managing our impact

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Biffaward
investing in the environment

SEEDA
SOUTH EAST ENGLAND DEVELOPMENT AGENCY
Working for England's World Class Region

EcoSys
environmental management & education

SEI
STOCKHOLM ENVIRONMENT INSTITUTE

THE UNIVERSITY of MANCHESTER
cure

Project Partners

• EcoSys	Project Management Dissemination
• SEI-York	Mass Balance Eco-Footprint
• CURE, Manchester	Scenarios Integrated Model
• CES, Surrey	Local Data, LCA, Embodied Energy
• Biffaward & SEEDA	Funders

How have we been Taking Stock?

- Materials Flow Analysis
- Ecological Footprint
- Analysis of Trends, Scenarios & Targets
- Case Studies - good practice examples
- Linked database model – interactive website
- Data Sources, Gaps, Further Research

Materials Flow Analysis

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Measured the physical throughput of materials and energy in the South East region for the year 2000, including direct and indirect material flows. Focus on consumption rather than production, so exports are excluded.

Materials Flow Analysis II

Assesses resource consumption and its impacts based on where the benefits are experienced. It includes anything consumed in the region, whether it is produced in the region or imported, and other activities that are of benefit to South East residents such as air travel.

Ecological Footprint

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“The land area required by the people in a defined region to provide all the resources and services they presently consume, and to absorb all the waste they presently discharge, wherever that land might be.”

Ecological Footprint II

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The EF accounts for the use of or the impact on the planet's renewable resources. It is a 'snapshot' based on data from a single year. Together with information on available biocapacity it can inform us about the sustainability of our lifestyles and consumption. It is measured in global hectares (gha) and usually expressed in gha per person.

Factor Four

- More sustainable and equitable solution
- Doubling efficiency, halving resource use
- Starting to influence policy, e.g. Energy White Paper, SCP Framework, RES, Regional Waste Strategy
- Feasible to achieve in next 50 years

So What ?

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Study provides a detailed quantified analysis of:

- **What** resources are used and **how**.
- **Which** resources are wasted **most** & where there is **most** potential for efficiency gains.
- **Shows links** between world poverty and regional affluence.
- Scenarios examine **where are we going**?
- Shows examples of **how** to remedy situation.
- Next steps involve asking **what needs to be done by whom** ?

Steering Group

- Regional Environment Agency
- Regional Government Office
- South East England Development Agency
- South East England Regional Assembly
- Regional Technical Advisory Body on Waste
- Waste Improvement Network for the Region
- Regional Sustainable Business Partnership
- Regional Water Resources Forum
- South East Climate Change Partnership
- Biffaward Mass Balance Club
- Hampshire County Council
- WWF UK

All considering impact of scenarios

Target Audiences

- **Regional programmes**
  - Steering group, SEEDA, SEERA, etc.
- **Local government**
  - Spatial planning, economic dev., LA 21, community planning etc
- **Other policy makers**
  - Regional government office, DEFRA, DTI, PIU, etc.
- **Business**
  - SEEDA, SBPs, egeneration, trade associations etc.
- **NGOs**
  - SEFS, FoE, RSPB, CPRE etc.
- **Schools**
  - Eco-schools, etc.
- **Public**
  - Local agenda 21 events, local press, etc.

Dissemination Strategy

- Launch event
- Press releases
- Website – www.takingstock.org
- Reports – Project Report & Summary Report
- Other resources – Flyer; Factsheets; Case Studies; Presentations.
- Scenario/Policy Workshops – For Practitioners

Taking Stock findings

The results of the MFA / EF analysis are presented in four main ways:

- Direct material consumption (DMC)
- Total material consumption (TMC)
- CO_2 emissions
- Ecological footprint (usually per person)

The base year for all data was 2000.

