

Summary

Executive summary

The productive system of the Casentino area is prevalently constituted by SMEs in all sectors (from agriculture and industry to services). It has demonstrated a high capacity for innovation and has a good relationship with the European and international markets. Although the environmental situation is reasonably intact (in comparison to other Italian areas), problems have arisen in relation to traffic and congestion.

The results of the Valley wide SDL/SWOT analysis led to a central working hypothesis: the elaboration of a Casentino "**Sustainable accessibility plan**", an integrated plan to increase accessibility of the Valley inhabitants to goods, services, people and places, without compromising the territorial integrity (social, environmental, economic).

Nearly 30 local projects (e.g. Leader, Life, municipal network, wind park-energy, methane pipeline, wool and wood production, road and rail infrastructures) and plans (e.g. economic development, rural and agricultural areas, social and health services, spatial planning, waste management) were analysed considering their impacts both on territorial systems and logistics.

Next information to quantify a series of 125 indicators (related to the 32 aspects of the SDL approach) was collected and analysed. Estimates were produced when appropriate data were not available.

The two analysis approaches were integrated and corrected several times to construct a Regional Profile, where the main characteristics of the CasentinoValley are evaluated in terms of strengths, weaknesses, opportunities and threats.

The results of the analysis were utilised in order to identify hypotheses that favour an improvement to the current territorial logistics system, moving toward a more sustainable approach, using each of the 32 aspects of the SDL approach.

These individual hypotheses were combined according to the SDL methodology with the aim of arriving at a cluster of innovative options to be further considered by the local stakeholders (governments, citizens, civil society and businesses) for the elaboration of a Casentino "Sustainable accessibility plan".

The results are summarised in the below Regional Perspective in order of importance connecting each hypothesis to the others.

Regional profile

Orientation

	Strengths	Weaknesses	Threats	Opportunities
The environmental dimension	●●●●	●●●	●●●●	●●●●
The economic dimension	●●●●	●●●	●●●	●●●●
The socio-cultural dimension	●●●	●●●●	●●●	●●●●
04 Equity between individuals	●●	●●	●●●	●●●●
05 Equity between territories	●●●	●●●	●●●	●●●●
06 Equity between generations	●●●	●●●	●●●●	●●
07 Diversity	●●●●	●●●	●●	●●●●
08 Subsidiarity	●●●●	●●●	●●●	●●●●
09 Networking and partnership	●●●●	●●●	●●●	●●●●
10 Participation	●●●●	●●●●●	●●●	●●

Social Potential

	Strengths	Weaknesses	Threats	Opportunities
Perception of a variety of development approaches	●●●●	●●●●	●●●●	●●●●
Entrepreneurial creativity and innovation	●●●	●●●●	●●●●	●●●●
Capacity to cope with complexity and to anticipate change	●●●	●●●●●	●●●●	●●●●●
Enrichment of the local Knowledge to create a cohesive multicultural environment	●●●	●●●●	●●●●	●●●●
Discovery and re-encoding of the local specificities and knowledge	●●●●	●●●	●●●●	●●●●
Ability to reach optimal levels of attainment and fulfilment of life	●●●●	●●●●●	●●●	●●●●

	Strengths	Weaknesses	Threats	Opportunities
Fractal distribution of responsibilities and competence	●●●●●	●●●	●●●●	●●●●●
Facilitating structure for autonomy and collaboration into the decision-making	●●●	●●	●●●●	●●●
Primary reliance on the endogenous resources without compromising the ones of the others	●●●●	●●●	●●●●	●●●●
Shared value system taking into account environmental, socio-cultural and economic interdependencies	●●●●	●●●	●●●●	●●●
Social cohesion	●●●●	●●●	●●	●●●
Opportunity and room for fair interactions	●●●●	●●●	●●	●●●
Capacity for creating shared visions of local development	●●●●	●●●	●●●●	●●●
Integration of social and technical skills for innovative processes	●●●	●●●●	●●	●●●●
Access to information and dialogue	●●●●	●●●●●	●●●	●●●●
Existence of facilitators and animators of multiple interactions	●●●	●●●●●	●●●●	●●●●

