

INSTRUMENTS FOR SUSTAINABLE REGIONAL DEVELOPMENT  
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discussion paper

**68**

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Tuscany / Val di Cornia  
An INSURED Case Study on Sustainable  
Regional Development

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## **INSURED**

### Instruments for Sustainable Regional Development

EC Environment and Climate Research Programme

### **Tuscany / Val di Cornia**

An INSURED Case Study on Sustainable Regional  
Development

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## **Available INSURED Reports and discussion papers:**

### **Instruments for Sustainable Regional Development**

The INSURED Project - Final Report

Ruggero Schleicher-Tappeser et al. (1998), EURES Report 9, Freiburg i.Br.

### **Instrumente für eine nachhaltige Regionalentwicklung**

Das INSURED-Projekt – Schlußbericht (deutsch/englisch)

Ruggero Schleicher-Tappeser et al. (1998). EURES Report 10, Freiburg i.Br.

### **The Mid West Region of Ireland**

An INSURED Case Study on Sustainable Regional Development

Gerry P. Sweeney et al. (1998), EURES discussion paper dp-66, ISSN 0938-1805 Freiburg i.Br.

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Rainer Röder und Ruggero Schleicher-Tappeser (1998), EURES discussion paper dp-70, ISSN 0938-1805, Freiburg i.Br., 100 S., (translation of dp-69)

### **Regional Development: Overview on five European Regions**

An INSURED Document

Robert Lukesch et al. (1998), EURES discussion paper dp-71, ISSN 0938-1805 Freiburg i.Br.

### **The EU Agricultural Policy**

An INSURED Case Study on Sustainable Regional Development

Jim Walsh (1998), EURES discussion paper dp-72, ISSN 0938-1805 Freiburg i.Br.

### **Sustainable Regional Development: An Integrated Approach**

Ruggero Schleicher-Tappeser et al. (1997), EURES discussion paper dp-60, ISSN 0938-1805 Freiburg i.Br.

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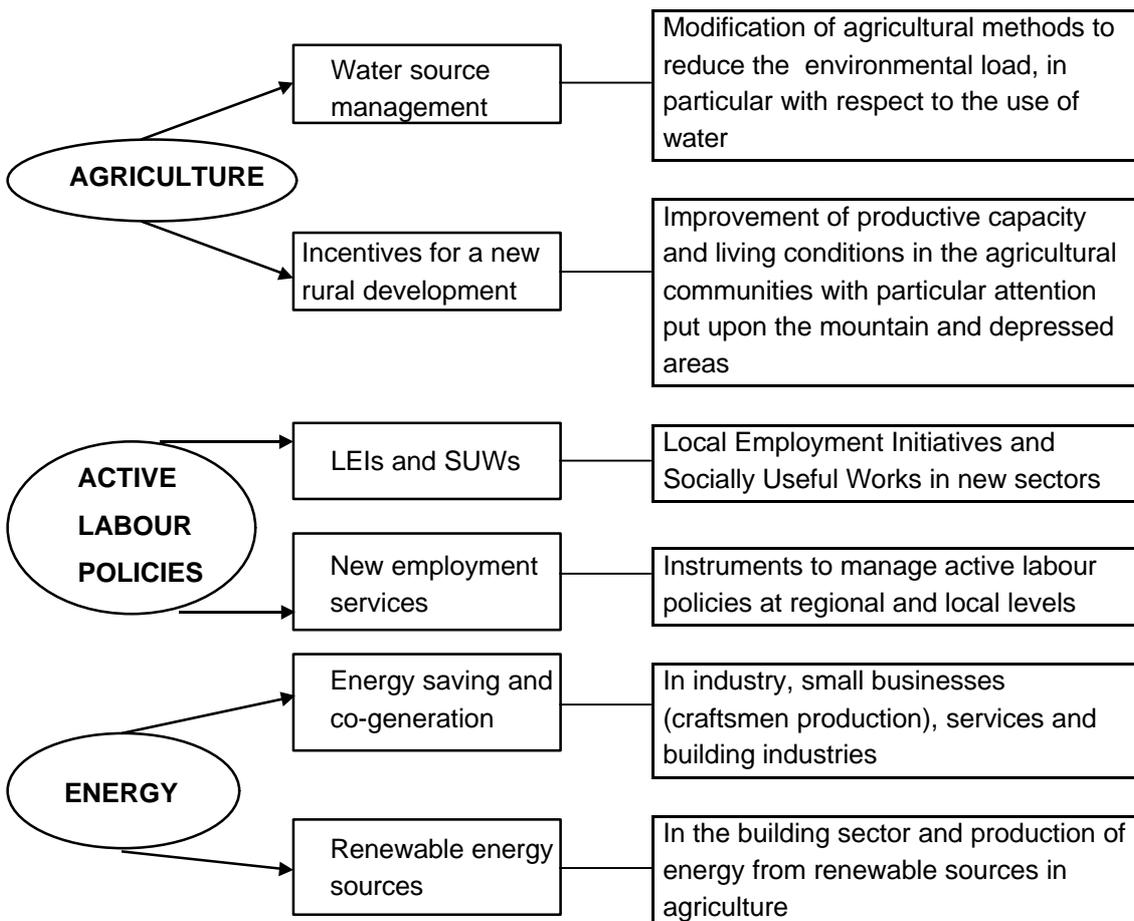
## EXECUTIVE SUMMARY

This report is divided in three main parts, each with separate sections, tables and figures and each analysing regional and local initiatives from a different prospective. Top down analysis of regional programmes and policies is covered in Part I, whereas a bottom up analysis of innovative local initiatives within the environmental, socio-cultural, institutional and economic context of the Val di Cornia is examined in Part II. The final part, Part III, considers the interrelationships between the above analyses.

Some features	Italy	Tuscany	Livorno	Val di Cornia
Population	57,283,000	3,528,000	337,000	60,000
Size in square km	301,323	23,000	1,210	366
Inhabitants per square km	190	153	227	164
Regions	20	Region	Tuscany	Tuscany
Provinces	102	10	Province	Administrative district (Circondario)
Municipalities	8104	287	20	5

### Part I (top down analysis)

This section is dedicated to a top down analysis of three key policy fields; agriculture, active labour policies and energy. Two regional programmes have been analysed in each fields.



The programmes were selected through consultations with the Tuscan Regional Advisory Group (TRAG). The TRAG group of experts chose these programmes using the criteria of overall regional importance according to the methodology elaborated by the European team involved in the INSURED project.

The chapters are presented in the following order; agriculture, active labour policy and energy. Each contains the analysis of two programmes using the following scheme: description (characteristics and contents); completeness (sectorial, systemic and equity dimensions); consistency (conflicting, independent and complementary targets); concreteness (basic principles, qualitative and quantitative targets); summary.

The final chapter (4) reviews the findings stemming from each policy field within the overall regional orientation. The result demonstrates a single image of Tuscany outlining its potential to enter into the path towards sustainability that is tied principally to the following three distinctive features:

- i. a strong commitment to subsidiarity;*
- ii. an increasing awareness of the key role to be played by the environment in future development;*
- iii. a consolidated culture of programming and a willingness to re-orientate this culture towards the principles of sustainability.*

#### **Part II (bottom up analysis)**

This section was dedicated to a bottom up analysis of the region principally based upon seven initiatives. These seven were selected and analysed through in-depth qualitative interviews and consultation meetings involving key persons in the Val di Cornia.

<b>The Val di Cornia Context</b>	
<b><i>Local innovative initiatives</i></b>	<b><i>Other relevant programmes and projects</i></b>
<b>Local Agenda 21</b> – Piombino	Integrated and co-ordinated <b>spatial planning</b> (land use, parks, soil conservation, landscape, urban and rural settlements, infrastructures)
<b>Alta Maremma</b> Covenant	The close collaboration between local authorities and <b>regional agencies</b> (e.g. <b>ARPAT</b> , for the environment protection)
<b>S. Silvestro park</b> within the single management of parks network	Integrated and co-ordinated management of <b>resource recovery</b> programmes (e.g. <b>ASIU</b> for waste reduction, recycling, etc.)
<b>CIGRI</b> water management (saving and reclamation)	Creation of the Val di Cornia <b>administrative district</b> ( <i>circondario</i> ) between the five local authorities
<b>La Bulichella</b> – organic farming	<b>Territorial employment pact</b> "Val di Cornia"
<b>La Cerreta</b> – organic farming	Co-ordinated management of <b>social welfare services</b> , as well as in public transport and professional training
<b>ARSIA</b> – demonstration <b>centre of irrigation</b>	

This information retrieval method adopted has many similarities with the participant observation method which is a major sociological research strategy and is aimed at discovering social facts as they are determined by the culture, behaviour, expectations and attitudes of local actors. Qualitative interviews were carried out utilising a list of open ended questions supported by group discussions (e.g. consultation meetings, informal talks, etc.).

Four basic areas of problems were investigated during the interviews: actors, action, strengths - weaknesses - opportunities - threats (SWOT) and best practices.

The analysis work was based largely on continued dissection and re-assembly and was inspired by the efforts and enthusiasm of those persons interviewed. In this report, these efforts are presented in a readable form. The descriptive aspects of the participatory interviews can be seen in the Actors and Actions sections of each of the first seven chapters (from 5 to 11) related to individual initiatives. Appraisals are summarised according to INSURED principles of SRD and the evaluative aspects are included in the SWOT and best practises analysis.

Val di Cornia can be characterised by continuous change within a locally consolidated socio-cultural and political fabric. This mixture of change and conservative elements is at the basis of the actual answer to the social and economic crisis brought on by the decline of the heavy industry (iron) which had dominated the Valley communities for several generations. These findings are highlighted in Chapter 12 which considers the seven initiatives within the Val di Cornia context: including other relevant programmes and projects; an overall SWOT analysis; a summary of the current best practices' orientation; and an analysis of the reasons which favoured this orientation.

The result is a single image of the Val di Cornia as "a feasible laboratory for experimenting sustainable development", showing as key factors:

- i. a strong commitment towards creative subsidiarity (both formal and not formal)*
- ii. significant orientations towards the concepts of sustainable development*

### **Part III (interrelationships)**

This final section is dedicated to analysing the interrelationships between top down and bottom up. In the initial chapter (13) local innovative initiatives are analysed in the context of regional programmes, laws and policies. A final SWOT analysis is presented combining elements from: the overall analysis of the Region, the evaluation of the regional policies and programmes (top-down), and the Val di Cornia inquiry (bottom-up). SWOT analysis helped to understand the actual conditions and potentials, that is the context from where the best practices originated. Main lessons and best practices are presented in Chapter 14. Those which are most orientated towards sustainability and their interdependencies - internal (core interrelations), transversal, vertical - are demonstrated. A final single image of Tuscany and the Val di Cornia is traced, discovering a learning process which stimulates an open-ended cycle between top-down and bottom-up approaches.

## **DIFFUSION OF THE *INSURED* METHOD AND FINDINGS**

Throughout the last 18 months, the analysis method and results of the INSURED project were presented a number of times throughout the Region. These presentations included the objectives, scope and methodology of the INSURED project as well as the theoretical framework, the contents of this report and those concerning the other four Regions. A partial list of these presentations follows:

- four meetings of the Tuscan Regional Advisory Group (TRAG) held in Florence in January, April, May and October 1997;
- the meeting between the representatives of the five regional advisory groups, to which two members of the TRAG took part, in November 1997 during the INSURED workshop organised in Florence;
- two consultation meetings held in the Val di Cornia in June and October 1997;
- the conference on sustainable development, organised by the Province of Livorno in November 1997;
- the International Conference on "The European dimension of sustainable regional development: local initiatives and instruments to reconcile sectorial policies and the environment", based on the INSURED project, organised by the Tuscan Region in collaboration with SRS and held in Florence in November 1997;
- the conference on sustainable development in Alta Maremma, organised by the local authorities of the Val di Cornia in collaboration with the University of Florence and held in June 1998;
- the third conference on the state of the environment in Tuscany, session concerning sustainable development, organised by the Tuscan Region and held in June 1998.

Other meetings aimed at transferring the INSURED method are scheduled in next months, concerning especially the local authorities of Alta Maremma, an area that is part of three provinces (Pisa, Livorno and Grosseto) and contains the Val di Cornia.

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- all the persons who have contributed to the Tuscan Regional Advisory Group (TRAG);
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Pazzagli Rossano (mayor of Suvereto)  
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Ruocco Mario (Chamber of Commerce – Livorno)  
Saragoza Claudio (urbanist and councillor of Suvereto)  
Zifferero Andrea (S. Silvestro Archaeological Mines Park - Campiglia Marittima)

#### *Abbreviations*

ARPAT, regional agency for environmental protection  
ARRR, regional agency for resource's recovery  
ARSIA, regional agency for development and innovation in agriculture  
ASIU, municipal agency for the collection and treatment of solid waste  
CEVALCO, centre for economic development of the Val di Cornia  
CIGRI, intermunicipal consortium of water resource management  
CNA, national confederation of craftsmanship  
Coop Toscana Lazio, consumers co-operative  
INCA (national credit institute in agriculture field)  
La Bulichella, organic farm  
La Cerreta, organic farm  
Tenuta di Vignale, farm  
USL, local health agency

## **AUTHORS**

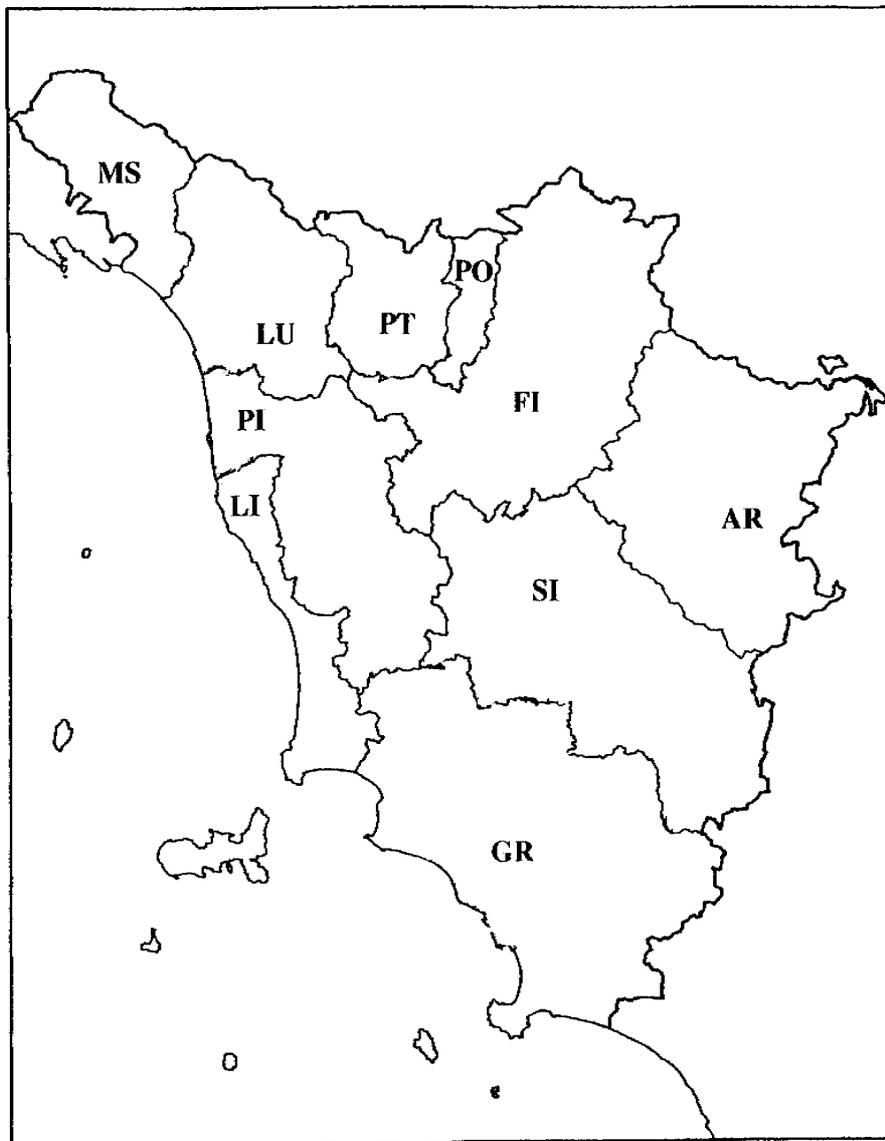
A special contribution was made by Riccardo Basosi and Claudio Rossi from the University of Siena who respectively wrote Chapter 3 (energy) and Chapter 1 (agriculture) of Part I.

Filippo Strati co-ordinated all the parts of this report with the collaboration of the SRS team: Mario Ferroni, Marta Franci, Steven Loiseau, Daniele Stasi and Alessandro Vendasi.

# PART I

## Top down analysis

### TUSCANY





# CHAPTER 1 - AGRICULTURE

## FIRST PROGRAMME: WATER SOURCE MANAGEMENT

### DESCRIPTION OF THE PROGRAMME

#### Characteristics

##### *Programme area*

Modification of agricultural production methods to reduce the regional environmental load, in particular with respect to the use of water.

##### *Actors*

The programmes treated in this section deal directly with the regional farmers, either as individuals or in associated groups. The principal involved bodies and agencies are: the sub-regional authorities (Provinces and the Mountain Communities - which gather local authorities in mountain areas), the Regional Department responsible for agriculture and forestry, ARSIA (Regional Agency for innovation and development in agriculture and forestry).

##### *Time-span*

Both programmes started in 1994: the first one, which relates to L.R. 63/81<sup>1</sup>, was valid until the end of 1995; the second one, which relates to ECC Regulation n. 2078/92<sup>2</sup>, enters into the four year regional agricultural plan with reference to the deadlines of the EU structural funds (1998).

##### *Financing*

The funds dedicated by the Region are created within the annual regional budgets. The financial contribution ranges from 20% to 40% of the total project costs in the programme 63/81 (which regards coastal areas of Livorno and Grosseto provinces) and 40% in the programme 2078/92 (which regards all the regional territory).

##### *Procedures*

Procedures regarding the decision making in both programmes are those envisioned by L.R. 63/81 which constitutes the current principal regional law dealing with agriculture policy. Proposals are submitted with required financial and technical data necessary for the review of the project. Approval and final certification are the responsibilities of the sub-regional authorities.

#### Contents

The principal objectives of the programmes are the improvement of the degraded condition of regional water sources and the diffusion of environmentally sound irrigation practises. In particular Programme 63/1981 directs it attention at the deteriorating quality of the coastal deep fresh water aquifers.

### COMPLETENESS

#### Sectorial Dimensions

##### *Environment*

The programmes (hereafter described together as "programme") are addressed at preventing the further degradation of the quality in the natural water bodies presently available in the region. The main objectives are therefore principally environmental in nature and can be described as pertaining to water source management, the promotion of new irrigation methods, the reduction of salinisation risks to water and soil and the reduction of effects of fertiliser and pesticide use on the environment. As stated in the programme, a degradation in the water

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1 Regional Council Deliberations: Deliberation of July 19, 1994 number 338. Regional law (L.R.) 63/1981. General programme for the regulation and access of financial incentives for agriculture. Annex E Programme for the introduction of modern irrigation practises and the control of water usage in the coastal areas.

2 Deliberation of September 26, 1994 number 9419. ECC regulation n. 2078/92. Regional programme 1994/1998 - Modification and integration following EC observations and dispositions of new programmes. Annex 10 Programme for low consumption water use in irrigation.

quality of aquifers in agricultural zones in the coastal areas in Tuscany has been determined to be related to the excessive removal of water for irrigation purposes with respect to their natural recharging rate. An intense pumping regime has, over a prolonged period of time, favoured the entrance of water from nearby saline aquifers (with recharge from the sea) to coastal fresh water aquifers. This contamination has increased the salt content in the fresh water aquifer. The resultant use of such water for irrigation has increased the salt content in the coastal agricultural soils. The instruments proposed in this programme are directed at water conservation and alternate source creation to reduce the pressure put on the coastal aquifer from irrigation activities. The principal conservation method proposed in the programme is the introduction of localised irrigation methods to replace typical asperation techniques. Localised irrigation installations apply irrigation water at the ground level which results in a significant reduction in water requirements with respect to centralised asperation (sprinkler) methods that have inherent losses due to evaporation and oversprinkling. With respect to new sources, the programme outlines several possibilities to increase the water supply available for irrigation purposes. The goal is to create new storage facilities for the retention of water from seasonal and continuous water sources. The rain regime in Tuscany is torrential in nature and localised in several brief periods. Due to the limited capacity of the Region's rivers, much of the irrigation requirement is satisfied by extraction from deep aquifers. To relieve this dependence, the programme strives to maximise the water resources available by favouring the construction of small hillside lakes, small reservoirs in foothill areas and the use of alternative water sources. Alternative water sources are considered treated wastewater with chemical and microbiological characteristics acceptable for irrigation and water from artesian or hydrothermal sources.

### ***Economy***

The objectives related to water management and the new irrigation methods have immediate and long term economic consequences. The reduction in water, energy and fertiliser use related to the irrigation methods proposed in this programme directly affect agricultural earnings. The continued increase in the saline levels of both the aquifer and agricultural lands have long term economic impacts related to lessened agricultural productivity. The creation of new water storage facilities, the use of alternative water sources and new irrigation systems require capital expenditures to which the contributions in this programme are addressed.

The irrigation methods that are here proposed for the reduction in water and energy consumption have elevated unit and maintenance costs with respect to their aspersion counterparts now in use. However, these methods allow for significant savings in water, energy and fertiliser use. As a secondary benefit from this programme, the general improvement of the Regions waters should also decrease the treatment costs of the potabilisation of drinking water on the urban level.

### ***Socio culture***

All the objectives in this programme have impacts on the present day practises and attitudes of those agricultural operators involved. As these objectives are related to resource consumption they can be considered to affect the social cultural reality of local agricultural communities. This is particularly true with respect to the reduction in the use of fertilisers and pesticides and the resultant negative effects from continued exposure.

The connection of this programme with developmental efforts of the Region (ARSIA) is indirectly referred to. The direct attention of the Region to the quality of the water sources and the promotion to the agricultural industry of practices that reduce energy and water consumption has a direct effect on the quality of life issues in agriculture.

## **Equity dimensions**

### ***Social equity***

This programme is not directly orientated at reducing any discrepancy between unbalanced societal levels. There is no immediate threat to the overall availability of quality water in the Region while this programme in the long run aims to preserve this quality by preventing the further degradation of the regions water sources.

### ***Interregional equity***

Water, for its very nature, flows from area to area and contains a high element of interregionality. Therefore any programme that affects the quality of the regions waters can be considered to have an impact on all areas within the Region. The management of regional water resources through the creation of new sources should affect both the quantity and the quality of this resource available to all end users, rural and urban. The use of treated wastewater should have a directly effect in the reduction in the organic and nutrient load in the regions waterways and therefore an increase in the river and stream quality. The reduction in the salt content of the coastal deep water faults should improve the quality of the water for the entire coastal community and reduce discrepancies in water quality between coastal and mountain areas. As mentioned earlier, the reduced presence of fertiliser/pesticide use should assist in the restoration of the landscape and surface water bodies. The infiltration of fertiliser/pesticide in the aquifer compromises the quality for all end users and has particular relevance for non-agricultural end users who depend on a higher quality of water. As the quality of the Region's rivers will affect the littoral zone, the activities related to the water quality of the sea (fishing, recreation) will be affected.

