# How to achieve LCS? Discussion points

#### Realization of the need to take action

- Uncertainty with scenarios, but important to identify & prioritize LCS options
- Harness maximum potential of cleaner/efficient options; tap "win-win" options
- Developing countries → should NOT become tomorrow what developed countries are today!
  - Decouple emissions & growth: sustainable development with CC co-benefits
  - Complementarity's vs conflicts with other goals
- Role of developed countries under a future framework of action to stabilize concentrations
  - Set pathways and support access to options

#### Finance, tech transfer to play a critical role

- Technological leapfrogging crucial; IPRs tech transfer; investment in R&D for adapting to all regions

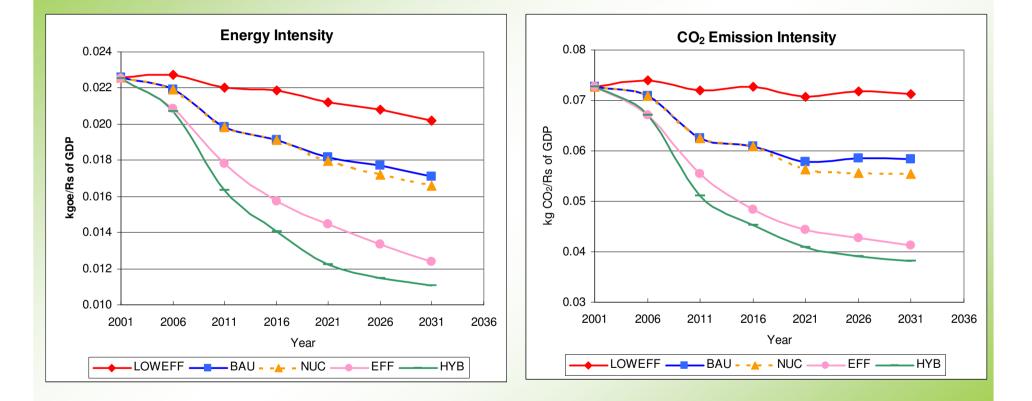
#### But, technology alone not sufficient

- Lifestyle changes

#### • What is LCS?

- A desired state in the future where everyone converges to a lower CO2 level per unit of service

### **Reducing trend of Energy and CO<sub>2</sub> Emissions Intensity**





### Sustainable Consumption: some Comparisons

- Steel: Per capita annual consumption
  - India (30 kg), World average (135 kg), USA (426 kg), Korea (814 kg), China (111 kg)
  - In 2031 India (272 kg)
- Cement: Per capita annual cement consumption
  - India (110 kg), World average (273 kg) Korea (1090 kg), Japan (540 kg), Thailand (300 kg),
  - In 2031 India (847 kg)
- Paper: Per capita annual consumption
  - India 5.5 kg (2003), 1/9<sup>th</sup> of world average (50 kg), In 2031 India (37 kg)
- Electricity: Per capita annual consumption
  - In 2001 India (361 kWh), USA (13053 kWh), China (1069 kWh), Japan (8092 kWh)
  - In 2031 (2994 kWh including captive)
- Motorized Transport: Per capita annual passenger transportation
  - In 1950: Industrialized region (4,471 km), World average (1,334 km), USA (11,205 km)
  - In 1997: Industrialized region (16,645 km), World average (4,781 km), USA (24,373 km)
  - India in 2001 (2,117 km), in 2031 (9,590 km)

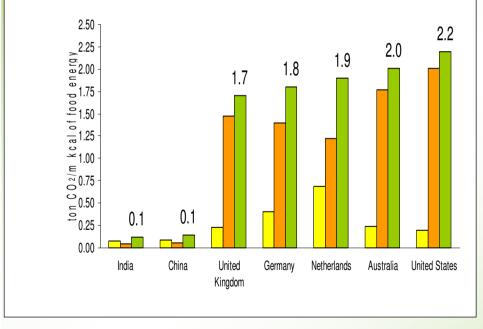
Sources: Sustainability mobility 2001, Steel Statistical Year book, 2001, TAR, 2005, IEA, 2003. Indicators for OECD countries (2003 edition)



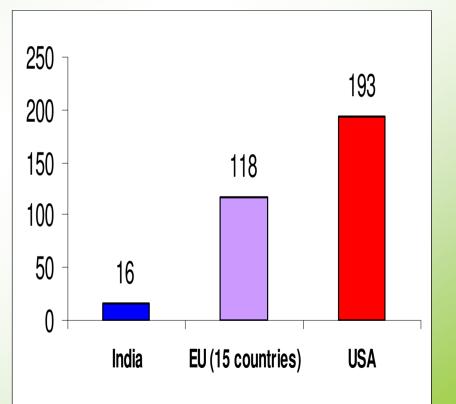
### Sustainable Consumption: Some Comparison (low intensity)

CO<sub>2</sub> emission from food sector--from Field (production) to Table (processed food)-*excluding cooking* 

Production related CO2 emission (tonne CO2/million kcal of food energy)
Processing related CO2 emissions (tonne CO2/million kcal of food energy)
Total CO2 emissions (tonne CO2/million kcal of food energy)



Estimated CO<sub>2</sub> emissions from passenger transport (gm/passenger-km)



Source: TERI analysis (various data sources)



## **Convergence corridor of sustainable development**