Dynamics

	Strengths	Weaknesses	Threats	Opportunities
Enhancing problem understanding	●●●	●●●●	●●●	●●●●
Open collective learning	●●	●●●	●●●	●●●●
Negotiation and co-decision	●●●●	●●●●●	●●●	●●●●
Creation of a shared vision	●●●●	●●●●●	●●●	●●●●
Client orientation	●●●●	●●●●	●●●	●●●●
Result orientation	●●●	●●●●●	●●●●	●●●●

Regional Perspective (order of importance that connects the main hypotheses)

1) First hypothesis

To create a permanent structure for the study of sustainable logistics where local professionals interact with local and regional bodies to create a Plan for Sustainable Accessibility in Casentino. This structure will have the responsibility to coordinate hypothesis 2, 3, 4, 5 and 6.

2) Second hypothesis

To create a roundtable on logistics issues, with the involvement of a large variety of stakeholders for planning logistics fluxes, integrating accessibility issues into Local Agenda 21.

3) Third hypothesis

To organise a long term system for monitoring and evaluating to assist logistics stakeholders (governments, businesses, civil society and citizens) to improve their activities in terms of economic, social and environmental diversification and to facilitate the participation of logistics stakeholders in integrated decision making (e.g. co-ordinated planning).

4) Fourth hypothesis

To create a group of local facilitators for "win-win" solutions, participation of local stakeholders, elaboration of locally-adapted methodology

5) Fifth hypothesis

To create of a "centre of resources", integrated with Local Agenda 21 structures, in which knowledge, know-how and skills in sustainable logistics are developed year by year also through specific courses, seminars and workshops.

6) Sixth hypothesis

To include quality management issues and sustainable development principles in all training courses and e-learning tools for producers (employers and employees) and consumers (generic public, job-seekers and unemployed, families, pupils) in order to increase awareness of sustainable logistics as a means to favour social cohesion and development in depressed areas over the next 15 years.

Main hypotheses of alternative options

1st hypothesis

Correlation between the SDL aspects

D1 - Enhancing problem understanding

P1 - Perception of a variety of development approaches

O1 - Environment

O2 - Economy

Short description

To create a permanent structure for the study of sustainable logistics where local professionals interact with local and regional bodies to create a Plan for Sustainable Accessibility in Casentino. This structure will have the responsibility to coordinate hypothesis 2, 3, 4, 5 and 6.

Expected results

- a substantial reduction and rebalance of energy consumption in the transport modes
- a reduction of pollution due to transport activities
- a progressive reduction of the transportation related external costs (environmental, social and health) making economic resources available for investment in production, socio-culture and the environment
- a progressive reduction of the transport intensity in the local economy
- a substantial reduction of road transport and a rebalance between the transport modes
- the rationalisation and reduction of general costs (e.g. through co-ordination and aggregation of services as such as waste management, e-government information network, power delivery, railroad facilities and connections) in order to cope also with lack of public funding due the recent financial laws (national budget)
- the improvement in quality, value, productivity and employment in several fields of activities (e.g. increasing the dissemination and transfer of good practices already experimented in tourism, economic diversification, territorial marketing) with a specific support to self-employment, enterprise creation and to the maintenance of the existing fabric of small businesses

Financial and organisational measures

- combination of several attempts stemming from local initiatives to follow criteria of sustainable development (e.g. in waste management plans, integrated spatial plans, recycling, energy production from alternative sources, diffusion of clean technologies, organic farming)
- investments in e-logistics (logistics and transport operators) and e-commerce (businesses and households) supported by the diffusion of the e-government network ("rete civica")
- a co-ordinated organisational and management system (with a diffuse utilisation of ICT) of the supply and distribution chains (local freight logistics network) based on freight rail transportation (e.g. night-freight-trains) combined with light freight road transportation (e.g. share-a-ride / vanpool)
- a co-ordinated organisational and management system (with a diffuse utilisation of ICT) of the passenger transportation (local passenger logistics network) based on a metropolitan railway combined with a differentiated supply and demand matching for public (e.g. buses and taxis, dial-a-ride) and private road transport (e.g. share-a-ride - carpool)
- an inter-modal transport system based on linear connection (e.g. a metropolitan railway with a full-day utilisation of its capacity, differentiated between night-freight-trains and day-people-mover) and transversal connections (e.g. the existing road network improved in safety and quality)
- the creation of an integrated system (local network between the municipalities) in order to monitor and evaluate the total costs (economic, social and environmental) of the logistics structure and the impacts of logistics fluxes (e.g. commercial centres, new road and railways projects, flood expansion area, production chains and networks) on the territory utilising a series of strategic indicators (qualitative and quantitative) that orient local stakeholders towards the reduction of pressure factors (e.g. waste and road traffic) and the quality improvement of business and spatial planning