### ***Intertemporal equity***

The objectives outlined in this programme are environmental in their design and as a result have a high intertemporal component which is not significantly stressed in the programme.

The restoration of the aquifer quality in the coastal areas should have an impact above all for future generations of farmers whose productivity should be affected by the availability of quality water and by the salt content of their lands.

Although not explicitly stated, the creation of new water storage facilities should assist in future water management efforts and reduce the burden of agriculture on the total environmental quality of the region. The promotion in the use of alternative water sources should initiate a process of water reuse that will lead to a decrease in the overall costs of water usage. The new irrigation methods proposed are more water and energy efficient which should facilitate future agricultural possibilities by reducing the overall agricultural energy requirements and environmental load.

## **Systemic dimensions**

### ***Diversity***

The new methods of irrigation, promoted in this programme are related also to a reduction in the use of pesticides and fertilisers. As stated in the programme, the application of fertilisers with localised irrigation methods (fertirrigation) has been demonstrated to decrease overall usage (30% reduction in nitrogen, 50 % reduction in phosphorus, and 30% reduction in potassium with respect to asperation methods) and therefore increasing application efficiency (kg fertiliser/ha).

As the transport of fertilisers to surrounding water bodies is a principal component in the degradation in the quality of surface waters and a significant contributor to non-point source pollution, lessened fertiliser use will positively effect these water bodies and there increase the potential biodiversity. Organised agricultural practises, by definition, diminish the biodiversity of an area by reducing the species to those few desired. The modern practise of widespread pesticide use has a secondary consequence of affecting the quality of the surrounding lands

and connected water bodies. The irrigation practises promoted in this programme facilitate the reduction in pesticide use. Localised methods inherently decrease the presence of moisture in the epigeous section of the plants with respect to asperation which wets the entire plant, thereby limiting the need for pesticide and antifungal agents. The creation of rows of wetted ground, separated dry interspacing assists in the control of infesting plants (weeds), therefore limiting the need for herbicides. By decreasing the use of pesticides and herbicides, there is a consequential reduction in the negative effect of agricultural practises on the biodiversity of natural lands and water bodies that are located in proximity.

Attention was made to some extent to reduce potential negative impact related to the collection of free running streams in the form of reservoirs and storage facilities, as a decrease in the flow-rate of seasonal streams will affect the flora and fauna.

### ***Subsidiarity***

Both programmes involve a direct relation between the local farmers, the provincial (as well as Mountain Communities) and regional government. Principally, the Region has the role of setting the guidelines, the allocation of funds, the rules to co-ordinate initiatives and to verify the results. The sub-regional authorities have the role of decision making, co-ordination and verification of the projects.

Advisory boards exist to support the sub-regional authorities: a provincial commission which includes the regional government members and ARSIA; an advisory committee which includes local representatives of agricultural business associations.

Therefore, subsidiarity aspects are present in both programmes of water source management. The top down objective of creating new sources for irrigation water and managing the present sources in an environmentally sound way are well coupled with the farmer's necessity for a constant supply of quality water.

### ***Partnership and networking***

Provisions for joint projects between different farms or co-operative efforts in the creation of water storage facilities increase the partnership and networking between different elements of the agricultural and non-agricultural communities. In the same light, the introduction of new irrigation methods could create partnership between different levels of society whose interests lie in reducing water consumption and restoring the quality of waters. The concept of the multiplicity is at the basis of programmes which can affect water quality and attract significant public attention.

### ***Participation***

As a general rule, the delegation of responsibility from the Region to the sub-regional authorities and the involvement of representatives from local farmer associations provides information to the end users and support their participation. Moreover, especially in the programme 2078/92, information is accompanied by meetings, seminars, newspapers involvement, as well as by training courses on environmental issues, protection of natural resources, traditional agricultural practices and organic farming.

## **CONSISTENCY**

### **Conflicting targets**

There were not present any conflicting objectives in the programme reviewed.

### **Independent targets**

All the objectives of the programme are related in that they are elements of the Regions effort to improve water management. The objectives of reducing the salt content of the coastal aquifers is independent to efforts to reduce fertiliser use.

### **Complementary targets**

The principal programme objectives are the improvement in the management of the Region's water resources and a reduction of the contamination of the deep fresh water aquifer in the coastal areas. These two objectives are perfectly complimentary as an improved control of the Regions water resources and a reduction in the use of water for irrigation are intimately tied into the contamination of the coastal aquifer by saline water. Related to the Regions efforts in overall water management and water conservation is the objective of promoting the use of more efficient irrigation methods which also satisfy the sub-objective of promoting lower energy consumption in agriculture. The objective of reduced fertiliser/pesticide usage is also satisfied by these methods. The sub-objective of improving the degraded condition of wells and well isolation would be complementary with reduced fertiliser/pesticide use in that both will reduce the entrainment of surface contaminants into the aquifer..

### **CONCRETENESS**

#### **Basic principles**

The principal objective in this programme is the restoration of the quality of Tuscany's water resources. All the objectives proposed in the programme are elements towards this goal.

#### **Qualitative targets**

The objectives of improved water source management and the reduction in the salt concentration of the coastal aquifer and agricultural lands are qualitative targets. While not explicitly stated, the creation of storage areas, a qualitative target, could be measured as the project dimensions are required in the certification documents.

#### **Quantitative targets**

The lone quantitative target specified in the programme is the introduction of irrigation methods that allow for a decrease in water consumption of 40-50%. From the data of the number of irrigation systems acquired, one could quantify the amount of energy and water conserved.

### **SUMMARY OF THE PROGRAMME**

The programme reviewed contains many of the aspects of sustainability. The addition of more explicitly quantitative aspects with respect to the salination of the aquifer and land would render the programme stronger as far as the dimension of concreteness. For consistency, the programme does not present any conflicting targets and has main objectives that are complementary.

Within the sectorial dimensions, there is a strong emphasis on environmental protection whereas the socio-cultural and economic aspects are present but not explicitly stated.

Equity dimensions are clearly represented in the basic environmental goals of the programme.

This is especially true for intertemporal and interregional dimensions.

There is attention also in the systemic dimensions of the programme, even though not always explicit (diversity, subsidiarity, partnership and participation).

## **SECOND PROGRAMME: INCENTIVES FOR A NEW RURAL DEVELOPMENT<sup>3</sup>**

### **DESCRIPTION OF THE PROGRAMME**

#### **Characteristics**

##### *Programme area*

Restructuralisation and improvement of productive capacity and living conditions in the agricultural communities of the Region with particular attention put upon the mountain and depressed areas.

##### *Actors*

The programme regards individual farmers, co-operatives and agricultural workers. The agencies involved are: the sub-regional authorities (Provinces and the Mountain Communities - which gather local authorities in mountain areas), the Regional Department responsible for agriculture and forestry, authorised credit institutions.

##### *Time-span*

This programme started in 1994 and was valid until the end of 1995. The project's objectives are based on a three year business plan and must be realisable within two years of the plan's conclusion (three years for mountain zones and depressed areas, previously defined by ECC Directive 268/75).

##### *Financing*

The following actions are supported by the annual regional budgets:

- the purchase of high quality livestock;
- the concession on interest payments for actions involving the farm management;
- the concession on interest payments for actions involving the farm equipment;
- the concession of loans to co-operatives for the purchase of approved items.

##### *Procedures*

Procedures are those envisioned by L.R. 63/81. Proposals should be submitted with required financial and technical data necessary for the review of the project. Approval and final certification are the responsibilities of the sub-regional authorities in direct relation with the Region and the Credit Institutions.

The prerequisites for the presentation of a project are based upon the economic conditions of the agricultural business and must satisfy the following requirements:

- a) the yearly remuneration per working unit (2300 annual working hours) must be less than the average regional retribution as specified by the regional government;
- b) the economic conditions of the business while satisfying "a)", require structural improvements to maintain production levels and present earnings;
- c) the investments must provide within two years (three years in depressed areas) a lasting earnings improvement, that however must not exceed by more than 20% the earnings registered in the year that the plan was presented;
- d) plans must conform to Regional requirements and must be compatible with the business's financial history.

The actions and purchases made in relation to the approved project are certified by the Credit Institution upon the deadline stipulated by the Region. It is the responsibility of the Credit Institution to communicate the certification of purchases and the completion of works financed. The documentation that must accompany the certification include original receipts for

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<sup>3</sup> Regional Council Deliberation: Deliberation of July 19, 1994 number 338. Regional law (L.R.) 63/1981. General programme for the regulation and access of financial incentives for agriculture. Annex A Regional programme relative to the financial assistance and the distribution of funds between the authorised bodies and Credit Institutions.

equipment, completed project dimensions and related certification provided by the sub-regional authorities.

## **Contents**

The programme strives to incorporate the new agricultural policies of the Community within a framework of related Regional programmes. The principal objective is to provide the means for the improved efficiency and competitiveness of agricultural businesses. Through this programme, the Region modifies the relation between the public institutions and agricultural businesses on the level of administrative action and procedure.

## **COMPLETENESS**

### **Sectorial dimensions**

#### ***Environment***

The main objective of this programme is not particularly addressed at the reduction of the environmental impact of agricultural activities. However, several important secondary objectives are focused on reducing resource consumption related to present day agricultural practises. In particular, the agricultural machinery and equipment promoted in the programme are characterised by their capacity to reduce energy consumption with respect to more diffuse practises. Equipment for fertilisation and plant protection purchased under this programme must satisfy the requirement of reduced fertiliser and pesticide usage. Within the programme there are incentives for the acquisition of equipment to improve the permeability of the land and for the improvement of irrigation methods that would constitute a reduction in the water requirement of irrigation. The programme outlines minimum pasture requirements and promotes local feedstock production for livestock purposes which will help reduce the frequency of overgrazing and improve the sustainability of meat production.

#### ***Economy***

This programme is predominately addressed at improving the economic conditions of the agricultural communities in the Region. In particular there is significant attention placed upon improving the efficiency of agricultural practises and increasing the competitiveness of the Regions businesses. The agricultural reality of Tuscany is such that 87% of the territory is hilly or mountainous and therefore non inclined to compete with other regions in production quantity. It is therefore important that any Regional programme include incentives in the production and promotion of items in terms of quality. This is partially addressed in the programme with the diversification of the agricultural business through direct selling, agri-tourism and artisan activities. The associated financial assistance is directed at building renovations related to agri-tourism activities and the sale of local agricultural products. The agri-tourism projects are required to comply with the Regional law (LR 76/1994). The improvement in the present production levels is promoted by incentives for the purchase of equipment related to irrigation systems, to the conservation or transformation of agricultural products and agriculturally related equipment. Structural improvements with regards to livestock raising and milk production are also included. The general objective of this programme puts a significant emphasis on the mechanisation of agricultural practises for the improvement of overall productivity. This obviously translates to an increase in the overall requirement for energy consumption by agriculture. The balance between low consumption agricultural practises with low production and their industrial counterpart with high output is best approached by optimising the production practises that constitute low impact and energy savings approaches. This programme strives to alleviate unacceptable economic conditions by introducing modern techniques that are characterises by elements of resource conservation.

#### ***Socio culture***

Several objectives stated in the programme related to the changing socio-cultural reality in the Region's agricultural areas. The introduction of young persons into the agricultural business is

stated as an objective and contained in several sections as a means of offsetting the progressive increase in the median age of the Tuscan farmers. The programme actions in the improvement in the living conditions of the agricultural community should have an effect in the social structure. The use of new equipment and the reduction in fertiliser / pesticide use should improve the working conditions of the agricultural worker which are poor with respect to other labour areas in the Region. The introduction of new technologies should also have effects on the cultural texture of the agricultural community.

## **Equity dimensions**

### ***Social equity***

The programme utilises financial incentives to meet the objectives of improved agricultural earnings and better working and living conditions of the farmers, thereby addressing the disparity between rural and urban standards of living. This disparity has been lessened in the last few decades but is still present. The median agricultural income is presently 80% of that of other sectors. By improving the competitiveness and the efficiency of the agricultural business there should be a further reduction in this difference.

### ***Interregional equity***

One of the central objectives of the programme is the promotion of economic activities in mountain zones and depressed areas. Within the majority of the measures taken, there are special allowances for these areas, translating into increased contributions and more flexible financial requirements. These incentives are obviously addressed at minimising the interregional disparity. A secondary consideration is the objective of increased employment opportunities in the agricultural sector that could consequently lessen the disparity in economic opportunities between the agricultural communities and their urban counterparts.

### ***Intertemporal equity***

The objectives outlined in this programme are predominately directed at improving the economic and working conditions within the agricultural community and as such are intertemporal in character. In particular, there are incentives for co-operative projects conducted by young people (18-40 years) which should result in long term changes in the make up of the agricultural human capital. Likewise the attention given to reducing the environmental load associated with agricultural activities is intertemporal by definition as the restoration capabilities of nature are slow by economic standards and depend on long term factors. Therefore, the incentives directed at eco-compatible projects must be long term in their consistency as there is not yet an adequate market request for such changes. This is also reflected in the Regional law on organic farming (LR 31/1994)

## **Systemic dimensions**

### ***Diversity***

A principal component of the programme is the diversification of the individual agricultural businesses with the intent of rendering them more profitable. This should entail a diversification not only of agricultural activities, but of the overall management of the farm, introducing new elements and new technologies in all aspects of agricultural operations. Intergenerational diversity is also stressed in relation to the introduction of young people into agriculturally related businesses. There are two aspects of biodiversity that are present, while not explicitly, in the programme. The first is the incentive to reduce overall fertiliser and pesticide use thereby improving the environmental conditions of the adjacent natural areas. Secondly, the associated reduction in the non-point source pollution of the Region's waterways which should facilitate their natural restoration processes and increased biodiversity.

### ***Subsidiarity***

The programme involves a direct relation between the local farmers, the provincial (as well as Mountain Communities) and regional government. Principally, the Region has the role of setting the guidelines, the aims, the allocation of funds, the rules to co-ordinate initiatives and to verify the results. The sub-regional authorities have the role of decision making, co-ordination and verification of the projects. An advisory committee exists to support the sub-regional authorities, which includes local representatives of agricultural business associations.

### ***Partnership and networking***

The programme is directed at both individual farmers and associated farmers. There is therefore the incentive to create partnership to reduce the overall financial burden of new acquisitions and activities. In addition, the programme explicitly gives priority to co-operative utilisation of pastures and associated production of feedstock, promoting the creation of new partnerships. There are also advantages given to irrigation projects that involve two or more agricultural businesses.

### ***Participation***

The delegation of responsibility from the Region to the sub-regional authorities and the involvement of the local farmer associations provide information to the end users and support their participation.

## **CONSISTENCY**

### **Conflicting targets**

The main objectives of this programme are: to favour an increased efficiency and competitiveness of the agriculturally related small businesses with special attention to depressed areas, to improve the working and living conditions of the agricultural community, to favour the use of environmental compatible practises, to increase the employment opportunities related to agriculture in particular with respect to young people. In a certain sense the improved mechanisation of the farm should reduce the request for labour and could be therefore in conflict with this objective. However, as is stated in the programme, the equipment purchased must be addressed at a specific operative needs connected with production, which in farms of limited dimensions should not constitute a reduction of the overall farm employment. This requirement coupled with the incentives for the diversification of farm activities (agri-tourism, direct selling, etc.) should produce an overall increase in the labour request.

### **Independent targets**

The objectives related to environmental protection and the increase in the labour force are independent targets. Between the objectives of eco-compatible production processes and increased agricultural earnings there is no significant connection. However, recent growth in the request for organic products does present a hopeful prospective for the future.

It should also be noted that the incentives for introduction of young people into the agricultural business and the use of eco-compatible practises, while apparently independent are related through the difference in generational approaches to new technology.

### **Complementary targets**

The objectives of improving the productivity and improving the living and working conditions on the farm are complementary as both are related to the economic well being of the business. The introduction of eco-compatible processes and the consumption reduction methods are also compatible with the above objectives as lower energy and water usage will aid in improving the overall economic earnings. Additionally, a reduction in the use of fertiliser and pesticides will lessen worker exposure to such materials thereby improving farm working conditions.

## **CONCRETENESS**

### **Basic principles**

The guiding principle of this programme is the improvement in farming efficiency and competitiveness. They are intended also as a way to enhance the quality of life for farmers and members in the agricultural community. This is present in all of the main objectives listed above.

### **Qualitative targets**

The objectives relating to environmental protection with incentives for the introduction of eco-compatible processes and new irrigation methods are qualitative in nature. This is also true for the objectives of increasing the overall employment opportunity and living conditions in the agricultural sector.

### **Quantitative targets**

The objective of increasing the efficiency and competitiveness of the agricultural businesses is qualitative in general but contains individual quantitative elements. With respect to the working earnings, there is the specific goal of attaining comparable wages to other regional employment sectors. The specific wage that is to be met is provided by the Regional Council. These improvements must be met within two years after the implementation of the project.

## **SUMMARY OF THE PROGRAMME**

In conclusion, this programme can be considered predominately economic with incentives for long term processes that emphasise environmental protection and improved living conditions in the agricultural sector.

The analysis of this programme for the aspect of concreteness demonstrates that it satisfactorily contains some of the elements of sustainability. There are however no quantitative goals for the objectives of environmental protection and reduced consumption, rendering it difficult to verify the impact that these improvements could produce. Likewise, the objectives of the programme are well integrated with each other and no significant conflicting targets are present.

With respect to the aspects of completeness, the sectorial dimensions are covered as well as the equity dimensions. Significant attention has been given to improving the economic opportunity in the depressed rural community.

Both social and environmental diversity are given indirect attention and there is a good connection between the top down global objectives and the bottom up goals, as well as in the decision making cycle.

Whilst participation is taken for granted, by means of the involvement of the agricultural interest groups, less attention is put on the creation of new partnerships between non-agricultural and agricultural communities.

This is perhaps the result of the very economic nature of the project and the attention given to production methods rather than fostering practises that would improve the exchange between urban and rural areas. Given that the territorial make-up of Tuscany presents a geographically close relation between these areas, the attention to improving partnership between these two communities is often overlooked.

## **SUMMARY OF THE AGRICULTURAL POLICY**

The two programmes analysed here give important indications of the overall agricultural policy initiatives in Tuscany.

The first programme reviewed (Programme for the introduction of modern irrigation practises and the control of water usage in the coastal areas) is environmental in nature and responds directly to the deterioration in the quality and quantity of irrigation waters in coastal agricultural areas. While not explicitly stated, this programme is the result of research (jointly performed by

the already mentioned Regional Department and ARSIA) published in a 1995 report, "Investigation of the state and prospective of irrigation in Tuscany". In particular this investigation revealed the diverse irrigation practises and problems in different regional areas, the lowering of the aquifers, the increased competition with other economic areas, the reduction in irrigation water quality, the increasing cost in irrigation practises, and the need for technical assistance. The programme outlined here is well directed in responding to these demands in the coastal areas whose water quality is jeopardised by the increase in the aquifer salt content. It is part of an overall policy aimed at the rationalisation and possible reduction of agricultural water use while maintaining the economic productivity in these areas.

The second programme (Regional programme relative to the financial assistance and the distribution of funds between the authorised bodies and Credit Institutions) is directed at the economic reality within the agricultural community. While the future of Tuscany's agricultural sector is clearly tied to the modernisation of methods for increasing productivity and reducing environmental load, the financing for such innovations has been scarcely available. The IV General Census for Agriculture of 1991 revealed an inverse relation between the introduction modern agricultural practises, in particular irrigation, and the decrease in the number of practising farms. The discrepancy between innovative elements in the agricultural sector is particularly evident in the rural mountain areas, that have demonstrated particular fragility with respect to economic conditions, (an 18% reduction nationally in the cultivated land of mountain areas). In Tuscany, this has particular significance as these areas constitute a important percentage of the cultivated lands. It is also evident that agriculture in the rural community constitutes a predominate factor in the economic and employment opportunities available. As a result, the increased marginalisation of rural areas often follows a decrease in overall agricultural activities. At present levels, it is possible to hypothesise that an additional exodus from the mountain areas would leave these communities nearly completely abandoned.

Individually, the above mentioned programmes contain many elements of sustainability with some gaps. When viewed together, they contain complementary elements that overlap well and reinforce the overall policy. With regard to *consistency*, there are several references to irrigation within the financial programme whereas the irrigation programme is more specific and directed at a particular area. Being more specific the irrigation programme demonstrates more consistency.

The overall policy responds well to the sectorial dimensions of *completeness*. The environment receives high priority both explicitly and implicitly along with the obviously important dimensions of economics and socio-culture. The aspects of diversity and subsidiarity are implicitly present in both programmes which indicates comprehension at the regional level of complex systems management.

Participation is not fully emphasised since it is often taken for granted in Tuscany as the historical practice of involvement of citizens, local authorities, social and economic interest groups has created a strong system of cohesion also within the agricultural community. Moreover, it should be noted that ARSIA has prior input on the research level in which involvement of the end user was included.

Partnership and networking are included in the policy, but not consistently promoted. This is partially a result of the historic presence in Tuscany of co-operatives and agricultural associations that have had a determining role in maintaining networks between agricultural elements.

The programmes implicitly demonstrate strong intertemporal and interregional characteristics. Explicit references to these equity dimensions would further reinforce the overall policy.

The aspect of *concreteness* in the overall policy is notably weak as there are few quantitative goals outlined. This is especially true with regard to the environmental aspects.

### CONSISTENCY of different targets per programme and between programmes

Programme	Conflicting	Independent	Complementary
<b>first: Water source management</b>			<i>second</i>
a) to improve increase the availability of new water sources			b, c, d
b) to promote irrigation methods that reduce water and energy consumption			a, c, d
c) to reduce the concentration of salt in coastal aquifers and agricultural lands		d	a, b
d) to reduce the environmental damage from the use of pesticides and fertilisers		c	a, b
<b>second: New rural development</b>			<i>first</i>
a) to favour improved efficiency and competitiveness of the agricultural businesses with special attention to depressed areas		c, d	b
b) to improve the living and working conditions of the agricultural community		d	a, c
c) to promote production processes that are eco-compatible		a, d	b
d) to increase agricultural work opportunities with special attention to young people		a, b, c	

### COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability

first programme: water source management

second programme: incentives for a new rural development

*expl = explicit; s.r. = some reference; impl = implicit*

Progr.	Sectorial dimensions		
	Environment	Economy	Socio – culture
<b>first</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>
<b>second</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>

Progr.	Equity dimensions		
	Social equity	Inter-regional equity	Inter-temporal equity
<b>first</b>	<i>impl</i>	<i>impl</i>	<i>impl</i>
<b>second</b>	<i>expl</i>	<i>impl</i>	<i>impl</i>

Progr.	Systemic dimensions			
	Diversity	Subsidiarity	Partnership networking	Participation
<b>first</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
<b>second</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

### CONCRETENESS of intentions (objectives and targets) per programme

Programme	Basic principles and guide lines	Qualitative targets	Quantitative targets
<b>first: Water source management</b>	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
a) to improve increase the availability of new water sources	<i>expl</i>	<i>expl</i>	
b) to promote irrigation methods that reduce water and energy consumption	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
c) to reduce the concentration of salt in coastal aquifers and agricultural lands	<i>expl</i>	<i>expl</i>	
d) to reduce the environmental damage from the use of pesticides and fertilisers	<i>expl</i>	<i>expl</i>	
<b>second: New rural development</b>	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
a) to favour improved efficiency and competitiveness of the agricultural businesses with special attention to depressed areas	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
b) to improve the living and working conditions of the agricultural community	<i>expl</i>	<i>expl</i>	
c) to promote production processes that are eco-compatible	<i>expl</i>	<i>expl</i>	
d) to increase agricultural work opportunities with special attention to young people	<i>expl</i>	<i>expl</i>	

*expl* = explicit; *s.r.* = some reference; *impl* = implicit

In conclusion, the programmes analysed here are a positive reflection of the overall policy initiated by the Region and demonstrate that there is significant attention given to the elements of sustainable development. In fact both programmes refer to the guidelines of the Regional Development Plan 1992-1994 and to those laid out in the Fourth European Environmental Programme. Moreover, they should be considered in the context of recent regional laws on: protected areas (L.R. 49/95); water system (L.R. 81/95); organic farming (L.R. 31/94); agri-tourism (L.R. 76/94); spatial planning (L.R. 5/95) and land conservation (presently in progress). More recently, the new orientation of the Regional agricultural policies clearly shows elements of sustainability. A clear example of this new direction is the regional law (n. 23/98) regarding assistance to young persons (18 - 40 years old) in agricultural activities explicitly defining the sustainable use of the territory through agricultural development as one of the primary objectives. The activities that are cited in this law are: small craftsman businesses, natural resource conservation, traditional-historical trades, conservation of biodiversity, the training of animals for work or recreation (e.g. for agri-tourism).