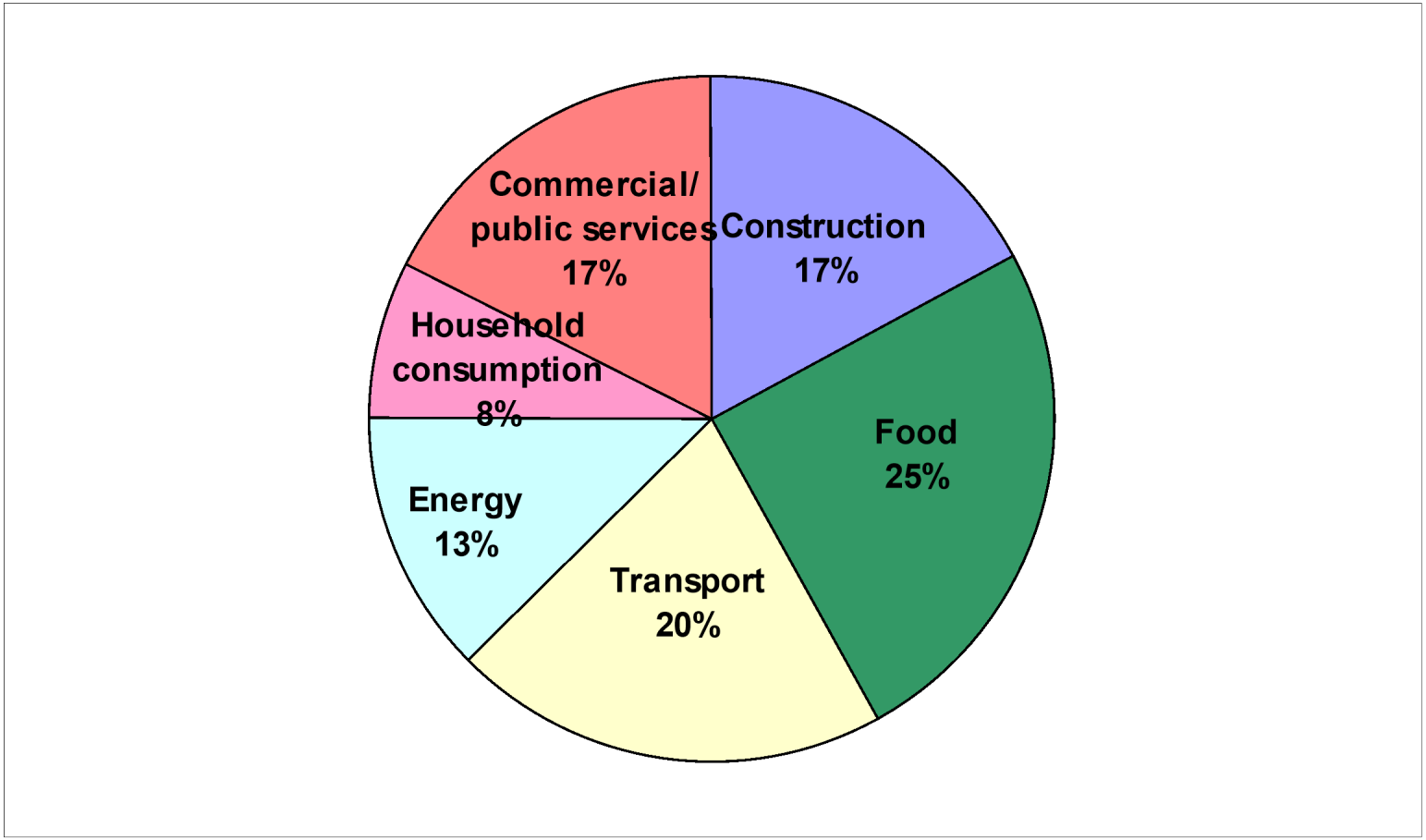
Taking Stock findings II

- Direct Material Consumption = **88 million tonnes**, equivalent to 11 tonnes per person.
- Total Material Consumption = **211 million tonnes**, or 26 tonnes per person.
- CO_2 emissions **within** the region = approx **58 million tonnes**, half from private transport and home heating.
- Total CO_2 emissions due to **consumption by the region** = approx **158 million tonnes**, or 20 tonnes per person.