2nd hypothesis

Correlation between the SDL aspects

D3 - Negotiation and co-decision

P3 - Capacity to cope with complexity and to anticipate change

P10 - Shared value system taking into account environmental, socio-cultural and economic interdependencies

P15 - Access to information and dialogue

O9 - Networking and partnership

Short description

To create a roundtable on logistics issues, with the involvement of a large variety of stakeholders for planning logistics fluxes, integrating accessibility issues into Local Agenda 21.

Expected results

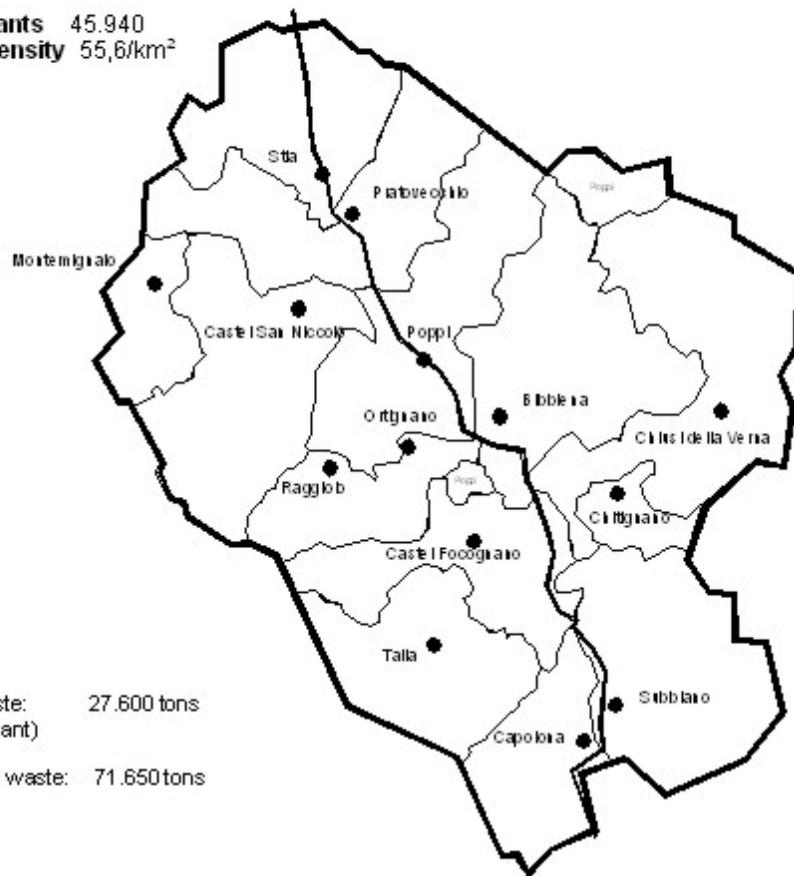
- analysis of different interests to create a map that covers all potential local logistics stakeholders (e.g. producers, suppliers, consumers, local communities) looking at a long-term perspective
- participation in and connection with other relevant issues and initiatives
- integration of local sustainable accessibility issues into the elaboration of the valley Local Agenda 21 and support to their implementation with training courses and related research

Financial and organisational measures

- investment in impact analysis, monitoring and evaluating systems, research, learning and training
- creation of an integrated communication centre for public information on the issues related to sustainable development and logistics issues, enlarging the scope of the already existing e-government network (rete civica - portal) managed by the Mountain Community