During the 1996 Regional Conference on Agriculture, it was declared that future policies should be orientated towards:

- the principles of rural development outlined in the Cork Declaration (1996);
- a close link between agricultural and rural development;
- rural life as a new way of conceiving sustainable social relationships within the reconciliation of society and nature;
- local initiatives by which local actors utilise in a synergetic way the endogenous resources in order to foster employment and to promote old and new professions by means of the

integration of craftsmanship, tourism, agriculture, trade and other related activities (in so called rural districts);

- the promotion of new culture, educational paths and vocational training to maintain and to hand down historical, cultural, labour and environmental values;
- the promotion of new entrepreneurial culture in co-operatives and small businesses to organise them in networks and to develop partnerships;
- the leading role of organic farming within a global and diversified agricultural development;
- the promotion of equal opportunity to all rural areas;
- the strengthening of territorial diversity (biological, environmental, historical, cultural, behavioural, etc.) in local development patterns, to clearly show their specific characteristics (local brands and types of production);
- the improvement of agricultural quality through the alliance between producers and consumers;
- the innovation in businesses, technology and techniques, by means of supporting bodies and agencies (as it is the role of ARSIA);
- a notable attention on the remuneration of activities that positively impact the environment and territory;
- the implementation of a "bottom up" policy making, fostering a cultural increase and innovation in a participatory co-decision procedure to conceive guidelines, priorities, scope and orientation of development;
- the empowerment of local authorities giving them autonomy and responsibility to conceive and implement their own development and a strong role in regional programming within an overall de-bureaucratisation of procedures;
- the cooperation between the public and private sector to improve co-ordination and collaboration;
- the tying together of spatial planning, environmental policies and agricultural activities, since they are at the base of sustainable development.

Therefore, it seems that more awareness is emerging at the regional level of the important role that agriculture can play in future development and employment. Decisions in the near future will be directed at research and innovative efforts to meet these ends.

## **CHAPTER 2 - ACTIVE LABOUR POLICY**

### **FIRST PROGRAMME: LOCAL EMPLOYMENT INITIATIVES AND WORKS IN THE PUBLIC INTEREST**

#### **DESCRIPTION OF THE PROGRAMME**

##### **Characteristics**

###### *Programme area*

The overall goal of this programme is the creation of new employment opportunities and the increase in the possibilities for self employment.

###### *Actors*

The principal actors of this programme are: the Regional Department for Training Policies and Cultural Heritage, Provinces, Mountain Communities and local authorities, the regional credit agency (FIDI Toscana), local businesses innovation centres (BIC), together with a network of local development agencies, trade unions and trade associations. Also regional and local bodies of the Minister of labour are involved (e.g. the regional employment agency).

###### *Time-span*

The projects concerning Local Development and Employment Initiatives (LEI) enter within the Objective 2 of the SPD (Single Programming Document) 1997 - 1999 and Objective 5b of the SPD 1994 - 1999.

As for projects related to work in the public interest (socially useful work - SUW), the programme was introduced in 1994 and must be renewed annually.

###### *Financing*

The LEI projects are financed by the EU Structural Funds, the Region and the State. For the projects related to SUW, the total contribution is determined on an annual basis in the Regional budget.

###### *Procedures*

The overall assistance plan is specified on a local level on the basis of agreements promoted by the Provinces and the Mountain Communities with the collaboration of the local authorities and the local trade associations and unions. These local actors also participate in the co-financing of the projects. FIDI supports the management of the LEI projects according to an agreement with the Region drawn up in December 1996. FIDI divides the financial resources between the Provinces and Mountain Communities on the basis of unemployment rate. The Provinces and Mountain Communities, with the assistance of FIDI, publicise calls for proposals and are directly responsible for the control of projects financed. The Region exerts control over the actions of FIDI and those performed by the above mentioned public authorities. The programme provides for project monitoring and project completion review.

The Region provides technical assistance to the local authorities who promote projects concerning SUW. The Provinces have the responsibility for the administrative functions referred to the above projects, as well as for favouring the hiring of workers previously involved in other SUW projects. Moreover, the Provinces transmit to the Region projects of enterprise creation promoted by workers involved in SUW. An annual report on the efficacy of the programme is elaborated by the Regional Department responsible for monitoring of the local labour markets.

##### **Contents**

The principal objectives of the programme are:

- the promotion of local development and employment initiatives in new occupational areas;
- the support of projects related to work in the public interest and the subsequent re-employment of the participants.

LEI projects are orientated towards the 17 fields defined by the European Commission (enquiry on "Local Development and Employment Initiatives", 1995) as new sources of employment. The selection criteria and management of the projects is conducted on the local level.

SUW projects are distinguished in:

- a) those directly promoted by the Provinces, the Mountain Communities and the local authorities;
- b) the hiring of workers previously involved in SUW;
- c) enterprise creation promoted by workers involved in SUW.

## **COMPLETENESS**

### **Sectorial Dimensions**

#### ***Environment***

Priority sectors of the LEI programme are those concerning environmental restoration and improvement. In particular, the environmental services include:

- waste management: waste treatment and recycling including the commercialisation of recovered materials
- water management: infrastructure and operational control; transfer of new technologies and know-how; water saving practices; plant operators training; development of recreational activities related to water use;
- protection and management of natural areas with creation of new qualified professions and skills;
- pollution control: services related to pollution free or low impact technologies, exportation of new technologies and know-how, energy saving.

#### ***Economy***

The projects prepared under the programme must provide for the basic conditions related to the local development of new employment opportunities and new possibilities of self employment. Attention is given to meeting potential hidden needs and to convert these into tangible requirements for service. The types of actions are related to:

- contributions to local development agencies and agents who provide services in the support and creation of new self employment opportunities for priority groups (long term unemployed, unemployed and women); these services include organisational and financial consulting, market analysis, business services, professional training;
- financial assistance in the creation of new businesses, either independent or associated ventures, in the identified sectors;
- incentives to stimulate the hiring of priority groups (long term unemployed, unemployed and women) by businesses in the identified sectors to foster open ended employment contracts;
- incentives to stimulate the hiring of workers already utilised in SUW;
- contributions to public agencies and social co-operatives for the promotion and start-up of SUW in identified sectors;
- co-financing of enterprise creation promoted by workers already utilised in SUW;
- contributions to service vouchers to promote the use of social services provided by the new businesses or self employed;
- co-financing of the expenses related to the SUW projects promoted by the Provinces and local authorities.

#### ***Socio culture***

The programme is directed at improving the socio-economic reality of the community and rendering the community more aware of the need for new services. In this sense, the programme puts a marked attention on the socio-cultural dimension of sustainability. Additionally, there is the implicit result of an increased diffusion of entrepreneurial culture related to the incentives for self employment. Incentives are aimed at services related to home

help services, child care, increasing the accessibility of public services by new technologies, increasing the diffusion of information technologies related to health services and tele-teaching. The services that impact the quality of life are related to the following categories: better housing, security, local public transport services, revitalisation of urban public areas, local shops. The cultural and free-time services consist in the promotion of: new forms of tourism (rural, environmental and cultural, as well as the utilisation of advanced information technology); cultural heritage; local cultural development (popular culture, rediscovery of local traditions, revitalisation of endogenous potential).

## **Equity dimensions**

### ***Social equity***

The social equity dimension is a fundamental part of the entire programme as the central goals are increasing employment and giving priority to the weaker categories according to the principle of equal opportunity. Attention to social equity is also included in the funding distribution procedure for SUW projects.

### ***Interregional equity***

There does not seem to be any significant attention given to this dimension in the programme.

### ***Intertemporal equity***

There does not seem to be any significant attention given to this dimension in the programme.

## **Systemic dimensions**

### ***Diversity***

Local development represents one of the principal objectives of the programme, in which the dimension of diversity is present as:

- the strengthened role of the local actors in determining new development patterns by means of a synergetic utilisation of the endogenous resources;
- the attention given to priority groups: unemployed youth, long term unemployed, redundant workers, women.

### ***Subsidiarity***

This dimension is present throughout the programme in both of its sections (SUW and LEI). For the local employment initiatives, the programme conforms to the EU principles of institutional subsidiarity, socio-economic cohesion, partnership and additionality. With socially useful work actions, a large part of the administrative functions are delegated to the Provinces. These latter are then directly involved in promoting the co-ordinated initiatives between the local authorities, and in evaluating and financing the projects. The Region financially supports the local authorities in the realisation of projects, dividing the resources between the Provinces based on objective parameters including the number of redundant workers, long term unemployed and young persons registered for job placement.

### ***Partnership and networking***

The LEI actions are developed through a support network of local participants and regional agencies. For SUW projects, the collaboration between the Province, Mountain Communities, local authorities, public and private entities is required within the programme guidelines.

The collaborative relationship between the Region and the offices of the national Labour Minister is very important in the identification of subjects in the SUW projects and for the evaluation of re-employment opportunities.

### ***Participation***

There does not seem to be any significant attention given to this dimension in the programme.

## **CONSISTENCY**

### **Conflicting targets**

There were not present any conflicting objectives in the programme reviewed.

### **Independent targets**

The programme is concerned with objectives that have a significant importance for the Region as they were defined in the "Pact for the Development and Employment in Tuscany" agreed to by the Region, the trade associations and unions in September 1996. This agreement was reached by joint decision making process and defines in clear terms the direction and priorities of the Regional labour policies.

### **Complementary targets**

The projects in SUW and LEI are highly complementary with regards to their similar priority of the weaker social groups, the involvement of the same public institutions and the common sectors of interest.

The project areas are well integrated, with local development incentives directly aimed at creating employment opportunities for workers who had participated in SUW projects. The Region has historically given significant attention at fostering an entrepreneurial culture, especially with regards to the younger generation and the weaker sections of the labour supply.

## **CONCRETENESS**

### **Basic principles**

The programme objectives fulfil the guidelines agreed upon by the Region and the trade unions in the above mentioned Pact.

### **Qualitative targets**

Qualitative targets are included in this programme through the prioritising of the projects (both SUW and LEI related) also to environmental compatible activities.

### **Quantitative targets**

With regard to the LEI, the EU co-financing has created quantitative targets, through the calculation of expected results. Even though the targets related to SUW are not strictly quantified, the results are however measurable and demonstrate a positive impact.

## **SUMMARY OF THE PROGRAMME**

The analysis of this programme revealed that all the sectorial dimensions and most systemic dimensions of completeness are considered. Only the dimension of participation is not fully taken into account. This oversight may be partially responsible for the low efficiency that has characterised the re-insertion into the labour market of persons who have participated in SUW projects. With regard to the equity dimensions, there is a strong attention given to the weaker societal levels and to the promotion of equal opportunity, while there does not seem to be significant awareness of intertemporal and interregional equity dimensions.

Both of the objectives, the promotion of LEIs and the promotion of SUWs are sufficiently qualified and share equal importance as general guidelines in the Regional employment agreement "Pact for the Development and Employment in Tuscany". The programme treats the projects concerning SUW and LEI in a contiguous fashion, which therefore makes these objectives complementary. The relation of the programme to EU co-financing has created the necessity of determining quantitative targets specifying the expected project results.

## **SECOND PROGRAMME: NEW SYSTEM OF EMPLOYMENT SERVICES**

### **DESCRIPTION OF THE PROGRAMME**

#### **Characteristics**

##### *Programme area*

Instruments to manage active employment policies, improving labour supply and demand matching at regional and local levels.

##### *Actors*

The principal involved bodies and agencies are: the regional Ministry of Labour; the national Ministry in its decentralised offices throughout the territory (regional, provincial and local offices; regional employment agency); the Provinces; the local authorities; trade associations and unions, as well their bilateral agencies; private and public local development agencies.

##### *Time-span*

An overall agreement between the Region and national Ministry is performed through a yearly definition of a plan of experimental projects. The projects for 1997 have already been determined. Moreover, a further specific agreement between the Region and the regional employment agency of the national Ministry has determined the specific sectors of collaboration and is valid for three years.

##### *Financing*

The financial resources dedicated to this programme are determined by agreement between the Region and the national Ministry after the qualitative definition of the experimental projects. The Region of Tuscany together with the Regions of Friuli-Venezia-Giulia, Emilia Romagna, Umbria and the Province of Trento are participating in the overall reform of the employment services presented by the national Labour Minister and financed by a Multi-regional Programme (Technical Assistance - System Reinforcement) related to Objective 3 of the EU Structural Funds.

##### *Procedures*

The annual plan of projects is defined by agreement between the Region and the national Ministry after consultation with the trade associations and unions within the Regional Employment Commission (CRI). Moreover, a joint Committee is formed under the direction of the Region with the responsibilities of a) project co-ordination, b) programme management, c) co-ordination between the relevant involved bodies.

#### **Contents**

The overall goal of the programme is to create a network of employment services (information, educational and professional guidance, professional training, counselling, labour supply and demand matching, placement, the monitoring of the labour market, etc.) in order to support the local, regional and national employment policies in an integrated manner.

### **COMPLETENESS**

#### **Sectorial Dimensions**

##### ***Environment***

The programme measures are designed to improve the local capacity of promoting and implementing active labour policies, including those which are more or less related to environmental initiatives.

##### ***Economy***

The principal objective of the programme is directly related to the economic dimension through the co-ordinated efforts to remove obstacles to the regional employment development. To

these ends, the programme favours the increased synergy between the employment policies and the efforts related to local economic development. These efforts entail:

- the integration of the employment services (network) and the improvement of their quality by means of professional training, adequate information and monitoring systems;
- the promotion of joint programmes and initiatives to promote the employment of people at risk of social marginalisation;
- the promotion of local employment initiatives also through the favouring of new forms of labour flexibility.

### ***Socio culture***

A key element of the programme here analysed regards the socio-cultural level of the local populations (human capital): improving the employment services to better the human capital. This is the aim of a better quality of information, educational and professional guidance, professional training and counselling.

### **Equity dimensions**

#### ***Social equity***

The programme is founded in the principle of offering equal opportunity for employment through the creation of an integrated and efficient system of services. The formalisation of institutional collaboration facilitates the creation of experimental services and promoted new projects such as:

- programmes and co-ordinated initiatives for the employment and financial assistance for the unemployed;
- professional training programmes, in particular for disadvantaged labour categories;
- programmes for the creation of socially useful work, with the prospective for employment and social re-insertion;
- actions to promote equal opportunity for men and women.

#### ***Interregional equity***

The integration of a service network for employment favours the process of mobility and equal employment opportunity across different local areas, even though there are no explicit references to this dimension in the programme.

#### ***Intertemporal equity***

There does not seem to be any attention given to this dimension in the programme.

### **Systemic dimensions**

#### ***Diversity***

The dimension of diversity is present in several aspects of the programme:

- in the variety of agencies and actors involved;
- in the attention focused on the employment of priority groups: long term unemployed (especially women and young persons), redundant workers, workers in projects in the public interest, immigrants, persons with substance abuse problems and disabled persons;
- in the promotion of equal opportunity between men and women;
- in the aim to develop the human capital, as an important endogenous (individual and social) resource.

#### ***Subsidiarity***

This dimension is present throughout the programme. The integration of administrative functions and active labour policies involve the Region, the Provinces and the local authorities, as well as the regional and local bodies of the national Labour Ministry. Together they participate in the management of the programme on the basis of a joint decision making

process. Moreover, the currently significant reform of the labour market is based on the principles of subsidiarity according to the national law n. 59/97 (see Chapter 4).

### ***Partnership and networking***

This dimension is one of the most relevant in the entire programme and follows the consolidated Tuscan practice of interactions between local actors (both institutional and social) in the elaboration of objectives and projects. The already cited agreement between the Region and national Labour Ministry, while it favours a joint decision making process, strengthens partnerships and networking at regional and local levels with the involvement of trade unions, associations of entrepreneurs and their bilateral agencies, as well as other public and private agencies.

### ***Participation***

The programme promotes participation and information by means of media (newspapers, television, radio) and with the use of telematic systems. The practise of participatory decision making is both an objective and an instrument for the promotion of projects related to improving employment opportunities.

## **CONSISTENCY**

### **Conflicting targets**

There were not present any conflicting objectives in the programme reviewed.

### **Independent targets**

This programme represents a clear example of jointly decided orientations and priorities of the regional labour policies.

### **Complementary targets**

The targets of the courses of action included in the programme here analysed are intimately related and interdependent. This evaluation is supported by the fact that the reform of the employment services is seen as one of the priority instruments to foster local development and employment.

## **CONCRETENESS**

### **Basic principles**

The guidelines of this programme are clearly defined and they are based on the above mentioned "Pact for the Development and Employment in Tuscany", which has also overall meaning and influence in the regional programming.

### **Qualitative targets**

They are clearly provided in order to promote new services, as well as partnership, networking and collaborations between the different bodies involved.

### **Quantitative targets**

The programme does not have quantitative targets that relate to expected results and project evaluation. This can be considered also as a consequence of the absence of an adequate national legal framework and it makes evident the necessity of transferring relevant responsibilities from the State to the Region in order to favour more coherent active labour policies.

## **SUMMARY OF THE PROGRAMME**

The analysis of this programme revealed that the dimensions of completeness are significantly considered. The overall objective - the integration of employment services and innovations in institutional relations - satisfies important aspects of the paradigm of sustainable development.

In the sectorial dimensions, the absence of attention with regard to the environment appears to be connected to the nature of the programme which is primarily directed at improving instruments which support labour active policies. The systemic dimensions are uniformly represented, with a strong accent on partnership and networking that represent both objectives and means to implement the programme. As for the equity dimension, a constant attention is directed to the disadvantaged societal levels and the promotion of equal opportunity. There does not seem to be significant attention given the dimensions of interregional and intertemporal equity. The general guidelines of the programme are provided by the “Pact for the Development and Employment in Tuscany” and are sufficiently defined in a qualitative manner. The objectives are clearly complementary and strongly interdependent.

## SUMMARY OF THE ACTIVE LABOUR POLICY

The analysis of the two programmes, SUW/LEI and employment services reform revealed that both contain numerous converging elements:

- both are directed at objectives that are highly stressed in the regional employment policy;
- both demonstrate significant attention towards the fundamental dimensions of sustainability with special attention to the completeness dimensions of economy, socio-culture, diversity, subsidiarity, partnership and social equity.

The objectives of each programme are significantly overlapping, with attention given to the development of LEI and SUW in the reform programme and a common priority given to disadvantaged social areas present in both programmes.

### COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability

first programme: local employment initiatives and works in the public interest / LEI - SUW

second programme: new system of employment services

*expl = explicit; s.r. = some reference; impl = implicit*

Progr.	Sectorial dimensions		
	Environment	Economy	Socio – culture
<b>first</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>
<b>second</b>	<i>impl</i>	<i>expl</i>	<i>expl</i>

Progr.	Equity dimensions		
	Social equity	Inter-regional equity	Inter-temporal equity
<b>first</b>	<i>expl</i>		
<b>second</b>	<i>expl</i>	<i>impl</i>	

Progr.	Systemic dimensions			
	Diversity	Subsidiarity	Partnership networking	Participation
<b>first</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>impl</i>
<b>second</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

The absolute complementary nature of the two programmes reinforces the overall orientation towards sustainability, contributing to reduce the negative effects related to the dimensions not explicitly present in individual programmes. This is evident with regard to the environmental dimension, that is implicit in the employment services programme but included in the SUW/LEI programme as one of its priorities.

## CONSISTENCY of different targets per programme and between programmes

Programme	Conflicting	Independent	Complementary
<i>first: LEI - SUW</i>			<i>second</i>
a) LEI - by new sources of employment			b
b) SUW - local projects			a
<i>second: Employment services</i>			<i>first</i>
a) employment services network			b
b) new labour policies decision making			a

The analysis of these programmes indicates that the employment policy is moving in the direction of sustainability, but that further attention is needed with respect the aspect of *concreteness*. These considerations are particularly relevant when considered in the context of the changing regional and national employment policy. The most important examples of this are founded in the following:

- the National Labour - Promotion Agreement, between the Government, associations of employers and trade unions in September, 1996 that identified the reform of employment and training services as one of the central strategies in the battle against unemployment;
- the reform of labour market and policies based on the delegation of competences from the State to the local authorities, the Provinces and the Regions (see Chapter 4);
- the "Pact for Development and Employment in Tuscany", that was agreed to by the Region, trade organisations and unions in September 1996; it defines the regional orientation in employment policies, strengthening a process of active joint decision making.

The overall guidelines of the above Pact are:

- the qualification of the process of co-decision between the institutional (Region and local authorities) and social actors (trade associations and unions) respecting their specific and autonomous role;
- the increase in competitiveness and the promotion of innovation with the goal of increasing and improving employment both from quantitative and qualitative points of view;
- the creation of new employment opportunities in non traditional sectors.

The second guideline is realised through the following actions aimed at:

- improving logistics, territorial mobility, information technology, telematics, etc.;
- promoting a more efficient credit system and finance market;
- favouring the matching of the labour supply and demand by a) increasing work flexibility (increased mobility and the reduction in the work day), b) focusing and integrating the professional training systems (continuous training, re-conversion, management training, efficient information systems) and c) the reform of the employment systems.

The non-traditional employment fields referred to in the third guideline include the environment, cultural heritage, social services and tourism, and they are promoted by means of local agreements and the utilisation of the available EU funds.

To this end, the Pact identifies two fundamental instruments in the local employment initiatives and the projects concerning work in the public interest.

These goals will be followed by utilising all the available instruments (e.g. local agreements, participatory procedures provided by regional laws, partnerships - both social and economic - inspired by the current EU regulations).

The Pact provides for a series of annual sessions with specific themes, several of which are: the regional development plan; the regional budget; the EU financing; the monitoring of the regional economic dynamics.

**CONCRETENESS of intentions (objectives and targets) per programme**

Programme	Basic principles and guide lines	Qualitative targets	Quantitative targets
<b>first: LEI - SUW</b>	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
a) LEI - by new sources of employment	<i>expl</i>	<i>expl</i>	<i>expl</i>
b) SUW - local projects	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
<b>second: Employment services</b>	<i>expl</i>	<i>expl</i>	
a) employment services network	<i>expl</i>	<i>expl</i>	
b) new labour policies decision making	<i>expl</i>	<i>expl</i>	

*expl = explicit; s.r. = some reference; impl = implicit*

## **CHAPTER 3 - ENERGY**

### **FIRST PROGRAMME: ENERGY SAVINGS AND CO-GENERATION**

#### **DESCRIPTION OF THE PROGRAMME**

##### **Characteristics**

###### *Programme area*

Energy savings and co-generation practises in the following business sectors; industry, small businesses (craftsmen production), service industries and building industries.

