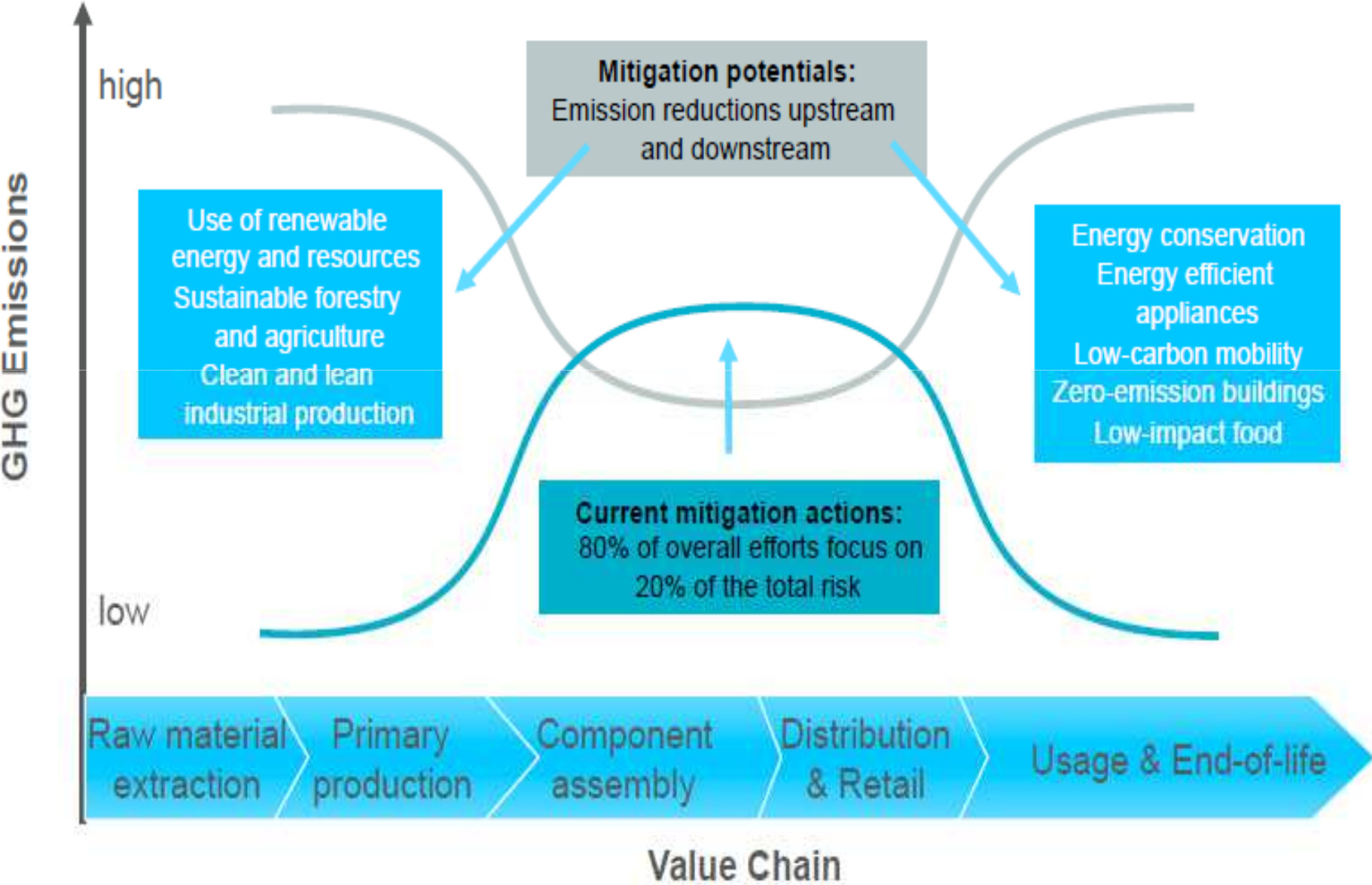


# The journey towards sustainable development

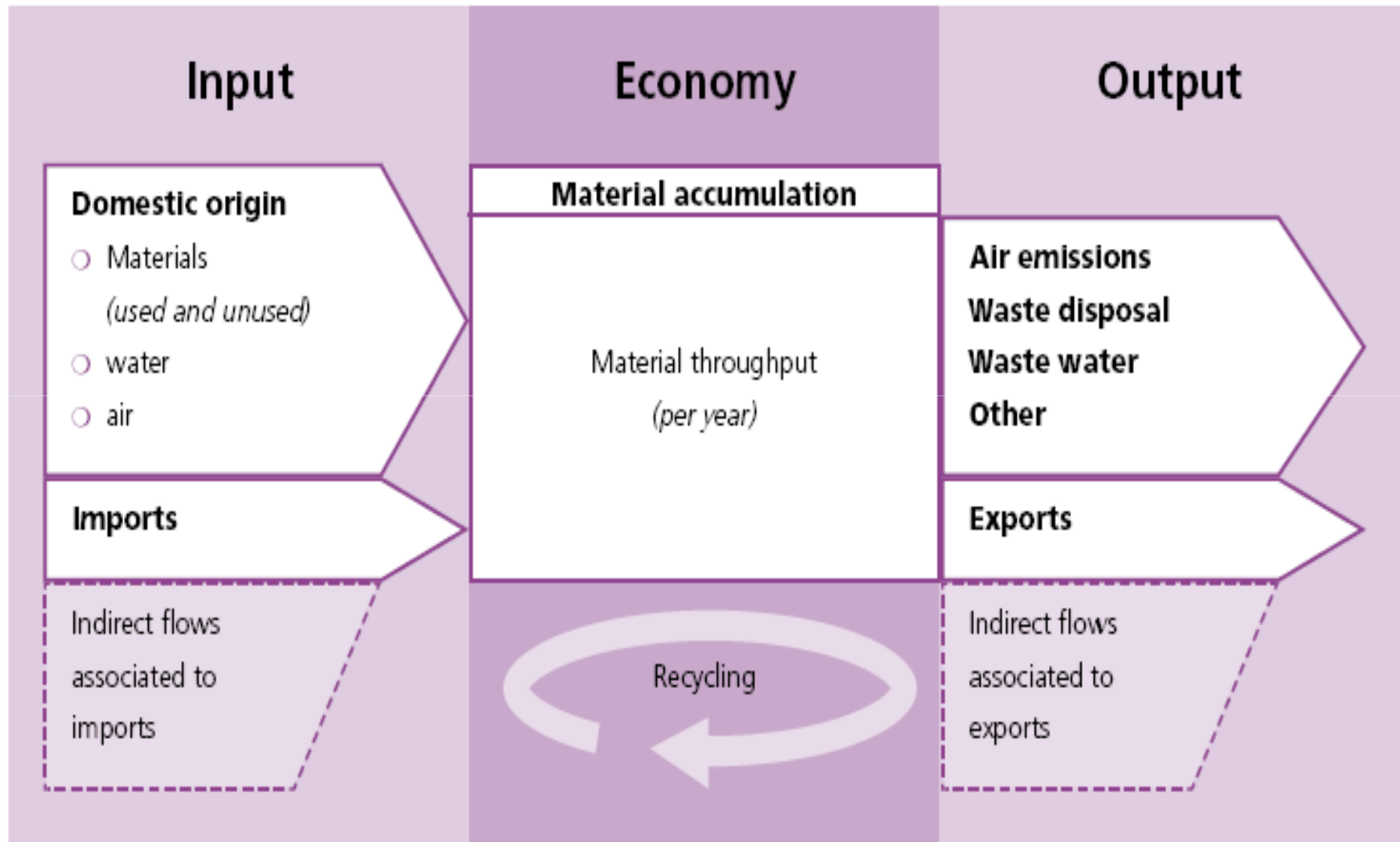




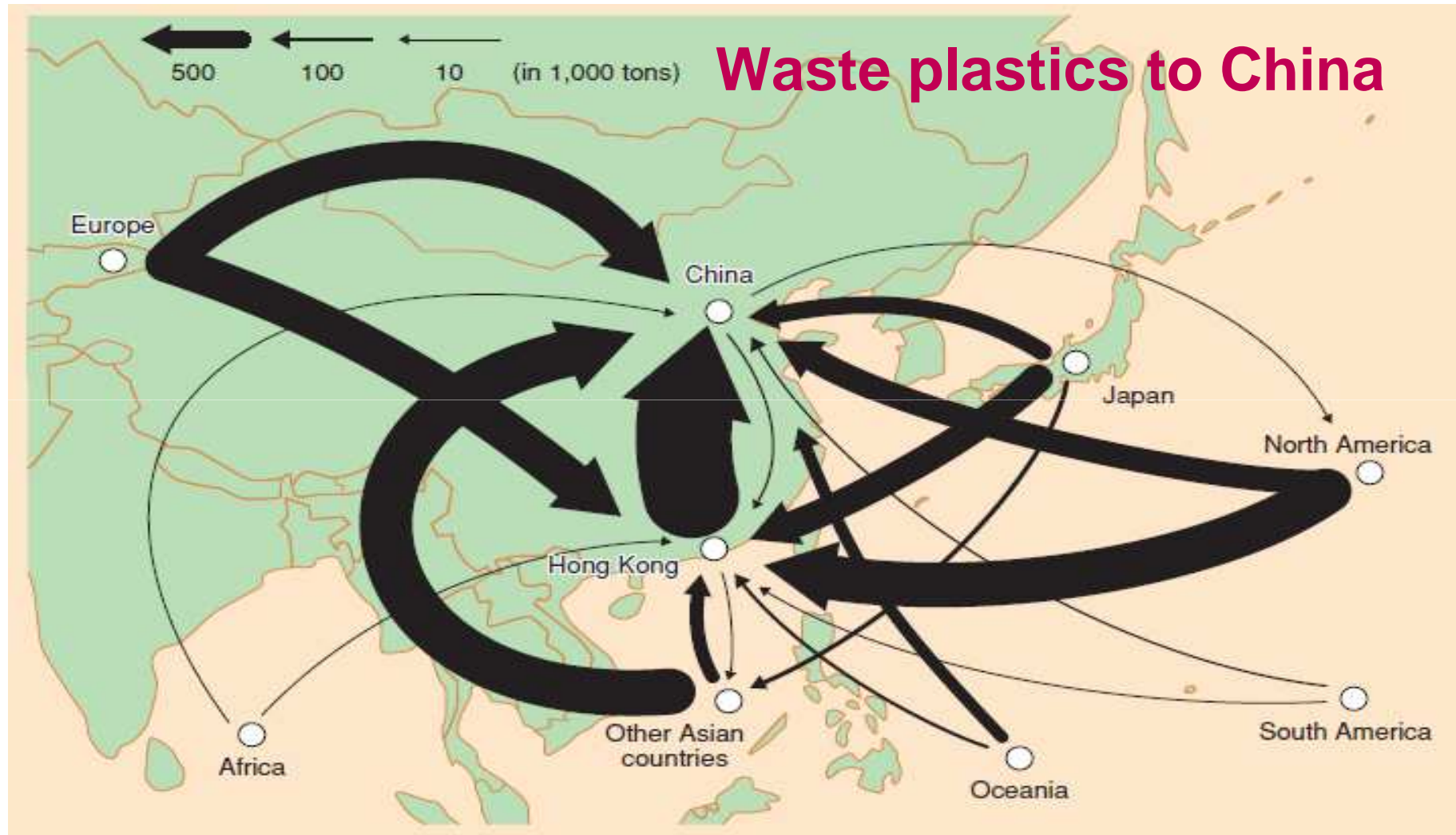
# Our focus – Sustainable Development through RE



# We need mass balances and material flows



# Material flows are international





# National material flow indicators (1)

## Broad consideration of sustainability - qualitative

Belgium	Denmark	Finland	Sweden	UK
Decoupling resource consumption and economic growth	More efficient use of resources	Resource efficiency and life cycle	Efficient cycles for non-haz substances and resources	Improvement in resource efficiency