The Casentino area: population, land use, waste

Total inhabitants 45.940
Population density 55,6/km²



Waste

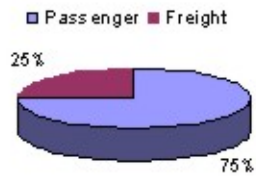
Household waste: 27.600 tons
(601 Kg/inhabitant)

Non household waste: 71.650 tons





Transport: energy, emissions

Transport energy consumption: 35.455 Toe



Energy consumption

Total	35.455 Toe
Passenger	26.593 Toe (75%)
Freight	8.862 Toe (25%)

road 
rail 

Energy passenger

Rail	497 Toe (2%)
Road public	222 Toe (1%)
Road private	25.874 Toe (97%)

Energy freight

Rail	57 Toe (1%)
Road	8.805 Toe (99%)

Total CO₂ 87.457 Tons (passenger 77%; freight 23%; road 98%; rail 2%)

Total NOX 519 Tons (passenger 67%; freight 33%; road 99%; rail 1%)

Total VOC 559 Tons (passenger 96%; freight 4%; road nearly 100%; rail nearly 0%)

Transport structure

Transport infrastructure per 1000 inhabitants

Rail	0,96 km
Road	13,7 km

Transport modal split

Passengers 644 million Pkm

rail	5%
road public	2%
road private	93%

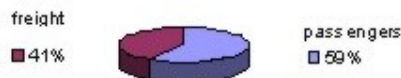
Freight 164 million Tkm

rail	2%
road	98%

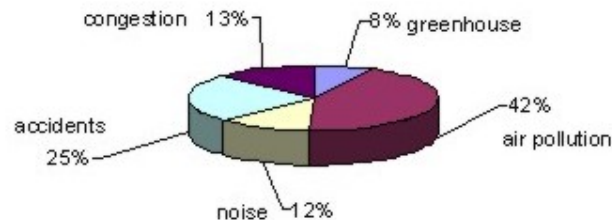


Transport external costs

External costs 97,3 million euro



total transport



3rd hypothesis

Correlation between the SDL aspects

D6 - Result orientation

P2 - Entrepreneurial creativity and innovation

P5 - Discovery and re-encoding of the local specificities and knowledge

P7 - Fractal distribution of responsibilities and competence

P8 - Facilitating structure for autonomy and collaboration into the decision-making

P9 - Primary reliance on the endogenous resources without compromising the ones of the others

O7 - Diversity

O8 - Subsidiarity

Short description

To organise a long term system for monitoring and evaluating to assist logistics stakeholders (governments, businesses, civil society and citizens) to improve their activities in terms of economic, social and environmental diversification and to facilitate the participation of logistics stakeholders in integrated decision making (e.g.

co-ordinated planning).

Expected results

- increase in economic, socio-cultural and environmental diversification as a driving factor for innovation and renewal of local development and employment, considering accompaniment measures related to the logistics structure
- logistics services provided on the basis of economic and employment diversification (e.g. facilities for small businesses, local products), socio-cultural diversity (e.g. facilities for rural areas, local communities, immigrant insertion), natural resources (e.g. facilities for biodiversity diffusion)
- promotion and increase of corporate social and environmental responsibility (e.g. facilities to support business quality certification through the rationalisation of supply and delivery fluxes)

Financial and organisational measures:

- a specific budget dedicated to logistics development (e.g. integration of public and private financial resources)
- a permanent monitoring system of the local, external and transit fluxes of passengers and freights
- clear criteria on stakeholder analysis and involvement in the public decision-making according to the specific field of problems, issues, policies and services
- programmes and projects to stimulate analogous methods in corporate strategies on a volunteer basis, providing financial support and technical assistance to disseminate CSR (corporate social and environmental responsibility; e.g. quality certification) specifically in favour of existing small businesses and enterprise creation
- a Charter of main orientation principles and procedures (e.g. a self-training handbook) in order to implement the institutional strategy for an integrated management of local plans
- development of methods of project financing based on clear protocols and agreements that respect local autonomy in decision-making.