###### *Actors*

The principal involved bodies are: the Environmental Department of the Region and, as far as building industry is concerned, the local authorities (municipalities).

###### *Time-span*

Calls for projects are based on the annual disposable budget<sup>4</sup>.

###### *Financing*

The programme is financed by the regional budget on the basis of the funds received from the State and on carry-over funds from previous calls.

###### *Procedures*

The Regional Council approved the multi-year plan for energy savings and cogeneration elaborated by the Regional government after a procedure of evaluation on the part of the Provinces and related professional associations. The plan includes annual programmes of expenditure which include the addressed proposals whose financing is based on available funding.

The Regional Committee for Energy, in which the principal national energy agencies (ENEL, ENI), regional research institutions, local authority service organisations and interest groups (trade unions, employer associations, co-operatives, and environmental associations) are represented, is responsible to provide expertise to the Region in technical matters. The funding requests are evaluated using methods developed by the National Agency for Renewable Energy (ENEA). The Region and the local authorities are responsible for the completion of the projects which they have financed. On an annual basis the Region must elaborate and submit to national Ministry an account of the projects financed during the previous year.

##### **Contents**

The programme consists of contributions to capital expenditures for projects that reduce energy consumption and improve efficiency, with respect to the modification of existing equipment, systems or components. The responsibility for this programme was delegated to the Regions in the National Acts 8 and 10 in the law 10/1991, "National Energy Plan for the rational use of energy, energy savings and the development of renewable energy sources". The criteria and financial regulations related to this programme are contained in the regional law L.R. 46/1989 and successive modifications "Actions for energy savings and development of renewable sources of energy".

#### **COMPLETENESS**

##### **Sectorial Dimensions**

###### ***Environment***

The programme responds to goals and guidelines established in the National Law L 10/91 and follows the EC energy policy to favour the rational use of energy sources, energy savings and

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<sup>4</sup> Some Regional Government and Council Deliberations are: October 23, 1991 number 315; July 20, 1993 number 305; October 31, 1995 number 438; October 15, 1996 n. 311.

cogeneration. Cogeneration is considered to be the combined production of electrical or mechanical energy, and heat energy.

The projects that can be accepted for financing in the building sector are:

- insulation of existing buildings;
- installation of new high efficiency heating systems;
- conversion of centralised heating systems to local single family units for heat and hot water;
- installation of integrated systems for control and accounting of heating and hot water consumption;
- high efficiency lighting systems.

Large scale projects that require larger investments and are associated with significant reduction in consumption are given higher priority.

The projects that are accepted in the industrial, craftsmanship, and service sectors must involve systems no larger than 10 megawatt (thermal) or 3 megawatt (electric) relative to general services or normal productive cycle. The energy savings must be associated with;

- the use of a renewable energy source;
- a cogeneration unit;
- the more efficient use of a machine or equipment;
- the substitution of hydrocarbons with other fuels.

Priority is given in the following manner:

- energy savings in production processes with reduced environmental impact;
- energy savings in production processes;
- energy savings in general services.

### ***Economy***

The reduction in energy consumption (in the building sector, production processes and services) is an objective containing both environmental and economical dimensions, in that processes that are more efficient in the use of a precious and scanty resource (energy) are favoured.

The main criteria in the evaluation process is given to primary energy savings associated with the complete life-span of the investment and the associated investment cost.

A secondary criteria is the net present value of the investment. The ratio between the total energy savings and the total investment is calculated using a method developed by National Agency for Renewable Energy (ENEA). Lastly, the realisation time necessary for each project and the possible construction difficulties are considered.

### ***Socio culture***

The programme is designed to increase the public awareness in the scarcity of a fundamental resource and the importance of preserving this resource through its rational use. This will favour the gradual change in the community mentality and therefore have socio-cultural effects.

### **Equity dimensions**

#### ***Social equity***

Even though does not appear a strong attention given in the programme to this dimension, some elements of social equity are present in the implementation of the projects (e.g. incentives for energy saving in favour of owners of house where they live).

#### ***Interregional equity***

The reduction in the conventional fuel consumption and the consequent decrease of the relative pollutant emissions has obvious environmental benefits that impact various territorial realities and can develop solidarity and equity in the utilisation of the energy resources. However, it should be noted that there are no explicit references to interregional equity in the programme.

### ***Intertemporal equity***

The concept of energy savings and cogeneration (an energy source which can be assimilated to renewable sources) is obviously tied to insuring the future availability of energy and the diffusion of rational uses of exhaustible resources. While these principles respond to the requirements of intertemporal equity, there are no explicit references to this dimension.

### **Systemic dimensions**

#### ***Diversity***

There does not seem to be any attention given in the programme to this dimension of sustainability.

#### ***Subsidiarity***

There does not seem to be a clear element of subsidiarity in the programme. There is not a clear division in the functional roles according to the criteria of assigning administrative responsibility to the lowest institutional level in order to foster a more coherent and efficient management of the programme. On the basis of the national law 10/1991, the Regions were limited to administrative-accounting roles for funding in specific areas that have been assigned priority by the national government. The national Minister of Industry, along with the Treasury Minister, established the evaluation criteria for the proposals, for the proposal requirements and the operative procedures. The Regions did not have so far planning responsibilities in these matters.

The specific regional task was that of investigation and supervision of the proposed projects, submitting to the Ministry the application for funds.

The above conditions were recently changed in favour of the delegation of competences in energy policies from the State to the Regions according to the principles of subsidiarity enforced by the national law n. 59/97 (see Chapter 4).

#### ***Partnership and networking***

The aspect of this dimension in the programme is limited to the involvement of the Provinces and the trade associations during the elaboration of the multi-year plan for energy savings and the development of renewable energy sources.

#### ***Participation***

There does not appear to be any attention given in the programme to this dimension.

### **CONSISTENCY**

#### **Conflicting targets**

There were not present any conflicting objectives in the programme reviewed.

#### **Independent targets**

The targets of the programme are jeopardised by an excessive sectoralisation in criteria, procedures and management.

#### **Complementary targets**

The objective of promoting efforts for energy savings and cogeneration are of great importance to the Region. However, the above mentioned sectoralisation, together with the lack of subsidiarity in the functional division of responsibility, results in the absence of a coherent plan for energy.

## **CONCRETENESS**

### **Basic principles**

The programme objectives are directly derived from the national regulations related to energy, of which they constitute several of the guidelines and give to the subject matter significant importance.

### **Qualitative targets**

The programme is sufficiently defined with respect to qualitative targets.

### **Quantitative targets**

Overall quantitative targets of the programme are lacking, whilst they are clearly present with regard to meeting energy technical standards and requisites for the approval of individual project.

## **SUMMARY OF THE PROGRAMME**

The analysis of the programme for completeness demonstrates the presence of all the sectorial dimensions while the systemic dimensions were limited to partnership and networking only, even though it is not fully developed. There appears to be a limited awareness of the aspect of social equity. Likewise there are only implicit references to intertemporal and interregional equity.

The role assigned to the Region in these matters was previously limited to the more managerial aspects. The programme, while containing two of the central guidelines of the national law 10/91, suffered from a lack of consistency related to the absence of a regional role in programming. This has recently been modified through the delegation of more responsibility to the Regions. As a result, the objectives of the programme were not completely homogeneous. With regards to the interested sectors, the programme contained qualitative targets and a number of quantitative standards to orientate individual projects.

## **SECOND PROGRAMME: RENEWABLE ENERGY SOURCES**

### **DESCRIPTION OF THE PROGRAMME**

#### **Characteristics**

##### *Programme area*

The programme is designed to promote projects in the following areas:

- the use of renewable energy sources in the building sector
- the realisation of systems for the production of energy from renewable sources in agriculture

##### *Actors*

The principal involved bodies are: the Environmental Department of the Region and, as far as building industry is concerned, the local authorities (municipalities).

##### *Time-span*

Calls for projects are based on the annual disposable budget<sup>5</sup>.

##### *Financing*

The programme is financed by the regional budget on the basis of the funds received from the State and on carry-over funds from previous calls.

##### *Procedures*

The Regional Council approved the multi-year plan for renewable energy sources after a procedure of evaluation on the part of the Provinces and related professional associations. The

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<sup>5</sup> Some Regional Government and Council Deliberations are: October 23, 1991 number 315; July 20, 1993 number 305; October 31, 1995 number 438; October 15, 1996 n. 311.

plan includes annual programmes of expenditure which include the addressed proposals whose financing is based on available funding.

The Regional Committee for Energy, in which the principal national energy agencies (ENEL, ENI), regional research institutions, local authority service organisations and interest groups (trade unions, employer associations, co-operatives, and environmental associations) are represented, is responsible to provide expertise to the Region in technical matters. The funding requests are evaluated using methods developed by the National Agency for Renewable Energy (ENEA). The Region and the local authorities are responsible for the completion of the projects which they have financed.

On an annual basis the Region must elaborate and submit to national Ministry an account of the projects financed during the previous year.

### **Contents**

The programme consists of contributions to capital expenditures. The responsibility for the programme was delegated to the Regions in Article 8 and 13 in the National Law 10/1991, "National Energy Plan with regards to rational energy use, energy savings and the development of alternative energy sources". The related criteria and financial regulations are contained in the regional law L.R. 46/1989 and successive modifications "Actions for energy savings and development of renewable sources of energy".

## **COMPLETENESS**

### **Sectorial Dimensions**

#### ***Environment***

The programme responds to goals and guidelines established in the national law L 10/91 and follows the EC energy policy in the promotion of renewable sources. The overall goal is to reduce the environmental load associated with energy use with respect to the services furnished and overall lifestyle. Renewable energy is considered to be that which utilises as sources, the sun, the wind, hydro-energy, geothermal energy, the tide, wave action, and the transformation of organic or inorganic wastes or agricultural products. The projects that can be accepted for financing in the construction sector are:

- the installation of systems for the use of renewable energy sources, for example, passive solar technology, solar collectors for heating of: a) water for collective uses; b) buildings; c) home hot water - that cover a minimum of 30% of the total heating needs;
- the installation of equipment for the combined production of electric and thermal energy;
- the installation of photovoltaic systems for the production of electric energy.

There is a priority given to the latter project type, which is associated with an elevated contribution of up to 80% of the investment cost.

Agriculturally related projects must be associated with the production or recovery of thermal, electric or mechanical energy from renewable sources (55% of the total costs allowed). The projects are classified with the following priority:

- projects that utilise geothermal fluids;
- the use of biomass, in particular the use of wastes from agricultural production systems;
- the production of solar and wind-related energy;
- other projects.

#### ***Economy***

The incentives contained in this programme for the use of renewable energy sources have a direct impact on the economics of energy in that these alternative sources are promoted over traditional ones. The increased demand for instrumentation and technology favoured in this programme will also impact the related overall market for these items.

### ***Socio culture***

The promotion of renewable energy production in agriculture and the introduction of such sources in construction practises will increase the public awareness of the importance of alternative energy. The result should be an increased sensibility in the community with regard to the importance of rational energy use and the consequent change in the overall public mentality. The socio-cultural importance of this programme would be further increased had the programme not been so strictly sectoralised.

### **Equity dimensions**

#### ***Social equity***

In general, it does not seem to be a strong attention given in the programme to this dimension, but for instance in the development of geothermoelectric energy, subsidies are provided by law (1 lira per 1 Kwh) to the municipality where the plant is installed.

#### ***Interregional equity***

There are no explicit references to this dimension in the programme even though the use of alternative energy would reduce the dependence on conventional sources and their relative environmental impacts with benefits that are interregional in character.

#### ***Intertemporal equity***

The promotion of alternative fuel sources should produce a consequent reduction in the conventional fuel consumption and relative pollutant emissions. While the diffusion of these practises has obvious benefits for future generations, there does not emerge in the programme a clear awareness of this dimension. Recently, as far as geothermal production is concerned, a precautionary principle was adopted to limit the exploitation of natural resources and to make it more compatible with the environment.

### **Systemic dimensions**

#### ***Diversity***

The dimension of diversity is fundamental in the programme as different energy sources are being promoted.

#### ***Subsidiarity***

There does not seem to be a clear element of subsidiarity in the programme. There is not a clear division in the functional roles according to the criteria of assigning administrative responsibility to the lowest institutional level in order to foster a more coherent and efficient management of the programme. On the basis of the national law 10/1991, the Regions were limited to administrative-accounting roles for funding in specific areas that has been assigned priority by the national government. The national Minister of Industry, along with the Treasury Minister, established the evaluation criteria for the proposals, for the proposal requirements and the operative procedures. The Regions did not have planning responsibilities in these matters. The specific task of the Regions (or the local authorities - municipalities - in building related projects) has been that of investigation and supervision of the proposed projects, submitting to the Ministry the application for funds. This condition has recently changed in favour of the delegation of competences in energy policies from the State to the Regions according to the principles of subsidiarity enforced by the national law n. 59/97.

#### ***Partnership and networking***

The aspect of this dimension in the programme is limited to the involvement of the Provinces and the trade associations during the elaboration of the multi-year plan for energy savings and the development of renewable energy sources.

#### ***Participation***

There does not appear to be any attention given in the programme to this dimension.

## **CONSISTENCY**

### **Conflicting targets**

There were not present any conflicting objectives in the programme reviewed.

### **Independent targets**

The targets of the programme, even though referred to a limited number of sectors (agriculture and building), are jeopardised by fragmentation in criteria, procedures and management.

### **Complementary targets**

The objective of promoting the production and use of renewable energy sources is of great importance to the Region. However, the above mentioned fragmentation, together with the lack of subsidiarity in the functional division of responsibility, results in the absence of a coherent plan for energy. This reduces the cohesiveness of the objectives.

## **CONCRETENESS**

### **Basic principles**

The programme objectives are directly derived from the national regulations related to energy, of which they constitute several of the guiding principles, although, in the limited frame of issues delegated from the State to the Regions, they have noteworthy significance.

### **Qualitative targets**

The programme sufficiently defined qualitative targets to which the projects must be addressed.

### **Quantitative targets**

In several cases there are explicit references to quantitative targets, as for example the percentage of the thermal requirement necessary to be covered by renewable sources in building related projects, or the power requirement for the energy production or recovery in agriculture.

## **SUMMARY OF THE PROGRAMME**

The analysis of the programme for completeness demonstrates the presence of all the sectorial dimensions while the systemic dimensions were limited to diversity and partnership - networking, even though the latter is not fully developed. There appears to be a limited awareness of the aspect of social equity, while there are only implicit references to intertemporal and interregional equity. In conclusion the analysis of the programme reveals the lack of a clear energy plan, while a limited role was assigned to the Region consisting in strictly administrative matters. The programme, while containing two of the central guidelines of the national law 10/91, suffered from a lack of consistency related to the absence of a regional role in programming. As a result, the objectives of the programme were not completely homogeneous. With regards to the interested sectors, the programme contained qualitative targets and a number of quantitative standards to orientate individual projects.

## **SUMMARY OF THE ENERGY POLICY**

The two programmes analysed here (the promotion in the development and use of renewable energy sources, and the promotion of energy saving methods and cogeneration) were found to have the following points in common:

- the specification of objectives of great importance that reflect several of the guidelines of the national energy policy
- a significant attention given to the sectorial dimension of the sustainability
- a need to develop the dimensions concerning subsidiarity and participation.

With respect to systemic dimensions, there are indirect references to diversity present in the cogeneration programme and direct references in the renewable energy sources programme. The systemic dimensions are nearly absent. This is also true for the social equity dimension. The interregional and intertemporal equity dimensions, while of particular importance in these programmes, are not strongly present.

**COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability**

first programme: energy saving and cogeneration

second programme: renewable energy sources

*expl = explicit; s.r. = some reference; impl = implicit*

Progr.	Sectorial dimensions		
	Environment	Economy	Socio – culture
<b>first</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>
<b>second</b>	<i>expl</i>	<i>expl</i>	<i>expl</i>

Progr.	Equity dimensions		
	Social equity	Inter-regional equity	Inter-temporal equity
<b>first</b>	<i>s.r.</i>	<i>impl</i>	<i>impl</i>
<b>second</b>	<i>s.r.</i>	<i>impl</i>	<i>impl</i>

Progr.	Systemic dimensions			
	Diversity	Subsidiarity	Partnership networking	Participation
<b>first</b>			<i>s.r.</i>	
<b>second</b>	<i>expl</i>		<i>s.r.</i>	

The above mentioned shortcomings result from the singularly administrative-accounting roles assigned to the Region in the energy sector by national law. The narrowness of these responsibilities increased the fragmentation of the two programmes, even though their targets are complementary, and the lack of a clear energy plan was evident.

More attention to the *consistency* and the *concreteness* of the objectives would significantly reinforce the programmes with respect to the elements of sustainability, which would partially result from an increased role given to the Region with respect to programme design and orientation.

**CONSISTENCY of different targets per programme and between programmes**

Programme	Conflicting	Independent	Complementary
<b>first: Energy saving and co-generation</b>			<b>second</b>
<b>second: Renewable energy sources</b>			<b>first</b>
a) in the building sector		b	
b) in agriculture		a	

**CONCRETENESS of intentions (objectives and targets) per programme**

Programme	Basic principles and guide lines	Qualitative targets	Quantitative targets
<b>first: Energy saving and co-generation</b>	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
<b>second: Renewable energy sources</b>	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
a) in the building sector	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
b) in agriculture	<i>expl</i>	<i>expl</i>	<i>s.r.</i>

*expl = explicit; s.r. = some reference; impl = implicit*

The recent I. R. 45/97, "Regional Law in Energy Resource Matters", defines the planning and operative responsibilities concerning:

- the reduction of energy consumption;
- the promotion of renewable energy sources and their integration;
- the financing of third parties through programmes for consumption reduction.

The Regional energy plan identifies the instruments necessary to meet these objectives based on Regional development following the indications presented in the national energy plan.

The role of the Regional Committee for Energy in technical and scientific matters is reconfirmed, with several modifications in its composition. The principal national energy related agencies (ENEL, ENI and ENEA), a national research agency (CNR), the regional agency for environmental protection (ARPAT), the Tuscan universities, the association of public services provided by the local authorities (CISPEL), the Tuscan associations of Provinces and local authorities, as well as the interest groups (trade unions, employer associations, co-operatives, and environmental associations).

The regional law regards also REA which is the regional agency for energy, created in a current project co-financed by the European Union. REA will be utilised for technical support in energy planning. The Regional Energy plan has a three year duration and is separated in three sections:

- an informational system directed to increasing the regional data base with regard to the characteristics of the production, consumption, energy request in the productive and public sectors and heating needs;
- a plan that defines the planning and programme alternatives within the territorial energy basins (on the basis of the national law 10/1991), the objectives and the related policies that are oriented at consumers and products regarding energy savings and renewable energy sources, the monitoring parameters and related indicators;
- the annual budget.

The regional law appears to significantly conform to the principle of subsidiarity in that the local authorities are responsible for the control of contributions with respect to energy savings. There is not however a similar functional division with respect to geothermal projects. The local authorities are required to present projects to the Regional government which in turn directly finances the accepted projects.

Finally, it must be remembered that the reform of the Italian institutional powers and responsibilities regards also energy policy, according to the principles of subsidiarity enforced by the national law n. 59/97 (see Chapter 4).

## CHAPTER 4 - SUMMARY ANALYSIS OF THE POLICY FIELDS

In the previous chapters, an analysis of relevant programmes was made in three policy fields (active labour policy, agriculture and energy) which have strong interdependencies with the other major sectors of regional development.

The analysis revealed the presence of many dimensions of the new paradigm of sustainable development as it is defined in this research. The programmes have been seen to contain varying degrees of *completeness* as well as *consistency* and *concreteness*.

As an overall result, each policy field demonstrated a growing orientation towards a more coherent and complete comprehension of the concepts and principles of sustainable development.

It is worth noting is that this orientation is part of a wide regional scenario in which sectorial and transversal policies are very mixed. A complex set of interrelationships sense emerges which feed back to the global dimension.

### SUBSIDIARITY

**Subsidiarity** is presently an important element in all regional policies. In fact, the Tuscan regional law (L.R. 77/1995) has gone beyond the concept of delegation of responsibility to the local authorities by the explicit application of the principle of subsidiarity.

Subsidiarity in the Tuscan experience and orientation assumes a diversified cluster of meanings:

- **institutional subsidiarity** as an empowering process which increases the responsibility and autonomy of the lowest levels of government in order to make them more capable to deal with local issues and development;
- **functional subsidiarity** as an empowering process to implement initiatives, projects and programmes, which is based not only on institutional actors but also on social actors; this means the development of a participatory process which involves local actors, associations and interest groups in the decision - making of their communities;
- **socio-economic cohesion** as a way to lessen disparities in the allocation of resources and to open opportunities towards local development;
- **institutional cohesion**, as a way to lower disparities in the administrative activity and to assure the efficiency of policies geared towards the socio-economic cohesion.

Most of the active administrative functions are conferred on the local authorities, along with the necessary resources (financial, human, etc.). Therefore the Region must provide for the re-ordering of the functions and bodies in the system of local authorities, in order to meet the principle of autonomy of single subjects with that of co-operation and programming combining bottom-up and top-down approaches and procedures.

The realisation of the complex reorganisation of the administrative functions of local authorities is based on assigning to Municipalities, Mountain Communities and Provinces all the regional administrative responsibilities except those explicitly indicated by law as corresponding to unitary regional interests in the various policy fields.

As a general rule, the Region limits its role to the co-ordination and integration of policies related to social and economic cohesion of the regional territory, starting from the definition of the main objectives and programming guidelines.

At the sub-regional level, the Province has the same limiting role with respect to the municipal level. The administrative activities and the management of projects are designated as the responsibilities of the provinces and the local authorities, who include the involvement of the local actors, both social and economic.

In the years since the regional law (L.R. 77/95) was approved, significant changes have occurred in both organisational and social systems.

A close confrontation between the Region, the associations of the Provinces, the Mountain Communities and the local authorities (municipalities) is defining new rules and legal framework to implement the principle of subsidiarity in programming and managing by means of a multiplicity of options and solutions that consider the diversity of the local contexts.

Between March and May 1997, two national laws (n. 59 and n. 127 - the first and the second Bassanini laws) were approved. It should be noted that Tuscany has anticipated the State in this decentralisation of powers.

The first law can be considered the most important step towards administrative federalism in the 137 years of Italian unification, while the second one supports this process by means of a streamlined administration and simplification of procedures (de-bureaucratisation).

Some references to the Italian institutional structure can help the understanding of the above process.

Provinces and local authorities (municipalities - Comuni), as branches of the State administration with delegated functions, pre-existed at the birth of the Regions.

Regions are divided in two principal legal frameworks: special (5 with autonomous statutes) and ordinary (15 with normal statutes). The special Regions were attributed more autonomy than the ordinary ones.

The first autonomous statute concerned Sicily and was formally approved in 1946 before the national Constitution (1948). Other autonomous statutes were approved which regarded the Regions of Sardinia (1948), Val d'Aosta (1948), Trentino Alto Adige (1948, as the sum of the two special Provinces of Trento and Bolzano) and Friuli Venezia Giulia (1963).