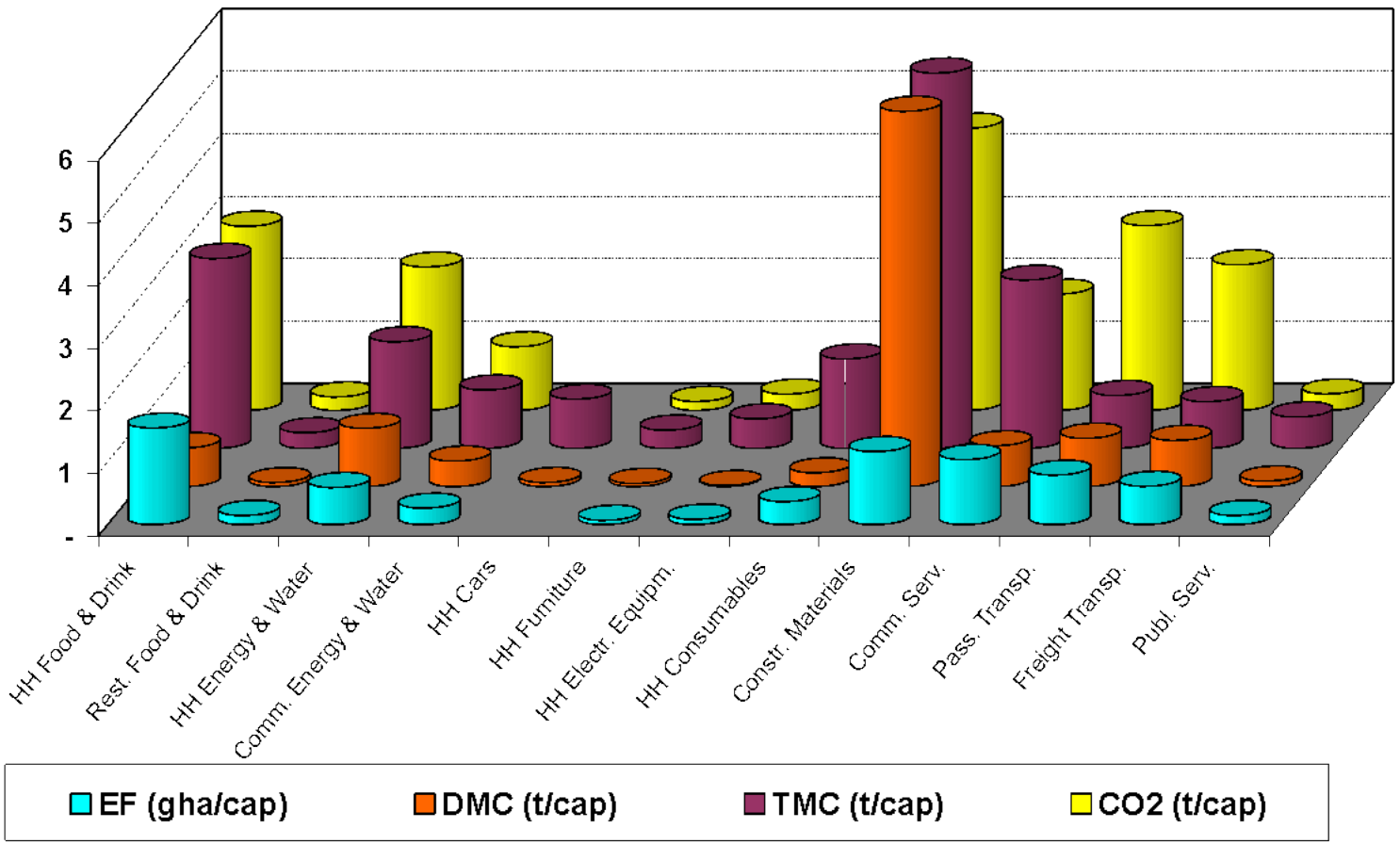
Taking Stock findings III

- The EF from all consumption related activity in the SE = **55 million global hectares**. This is **29 times** the land area of the region or equivalent to the size of France.
- This equates to **6.8 gha per person**.
- If all the world's population lived like the average SE resident we would need **3.5 planets.**

EF by sector


Commercial/
public services
17%
Construction
17%
Household
consumption
8%
Food
25%
Energy
13%
Transport
20%

All results by sector



Key policy implications

- **Food sector** has largest impact – scope for localising food production, reducing energy intensive processing & meat content.
- **Utilities** (energy & water) – huge technological potential for reducing energy/water use.
- **Construction** – potential for better management & control, more material efficiency (e.g. re-use), 'zero energy' developments.
- **Commercial and public services** – could greatly improve resource efficiency in all activities. Procurement decisions vital factor.

Win-win solutions

- Reducing primary resource inputs
- Regional/local self sufficiency
- Closing material loops (eco-efficiency)
- Whole life-cycle responsibility
- Integrated materials management

Achieving Factor Four targets will require new forms of networks, partnerships and consortiums. At present fragmentation between sectors and departments makes co-ordinated action very difficult.