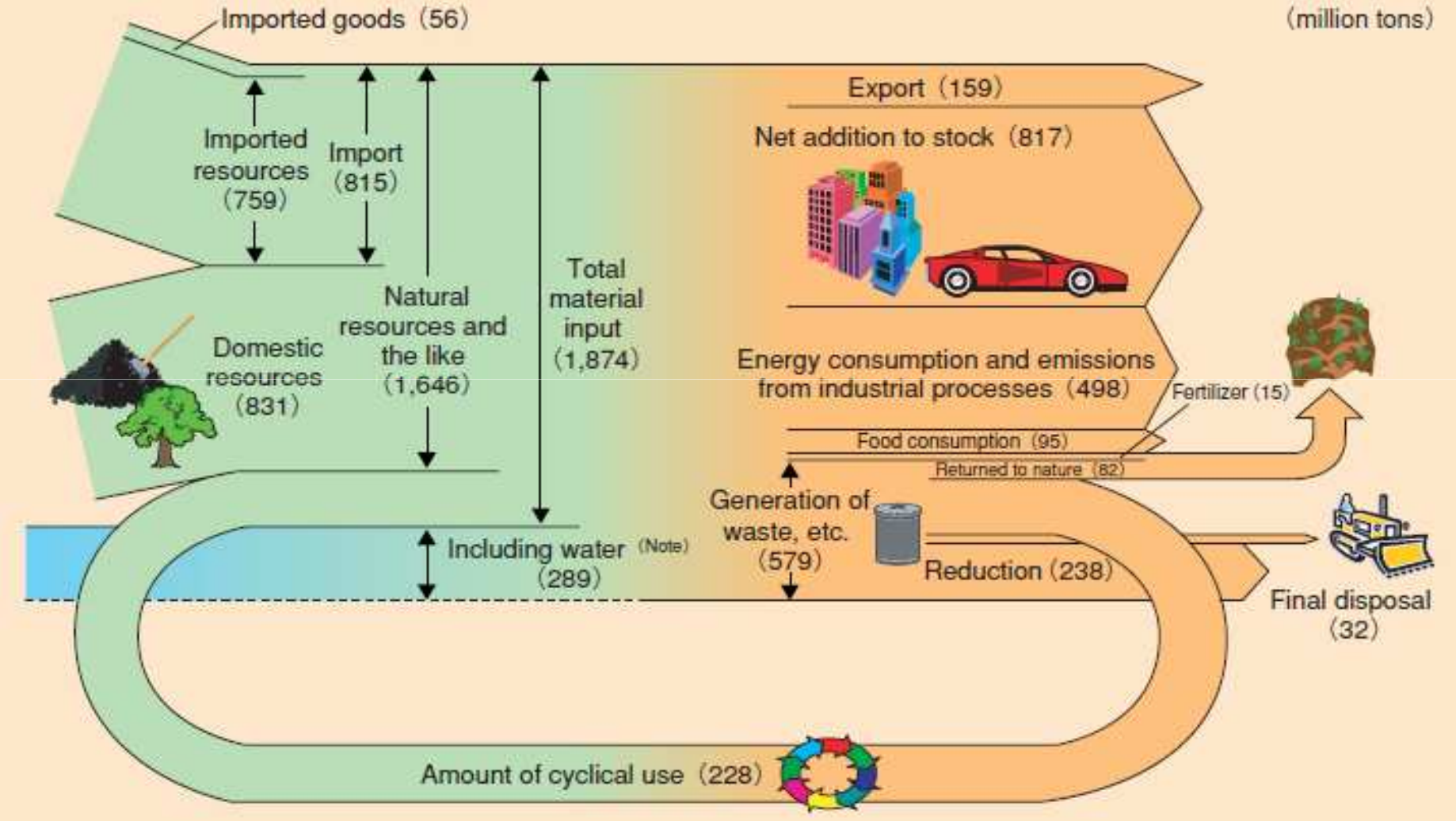
# National material flow indicators (2)

- **Austria**
  - Resource productivity (Factor 4)
- **Netherlands**
  - Dematerialisation (Factor 4)
- **Germany**
  - Material productivity (Factor 2 over 2004-2020)
- **Italy**