Even though the Italian Constitution (1948) included a transitional provision for electing the Councils of the ordinary Regions in one year's time, regional elections were called only in 1970 and the real exercise of the Regions' functions started in 1972 and improved in 1977 with the first large scale transfer of responsibility from the State.

In 1990 a national law (n. 142) provided new norms on local authorities giving them a more coherent role within a framework of co-operative relationships between them, the Regions and the State.

Lastly, in 1997 the above mentioned "Bassanini" laws were approved, laying down a new process of delegation of power and functions based on the following principles:

- **subsidiarity**, giving to local authorities (Municipalities, Mountain Communities, Provinces) the overall administrative functions and tasks according to their territorial dimensions in order to bring services closer to their citizens and to foster the capability of self-governance involving local communities, families, associations, individuals;
- **completeness**, giving to the Regions a role of programming agencies, along with administrative functions and tasks which are not included in those orientated towards the empowerment of the local authorities;
- **efficiency** and **inexpensiveness**, abolishing functions and tasks which became unnecessary;
- **co-operation** between State – Regions - Local Authorities also in order to assure an adequate participation to the initiatives adopted within the European Union;
- **responsibility** and **single** (unitary) **administration** in order to increase transparency, visibility and identification of each service and activity;
- **homogeneity** in order to distinguish different levels of government;
- **adequacy** in order to increase organisational capability, reliability and capacity building of the different levels of government;
- **differentiation** in order to respect local diversities, that is territorial, structural, demographic, social characteristics, etc.;
- **autonomy**, both in organisations and procedures, in order to enforce the responsibility given to the local authorities;

- **financial support** in order to cover the costs of the administrative functions and tasks which are assigned to each level of government.

According to the new legal framework:

- the duties of the State are those regarding the national cohesion while the duties of the regional, provincial and local governments are to guarantee cohesion at their territorial levels; of course, the policy fields include also those here analysed (agriculture, active labour policy, energy);
- there is an actual rebuilding of the Italian administrative system from the bottom up with the purpose of assuring more direct correspondence between social contexts and administration methods;
- the details of the administrative functions belong to the Regions and local authorities, except those which are expressly reserved for the State; this means that only those functions and tasks that are intrinsically unitary and not susceptible to division even on the administrative level are reserved for the State; same procedure is applied to the local authorities; all the functions are reserved for them, except those expressly reserved to the Regions.

The national law 59/97 is being enforced through a series of legislative decrees regarding the various policy and administrative fields, which will be followed by the necessary operational norms and procedures.

Coming back to the systemic components of the INSURED sustainability paradigm, the importance of empowering the relationships between institutions and social communities is a base concept of **subsidiarity** adopted by the Tuscan Region with an evident implication for: **diversity; partnership** and **networking**; participation. In fact, the regional law (n. 77/95) identified the following as particularly relevant:

- the central role of the local actors (i.e. institutional, social and economic);
- the significant attention put on the diversity of local development;
- the co-ordination and integration of different roles, rules, initiatives, courses of action, policies, etc. by means of multi - framed network - systems of local authorities which respect and create public value of the local diversity;
- a variety of partnerships between local authorities (associated management, collaboration);
- participation to and involvement in the process of programming at different levels (regional, provincial).

Briefly, subsidiarity is seen as the way to foster and to empower capacity at lower administrative levels to fully recognise their responsibility, autonomy and competences. In this ambit, the top down approach expresses itself by means of an innovative supporting mission, that being to foster and nurture bottom-up local initiatives (also as a new culture and practice).

As a general effect, there is an improvement in governance culture, since the higher levels (i.e. regional and provincial) should think locally in order to be capable of acting globally, whilst the lower levels (municipality, province) should think globally to be capable of acting locally.

Social communities are involved in this phenomenon as they are at the base of the democratic process related to the definition and implementation of initiatives and courses of action.

Therefore, subsidiarity represents a set of principles to manage interdependence, negotiation, participation and conflict. These are no longer considered as contrasting factors within the democratic process, but as expressions of each other in different stages. In other words, they are the components of real life and within them the equity dimensions (social, intertemporal and interregional) are called upon to play a relevant role. In fact, subsidiarity is closely related to social, economic and cultural cohesion in the regional context.

According to the proceedings of the L.R. 77/95 and the Regional Development Plans (PRS), cohesion is more and more understood as the way to offer equal opportunities for development in different situations, according to and respecting diversity in terms of institutional, social, economic and cultural capacities.

Therefore, the efficacy (as equity) of the policies adopted is related to their impact on the local communities, now and in the future, in connection with other communities..

As already written, L.R. 77/95 is the result of the institutional strategy contained in the Regional Development Plan (PRS) 1992-1994, which became the key to the reform of the institutional regional framework, distinguishing the role of the Region from that of the Provinces and other local authorities.

## REGIONAL PROGRAMMING

From the beginning of its institutional history, Tuscany has recognised the need for a *Regional Programme*, clearly orientated to participatory democracy, to stimulate various representative forms of collective interests and to involve populations and local authorities.

The year 1990 was decisive for the regional programming, thanks to both the new European Union regional policy (which gave the Regions important role, identifying them as the point of reference, both institutionally and territorially, for resources destined for development) and to the new norms on local authorities introduced by the national law mentioned above.

The programming policy was re-launched, putting together in one instrument, the Regional Development Programme (PRS), all its intervention policies. The new programming model was sanctioned by law in 1992 (L.R. 26) and has had a substantial influence on new regional norms. The PRS 1992-1994 facilitated and systematised the change towards the Region as an entrepreneurial and social development regulator.

It must be underlined that the above mentioned L.R. 77/95, based on subsidiarity, is the result of the institutional strategy contained in the PRS 1992-1994, which became the key to the reform of the institutional regional framework.

Starting from the PRS 1995-1997, the patterns of programming are clearly orientated towards the European Union principles, the choice of subsidiarity and cohesion as well as towards the options for new development strategies: institutional and organisational; environmental; territorial: social; economic.

Lastly, the new PRS 1998/2000 follows four fundamental principles:

- Federalism, in relationships with the State and the local autonomies;
- Europeanism, in relationships with the European Union and the European Regions;
- Solidarity, in relationships with the less developed Regions;
- Sustainability, in relationships with the development patterns and processes.

Three key-words express the general aim of the new PRS: **employment, environment, and innovation.**

Innovation is defined as a vector of regional development both in economy and socio-culture dimensions, combining environmental and sectoral policies and stimulating new sources of employment.

At least two of the initiatives which will be directly promoted by the Regional Government within the PRS 1998/2000 in the next three years' time, demonstrate a clear commitment to support local courses of action orientated towards sustainable development.

The first regional initiative, "Agenda 21 - instruments for sustainable development" aims at renewing regional and local instruments in order to orientate and promote both a Regional Agenda 21 and several cases of Local Agenda 21. Some expected results are: to elaborate a "manual of good practices"; to determine objectives of sustainable development in the medium - long term, supported by indicators appropriate to monitor them; to support and to verify the implementation of Local Agenda 21 at least in three pilot local areas.

The above mentioned regional initiative is clearly linked to the second one which regards "Experimental actions of sustainable development". Specific Local Agenda 21 will be supported (especially in urban and industrialised areas) along with projects of training and education, research and technological innovation, as well as information campaigns to raise public awareness on sustainable development throughout Tuscany.

## THE ENVIRONMENT

The **environment** is assumed to be one of the most significant endogenous resources in Tuscany constituting the most important opportunity to promote new development patterns. As already described, during the last three years, the environmental and spatial planning strategies have orientated many regional laws to promote and support several courses of action, both at regional and local levels.

Two laws are of strategic importance:

- L.R. 5/95 which considers environmental factors as being an integral part of the spatial planning procedures, and aims at directing public and private initiatives towards sustainable development; this law recognises the necessity for evaluating the environmental sustainability of actions involving changes in land use, on the basis of an overall assessment of their effects on natural resources, including the environmental impact assessment (EIA);
- L.R. 68/95 which considers the environmental impact assessment as an integration of the direct and indirect effects, positive and negative, short or long term, permanent or temporary, single or cumulative, affecting the environment; the EIA is defined as a procedure that contributes to the protection of nature, the security of the land, the conservation of human resources and the protection of public health; the environment is understood as a complex system of inter-related resources both natural and human.

Therefore, there is an increase in the awareness on the part of the regional and local actors of the importance of the environment and the necessity of conceiving and implementing more coherent and consistent policies.

A new area of activity was created in 1997 with a transversal role in regard to other departments. This area, called "sustainable development and ecological control", should support decision making, policies and programming since its distinctive tasks are:

- to assess policies and sectorial programmes from the point of view of sustainability and ecological compatibility;
- to assess the environmental impact of projects which include land use and spatial planning;
- to perform its actions as the environmental authority according to the EU rules.

Several agencies have been created to act as satellites of the regional government but in coordination to affront the complex and interrelated issues that are present in the region: ARPAT (Regional Agency for Environmental Protection), ARRR (Regional Agency for Resource Recovery) REA (Regional Agency for Energy) and ARSIA (Regional agency for Development and Innovation in Agriculture).

Briefly the regional policy concerning the environment stresses relevant areas such as: the creation of protected areas, biodiversity, pollution abatement, risk industries, integrated water management, earthquake prevention, waste planning, site reclamation, energy programming, and environmental monitoring.

The aspects of the regional reality that are considered most important and their objectives most prevalent are:

- land protection, to reduce the erosive and flood problems in coastal, mountain and valley floor areas with a more efficient organisation of programmes and the creation of the water basin authorities
- land use planning and land reclamation to maintain and to recover the quality of the natural heritage (e.g. Tuscany has the largest forest cover in Italy)
- protected areas to increase their range and to introduce a new diversified management (the percentage of protected area in the Region has increased from 3.4% in 1994 to 6% in 1995 to 8% in 1997)
- integrated water management, to improve wastewater management by providing treatment for all wastewater generated in the Region by the year 2000

- air and noise pollution, to increase areas monitored and tighter restrictions on vehicular traffic in the urban areas, favouring the use of public transportation
- energy management (through the REA and the elaboration of the first regional energy plan in 1998) to make the Region more efficient and more self sufficient in renewable energy production
- waste management, to improve the amount of waste material that is recycled, reducing the amount of material that finishes in the land fill
- environmental impact assessment to evaluate ex-ante the effects of infrastructural projects on the ecosystems
- environmental education, to diffuse information and experience by means of a network of educational centres and territorial laboratories where didactic and research activities are performed.

## **THE TUSCAN IMAGE: THE POTENTIALITY TO ENTER INTO THE PATH TOWARDS SUSTAINABILITY**

Programmes and policy fields (active labour policy, agriculture and energy) presently analysed have strong interdependencies with almost all important sectors of regional development.

The analysis revealed:

- the presence of many dimensions of the new paradigm of sustainable development.
- varying degrees of completeness as well as consistency and concreteness.

As an overall result, each policy field demonstrated a growing orientation towards a more coherent and complete comprehension of the concepts and principles of sustainable development.

This orientation is part of a wide scenario which highlights three principal and distinctive features of the recent Tuscan image:

- 1. *the strong commitment to subsidiarity;***
- 2. *an increasing awareness on the role played by the environment in the development patterns;***
- 3. *a consolidated culture of programming and a willingness to re-orientate this culture towards the principles of sustainability.***

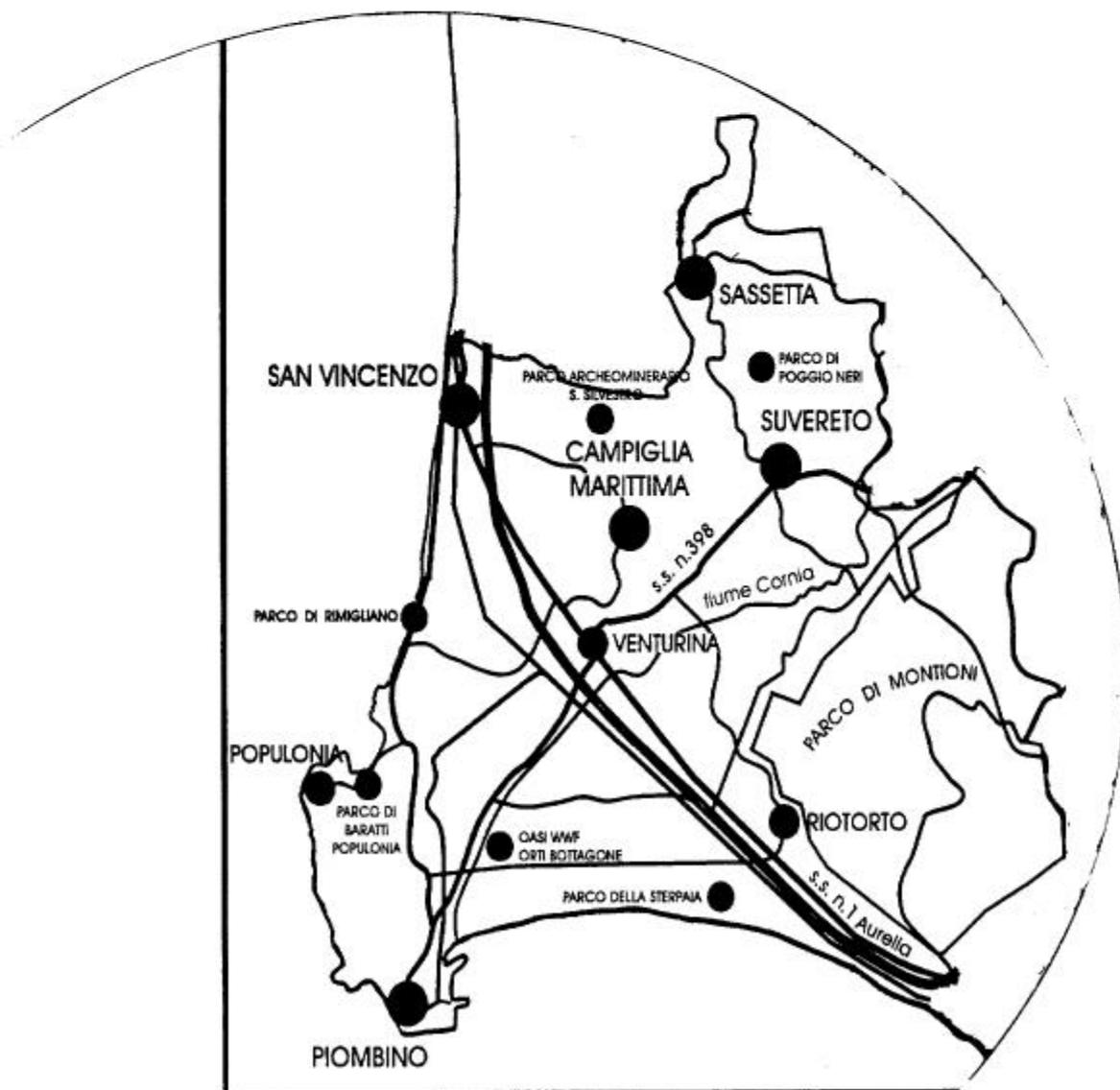
To these ends, there is strong inclination to create innovative instruments in the operational, organisational and administrative areas.



# PART II

## Bottom up analysis

### VAL DI CORNIA





## **CHAPTER 5 - INITIATIVE n. 1**

### **LOCAL AGENDA 21 – PIOMBINO - 1996/1998 Programme**

#### **THE ACTORS**

##### **PROMOTERS**

Local authority of Piombino in an effort to create a new philosophy of sustainable development with a wide and overlapping results.

##### **SUPPORTERS**

The general population of Piombino.

##### **TARGET GROUPS**

The citizens of Piombino as well as the local businesses.

##### **OPPONENTS**

The major resistance to the programme came from the large and medium businesses, in particular the large steel and iron production companies who view Agenda 21 as a significant and long term expense. Opposition has also arisen from those businesses, especially construction, whose vision has remained purely quantitative. The local unions remain rather sceptical, while agreeing to the overall programme they would be satisfied with a more restrictive plan. The traditional union culture is slowly being transformed in a newer more modern direction. Finally there is some opposition from the radical left who resent any opening whatsoever to the larger business community.

##### **PROCESS OF NEGOTIATION**

###### *Breaking the silence*

The public's environmental sensibility has increased in recent years as the result of a series of historic events. As two examples we site the proposed capacity doubling of the electric power facility in Torre del Sale and the increase in metallurgical activities in Piombino (project "Utopia"). As a result of these very publicised projects, many of the concepts of Agenda 21 have already undergone public and political discussion.

The debate, participation and discussion aspects of the public's environmental awareness were surely first raised as a result of the power facility question. This was concluded in 1987 with a referendum which gave a crushing defeat to the proposed plan to double the capacity and transform the plant combustion source to coal.

The local government has successfully combated problems related to pollution and land abuse for many years. Several areas, long time sites of illegal construction and land abuse, were cleared and made a public areas which have been utilised for more than twenty years. Sensibility has been increased through the battle to reduce pollution and environmental awareness programmes.

The entrepreneurial culture has always been rather scarce, limited only to the port city, (Piombino). Presently however it is undergoing a major development, chiefly as the reaction to the general loss of earnings and employment opportunities. This new business spirit is based on the correct use of resources rather than upon infrastructure alone.

###### *New partners emergence*

With respect to past periods, there is much less tension related to environmental issues and these few are always related to certain key factors. No true environmental movement exists nowadays and therefore has not a significant role in the public planning. The public views the local authority as being full of initiative but lacking in the capacity to realise their goals.

Nevertheless the climate is one of shared goals between the administration and the public and this is not restricted to only economic items. The local business community has not acquired

this same sense of the common good and has repeatedly applied significant pressure on the local authority with regard to the town plan. Business development projects are often inconsistent and poorly co-ordinated, usually directed at short term immediate interests. The public administrators are more advanced but are constrained by a restrictive bureaucracy and prolonged action times. This reduces the faith of the public with regards to the possibility in effectively concluding the administrations plans. The advanced position of the administrators is perhaps a function of their role as stimulators of political forces within a general condition of stymied political debate. This results in the administrators being forced to find new and innovative solutions to problems even though their political power is low. There have been occasions when the administrators have acted as interpreters of the public will within the political arena. Today they are often in positions where they must solicit support for single initiatives and institutions within the general political debate.

#### *Relationship between the actors*

A real open conflict between actors has not, as of now, occurred. There has been a sharpening of the differences with an acceptance in certain areas, for example that of water quality. This is also true with respect to territorial planning, where for example a major coke production company, located in an urban environment has agreed to modernise and possibly shift some operations to lower impact areas. There are ongoing difficulties in reaching agreements between actors regarding economic questions.

#### *Style of conflict management*

Conflicts have been successfully resolved with policy of negotiation and compromise between economic operators and the administration. However the process is complex, usually involving high level meetings and with the mayor's role strictly limited. The possibility exists that any action by the mayor would be blocked and a continuing set of appeals made to administrative court, thereby blocking any future progress in the matter. The relationship with the largest local industry has at times been quite open but recently is quite difficult, as the result of a the large number of diverging points. Progress has been quite significant especially in environmental impact matters but falls short of administration desires for an integrated approach.

#### *Role of facilitators and mediators*

As a result of the tightening of positions, a conflict is inevitable with the local authority acting as a mediator, along with the national Minister, the Region, the Province, the unions and other local authorities. A public information campaign is planned.

### **CREATION OF COMMON REFERENCES (values, identity and belief systems)**

The population has reacted positively to the programmes and positions put forth, sharing with the administration a common vision. But as mentioned previously there is some scepticism about the capacity to bring to conclusion the ideas set forth in the plan. This overall positive reaction signifies a major cultural advance for the general population. In fact, the present approach is to reason with the public, who now understand the breath of economic options available beyond the traditional industrial base. This cultural change has resulted from a historical series of events and with the general trend in reassigning smaller roles to industry. The attempt has been to remember the past, appreciate the local context and affront the new problems. If industry takes a secondary role in the local economics, it will be for necessity rather than for ideological tendencies. The culture of the regular workers has also been slowly modified away from centring around industry, which has lost many supporters. Those remaining are looking for alternative economic activities. This too is the result of new conditions that have changed the workers vision of the future.

The public has come to the understanding that the territory has an enormous potential and should be controlled as a competitive business opportunity. This perception has not been completely acquired by the business operators who do not envision this potential as a personal

business opportunity. But for several actions, operators have begun to support the initiatives proposed, in particular for the park projects (see initiative n. 3). But these remain the minority.

## **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

Intensive professional training has not been provided for the public employees in the environmental sector. The Aalborg Charter was studied as a result of personal initiative rather than organised training. Conferences and meetings relating to Agenda 21 as well as a conference with the national Minister of the Environment has provided valuable occasions for collective learning.

## **THE ACTION**

### **BRIEF HISTORY**

The programme was approved November 29 1996 and is presently in its start up phase of implementation. Previous work to Agenda 21 began in 1982 while it has only been in the last two years that consistent and decisive efforts were made, following the discovery of a reference programme (Aalborg Charter). This umbrella programme assisted in putting Agenda 21 in global terms and acted as a catalyst for the process. For the local authority, this resulted in a totally innovative approach as well as increasing the quality of the environmental programmes in general, beyond the historic attention to impacts. Historically the local authority limited its actions to third party projects, introducing improvements related to the most important environmental conditions. Agenda 21 and the new town plan gave the local authority the instruments necessary to create substantial improvements in programming, one result of which was the gradual reduction of areas dedicated to industry. Adhesion to the Aalborg Charter was therefore a prefiguring of this transformation and a concrete reference for the Agenda 21 movement.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS** (expectations, visions)

Agenda 21 represents an attempt to form a new model of sustainable development that bases its strength upon the local natural, cultural and historic resources. The most significant conflict was related to the environmental impact of the city's iron and steel industry.

### **OBJECTIVES**

The fundamental objective of Agenda 21 is to create a break with the past. For the local authority of Piombino, this is finalised in a programme of environmental reclamation and the promotion of a sustainable development model. Agenda 21 represents a coherent outline to integrate various environmental initiatives into a single policy. It is not an operative instrument but fixes the objectives that must then be followed with operative instruments and with the involvement of all the interested subjects. The plan covers a number of environmental sectors, including landscape, wastewater treatment, water collection and delivery (in collaboration with CIGRI; see initiative n. 4) and public spaces. Interdisciplinary aspects include air, ground and noise pollution, visual impacts, urban planning, etc.

### **Sectorial dimensions**

#### ***Environment***

The principal goal of this initiative is the identification of a sustainable model for the city of Piombino. The definition of sustainability is taken from the Aalborg Charter as a creative process that includes all the areas of the local decisional process and requires a continuous examination in the city management process. The local urban scale is considered the minimum level of intervention.

The local authority has, from 1982 to date, conducted four programmes dealing with pollution, that have all had important results - new filters in a metal facility, the increase of dust collectors

in a casting operation, the installation of movable exhaust hoods, the installation of post combustion furnaces for the emissions from a finishing operation. These projects have not significantly affected the structural problems that are related to the most important pollution problems.