4th hypothesis

Correlation between the SDL aspects

D4 - Creation of a shared vision

P13 - Capacity for creating shared visions of local development

P16 - Existence of facilitators and animators of multiple interactions

O10 - Participation

Short description

To create a group of local facilitators for "win-win" solutions, participation of local stakeholders, elaboration of locally-adapted methodology

Expected results

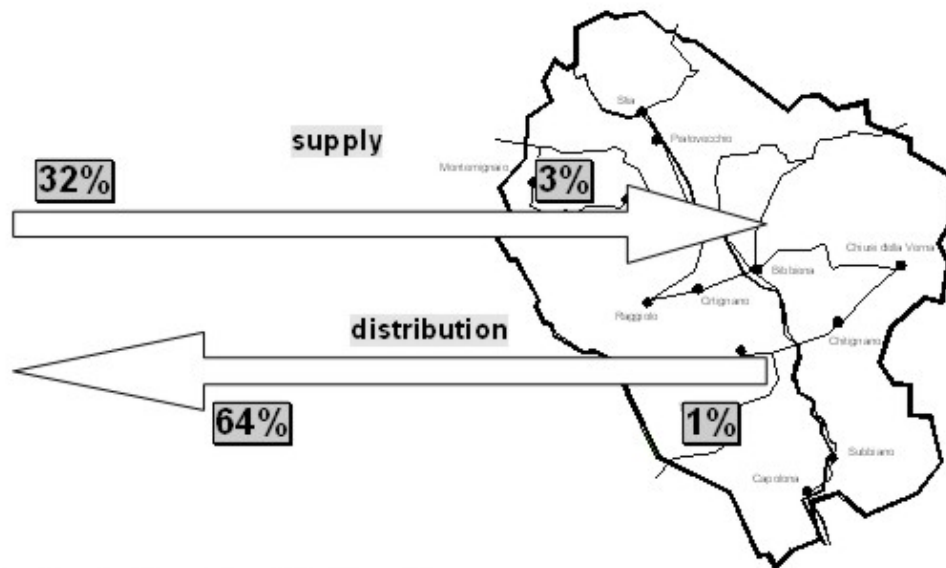
- elaboration of methods and procedures that increase information and participation of local stakeholders (included less favoured categories, e.g. women, old people, disabled people, immigrants, minors) in decision-making on logistics and spatial planning, utilising experiences gained in other policy fields (e.g. local plans of social services)
- elaboration of a locally-adapted methodology that incorporates and harmonises objectives and measures towards sustainability and logistics issues in order to support the revision of previous territorial pacts and local development agreements

Financial and organisational measures:

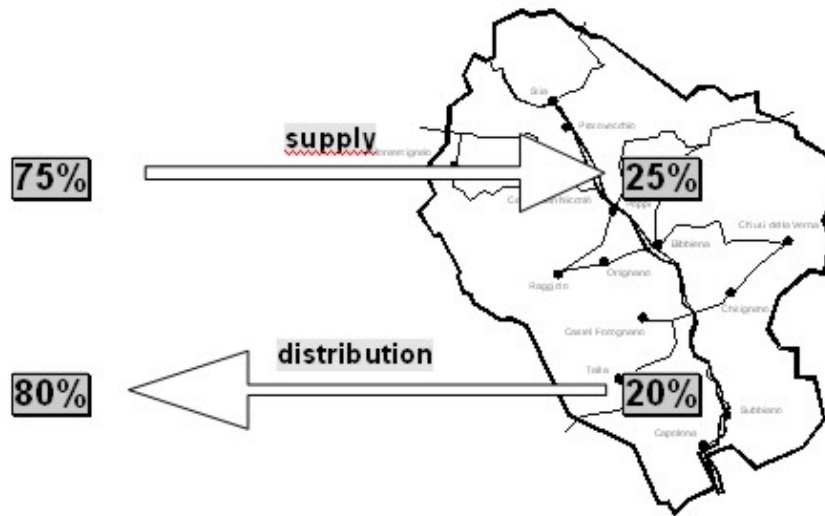
- involvement of existing local development agencies and agents
- application for a new professional profile that combines sustainable development and logistics knowledge
- specific training courses

Transport flow in Tkm

1 – Average share of freight transport internally borne, externally borne, and transit traffic: transit nearly 0%; supply internally borne and externally provided 32%; supply internally borne and internally provided 3%; distribution internally borne and externally delivered 64%; distribution internally borne and internally delivered 1%.



