

Report indicators environment

O1 - Environment

Sustainable District Logistics (SDL) orients logistics towards:

- Reduction of natural resource consumption (energy, soil, water, fuel, etc.)
- Preserving landscape configuration (density of hard infrastructures, etc.)
- Re-utilisation of products
- Recycling of parts of products, semi-products and wastes
- Pollution prevention and reduction
- Diffusion of new clean technologies, eco-efficient means and modes of transport
- Utilisation of renewable sources of energy

Main indicators

Structural statistics

Total area (Km2) year	4122	2003
Total inhabitants (inhabitants) year	234.188	2001
Population density (inhabitants/km2) year	57	2001

Land use development

Agriculture and rural area (%) year	58	2000
Urban and industrial area (%) year	6	2000
Area for transport purposes (%) year	2	2000

Resource use development

Total residual household waste (mill.tons) year	2,9	2000
Total residual non-household waste (mill.tons) year	10,0	2000
Total energy consumption (Gj) and in main sectors: Food production year	36.548.277	2001
Total energy consumption (Gj) and in main sectors: Textile & clothes	2.764.401	2001
Total energy consumption (Gj) and in main sectors: Wood and paper year	15.248.815	2001
Total energy consumption (Gj) and in main sectors: Iron & metal	23.769.709	2001
Total energy consumption (Gj) and in main sectors: Furniture production year	4.746.671	2001
Total energy consumption (Gj) and in main sectors: Transport year	82.106.595	2001
Total energy consumption (Pj) in road transport year	157,2	1999
Total energy consumption (Pj) in rail transport year	4,7	1999
Total energy consumption (Pj) in air transport year	34,3	1999
Total energy consumption (Pj) in domestic sea transport year	4,8	1999
Total energy consumption (Pj) in passenger road transport year	98,8	1999
Energy consumption (Pj) in freight road transport year	57	1999

Environmental impact development

Total CO2 production (% of total CO2 production on national level) year	21	1997
Total CO2 production (tonnes) due to all transport modes year	14.311,2	1998
CO2 production (tonnes) due to rail transport year	247	1998
CO2 production (tonnes) due to road transport year	11.204	1998
CO2 production (tonnes) due to air transport year	2.451	1998
CO2 production (tonnes) due to sea transport year	409,2	1998
Total NOx (tonnes) transport emission year	96.400	1998
Total VOC (tonnes) transport emission year	56.900	1998
Total SOx (tonnes) transport emission year	5.500	1998
Average peak concentration of traffic noise per million of dwellings year	130.000	1995

Report indicators economy

O2 - Economy

Sustainable District Logistics (SDL) orients logistics towards efficiency, customer satisfaction and community well-being based on:

- Reduction of the material, energy and transport intensity (flows) in the economy (decoupling) also by means of soft and clean technologies
- Investments for the incorporation and reduction of the environmental and social costs in logistics accounting
- Dematerialisation of economy (durability of goods and services, miniaturisation of products, substitution of products by services)
- Reduction of transport growth and more balanced modal split in favour of rail and water
- Information and Communication Technology to substitute transport (e.g. telecommuting, home-shopping and delivering, teleconferences, teleworking, etc.)

Main indicators

Basic structure

Total employment in all sectors year	122.952	2001
Local units in wholesale trade year	5.346	2002
Local units in retail trade year	7.466	2002

Transport infrastructure development

Railways per typology (sole track Km) year	140	2003
Railways Km per 1000 inhabitant year	0,60	2001
Total roads Km year	5.531	2000
Roads Km per 1000 inhabitants year	24,62	2000
National roads Km year	143	2000
Regional roads Km year	798	2000
Municipal roads Km year	4.590	2000
Railways capacity - passenger (trains per day) year	60	2000
Railways capacity - freight (trains per day) year	1	2000