The Agenda 21 objectives are to follow-up on these works in the direction of:

- Spatial planning with regards to the balance city-factory with the gradual phase-out of obsolete and polluting operations. The plan has already separated the industrial areas into categories; areas defined "saturated" are those nearest to housing, and are prohibited for future new establishments, possible facility expansions are limited to areas furthest from the city. The coke production plant is an example of a significant pollution source in the area, dusts included. It is an obsolete operation, lacking in proper air pollution devices for the coke loading process and is also located very close to a residential area. Agenda 21 provides for the re-localising of the operation as well as the coke storage.
- Environmental reclamation of the urban and industrial degraded areas. The local authority will utilise the services of the regional environmental agency (ARPAT) to co-ordinate the localisation and demolition of expired plants, eliminating a non-point source of pollution and a deterioration of the territory. The principal pollutant to control is sedimentable dust that is carried over most of the residential areas of Piombino. Italian legislation does not refer to standards for this dust, therefore increasing the efforts necessary to overcome this problem.
- Noise abatement. A variant to the town plan was approved which is directed at acoustic zoning and to the study of a plan for noise abatement. This plan has the objective of adopting more restrictive limits in areas with tourist, territorial and natural value through the modification of existing health and police regulations.
- Waste management and soil reclamation. The industrial areas contain numerous storage's of industrial wastes and process slag. The main priority is the reduction of the quantity of materials by selection and recycling. An integrated system of that includes recycling and waste separation of residential and industrial solid waste will be initiated as well as the reclamation of a dump site within the industrial area. A new facility that will convert the fines material from metals operation will eliminate the on-site storage's of such materials.
- Water use reduction and reclamation. The local authority of Piombino will initiate several projects within the integrated water and energy plan, as well as those elaborated by the water management local consortium (CIGRI; see initiative n. 4), to deal with the poor condition of the water bodies in the Val di Cornia. The principal initiatives are: reclamation of the deep water fault, the increase of efficiency of the water treatment facility and secondary water use of the effluent (this project will allow for the complete re-use of the city wastewater effluent), the construction of an industrial aqueduct to use runoff water and non-potable water supplies, a reduction in the overall water use (agricultural, residential, industrial) through a graduated tariff schedule that will discourage excessive consumption.
- Energy saving and renewable sources. The local authority, together with the Province will initiate specific studies, offer a package of services for the diagnosis of business energy uses and reduce the emissions from the Torre del Sale electric power facility to the strictest limits allowed by the national and EU standards.
- Monitoring and analysis. In collaboration with the local health agency and the regional environmental agencies, the following areas have been identified for study: epidemiological study of the population, evaluation of the re-localisation of the coke production facility, the widening of the ARPAT's measurement of noise pollution related to industrial activity and traffic with the elaboration of mitigation plans for critical areas, the use of bio-indicators for the measurement of ozone, a study on the evolution of illegal construction activity. A provincial system of air quality monitoring will be implemented and tied to meteorological data for a clearer definition of alarm levels.

## ***Economy***

The sustainable development outlined in Agenda 21 is aimed at an economic and productive diversification, the optimisation of port, industrial and artisan activities, the development of historic, cultural and natural resources of the area in connection with the parks systems (the Cultural and Natural Park of the Val di Cornia; see initiative n. 3).

## ***Socio-culture***

The requirement of sustainable development has entered into the public conscience as an integrated initiative that is also directed at lifestyle choices, production models, as well as territorial uses. This understanding is the result of the massive environmental impact that the metallurgical industry has had on the city. This industry, for many years predominately under state ownership, has operated without the minimum environmental controls and in locations that conflicted with the life of the city. The decline of heavy industry in the area has provoked a notable crisis in the city's infrastructure, employment and environment. Pollution and territorial decline heavily influence the quality of life of the population as well as present problems for the public health. From this a widespread consensus of the urgency for a major redesign and environmental reclamation was formed. The objectives of the Agenda 21 are related to a diversification of future development and therefore must be accompanied by coherent sectorial policies. One objective of the local authority is to promote environmental knowledge also through the publication of the principal environmental data, with an annual report on the state of the environment which will be distributed to all families. A new monitoring system will be installed making real time data available to the public. The local authority has further initiated a public campaign to promote saving attitudes, behaviour and values.

## **Equity dimensions**

### ***Social equity***

Agenda 21 was created in a social context, historically characterised by a strong social equity dimension, which has been incorporated into the local politics and class initiatives. The worker movement, unions, local authorities, public institutions and local authorities and social organisations have been the central protagonists in this dimension.

### ***Interregional equity***

Agenda 21 integrates positively in the overall prospective for the Val di Cornia and the aim is to involve in the programme also the other local authorities of the Val di Cornia.

### ***Intertemporal equity***

This dimension is connected to the concept of sustainability that dominates the entire programme.

## **Systemic dimensions**

### ***Diversity***

Attention has been given to the social, economic and cultural conditions of Piombino, with the objective to increase the sensibility regarding the value of the natural capital of the area through an improved resource use.

### ***Subsidiarity***

It should be noted that in recent years, there has been a decline in competence within the local authority with respect to aspects of the environment, health and worker safety. It is also argued against the competence of the Province in the aspects of ground pollution and re-use of industrial wastes, where even with the involvement of regional bodies adequate results have not been produced. One possible solution is the territorial decentralisation of the regional environmental agencies along with the empowerment of the local authorities within co-

ordinated administrative districts giving them adequate legal, technical and administrative instruments.

For instance the claimed Val di Cornia administrative district (see box n. 1) would help Agenda 21 to acquire further definition and support. ARPAT, as well other regional agencies, should in any case give more attention to the problems of the area. Environmental competence still needs to be developed.

### ***Partnership and networking***

The real process of territorial improvement requires the maximum involvement on all institutional and business levels as well as the availability of financial resources. In principle, these resources should come from the industrial businesses, but to satisfy the deservedly ambitious programme, a convergence of objectives and resources, both public and private, is necessary (e.g. by means of territorial pacts; see box n. 6). In particular, the reuse of process material from the major steel manufacturer needs to be urgently determined to harmonise the Agenda 21 objectives with those of businesses where an increase in steel production is planned with the according increases in raw material.

### ***Participation***

The local authority performed a number of consultations with a number of social groups, but failed to adhere to the prepared plan for a wider participation. The Città Vecchia association, representing the neighbourhood that directly surrounds the factory was a privileged and consistent partner in the discussions and produced a document which contributed to the formation of the Agenda 21 objectives. This document was presented in the presence of national Minister of the Environment in the most polluted area of the city. The attainment of environmental quality is seen as a complex relationship between social, economic and cultural factors requiring co-ordination between all the involved subjects. In particular, a constant degree of information, co-ordination and effort between the Province and ARPAT is necessary. A possible consultation with the involvement of representatives from industry, monitoring agencies, and unions could lead to a serious attention to instrumentation of environmental control. The involvement of trade unions is also important in efforts to improve the quality of the workplace. It is also true that, up to now, the visibility of this process was not very clear because of local authority's limitations, while there is significant convergence on these objectives.

## **PROCEDURES**

The attention of the population regarding the quality of the environment has historical roots. In 1988, a proposal of public law with more than 5000 signatures was made to lower the standards for dust concentration. This was preceded by a referendum against the redoubling and conversion of the electric power plant to coal. The preparation of four anti-pollution programmes from 1982 to date has obtained strong public and private participation. The projects that are related to the factories have been 70% dedicated to reducing impact on the outside environment and 30% on the inside environment. An examination of Agenda 21 was made by all the representative associations of the local community and successively changes in the document were made based on suggestions and preliminary discussions. The local authority of Piombino is the first in Toscana to produce their own report on the environment.

## **CHANGES IN THE RULES OF THE GAME**

Environmental legislation underwent modification during this time, passing from protective laws to more innovative ones. These changes increased the role of the mayors and shifted regulatory instruments from the local authorities to Regions and Provinces. The overall approach was also changed, moving away from direct ordinances and fines towards a series of contacts between administrators and local businesses that have a potential environmental

impact on the territory. Ordinances and fines, if necessary were issued, but in a climate of reciprocal understanding. Attention was also given to resolving technical on site problems.

### **SUPPORTING MEASURES WHICH WERE USED**

The local health agency and the regional environmental agency were involved from the beginning of the process. The same is true for the regional agency for resource recovery (ARRR), with whom the local authority is preparing a programme of environmental auditing mandating local businesses to completely control the material process, from raw material to waste disposal.

#### *Employment impacts*

Agenda 21 is not designed to directly create employment but to favour particular sectors of the employment market, in the development of a diversified economy. This should result in an increase in occupation in new areas such as tourism and services.

#### *Financial resources*

Agenda 21 is based on the resources on the local authority as well as support from other organisations (e.g. EU funding related to the CIGRI projects – see initiative n. 4). Indeed, Agenda 21 is composed of projects, whose resources can be separated in two levels. The first consists of the direct costs attributable to individual polluters in order to meet the new requirements. The second is related to instruments and plans which regard town planning and overall pollution control; their financing comes from specific sources, for example the cost of decommissioning and relocation of one of the more important facilities has a cost of 4 million ECU and is co-funded by national government.

### **SUMMARISED EVALUATION**

Following a fifteen years of programmes aimed at reducing pollution (in particular of industrial origin), LA 21 would introduce an integrated development towards sustainability.

The 1996 – 1998 Programme is largely focused on pollutant control, environmental reclamation and rehabilitation and a reorganisation of land-water-energy use by means of the following activities:

- A) Territorial planning
- B) Reclamation of urban and industrial areas
- C) Noise abatement
- D) Waste management and soil mitigation
- E) Water savings and integrated management
- F) Energy savings and renewable sources
- G) Environmental monitoring
- H) Reporting
- I) Natural park system

As an overall assessment, the following features emerge from the introductory statement of the LA 21 and are also present in the planned specific activities.

### **COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability**

*expl = explicit; s.r. = some reference; impl = implicit*

<b>Sectorial dimensions</b>		
Environment	Economy	Socio – culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

<b>Equity dimensions</b>		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

<b>Systemic dimensions</b>			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

**CONSISTENCY of different targets by activity**

Activities	Conflicting with	Independent of	Complementary to
Territorial planning			B
Reclamation of urban and industrial areas			A
Noise abatement			A
Waste management and soil mitigation			A, B
Water savings and integrated management			A
Energy savings and renewable sources		All	
Environmental monitoring			All
Reporting			All
Natural park system			A

**CONCRETENESS of intentions (objectives and targets) by activity**

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
Territorial planning	<i>expl</i>	<i>expl</i>	<i>expl</i>
Reclamation of urban and industrial areas	<i>expl</i>	<i>expl</i>	<i>expl</i>
Noise abatement	<i>expl</i>	<i>expl</i>	<i>expl</i>
Waste management and soil mitigation	<i>expl</i>	<i>expl</i>	<i>expl</i>
Water savings and integrated management	<i>expl</i>	<i>expl</i>	<i>expl</i>
Energy savings and renewable sources	<i>expl</i>	<i>expl</i>	<i>s.r.</i>
Environmental monitoring	<i>expl</i>	<i>expl</i>	<i>expl</i>
Reporting	<i>expl</i>	<i>expl</i>	<i>expl</i>
Natural park system	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl* = explicit; *s.r.* = some reference; *impl* = implicit

## SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Statement and articulated definition of a concrete path towards sustainable development</li> <li>• Reclamation and rehabilitation of areas with a high level of environmental pressure</li> <li>• Improvement of the value of natural, historical and cultural resources</li> <li>• Better resource management and reduction of consumption</li> <li>• Co-ordination and integration of key objectives within spatial planning</li> <li>• Creation of key conditions to stimulate economic and development diversification</li> <li>• Monitoring and reporting</li> </ul>	<p><b>WEAKNESSES</b></p> <p>Even though there is a wide public consensus, limits exist in the following area:</p> <ul style="list-style-type: none"> <li>• the public participation;</li> <li>• the involvement of agencies and persons who operate in the environmental sectors</li> <li>• the co-operation and co-ordination between and within the above agencies, the local authorities and the public administration</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Opposition and resistance from industry and local businesses in specific cases regarding specific objectives</li> <li>• Decrease in motivation and mobilisation of local authorities, agencies, public administration and public</li> <li>• Loss in leadership exerted by local key persons (e.g. in the local town executive board) and lowering of consensus</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Improvement - by means of new advanced methods and techniques - of participation, involvement, co-operation and co-ordination</li> <li>• Reinforcement and enhancement of the consensus process by means of negotiation, agreement, mobilisation, motivation, participation, alliance with local, regional and national environmental bodies, agencies, and key persons</li> </ul>

## BEST PRACTICES STEMMING FROM THE INITIATIVE

### SECTORAL DIMENSIONS

#### *The environmental dimension*

- To create an integrated local environmental program instead of merely reacting to projects proposed by big industry
- To shift the focus from environmental protection measures and land speculation, to environmental improvement and increase in value
- To consolidate previous experiences that have concentrated on minimising the environmental impact of industrial activities and on preventing the creation of new pollution sources
- To give strong sense of the community's definition of itself (history, cultural heritage, social cohesion)
- To elaborate tangible and realisable objectives, timing tasks to previous actions

These practices stem from a very long term process related to:

- community's identity has always been very high and it is based on a rich historical and socio-cultural heritage (from one generation to the next);
- by the end of the '60s first experiences of territorial planning had appeared including the creation of natural parks;

- plans reducing pollution (air, water, noise, ground) started in the beginning of the '80s. Therefore, this local initiative demonstrates that a strategy geared towards sustainable development has required, up to now, a very long term process of incubation.

### ***The economic dimension***

Economic and social crises (since the end of the '80s) have accelerated the above process during which there has been simultaneously:

- an increase in the awareness of the important role played by the environment in the human activities;
- a decrease in the certainty of - and trust in - previous development patterns (based on the strong role of big heavy industries)
- a wider diffusion of new knowledge related to environmental topics and to sustainability

Practices are experimented which have the following characteristics:

- from a re-active to a pro-active culture in order to anticipate economic and social change and to find out new options and opportunities, giving support to individual choices by means of structural interventions aimed at innovative and efficient utilisation of resources (land, water, energy, waste)
- from an intensive mono-sectorial development to integrated diversification of activities
- from conventional path of industrial innovation to creativity and innovation in new undertakings stimulating and promoting entrepreneurial culture in small and medium sized businesses

### ***The socio-cultural dimension***

As above mentioned, crisis stimulated the need for change, for creating a shared new vision of development. Relevant practices can be summed up as follows:

- to promote cultural change in order to have chances of future economic and social development which incorporates more and more the environmental dimension
- to adopt a socio-cultural approach aimed at changing the current styles and patterns of production, consumption and utilisation of resources (land, water, energy, etc.)
- to combine continuity with change, never repudiating the past but utilising it as a starting point for new and alternative ways of thinking and acting
- to make the cultural change less ideological and more pragmatic in order to be easy accessible to citizens
- to foster diversification and integration in human activities (from big to small and medium sized enterprise, from industry to agriculture, tourism, craftsmanship, trade, etc.) taking into account the current human and social capital in order to strengthen and improve its knowledge, skills, know-how

## **EQUITY DIMENSIONS**

### ***Social equity***

LA 21 is the result of a long term process based on historical experience, awareness and the willingness of the local population to combat unemployment, to reduce social unbalances and to reach a more equitable society. Therefore, the practice strives to:

- always take into account local needs and to conceive courses of actions which are geared towards the ongoing improvement of the quality of life

### ***Interregional (spatial) equity***

- To promote combination and co-ordination of the various initiatives which exist within the LA 21 and in the Valley

- To foster their integration since they concern a homogeneous area and interest spatial planning, water management, energy saving, etc.

### ***Intertemporal equity***

- To strengthen the path envisaged in LA 21 by means of strategic long term thinking in which an alliance can be entered into between present and future generations

## **SYSTEMIC DIMENSIONS**

### ***Diversity***

- To take into account the wide diversity of previous collective values, behaviour, practice and culture
- To be flexible and responsive to this diversity in order to seize all opportunities which are embedded in the local context
- To maintain and re-discover the diversity of the natural and man-made environment in order to utilise it as opportunity of new local development

### ***Subsidiarity***

- To strengthen the role of local authorities by means of ongoing negotiation with the Province, the Region and the State
- To improve continuously the capacity of local authorities for: recognising local problems and needs, resources and solutions; having and declaring clear rationales, objectives and tasks
- To improve their levels of knowledge, skills, networks, habits, beliefs and practices
- To maintain and improve the mission of local authorities to stay on the citizens' side and to be accessible to them
- To improve the capacity of mayors and local elected administrators in long term strategic thinking to anticipate and promote change, stimulating the social and political arena, as well as the local entrepreneurship and culture

### ***Partnership/ networking***

- To foster the historical consolidated capacity of local authorities to co-ordinate local initiatives and plans within the Valley
- To maintain and develop co-decision between local authorities and social, economic and cultural interest groups and associations
- To maintain and cultivate common interests between the town and the Valley in order to reach shared visions of development
- To improve co-operation between public and private sectors, agencies and operators both in general (e.g. economic diversification) and in specific projects (e.g. water, land, energy management)

### ***Participation***

- To maintain and develop a style of "open-door" governance from local authorities to citizens
- To involve local associations (which represent social, cultural and economic interests)
- To disseminate information and experience and to improve accessibility of this material for the population (citizens, local associations, etc.) in order to give real possibility to control the activities of local authorities (e.g. monitoring and reporting)

Limits to participation have been underlined by the promoters. They identify which practices should be pursued to make a more participatory Local Agenda 21:

- public meeting, strongly boosted by publicity in the media
- an elaboration of general aims, scope and orientation along with proposals for working together to elaborate a detailed plan
- thematic working groups to involve all citizens and associations, especially environmentalists
- a campaign of consultation meetings where global and local issues are presented and discussed
- an evaluation of the local strengths, weaknesses, difficulties and alternative solutions
- a detailed plan to identify financial needs and opportunities
- a campaign of negotiation and co-decision in order to gain consensus, as wide as possible, and to identify probable conflicts
- recurring general public meetings where the project progress (elaboration, implementation, etc.) is presented to all participants
- never to take for granted the knowledge of problems but to discover and identify them with the participants in order to have more options, alternatives and opportunities to choose
- a climate of awareness and shared vision
- a coherent activity of monitoring, accountability, reporting in order to evaluate results and performances, to adapt initiatives over time, to elaborate new courses of action to meet new needs

## **CHAPTER 6 - INITIATIVE n. 2**

### **ALTA MAREMMA COVENANT**

#### **THE ACTORS**

##### **PROMOTERS**

The promoters of this programme consist of 12 municipalities whose territories cover three provinces. These are: Bibbona, Campiglia Marittima, Casale Marittimo, Castagneto Carducci, Guardistallo, Monterotondo Marittimo, Montescudaio, Monteverdi, Piombino, San Vincenzo, Sassetta, Suvereto.

##### **SUPPORTERS**

Department of Architecture of the University of Firenze; Department of Agriculture of the Tuscany Region; local political parties.

##### **TARGET GROUPS**

The population of the valley; the local authorities acting in co-ordination; local farmers' associations; the Provinces of Livorno, Grosseto and Pisa.

##### **OPPONENTS**

Resistance to the project, in its early stages, came from local farmers and breeders associations (Confederazione Italiana Agricoltori, Unione Italiana Agricoltori, Coldiretti, Associazione Provinciale Allevatori) who considered the initiative as conflicting with their actual policies. The Province of Grosseto, that even while agreeing with the project framework, showed resistance to some of the project's objectives.

#### **PROCESS OF NEGOTIATION**

##### *Breaking the silence*

In the beginning of the '90s, the ongoing socio-economic crisis in the valley called for new development patterns. The choice was made to develop a project of diversified sustainable development that was sensitive to the needs of the population. This development made agriculture a central theme, integrating the needs of a competitive production dedicated to quality to rural development and environmental protection.

##### *New Partners' emergence*

The initiative was initiated by eight Municipalities, with four joining more recently: Casale Marittimo, Montescudaio, Monteverdi and Piombino, recapturing the culture of the territory which has historically been considered the Alta Maremma. Other local authorities, such as Cecina and Rosignano are showing interest in the project. The Covenant is open to participation within the Provinces of Livorno, Grosseto e Pisa.

##### *Relationship between actors*

The Covenant between the municipalities favours the development of a co-ordinated management of local policies, regarding tourism and agricultural activities, the protection of the territory and water resources, and incentives for economic diversification and the production of quality goods. The responsibility for the co-ordinated functioning of the activities has been assumed by a Mayors Conference, that has in turn created, from its members, a Co-ordination Office and Co-ordinator.

The administration of the activities is performed by the Mayors Conference, with an annual programme and verification of activities. The convention, stipulated in 1993 has a programmed 8 year duration with the possibility of renewal. The financial burden of the Covenant is shared by all the Communes, relative to a division established by the Mayors Conference and

according to the following parameters: 30% from equal contributions from each Municipality, 35% according to the population, and 35% based on utilised agricultural area.

#### *Style of conflict management*

The agricultural and livestock associations showed notable attention but also diffidence and rigidity. Discussions which included their participation created a more open position on all sides.

#### *Role of facilitators and mediators*

Local authorities and mayors. They expressed a clear willingness to create an area for sustainable development planning.

### **CREATION OF COMMON REFERENCES (values, identity and belief systems)**

In the Val di Cornia, the first use of the term "sustainable development" in an official act appeared in the Covenant of the Alta Maremma. The covenant takes the Val di Cornia action a step further with regards to agriculture, tourism and the general population. The restrictive nature of the municipal divisions is recognised and a common area is identified. The Val di Cornia was identified as an Objective 2, an industrial decline zone. There is some reconsideration of this classification as the rural coast area would appear to meet the requirements for an Objective 5b zone. This debate was increased with the regional Department of Agriculture's proposal to assign to the Province of Grosseto the qualification of European Rural District, therefore becoming an area of experimentation on a European level. It would seem more correct to include in this assignation the entire area historically and culturally known as the Maremma, which spreads over several provinces, Siena, Grosseto, Livorno, and Pisa.

### **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

Conferences, printed publicity, a regular written bulletin, training courses and seminars on organic farming.

## **THE ACTION**

### **BRIEF HISTORY**

The Alta Maremma Covenant was developed not only to develop the central role of agriculture but for a more comprehensive control over the Val di Cornia territory. The project was approved unanimously in all the communes in 1993 and it is presently in its development phase of implementation. This experience is leading to more widespread consequences, in fact the Association of Italian Local Authorities, Tuscany branch, gave the position of Agricultural Council to the ex-mayor of Suvereto, a key person in the Alta Maremma project, to introduce the concept of sustainability and to develop a stronger role of the municipalities in the agricultural sector.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

The most common expectation is that the project will act to reinforce a wide approach to problems in the agricultural sector, tying it in closer with tourism, improving the promotion of single local authorities and giving the latter a valuable management instrument for both administrative and procedural responsibilities.

### **OBJECTIVES**

The Alta Maremma Project is a programme promoting the efforts of a sustainable development that assigns to agriculture a central role. The Covenant consists in the development of a co-ordinated management of local policies, regarding tourism and agricultural activities, the protection of the territory and water resources, and incentives for economic diversification and the production of quality goods. The Covenant was formed as a result of the awareness on the

part of the municipal authorities that an efficient development would require efforts beyond their respective municipal confines and include a more vast geographical area.

## **Sectorial dimensions**

### *Environment*

Within the Alta Maremma, the participating municipalities have defined a “homogeneous zone” as a minimum geographical area. A programme of sustainable development for this area will be constructed around the concepts of the environment and its natural, historical and landscape resources. Within this homogeneous zone, an integration of tourism, agricultural and territorial planning activities will be made. The defence of the territory's natural characteristics and the reclamation of compromised areas are the priority objectives for the environmental protection aspects of the Covenant. These initiatives are also related to economic objectives. The proposed actions are based on the protection of the Tuscan agricultural territory and the reduction of high impact activities which effect both land and aquifer quality with the overall reduction of intensive agriculture practises with low value output. The identification of protected areas is also promoted with the scope of favouring agri-tourism, organic farming and integrated agricultural systems.