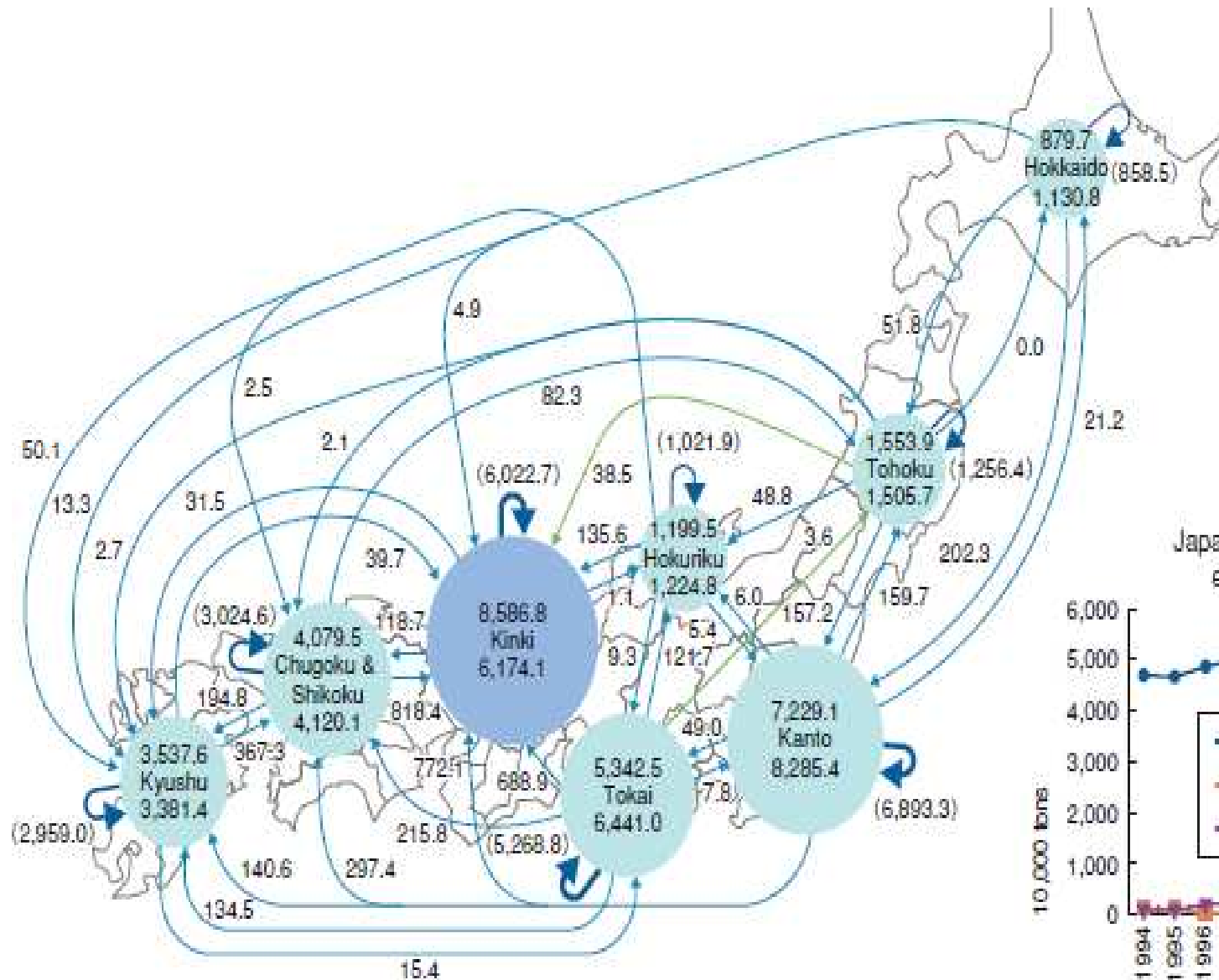
Total material requirement (TMR)

  - 25% reduction by 2010, 75% by 2030, 90% by 2050
- **Japan (targets for 2000-2015)**
  - 60% increase in resource productivity (GDP/DMI)
  - 40-50% increase in recycling rate
  - 60% reduction in final disposal

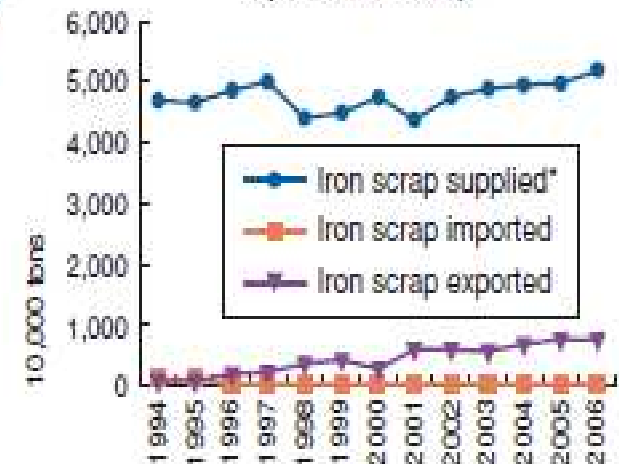
# Material flow through the Japanese economy



