

Areal Input per Unit of Service or Utility,  
Flächeninput pro Einheit Nutzen – FIPS

A robust and directionally safe indicator for the comparison of functionally equivalent goods with respect to their surface coverage/use. A quantitative measure for the “use of natural surface” per unit service, per unit utility or per unit extractable value. The ecological “surface price” for utility.

Cost Per Unit Service – COPS

Costs in monetary terms for obtaining a unit of service, either on a person-to-person basis or by employing one or more machines.

Dematerialization

The diminution in use of natural resources for generating material wealth by technical means.

Factor 10

The goal to dematerialize the economies of the industrialized countries tenfold on the average within 30 to 50 years for the purpose of approaching sustainability. Equivalent to increasing the resource productivity tenfold on the average during the same time period.

Eco-efficiency

“The delivery of competitively priced goods and services that satisfy human needs and bring quality of life while progressively reducing ecological impacts and resource intensity, through the life cycle, to a level at least in line with the earth’s estimated carrier capacity” (Business Council for Sustainable Development, Frank Bosshardt, 1991)

Eco-intensity

An indicator for the “consumption of nature” (Material, Energy, Surface) per unit of output or per unit of extractable value. Any absolute decrease in eco-intensity contributes toward reaching sustainability

Eco-intelligent Products

Nontoxic utensils, objects, foodstuffs, machines, vehicles, buildings, infrastructures etc. that produce a maximum number of high quality service units at competitive prices with a minimum of natural materials and land use.

Eco-intelligent Service

Meeting of a defined and socially acceptable demand – or a bundle of demands – at a competitive price by means of eco-intelligent products (“service delivery machines”) and the smallest possible input of natural resources

Eco-intelligent Processes

Technical procedures that function at competitive prices by utilizing eco-intelligent products and equipment and a minimum input of natural resources with the smallest possible output of waste and toxic substances

Eco-intelligent Production

Organizational, managerial and technical processes for producing goods and services at competitive prices that utilize eco-intelligent products and equipment and a minimum input of natural resources with the smallest possible output of waste and toxic substances.

### Eco-intelligent Consumption

The utilization of eco-intelligent products and services.

### Ecological Rucksack of a Product

The total amount of natural material input (Total MI) for manufacturing a product, minus the weight of the product itself (see also MI-Factor below). Ecological rucksacks are counted separately for abiotic (non-renewable) and biotic materials, moved soil, water and air.

### Ecologically Sustainable Economy

Service-oriented customized economy that operates with at least a Factor 10 less natural material resources per capita (including rucksacks) than were consumed in the US economy in 1995. Note, this is a necessary condition even though it may not be a sufficient one.

### Material Input – MI

The totality of natural materials that are moved by technical means from their natural places in order to manufacture a product or produce a service. MI includes all natural materials that are needed to make the necessary energy available. MI is measured in tons or kg

### Material Input per Unit Service, per Unit Utility, or per Unit extracted Value – MIPS

A robust and directionally safe indicator for the comparison of functionally equivalent products with respect to their material intensity. A quantitative measure for the use of natural materials per unit service, per unit utility or per unit extracted value. The “material price for utility”.

### MI-Factor (Rucksack-Factor)

An intensity factor that gives the total quantity of natural material (including the material for making the necessary energy available) for all technical input materials (such as wood, metals, cement, plastics, or chemicals), measured in kg/kg. The sum of multiplying each constituent material content of a good with its specific MI-factor yields the total MI of the good. Subtracting the weight of the good from the total MI yields the ecological rucksack of the good

### Sustainability

Sustainability requires disturbing the natural evolution of the ecosphere as little as possible by human activities. Only if humankind manages the use of the ecosphere accordingly, can future generations be expected being able to meet their needs

### Total Material Flow – TMF, or Total Material Requirement – TMR

Economic indicator for measuring (tons/year) the yearly quantity of natural material – including their rucksacks – needed for sustaining an economy or branch within defined geographical or political boundaries.