### *Economy*

Agriculture is one of the dominant economic activities of the area. The project underlines the importance in considering agriculture not only from the economic point of view but in its other important functions as well: the production of high quality and healthy foodstuffs, the protection of a territory which represents a major tourism resource.

Quality agricultural production is continually becoming more important to meet the rising demand for a new tourism product that combines the environment, active tourism, sports tourism, cultural tourism and gastronomic demands.

The covenant is aimed at stimulating the culturally based vocations related not only to agriculture, but also to Tuscan agricultural history, and in support of the market for quality goods. Specific projects are carried out:

1. to promote agri-tourism in particular that related to long term projects that utilise materials that are produced on the farm;
2. to favour the creation of quality labelling related to specific products and specific geographical areas;
3. to increase the services related to information and technical assistance for the agricultural businesses, marketing and research activities related to quality goods, including a service of promotion and distribution on a local and national scale;
4. to provide professional training.

### *Socio-culture*

The project proposes to increase the sensibility of the population with regard to sustainability and to the aspects of quality and health for agricultural products. It further works to promote an interaction and exchange between the local culture, rural activities and the value of the territory.

## **Equity dimensions**

### *Social equity*

The efforts to give agriculture a central role is related to an effort to improve the social and economic conditions of a marginalised rural population. It is further directed at recognising the function and role of this activity with respect to resource use, the production of quality agricultural goods, the conservation of environmental and territorial wealth, and the promotion of a social model that does not exclude the rural areas and does not relegate these areas to simple containers of memories.

### *Interregional equity*

Inspired by one of the main promoters of the Covenant, a multidisciplinary Scientific Committee between the Universities of Firenze, Siena and Pisa was constituted in 1994 to elaborate a Manifesto directed to the mayor-candidates of 1995. Owing to time constraints, the document appeared only after the administrative election and resulted in a workshop for the sustainable development in Tuscany "Agriculture and Territory". Three main areas for experimentation towards sustainability were selected: Val di Cornia, Val di Chiana, Val d'Elsa, ("Manifesto for the experimentation of new criteria in the designing, planning and regulating of open spaces"). The "Manifesto" is well known on the regional level and was presented at the First Regional Conference for the Environment in Tuscany in November 1995. It contains the following thesis:

- the production of environmental and territorial quality is today the most authentic gauge of wealth and well being;
- Tuscany is between tradition and innovation: the historical values of the territory are the foundations of an ecological transformation and the most precious resources in the future;
- the unity of the landscape should be reconstructed: from historic centres to historic territories; from parks to environmental systems;
- the small town networks should be developed: a European workshop of sustainable development;
- an extra-urban territory project should redesign rules, boundaries and proportions for the sustainable town;
- agriculture should be transformed from a marginal sector in an industrial society to a strategic sector in an information society;
- quality farming develops the identity of the places, reorganises the landscape according to appropriate rules, blocks the process of land consumption;
- quality agriculture contributes to reclamation, to the safeguarding and positive exploitation of environmental systems;
- agriculture promotes a different ethical and cultural relationship between town and country, inhabitants and territory;
- agriculture is conceived with a multiplicity of roles and synergy;
- the planning of agricultural and forestry territory as a whole should become a central instrument of the strategic projects of ecological transformation of the territory.

### *Intertemporal equity*

This dimension is inherent in the concepts of sustainable development, innovation and humanisation that are the central objectives of the project.

## **Systemic dimensions**

### *Diversity*

The introduction of a system of quality labelling related to the production of goods (for example livestock related) is based upon highlighting the diversity of the area.

### *Subsidiarity*

The covenant is based on the voluntary participation and collaboration of the local authorities and it is open to the Provinces of Livorno, Grosseto and Pisa, who have the identical right to vote and participate in the administrative costs for the individual projects at the same level as the participating local authorities.

### *Partnership and networking*

The covenant contributed to strengthening the bonds between local authorities in economic, tourism and cultural activities. The covenant should further promote a closer relationship between the participants and the external institutions within the Region and the Provinces, with

the result being an increase in the availability of resources dedicated to agricultural programmes.

#### *Participation*

Annual updating of the actions and the verification of the past years activities are open to the participation of the local councils, environmental and cultural groups, trade associations and all related public organisations. The programme guidelines were created in association with the related Provinces and with the professional agricultural organisations. The Conference sessions and decisions are public, the programme documents and major decisions are communicated to the leaders of the Town Council in each interested territory. Conference activities are widely circulated including the coverage by the public information services.

In particular, the participating municipalities have created a regularly published bulletin in the effort to expand the debate about agricultural problems not only to persons in that sector, but also to the related institutions and the public in general. The bulletin represents an opportunity for dialogue between local groups and the population.

### **PROCEDURES**

The Alta Maremma covenant has involved the general population as it is dedicated to improving the agricultural and tourism potential of the area. In an early phase, actions were made to increase the project's visibility and stimulate involvement in a series of press releases, public initiatives, conferences, meetings and promotional stands in the large fairs throughout the Val di Cornia. A regular bulletin has been published since May 1996 that represents a continuing dialogue between local authorities and the public.

### **CHANGES IN THE RULES OF THE GAME**

The principal changes are of institutional and decision making nature. The covenant stimulates solutions to make transparent and streamlined the relationships between the local authorities and the Provinces. Co-ordination procedures are experimented in order to make feasible: the identification of a model for sustainable development; the concept of homogenous areas that surpass the municipal territorial confines; the central role of agriculture in economic and social development of the rural populations; the protection of the environment and the natural resources.

### **SUPPORTING MEASURES WHICH WERE USED**

Regional laws concerning agri-tourism and spatial planning and building within rural areas.

#### *Employment impact*

A evaluation on the impact of this project on employment was not performed.

#### *Financial resources*

Basically resources come from the local authorities. limited Provincial funding is occasionally available in relation to requests for individual initiatives.

### **SUMMARISED EVALUATION**

Since 1993, twelve local authorities have formalised an agreement to co-ordinate and manage an integrated programme by means of specific local projects. The local authorities are located in the zone of "Alta Maremma", where Val di Cornia is embedded, and are part of three Provinces (Livorno, Grosseto, Pisa). The programme, which is yearly updated, assigns a central role to agriculture. At the moment, the main activities are as follows:

- A) Agritourism (closely linked to agricultural production)
- B) Local quality goods labelling (to certificate and to promote local products and organic farming);
- C) Business services (to provide technical support to local farmers in marketing, sales, etc.);
- D) Professional training to improve the quality of local farmers

As an overall assessment, the following features emerge which relate to contents of the “Alta Maremma” covenant; moreover many of them are considered in the planned specific activities.

**COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability**

*expl = explicit; s.r. = some reference; impl = implicit*

Sectorial dimensions		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

Equity dimensions		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

Systemic dimensions			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

**CONSISTENCY of different targets per activity**

Activities	Conflicting with	Independent of	Complementary to
A) Agritourism			All
B) Local quality goods labelling			All
C) Business services			All
D) Professional training			All

**CONCRETENESS of intentions (objectives and targets) per activity**

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) Agritourism	<i>expl</i>	<i>expl</i>	<i>specific projects</i>
B) Local quality goods labelling	<i>expl</i>	<i>expl</i>	<i>specific projects</i>
C) Business services	<i>expl</i>	<i>expl</i>	<i>specific projects</i>
D) Professional training	<i>expl</i>	<i>expl</i>	<i>specific projects</i>

*expl = explicit; s.r. = some reference; impl = implicit*

## SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Environmental and historical homogeneity of the local area</li> <li>• Shared vision of integrated sustainable development formalised for the first time (covenant) between a large number of local authorities belonging to different Provinces</li> <li>• Leadership of key persons (local mayors and councillors) who want to change the conventional development patterns</li> <li>• Change in perceptions and orientations both at local and regional level (e.g. sustainability and subsidiarity are clearly affirmed in recent regional laws and more diffused than before)</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• High turnover of democratically elected members of many local authorities versus the continuity of an integrated, creative approach</li> <li>• Emphasis placed more on co-ordination needs than on real long term planning</li> <li>• Administrative and institutional boundaries which make it difficult to cope with the environmental and historical homogeneity of the local area</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Lack of a diffused capacity to analyse, understand, anticipate and manage change and complexity of the current phase</li> <li>• Social fragmentation, radical localism, corporatism, short term thinking versus the attempts of giving a new general shared vision of development (strategic long term thinking for future generations' benefits)</li> <li>• Suspicion, rigidity and resistance from some local farmers associations</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Involvement of local actors (farmers, associations, interest groups), improving their knowledge and their commitment to sustainability</li> <li>• Strengthening of the programme by means of articulated and integrated projects finding appropriate sources of financing also at EU level</li> <li>• Enhancement of the programme through a strong alliance with the Regional Government in the experimentation of a co-ordinated and integrated implementation of recent innovative regional laws in such a way as to foster sustainable development in this large area</li> </ul>

## BEST PRACTICES STEMMING FROM THE INITIATIVE

### SECTORAL DIMENSIONS

#### *The environmental dimension*

- To define an area which is homogenous from the environmental, historical and socio-cultural points of view
- To define the above area as the ambit where initiatives of sustainable development can be elaborated and implemented, focusing on the environment, landscape, historical and cultural heritage
- To create an institutional "container"(through the covenant) where projects are elaborated and implemented within common guidelines of a shared vision of sustainable development, (the programme is yearly updated)

#### *The economic dimension*

- To promote an integrated development based on agriculture, tourism and the environment
- To support local farmers by providing technical, trade and marketing assistance, training programmes, quality goods labelling, etc.

### *The socio-cultural dimension*

- To open a cultural horizon which is adequate to and can stimulate the local socio-cultural characteristics by means of ongoing contacts and relationships with researchers and academics
- To analyse the inner motivation, values, beliefs, needs and to look at those existing in the outside world
- To give scientific value and validation to the programme and its projects
- To foster a continuous flow of scientific knowledge
- To increase the awareness of local citizens, farmers and businesses towards sustainable development, high quality and healthy products
- To improve local knowledge and culture

## **EQUITY DIMENSIONS**

### *Social equity*

- To promote environmentally friendly and high quality activities in order to combat social disintegration which has characterised rural areas

### *Interregional (spatial) equity*

- To promote the awareness of area identity over radical localisms
- To give equal opportunities to different socio-cultural, environmental and economic activities, promoting diversity of the local area concerned

### *Intertemporal equity*

- To promote a common sensibility and identity which can modify current lifestyles and make it possible that young people and future generations are attracted by real opportunities that strengthen the rural and agricultural fabric

## **SYSTEMIC DIMENSIONS**

### *Diversity*

- To identify the distinctive features of a local area and to increase the awareness of its diversity

### *Subsidiarity*

- To promote a democratic vision of the local area giving equal dignity and roles to each partner, especially between the local authorities involved, eliminating formal and informal hierarchy barriers
- To promote institutional cohesion as a means to develop socio-cultural, economic and environmental cohesion
- To give a more flexible and coherent institutional arrangement in order to meet the identity of the local area, promoting, as far as possible, the overcoming of administrative boundaries which impede the above cohesion
- To establish a co-operative decision making and governance style
- To innovate procedures and institutions to determine common decisions, initiatives and policies, maintaining and developing simultaneously responsibility, power and commitment of each local authority involved in the management of its interests
- To reduce probable institutional and procedural redundancy and to combat the tendency to create new organisms and bodies
- To streamline the decision making, enhancing transparency, accessibility and relationships between the local authorities involved

### *Partnership/ networking*

- To create a team of motivated people
- To disseminate motivation, animation and knowledge of new options and alternatives to the conventional development patterns
- To promote networking and partnership based on the growing awareness and knowledge of individual perspectives
- To negotiate and gain consensus in order to obtain a strong alliance between the local authorities involved, combating the tendency to isolation
- To strengthen relationships between local authorities (starting from common trade, cultural and tourism initiatives involving local entrepreneurs and public) in order to increase financial resources in favour of agriculture as one of the main goals

### *Participation*

- To involve local actors and the public
- To disseminate information and experience by means of the media and specific publications
- To open the decision making to all Town Councils, environmental, cultural, social and economic associations, etc.

## **CHAPTER 7 - INITIATIVE n. 3**

### **SAN SILVESTRO ARCHAEOLOGICAL MINES PARK**

#### **THE ACTORS**

##### **PROMOTERS**

The local authorities of Campiglia Marittima, Piombino, Sassetta, Suvereto, San Vincenzo and their co-ordinating committee (see box no. 4) were the principal promoters of this project. The idea for the park was born out of the long term vision of the mayor of Campiglia Marittima, in the framework of a wide research promoted by the Department of Archaeology of the University of Siena, and was subsequently supported by the other local authorities in the Val di Cornia.

##### **SUPPORTERS**

University of Siena, tourism promotion agencies, tour and hotels operators. These latter cited several contradictions with regard to lodging during the proposed park operations in the winter season. The major part of the hotels are closed for the winter, with the remaining hotels Remaining reluctantly open for scholastic trips. The tendency has remained to concentrate the hotel resources in the summer months during the traditional coastal vacation period.

##### **TARGET GROUPS**

A specific market has not been identified, even though the project is hoped to increase local tourism. An enquiry, performed in 1995, demonstrated that the visitors to the park were largely Italians (90%), from Tuscany (47%), upper to middle class families (65%) and adults (68%). Trends of the 1996-1997 activity point anyway towards the specific market offered by schools and organised groups (associations, tour operators, etc.).

##### **OPPONENTS**

There is no opposition, not even from the hunting associations. An attempt has been made to maintain an open dialogue between the different parties.

##### **PROCESS OF NEGOTIATION**

###### *Breaking the silence*

The creation of the park has arisen as an attempt to conserve the environmental patrimony that was being threatened by expanding land speculation, but nowadays it represents also an attempt to cope with the area's economic crisis. The local administrators demonstrated a long term vision and a capacity for strategic thinking in terms of tourism, employment, and environmental protection. This strategy is important as the local business environment tends to limit itself to satisfying the requirements of mass tourism.

###### *New Partners' emergence*

At the beginning the initiative was clearly carried out by the most sensible local authorities, but later on consensus and awareness of the park opportunities has increased, along with attention and involvement of local private actors.

###### *Relationship between actors*

A long tradition of cooperation and co-ordination have tied the Val di Cornia local authorities together in projects concerning parks, transportation, public health, water resources, etc. These ties were initiated in the late 1960's in co-ordinated planning efforts. The vision of the valley as a naturally united geographical area is well entrenched. A research collaboration in the San Silvestro area between the Campiglia Marittima and the University of Siena was fundamental in making this vision more public.

A connection between the San Silvestro Park and the historic centre of Campiglia Marittima was created from the collaboration between the local authority and the local public transport company.

#### *Style of conflict management*

Conflicts have not emerged because of intensive information, discussion and negotiation provided by the local authorities in order to gain and strengthen public consensus.

#### *Role of facilitators and mediators*

The mediation was facilitated by the co-ordinating committee of the Val di Cornia local authorities. This role will be increased by the creation of the stronger ties within the future administrative district (see box n. 4).

### **CREATION OF COMMON REFERENCES (values, identity and belief system)**

A Valley common identity has emerged, over a long term, which is based on the recovery of a historic identity, the protection and conservation of the environment, economic diversification, and the enhancement of the local resources. It is a vision orientated towards the increase in the values of the area, giving equal dignity and role to all the endogenous resources.

### **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

An extremely important element was the scientific contribution of the University research team that conducted the archaeological excavation in the park.

## **THE ACTION**

### **BRIEF HISTORY**

The park system in the Val di Cornia is an idea that originated in the early 1970's with co-ordinated regulatory plans, in which areas were identified as having a high naturalist or environmental value. The project initially represented a reaction to the growing land speculation in specific areas. As a result of this necessity to protect and conserve the environment, the practise of co-ordinated efforts between the valley's local authorities was born. In 1984, through a collaboration between Campiglia Marittima and the University of Siena, archaeological excavations were initiated. This was the beginning of the idea for an archaeological - mines park of S. Silvestro. By the beginning of the 1990's, the iron and steel industry crisis gave the possibility to initiate the diversification of the formerly industrially dominated economic and employment sector in the Valley.

This programme of diversification was based on the recovery and correct use of all the area's resources. The Val di Cornia Parks Society (a joint stock company) was formed in 1993 for the co-ordination, programming and management of the parks system and the S. Silvestro park is presently in its start up phase of implementation.

In 1994, the Cultural District Park of Val di Cornia project was created as a system of sites with historical, archaeological, naturalistic and environmental value, strongly tied together as part of a homogenous and integrated territory.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

A contribution of the park system to the Valley sustainable development is expected by the local actors who also think that (direct and indirect) positive employment effects can be reached to tackle the decline of the iron and steel industries.

According to these expectations, a co-ordinated and co-operative management of the Valley parks by a single society has been created because it is capable of integrating various interests and needs.

## OBJECTIVES

The principal objective of the project is the realisation of a park (and a system of parks) with European profile and audience and the creation of a model for the management of cultural and environmental resources.

### Sectorial dimensions

#### *Environment*

The Val di Cornia Parks Society operates according the objective to integrate the necessity for environmental protection with the social, cultural and economic development of the entire territory. To these ends the society promote initiatives for the study and concrete realisation of an integrated management structure for the entire park structure.

The concept of environmental and landscape preservation as a base for the creation of parks is founded on the appreciation of the relationship between the natural environment, historic-archaeological necessities and the interrelationship of different ecosystems. The Cultural District Park was conceived as a system of sites with various characteristics; historic, archaeological, forests, naturalistic, coastal. The basic strategy is that of an integrated approach both from the project side as well as the management point of view. The value of nature and environment is the principal axis in the policy of integrated management. The Val di Cornia presents ecosystems typical of the Tyrrhenian coast and the Mediterranean, in addition to which there is the mountain area of the Campiglia. The presence of mineral deposits strongly influenced the historic creation and development of the population centres in the area. The traditional characteristics of the San Silvestro Park area is that of an economy based on mineral extraction and marble quarrying. These activities have characterised the territory for more than 2000 years.

The Cultural District Park of Val di Cornia is articulated in the following projects:

- a) *parks with historic interest*; Archaeological - natural park of **Baratti/Populonia** (Piombino), which is part of a provincial system of protected natural areas and one of the largest centres in Europe of the Etruscan civilisation, the only to be located on the coast; Archaeological-mines Park of **San Silvestro**
- b) *coastal parks with naturalistic interest*; Natural and coastal park of **Rimigliano** (San Vincenzo); this park has existed for 20 years and is one of the first experiences in natural and municipal parks ; Natural and coastal park of **Sterpaia** (Piombino), which is part of the provincial system of protected areas along with the park of Baratti/Populonia
- c) *forest parks with naturalistic interest*; **Montioni** Park (Suvereto, Campiglia, Piombino and Follonica), which is part of the provincial system of protected areas; **Poggio Neri** Park (Sassetta)

The project Archaeological-mines Park of San Silvestro is dedicated to conserve and make available an extraordinary open museum of the mineralogical story of the Val di Cornia that is divided into four periods of fundamental activity: Etruscan and Roman (VII-I century BC.); medieval (X-XIV century), modern (XVI century) and the contemporary age (XIX-XX century). The park documents the story of a number of populations and their mineralogical works in the hillside mining area around Livorno over nearly 3000 years. It is an experiment in a new method to communicate archaeological facts, relating them to territorial transformations, relations between power and the classes in various epochs with the scope to revive an active dimension to the productive history of the area.

#### *Economy*

The basic economic strategy consists of: creating new employment opportunities, professional training of qualified persons in the tourist and culture-related fields, satisfying the needs for new services on the part of local industries. The parks system is structured as a network in order to offer to potential tourist a single package. Environmental protection elements of the park

management are integrated with the social, economic and cultural objectives of the entire Valley.

In this manner, the conservation of the natural and historic-archaeological resources overlaps with the rising demand for recreation alternatives and the need to preserve the social economic values of the local communities. The Park also operates a welcome centre that offers general services and food facilities for visitors. A second facility will be initiated that will serve as a restoration laboratory with exposition and service areas. A site on the Internet will be created that will increase the exposure of the park to two million potential visitors. The park should be completed in 1999, in its present state the park is at 30% of its final realisation, still to be completed are: the final version of the museum, the laboratory, the work related to the mining shaft structure, park gallery, and transportation system. To increase the relation between the Park and Campiglia Marittima, a small train and track system will be installed for transport inside the park with an eventual connection to the town centre.

### ***Socio-culture***

Most naturalist and cultural park projects have elements that highlight cultural, historic, archaeological, architectural resources that are strongly connected to the natural environment. The information that was brought forth from the excavation experience and the close relationship with the University demonstrated that the public can be strongly motivated for such local interests. Additional cultural activities are planned to further strengthen the ties that were initiated through the scientific research. The Park Museum, while not in its final form, supplies a wide range of information to visitors, as well as the most recent data from the ongoing research.

In order to improve professional quality and employment, training courses are performed (park guide; park operators; archaeological restoration, etc.).

### **Equity dimensions**

#### ***Social equity***

Even though the park project was created before the iron and steel industry crisis, it presently constitutes a possible response to the economic difficulties in the area. This is related to the positive impact on the local economic community and the real possibility of new employment opportunities.

#### ***Interregional equity***

This dimension is satisfied by the creation of a system of parks that cover the entire Val di Cornia and local authorities contained therein. The proposed "Etruscan Civilisation Park", a inter-provincial theme park that has gathered both European and international attention would tied in well with the Cultural District Park of Val di Cornia. There are also strong ties between the Val di Cornia, the Val di Pecora and Elba island. The shared history of metallurgical activities, starting in the Etruscan epic could prove to be a promotional vehicle for all three areas and in particular the Via Aurelia Park.

#### ***Intertemporal equity***

The project is based on a strategy of sustainable development and as such represents an instrument to transmit to future generations historic, cultural and environmental values of the valley.

### **Systemic dimensions**

#### ***Diversity***

The specific diversity of the territory is reflected on the base of its varying environmental character, the locally historic presence of man as well as the diverse cultural and archaeological resources that are specific for each area in the valley.

### ***Subsidiarity***

The initiatives promoted by the Valley local authorities have improved the relationships between them and the other levels of government in Tuscany. Nowadays the San Silvestro Park and the Valley park system enter within the provincial system of protected natural areas. The Province has the responsibility for managing the provincial parks and protected areas and a role in the co-ordination of local authorities proposals. The provinces, after consultation with the local authorities and the Mountain Communities present to the Region projects for territorial parks and nature reserves. After examination of these projects, the Region selects protected areas to create and partition the available financing. The selected Parks are then entered into a three year regional plan for protected areas.

### ***Partnership and networking***

Systems logic is present through the park programme: the efforts to create a model for the integration of culture-nature-tourism, the work to network a number of different parks under an integrated park management system.

The collaboration between local businesses, Universities, the Region, provincial and regional agencies, the Ministry of cultural heritage and its local branches, has led to the creation of the Val di Cornia Parks Society, an innovative administrative organism.

Another example relates to the monumental Rocca San Silvestro complex, an ancient mines-village of great historical value, located within the San Silvestro Park. The Rocca was returned to its original form as a result of ten years of collaboration between the local authority of Campiglia and the University of Siena, Department of Medieval Archaeology which carried out excavations and restoration and involved many other international Universities. On the contrary, the environmental associations did not have a significant role in this project and did not perceive the overall project strategy.