Transport intensity

Total national passenger transport (million Pkm) year	76.710	2001
National passenger transport (million Pkm) by rail year	5.548	2001
National passenger transport (million Pkm) by road year	70.589	2001
National passenger transport (million Pkm) by air year	338	2001
National passenger transport (million Pkm) by sea year	235	2001
National freight transport (million Tkm) by rail year	1.987	2001
National freight transport (million Tkm) by road year	11.057	2002
Viborg County total freight transport (million Tonnes) year	13.715	1998
Viborg County freight transport (million Tonnes) by lorries year	13.275	1998
Viborg County freight transport (million Tonnes) by train year	14	1998
Viborg County freight transport (million Tonnes) by ship year	426	1998

Report indicators social potential

SP.1 Perception of a variety of development approaches

The Sustainable District Logistics (SDL) approach is facilitated by:

- Willingness and practices of the logistics stakeholders (businesses, public authorities, civil society and communities) to open their views and ways of thinking, looking at new issues and conceptions on local and logistics development (debates, seminars, interdisciplinary working groups, animation and mobilisation of citizens, new plans on sustainable development, etc.)

Main indicators

Publications and public information on sustainable development and related innovation

2: Publication on local Agenda 21 initiatives and a web-site on environmental indicators

SP.2 Entrepreneurial creativity and innovation

The Sustainable District Logistics (SDL) approach is facilitated by:

- Reproductive capacity of the local context, based on common cultural roots, mobilisation of potential resources and research to improve the quality of life (projects and plans for sustainable businesses, banking, agriculture, tourism, etc.)
- Fertilisation of the local economic fabric to embed the single business into the fluxes of internal and external production relationships (typology and number of businesses, their life expectancy, sizes, markets, eco-efficiency technologies, etc.)
- Corporate Social Responsibility (CSR), defined by the recent (2002) European Union action framework, as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (typology and number of businesses and public bodies with social and environmental quality certifications, etc.).

Main indicators

Average business size in main economic sectors: agriculture, industry and services

In 2001: Furniture industry: 29,9 employed per local unit Transport sector: 5,04 employed per local unit

Average business size in transport services

Transport sector: 5,04 employed per local unit

SP.3 Capacity to cope with complexity

The Sustainable District Logistics (SDL) approach is facilitated by:

- Strategies at local level able to increase the capacity of the logistics stakeholders to anticipate changes and to cope with a large amount of problems finding solutions that can reduce uncertainty while evaluating and managing local / global interdependencies (flexibility of the local economic and social fabric, integrated programmes and common medium and long term projects supported by training and education on visioning methods, chaos and complexity theories, etc)

Main indicators

Programmes directed towards sustainable development

2:- Agenda 21 - SEED

Training courses based on issues of sustainable development

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SP.5 Discovery and re-encoding of the local specificities and knowledge

The Sustainable District Logistics (SDL) approach is facilitated by:

- Close interrelationships between the components of the concerned local context, considering different cultures and knowledge that can have an impact on logistics processes (number of endogenous companies, projects on local diversity recovery, cultural heritage, arts & crafts, oeno-gastronomy,

agro-eco-natural tourism, economic and social diversification, etc.)

Main indicators

Projects on local economic, environmental and socio-cultural diversification

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Report indicators dynamics

D2 - Open collective learning

Changes in favour of Sustainable District Logistics (SDL) can be produced by:

- Improving the capacity of the logistics stakeholders to acquire and utilise knowledge and know-how; this means to develop a culture of co-operation in several policy fields, for instance in spatial planning and territorial flows management

Main indicators

Existence of training courses, seminars and workshops to increase knowledge of logistics operators

1 - a course on logistics of local SME's. Organised by regional industrial board and private consultant firm

D3 - Negotiation and co-decision

Changes in favour of Sustainable District Logistics (SDL) can be produced by:

- Improving the capacity of the logistics stakeholders to determine strategies that have the wider possible consensus; this means to develop a culture of participation, attributing, for instance, equal decision role to the different interest groups (economic, social and environmental)

Main indicators

Existence of round tables, joint committees and groups of logistics stakeholders for plans and projects development

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