AN EFFECTIVE MODEL OF SUSTAINABLE DEVELOPMENT IMPLEMENTED IN LIGURIA REGION: THE CASE STUDY OF VARESE LIGURE MUNICIPALITY

Giovanni Sergi, Carlo Berio

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WHERE IS VARESE LIGURE?

The Municipality of Varese Ligure is located in Liguria with a territorial surface of 137 square kilometres and 2,091 inhabitants in 2013.
In 1994 the Municipal Administration decided to give up a development programme focused on the protection and promotion of its environmental resources which cover one of the widest municipal areas in Liguria region and on a selected sustainable tourism.

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The main results of the development programme of the Municipality have been the following: stop of depopulation, independency through renewable energy, 1,800 ha of certified organic agriculture, the number of tourists has increased by three times, about 140 new jobs, reduction of waste.
Since the 70’s the European Union has adopted more than 200 legislative acts to safeguard the environment. In 2050, the EU economy will have to be able to offer a high standard of living and at the same time guarantee a reduced impact on the environment. Between 1990 and 2000 increase in ground that was made waterproof amounted to 1,000 square km per year.

Source: European Commission, the EU environment policies, 2013
Infrastructure and economic incentives to reduce vulnerability to drought in Segura and Tagus basins

The Segura River Basin in the south east of Spain suffers from a structural condition of water scarcity and drought occurrence.
In European Union between 1990 and 2000 increase in ground that was made waterproof amounted to 1,000 square km per year. In Italy between 2008 and 2013 increase in ground that was made waterproof amounted to 55 hectares per day (190 square km per year).
In 2012 in Italy 13% of the overall energy consumption and 28.2% of electricity consumption came from renewable sources.
THE PATH TOWARDS ENVIRONMENTAL SUSTAINABILITY FOLLOWED BY THE REGIONAL AUTHORITY OF LIGURIA

The Regional Operational Programme of Liguria POR 2007-2013 funded by the European Regional Development Fund gives a meaningful contribution to the development of an integrated sustainable energy policy, soil conservation and prevention of natural risks.

ISO 14001 CERTIFIED MUNICIPALITIES (International Organization for Standardization)

Varese Ligure

Source: Region Liguria, 2008
The Regional Rural Development Programme PSR 2007-2013 is a programme for the development of agriculture and rural economy as well as the improvement of the environment and quality of life in rural areas.
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TERRITORY, POPULATION AND PRODUCTIVE ACTIVITIES IN VARESE LIGURE

USE OF LAND IN THE MUNICIPALITY OF VARESE LIGURE 1970
TOPOGRAPHIC MAP 1:50.000 OF THE REGION LIGURIA
The municipal territory is the second largest territory in Liguria after the Municipality of Genoa covering an area of 13,759 hectares corresponding to 137.59 square kilometres. In 2013, it had a population of 2,091 inhabitants living in twenty-seven small villages. The main villages are Varese Ligure and S. Pietro Vara. 95% of the municipal territory is made up of non built-up areas.
COMPARISON BETWEEN THE USE OF SOIL IN 1970 AND 2012

There is a meaningful increase in areas covered with woods as well as the decrease in cultivated farming lands.
### Demographic Dynamics of the Municipality of Varese Ligure

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Index number</th>
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<tbody>
<tr>
<td>1861</td>
<td>7,851</td>
<td>100</td>
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<tr>
<td>1871</td>
<td>8,063</td>
<td>103</td>
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<tr>
<td>1881</td>
<td>8,185</td>
<td>104</td>
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<tr>
<td>1901</td>
<td>7,154</td>
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<td>1911</td>
<td>7,127</td>
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<td>1921</td>
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<td>1931</td>
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<td>1961</td>
<td>4,710</td>
<td>60</td>
</tr>
<tr>
<td>1971</td>
<td>3,711</td>
<td>47</td>
</tr>
<tr>
<td>1981</td>
<td>3,118</td>
<td>40</td>
</tr>
<tr>
<td>1991</td>
<td>2,681</td>
<td>34</td>
</tr>
<tr>
<td>2001</td>
<td>2,358</td>
<td>30</td>
</tr>
<tr>
<td>2011</td>
<td>2,151</td>
<td>28</td>
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</table>

Source: Italian National Institute of Statistics, Rome
We find out that Varese Ligure was subject to emigration of its inhabitants for a long time.
TERRITORY, POPULATION AND PRODUCTIVE ACTIVITIES IN VARESE LIGURE

<table>
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<tr>
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<tr>
<td>0-14 years</td>
<td>493</td>
<td>297</td>
<td>221</td>
<td>189</td>
<td>177</td>
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<tr>
<td>15-64 years</td>
<td>2,288</td>
<td>1,755</td>
<td>1,447</td>
<td>1,222</td>
<td>1,195</td>
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<tr>
<td>65 and more</td>
<td>930</td>
<td>2,066</td>
<td>1,013</td>
<td>947</td>
<td>779</td>
</tr>
</tbody>
</table>