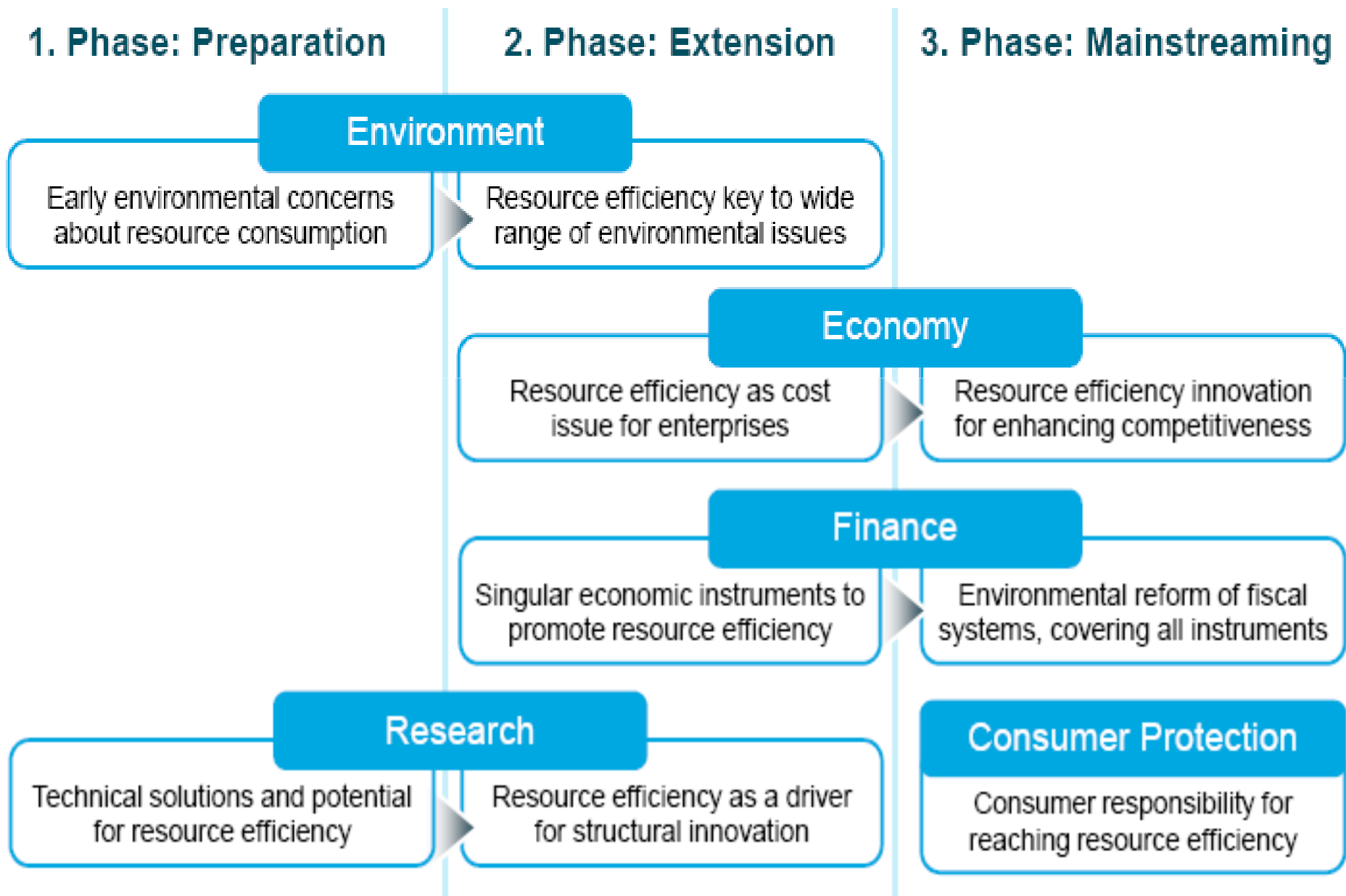
# Japan's circulative use of iron scrap



Japan's supply and import / export of iron scrap



# Government's role – building an RE policy framework





# Bringing the future closer to the present !

- Turn England's Waste Strategy 2007 into a Resource Management Strategy 2010/11
- Integrate Resource Management Strategy with Low Carbon Transition Plan
- Set quantitative targets for RE (by sector, by product, per resource flow, ...)
- Consolidate existing work on mass balances and resource flows, and convert into policy levers

**RE = moving towards a low carbon economy**