2 - Tkm inside and outside Casentino area: nearly 25% of the total Tkm of the supply chain occurs within the Casentino and 75% occurs outside the Valley. For distribution, the Tkm percentages are respectively 20% and 80%.



5th hypothesis

Correlation between the SDL aspects

D2 - Open collective learning

P14 - Integration of social and technical skills for innovative processes

O3 - Socio-culture

Short description

To create of a "centre of resources", integrated with Local Agenda 21 structures, in which knowledge, know-how and skills in sustainable logistics are developed year by year also through specific courses, seminars and workshops.

Expected results

- integration of logistics as a priority in the Local Agenda 21 under elaboration
- promotion of research, training and education for qualified activities and employment (e.g. in agriculture,

industry and services) towards sustainable consumption and production, (logistics, mobility and transport included)

- capitalisation of positive experiences (e.g. Life and Leader projects, municipal spatial and social insertion plans) concerning learning methods
- implementation of e-learning methods enlarging scope and purposes of the local municipal network (rete civica)
- mobilisation of local schools, businesses, associations and institutions towards shared education and training plans that could increase university and high school degrees lowering the drop-out rate
- integration between knowledge and skills requested by Local Agenda 21 and logistics issues.

Financial and organisational measures:

- integration of several financial resources and plans, e.g. EU - ESF Ob. 3 (provincial plan for vocational guidance and training), Community Initiatives (e.g. Leader Plus), research and education (university and schools), trade association, regional and provincial support to Local Agenda 21 elaboration

6th hypothesis

Correlation between the SDL aspects

D5 - Client orientation

P4 - Enrichment of the local knowledge to create a cohesive multicultural environment

P6 - Ability to reach optimal levels of attainment and fulfilment of life

P11 - Social cohesion

P12 - Opportunity and room for fair interactions

O4 - Social equity (between individuals)

O5 - Inter-local equity (between territories)

O6 - Inter-temporal equity (between generations)

Short description

To include quality management issues and sustainable development principles in all training courses and e-learning tools for producers (employers and employees) and consumers (generic public, job-seekers and unemployed, families, pupils) in order to increase awareness of sustainable logistics as a means to favour social cohesion and development in depressed areas over the next 15 years.

Expected results

- increase in the accessibility to goods, services, people and places taking into consideration people at risk of social exclusion (e.g. social transport for elderly, minors, immigrants, poor families included into the local plan of social services)
- creation of logistics services that anticipate and meet new demand due to demographic changes (e.g. a high dependency rate determined by the progressive increase of ageing population; decrease in household dimensions), cultural and educational changes (e.g. probable increase in the immigrant share of the new generation), availability of public resources (e.g. probable increase in public debt per inhabitants), availability of environmental resources (e.g. probable decrease in biodiversity and in traditional energy sources)
- long-term quantitative objectives that support qualitative objectives and guidelines provided by several local plans, together with adequate systems and methods of social and environmental accounting
- new consumption patterns, new production technologies and methods to fight against resources deterioration and shortcoming

Financial and organisational measures:

- new methods of services delivery (e.g. e-government network supporting also e-commerce, e-logistics, home-shopping, e-banking, e-administration)
- an integrated e-logistics and a safety-orientated inter-modal (e.g. metropolitan railways connected to intra-valley roads) transport system based on the full utilisation of co-ordination potentials (e.g. local e-government and regional networks, spatial planning, waste management, biodiversity conservation, flood expansion area)
- programmes and projects related to integration between different knowledge and cultures taking into

- account future impacts on logistics dynamics
- programmes and projects for fair interactions also in trade through logistics facilities with different immigrant communities and countries
- programmes and projects for positive actions in favour of women insertion in labour market, education and decision-making (e.g. planning, management and implementation of local policy strategies with a close attention to logistics impacts)