Source: Italian National Institute of Statistics, Rome

POPULATION OF VARESE LIGURE BASED ON GROUPS OF AGES
AGRICULTURE AND ORGANIC LIVESTOCK PRODUCTION

In 2014 the “Biodistretto Val di Vara-Valle del Biologico” district for organic production was established which also includes the Municipality of Varese Ligure.
In Varese Ligure there are more than 60 certified organic farms, on a surface of 1,800 hectares led by two cooperatives: San Pietro Vara and Casearia.
The wind farm installed in 2002 and enhanced in 2006 is equipped with four wind turbines which ensure an overall power of 3.2 MW located at a height of 1,100 metres above sea level close to the Cappelletta pass. The wind farm achieves a production of 7 GWh/year which is five times higher than the energy need of the area of Varese Ligure.
Biodiversity here is safeguarded by the activities carried out by farms and livestock farms.

In the Municipality of Varese Ligure in 2014 waste collection reached 30.20% of the municipal solid waste production.
Varese Ligure in 2004 received from the EU the prize “Promote 100” in Berlin, for the European Rural Municipality which has implemented the most complete and unique project for sustainable development.

In 2005 it was the first Municipality in Europe which obtained the European certification European Energy Award, an award for the local authorities which contribute to a sustainable future through the efficient use and exploitation of renewable sources.
ROLE OF TOWN PLANNING IN SUSTAINABLE DEVELOPMENT

DEVELOPMENT OF BUILT-UP AREAS IN VARESE LIGURE AND SIMULTANEOUS POPULATION DECREASE

Population: 3,426 inhabitants
Population: 2,879 inhabitants
Population: 2,358 inhabitants

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Source: Collection of topographic maps of the Region Liguria
ROLE OF TOWN PLANNING IN SUSTAINABLE DEVELOPMENT

COMPARISON BETWEEN THE DEVELOPMENT OF THE URBAN FABRIC AND AREAS COVERED WITH WOOD

Source: Collection of topographic maps of Liguria Region
ROLE OF TOWN PLANNING IN SUSTAINABLE DEVELOPMENT
GENERAL VARIANCE TO THE MASTER PLAN (PRG)

EXTRACT FROM THE GENERAL ZONING PLAN OF THE MUNICIPALITY OF VARESE LIGURE, 1998
ZONING TABLE 1:5.000

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The General Variance to the PRG set two main objectives. The first one is upgrading of the local territory by reducing developable volumes through incentives and measures aiming at a reorganisation of settled areas in Varese Ligure.
The second objective was re-launching traditional farming activities. The potential of tourism-related activities was taken into account as a source of income in the high Vara Valley.

The protection and promotion of the environment are a priority of urban planning measures included in the General Variance to the PRG together with the role of men and women in the protection of nature, as the only real guarantee to keep environmental values and effectively safeguard of the territory.
ROLE OF TOWN PLANNING IN SUSTAINABLE DEVELOPMENT
GENERAL VARIANCE TO THE MASTER PLAN (PRG)

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The main objectives of the Detailed Plan for the historical centre of Varese Ligure have been the recovery of the existing building heritage, safeguard of historical-environmental values and specifically, identification of effective solutions to the needs of residents in the ancient village.
The Plan for the historical centre pursued the following objectives: a) effective and suitable architectural recovery in order to ensure compliance with the types of buildings, constructions and historical heritage b) improvement of comfort and convenience of homes through a slight increase in volumes and reorganisation
These measures aimed in the medium term at maintaining the current number of residents in the old village and restoring traditional handicraft and commercial activities.
The first method is that one of local community distributed hotels. This type of accommodation is widespread because it is hard for businesses to buy properties within old villages characterised by the splitting of real estates. This is why tourism operators have chosen multi-building accommodation within the same old village.
The second method which is probably more suitable for very small old villages in the area of Varese Ligure, like for example Montale, may be a type of company which includes owners who cannot manage their small split properties. According to this solution, the economic operator, after the basic investment, will allocate the income to each owner-partner who is part of the business based on his/her respective share.
Varese Ligure has implemented a model of rural development that combined environment, employment and business. Over the past years, the Municipal administration has obtained the following results:
- it has slowed down the decline in population;
- it has developed renewable energy;
- it has developed organic farming and livestock production;
- it has developed sustainable tourism;
- according to estimates it has created 140 jobs;
- it has increased separate waste collection;
- several businesses have obtained ISO certification.
BLOCK DIAGRAM ON THE FUTURE OUTLOOK FOR VARESE LIGURE

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THANK YOU

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