### ***Participation***

The participation by the University greatly assisted in gathering the attention of the public and strongly influenced the political debate. The Park will have a site on the Internet. Public interest in the park activities is still insufficient and whereas there are no explicit forms of opposition or resistance to the definitive park plans, there is no significant participation. The mentality related to industrial type regular work with a specific and limited job responsibility still prevails in the area. The project wants to contribute to change this behaviour and has a cultural impact in addition to modifying the economic and environmental aspects of the community. Indeed there are signs of an entrepreneurial spirit: interest of private businesses is increasing along with their participation within the Val di Cornia Parks Society, but additional time and effort is needed to stimulate further active interest.

## **PROCEDURES**

The Val di Cornia Parks Society was created by the local authorities of Piombino, Sassetta, Suvereto, Campiglia Marittima, San Vincenzo and interested private bodies. The society, largely constituted with public capital, works in conjunction with the Region. The actual private partners number over ten, with the newest being operators in the tourism and tourist transportation areas. The duration of the society is set for the end of 2050. The population perceives that this new model of development is the correct one to follow, but there is not yet a clear understanding of the overall strategy.

## **CHANGES IN THE RULES OF THE GAME**

As already described, the San Silvestro Park project is integrated in the Valley parks system which constitutes a new management model for the cultural and environmental resources of the territory.

## SUPPORTING MEASURES WHICH WERE USED

A significant support role for the scientific-technical-historical aspect was performed by the University of Siena, Department of Medieval Archaeology. The Val di Cornia Parks Society operated under the supervision of the Archaeological Superintendent of Firenze and University institutions.

### *Employment impact*

The Park actually employs 8 operators, 4 guides, 1 park guard, 1 reserve persons, 3 archaeologists. Of these persons, 16 work full time, whereas the full time persons that were employed at park start up totalled 9.

### *Financial resources*

The executive project for the first part of San Silvestro Park (2.3 million ECU) was included within the EU programme RESIDER. The completion efforts (3.5 million ECU), which are undergoing elaboration, have already been declared admissible for EU programme RESIDER. The EU contribution represents 70% of the total cost (5.8 million ECU), 30% is covered locally (80% of which by the public sector and 20% by the private sector). The basic financial strategy of the Cultural Park of Val di Cornia project is the integration of the available resources (local, regional and national, public and private). To date a total of 2.6 million ECU has been obtained from the following sources: EU structural funds (ERDF 32%; ESF 3%); Val di Cornia Parks Society (6%); National and Regional governments (40%); local authorities (19%).

## SUMMARISED EVALUATION

By the beginning of the 1980's, the local authorities Campiglia Marittima, with the collaboration of the University of Siena, initiated a long term project aimed at protecting and promoting the history of one of the most distinctive characteristics of the Val di Cornia: the mineral exploitation dating from Etruscan times up to the recent past (1978).

Promoted by the local authorities, in 1993 the "Parchi Val di Cornia SpA" (a joint-stock company) was created to manage the park within a co-ordinated system that included other natural, historical and archaeological reserves.

Nowadays they constitute the core of the so called "Cultural District Park of the Val di Cornia" which is one of the most effective and important results of a very long term process (since the end of the '60s) of co-ordinated and integrated spatial planning between the Valley's local authorities. The aim is to implement an overall management policy for the heritage of the Valley as well as contribute to local diversified development and employment.

As an overall assessment, the following features emerge which relate to the San Silvestro park activities and to objectives pursued by the local authorities and the joint-stock company which manage also Baratti – Popolunia (archaeological and natural park), Rimigliano and Sterpaia (natural and marine parks), Poggio Neri and Montioni (natural and forest parks).

## COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability

*expl = explicit; s.r. = some reference; impl = implicit*

Sectorial dimensions		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

Equity dimensions		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

<b>Systemic dimensions</b>			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

**CONSISTENCY of different targets per activity**

Activities	Conflicting with	Independent of	Complementary to
A) San Silvestro activities			All
B) Baratti – Popolunia objectives			All
C) Rimigliano objectives			All
D) Sterpaia objectives			All
E) Poggio Neri objectives			All
F) Montioni objectives			All

**CONCRETENESS of intentions (objectives and targets) per activity**

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) San Silvestro activities	<i>expl</i>	<i>expl</i>	<i>expl</i>
B) Baratti – Popolunia objectives	<i>expl</i>	<i>expl</i>	<i>expl</i>
C) Rimigliano objectives	<i>expl</i>	<i>expl</i>	<i>expl</i>
D) Sterpaia objectives	<i>expl</i>	<i>expl</i>	<i>expl</i>
E) Poggio Neri objectives	<i>expl</i>	<i>expl</i>	<i>expl</i>
F) Montioni objectives	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl* = explicit; *s.r.* = some reference; *impl* = implicit

## SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Recovery and increase in value of the local identity by means of high profile cultural content, research and dissemination of scientific findings to the local population</li> <li>• Connection of human and environmental resources through the reconstruction of the historical process which has characterised the local area (archaeological, anthropological, cultural, etc.)</li> <li>• Visible results which improve local population's sensibility and awareness</li> <li>• Grass-roots support from a strong community identity (e.g. family, tradition, local permanence) and from a positive relationship with the environment (e.g. farming and rural culture, mines, forestry, etc.)</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Marketing (communication and information) and market analysis which have to be improved to cope with tourist needs, attitudes and behaviours and to motivate them towards sustainable tourism</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Tourist operator attitudes that are short-sighted and not-environmentally aware, both at regional and national level (last minute, mass tourism, etc.)</li> <li>• Insufficient participation and a lack of shared vision of sustainable development</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Improvement in the capacity for networking and partnership both in the Valley (relating parks system to other activities) and neighbouring areas where parks are promoted (Massa Marittima, Archipelago, Colline Metallifere)</li> <li>• Increase in local and European Union awareness of and interest in the park as a potential centre of research, a school of traditional and innovative artistic activities (e.g. marble, sculpture, craftsmanship, etc.), a place of cultural and environmental tourism, etc.</li> <li>• Enhancement of co-operation with public institutions, private bodies and entrepreneurs, institutes, universities, etc. to pursue integrated and coherent objectives of development in many sectors and activities related to the park's abundant resources</li> </ul>

## BEST PRACTICES STEMMING FROM THE INITIATIVE

This initiative is the result of a long term process (about thirty years) during which many local key actors (mainly mayors and elected representatives) have created a climate of ongoing innovation while maintaining continuity for future development patterns. They expressed, more or less explicitly, the following practices.

### SECTORAL DIMENSIONS

#### *The environmental dimension*

- To protect the environment against land speculation (since the '60s)

- To assure the protection of natural parks by means of integrated spatial planning throughout the Valley, increasing the capacity of the individual local authority to cope with its own needs and problems
- To recover and increase the value of natural and archaeological resources in order to create the conditions for a local diversified environmentally friendly development (since the '80s)

#### ***The economic dimension***

- To conceive the park as an opportunity of economic development by means of activities based on agriculture, tourism, craftsmanship and the environment
- To improve the awareness of the local economic actors, stimulating them in order to create jobs and innovative activities linked to the parks system
- To give an equal role to all the local resources, increasing in value the socio-cultural, economic and environmental fabric of the Valley

#### ***The socio-cultural dimension***

- To utilise all cultural heritage linked to mines activities
- To disseminate and transfer knowledge in close relationship with universities, scientific sectors, etc.
- To promote environmental and historical culture by means of meetings, conferences, school visits and lessons, information technologies, media, etc.

### **EQUITY DIMENSIONS**

#### ***Social equity***

- To utilise the system of parks (initiated in times of full employment, high income, mono-industrial economic development) as a key-point to stimulate the start up of other sustainable activities thereby giving a pragmatic answer to the social needs of the local population (effected by the crisis in the iron and steel industries)

#### ***Interregional (spatial) equity***

- To increase the role of the parks system in order to develop and promote policies and initiatives which unify the different identities of the Valley

#### ***Intertemporal equity***

- To develop the system of parks in a coherent far-sighted strategy to give to the future generations opportunities based on intact historical, cultural, environmental and economic resources

### **SYSTEMIC DIMENSIONS**

#### ***Diversity***

- To recognise the specific environmental, historical and cultural characteristics of diverse localities and to give them equal opportunities to be recovered and utilised in a sustainable way within a common system of management and development

#### ***Subsidiarity***

- To stimulate a political climate and a style of governance which are of high profile at the local, provincial and regional level in order to give coherence to programmes, initiatives and policies pursued at those levels
- To stimulate a long term programming through increasing the capacity to think strategically, taking into account the opportunities which arise from different territories and

features of the Valley; in other words to think and to act simultaneously combining local, inter-local, past, present and future dimensions

### ***Partnership/ networking***

- To have courage to cope with difficulties and problems (e.g. the recent industrial crisis)
- To be open minded, far-sighted and willing to accept the challenge of the unknown in order to create a vision of future development which involves many options and alternatives (e.g. do not be deceived by the short term gains of conventional development patterns as experienced in the '60s land speculation)
- To support strong relationships with scientific sectors, experts, researchers, universities
- To develop such relationships in a synergetic way involving other local actors, both in the socio-economic and political sides
- To build a strong capacity within the local authorities to integrate cultural, spatial planning, land use and environmental policies and initiatives
- To create flexible and streamlined management systems (e.g. the joint-stock company of the parks) which involve both the public and private sectors
- To cultivate a open minded local entrepreneurial fabric
- To involve the above fabric in the management of the parks

### ***Participation***

- To inform, involve and mobilise local citizens and actors, improving their sensibility and awareness
- To combine research and discovery of new resources (e.g. archaeological sites) along with the efficient diffusion of knowledge

## **CHAPTER 8 - INITIATIVE n. 4**

# **INTERMUNICIPAL CONSORTIUM OF WATER RESOURCE MANAGEMENT**

### **THE ACTORS**

#### **PROMOTERS**

The local authorities of Piombino, Sassetta, Suvereto, Campiglia Marittima, San Vincenzo, Monteverdi Marittimo and the Mountain Communities of Elba and Capraia

#### **SUPPORTERS**

Under the planning point of view of the supports are the local authorities and the Region; with respect to financing, the supporters are the Region and the UE.

#### **TARGET GROUPS**

The project is targeted at all deep aquifer users, economic operators (in particular agriculture, tourism and industrial) and the general population. The objective of the Intermunicipal Consortium of Water Resource Management (CIGRI) is to direct these users to alternative water sources. Particular attention is directed to the largest resource consumers such as the steel industry.

#### **OPPONENTS**

There is no explicit opposition to the CIGRI. A certain level of difficulty can be associated with administrative delays related to the bureaucratic structure and the lack of flexibility by the local authorities including the benefiting local authorities. The informal opponents include other neighbouring agencies of water resource management (e.g. in Livorno), for their cultural and operative philosophy, being related to older concepts of large operations which is decisively different than that of CIGRI. The agricultural associations were initially opposed to the increase in territory by the consortiums of Elba and Capraia, but this was quickly resolved after a meeting and information exchange.

#### **PROCESS OF NEGOTIATION**

##### *Breaking the silence*

Following the failure of a large dam project of the early 1990's, intended to resolve the water resource problem in the valley, efforts were made to break from the traditional industrial culture of the 1980's tied to large public projects. A water reuse project (Fossa Calda) related to the secondary utilisation of thermal water was initiated as well as projects (e.g. Tirreno e Fenice) dedicated to utilising the wastewater effluent from treatment facilities for the city of Piombino. Efforts were made to consider alternative projects based on the philosophy of reuse and resource protection. A reclamation project was created for the aquifer, that consisted of a number of actions, none that would completely resolve the problems but all part of an integrated approach to the complex aquifer problem.

##### *New Partners' emergence*

Since the beginning of the 1980's, enquiries and studies were conducted to analyse and monitor the water resource problem in the valley. The consortium was created to solve this problem and its membership has changed during the past sixteen years, arriving at covering the historical links with the archipelago (islands of Elba and Capraia).

##### *Relationship between actors*

Many years of collaboration have consolidated an open style of management by means of negotiations and agreements between the parties involved.

### *Style of conflict management*

CIGRI has conducted regular meetings with the population to examine their requirements and satisfy any requests. The Piombino local authority and CIGRI have made an agreement to better guaranty the operations related to wastewater reuse with respect to the general population. The agreement also stipulates municipal control of the CIGRI's facilities.

### *Role of facilitators and mediators*

Generally speaking the local authorities acted as mediators to improve awareness of local communities, businesses and large industries (e.g. the Piombino local authority in the wastewater reuse project).

### **CREATION OF COMMON REFERENCES (values, identity, and belief system)**

A cultural change has followed the actions of CIGRI. The fundamental principals are protection of the resources and the concept of a control by water basin. The approach is based on the study of complexity. The dam project represented a challenge for the Consortium in that a new philosophy needed to be developed that was alternative to the traditional idea of large projects. This became an alternative strategy for water resource management, based on the integration of the opportunities offered by the territory and the environment. Small projects, integrated together and synergetically co-ordinated on the basis of an overall strategy.

### **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

The objectives, water savings, water reclamation and recycling are well accepted by all, the process of cultural growth is underway even though there is still an occasional request for a large infrastructure project.

## **THE ACTION**

### **BRIEF HISTORY**

In November 1981, an inter-provincial consortium was created following the initiative of the Provinces of Livorno and Grosseto, the local authorities of Piombino, Sassetta, Suvereto, Campiglia Marittima, San Vincenzo and the Monterotondo, Monteverdi Marittimo and Massa Marittima, and the Region. The Consortium was created in relation to the presentation of the Cornia Dam project desired by the iron – steel industry of Piombino. This direction of the consortium lasted up to the beginning of the 1990's when they initiated a new environmentally friendly approach to solve the problem of water shortage. Meanwhile, in December 1987, the consortium changed its legal status having the same members with the exception of Massa Marittima. In March 1993, the consortium was transformed into the Intermunicipal Consortium of Water Resource Management (CIGRI) after the exit of the Provinces (Livorno and Grosseto) and the Region. According to a new national law on local autonomy (L. 142/90), the Assembly of the Consortium was composed of mayors for each local authority. In 1995, Monterotondo withdrew from CIGRI which was followed by the inclusion of the Mountain Communities of Elba and Capraia. The first innovative initiatives were begun in the early 1990's.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

The Consortium is guided by methods that utilise the theory of complexity (e.g. E. Morin, G. Vattimo). The members have very high expectations based upon a great faith in their project capabilities and the results from completed initiatives. In comparison to other water resource bodies, the Consortium has no experience with aqueducts, but concentrates on resource and water basin management, with the environment seen as an opportunity.

## OBJECTIVES

The central goal is the hydro-geological reclamation of the territory. To this end, a programme of interventions is fundamental as is the eventual increase of the overall project targets, in particular the industrial uses which represent a major consumer of the water resources.

### Sectorial dimensions

#### *Environment*

The approach of CIGRI is one that considers the complete water cycle, with the connection of its different compartments. The analysis method utilised is based on the theory of complexity, that examines the relationships of the cycle rather than the action of each component. The Consortium's projects constitute an integrated programme to affront an overall environmental reclamation of the water cycle for the archipelago and the Tuscan coast.

CIGRI is responsible for the following activities:

#### 1. The study, protection and correct use of the aquifer and surface waters.

The Cornia river basin is fed by artesian wells from which the valley local authorities and Elba island obtain potable water. The iron and steel industry as well as the irrigation systems for the valley agricultural businesses also obtain water from the same aquifers. For over ten years, CIGRI has analysed the chemical-physical quality of the waters in the Cornia water basin. This has allowed for the creation of a model for the estimation of the water deficit. The numbers that have been estimated display a number of serious and immediate problems: the lowering of the average aquifer levels, excessive withdrawals with respect to the natural replenishing rate leading to a gradual impoverishment of the deep aquifers, infiltration of high salt content and organic content waters

CIGRI uses a specific mathematical modelling programme to predict the evolving dynamics of the water deficit and to programme water use for various needs. The model, one of the most advanced in Europe, utilises continuously calibrated information of water level in sampling wells, pluviometric data, hydro-graphic data and chemical analysis together with environmental observations.

#### 2. The integrated management of water supply and distribution facilities for residential, industrial and agricultural uses.

CIGRI has produced a plan of interventions, approved by the Municipal councils of the valley and Elba island that are directed at a series of water savings projects related to agricultural and potable supplies. The programme proposes not only to eliminate the water deficit but to reach a positive balance that would lead to the replenishing of the resources that have been already consumed. The interventions are directed at reducing the withdrawal rate and increasing the recharging of the aquifer.

The proposed interventions are:

- Potable water consumption: proper maintenance of the facilities, elimination of waste in the public sector, highly progressive water rates, permanent public information campaign
- Irrigation water: adoption of low consumption irrigation techniques, strong limitations in exploration and use rights of deep aquifers, prohibition in irrigation during the hours of highest insolation, the use of treated wastewater effluent for sub-irrigation systems
- industrial waters: activation of absolute water savings in productive processes with techniques of internal water recycling and the use of low consumption processes, the use of treated wastewater and superficial waters, use of waters from aquifers that are located distant from the coast.

The programme strives for the near complete reuse (80%) of treated wastewater effluent for both irrigation and industrial uses. This would make the Val di Cornia the leader for such practises in all of Europe. Main projects are:

- Tirreno and Fenice, two projects for the industrial use of treated wastewater of Piombino, that are presently in the realisation phase. Piombino is served by two wastewater treatment plants; one large facility, near the port that treats 2/3 of the total city with the effluent being sent into the sea, the second facility, a pumping plant sends untreated wastewater into the sea after separation. The “Tirreno” project is directed at tying together the two facilities, using the pumping facilities of the smaller plant to send the untreated wastewater to the larger facility whose capacity will be doubled. The “Fenice” project will be dedicated to installing additional treatment stages for the larger port facility and connecting the treated effluent with steel production industry in Piombino. The largest manufacturer has agreed to construct a gathering station for the waters as a point for their possible reuse in industrial processes that require water of lower quality, (dust removal, coke quenching, etc.). Other industrial water consumers have also expressed interest in being supplied with the treated wastewater. The two projects (“Tirreno” and “Fenice”) realise four fundamental objectives: reduction in marine pollution, improvement in the wastewater treatment process, industrial use of treated wastewater, and reduction in the withdrawal on the deep aquifers. The complete reuse of wastewater will make Piombino the first city in Europe to not produce wastewater, as the industrial uses will lead to a complete evaporation of the treated waters, as well as the first port city to not introduce wastewater into the sea. The reduced withdrawal rate on the aquifers will be equal to the water reuse rate and contribute significantly to returning an equilibrium to the aquifers as well as reducing their overall salinity.
- Anelli facility. This project is a system that was realised by CIGRI connecting all the potable water wells throughout the Cornia valley, mixing the well waters and distributing them to all the aqueducts. The collection and well pumping part of the system is managed by CIGRI and is dedicated at serving the water needs of Piombino, San Vincenzo and Elba island. Maintenance responsibilities are contracted to private companies.
- Fossa Calda facility. This facility was constructed by CIGRI in 1994 and is now managed by the same. The facility obtains water from the Fossa Calda (thermal waters) in Venturina and accumulates it in a 100,000 m<sup>3</sup> reservoir, that is located within a constructed forest. A low pressure distribution system distributes these waters to 60 agricultural operations as well as to a large industrial aqueduct. The farmers have first priority for irrigation purposes, while the industrial facility can remove from 1.3 to 1.7 million m<sup>3</sup>/year. CIGRI is evaluating the possibility of increasing the area covered by the Fossa Calda facility. Based on the CIGRI model, the resultant increase in the aquifer level will be approximately 5 meters.

### 3. The study, realisation and management of geothermal facilities.

#### ***Economy***

The availability of water is an element that is indispensable for the development of an area. The exhaustion of the water sources for industrial, agricultural and residential uses constitutes a real problem for the Val di Cornia. The progressive water shortage, in addition to restricting further development, threatens the actual economic activities in the territory. The concept of reuse is the most attractive from a cost benefit point of view as an exhaustible resource is threatened. The use of treated effluent will allow for an increase in agricultural earnings in areas where the aquifers have already a high salt concentration or are not productive enough to meet demand. Other projects for treated wastewater reuse are in the local authorities of San Vincenzo, Campiglia Marittima, Venturina and Riotorto.

The CIGRI aquifer model predicts a consistent increase in the aquifer levels of the Cornia. The costs of the operation should be recovered entirely with the sale of treated water. Treated

wastewater becomes in this case a commodity, producing earnings and financing the initial expenditures.

### ***Socio-culture***

CIGRI has also programmed a campaign of public information that is related to potable water consumption. In 1996 the programme entitled “put a brick in your toilet tank and win” was launched to publicise the importance of residential water consumption reduction. Large residential water consumers will be queried and efforts will be made to determine possible reductions in their overall use.

### **Equity dimensions**

#### ***Social equity***

One of the commitments of the CIGRI philosophy is that water quality reclamation and the reuse of treated wastewater improve the quality of life for all the population of the territory, as well as reduce individual water costs. Various instruments are utilised and will be strengthened, for example: financial incentives (as those provided by regional laws which promote the introduction of new systems of water savings and irrigation), differentiated methods (e.g. irrigation forbidden during the warm hours) and fare (e.g. higher cost for primary water utilisation by the industry and lower cost for secondary water utilisation, etc.).

#### ***Interregional equity***

The concept of environmental and resource protection and the idea of an integrated water basin are basic to the water management approach of CIGRI which would like to pursue inter-local equity between needs, consumption and savings. The experience up to now gained confirmed that the approach to the theories of complexity and chaos has been of relevant importance since they allow to understand how to manage services (e.g. water resources management) within a large area with complex interdependencies between local communities and different territorial characteristics.

#### ***Intertemporal equity***

The above mentioned approach changed the conventional way of water management: from exploitation of ad search for new resources to the savings of the available ones; from dispersion and pollution to reclamation; from resources deficit to their increase (e.g. the current unfavourable water balance of the Valley is estimated to change in a favourable balance in the next ten years' time). Thus, CIGRI is strongly tied to hand down renewed resources to the future generations, since the reclamation of the territories aquifers is directed at guarantying the resource for the future.

### **Systemic dimensions**

#### ***Diversity***

The different CIGRI initiatives are designed to be synergistic while functioning autonomously. They are part of a single programme goal that assumes complexity as an operating method. Each project has multiple and overlapping results and should be viewed with respect to the strengthening effect it has on the other projects. The water management goals are directed at the transformation of the civil and productive structures into a network that behaves cyclically. The philosophy is to have a single minimum withdrawal that will be off balanced by the natural water cycle, followed by series of uses and treatments that consent the reuse of waters in other sectors without additional resource request.

The territorial water resources are, in fact of differing qualities that can be distributed to meet the differing requirements for each sector. A correct planning of water use and management of water resources should identify the quality of the water necessary to meet the requirements of the end use.

### ***Subsidiarity***

CIGRI has a very close relationship with the local authorities, supplying assistance and technical advice. CIGRI, while planning on transforming itself in a joint stock company is not characterised by the rigidity that often hampers the local authorities in their public services. CIGRI's human resources programme reflects that of a modern private organisation, using the same methodologies (worker motivations, process control, procedure simplification, etc.). The objective is to attain a re-organisation for each process, through overcoming the concept of organisation as a function, according to the Hammer-Chamy theory on re-engineering. This methodological patrimony could represent also a reference model for renovating the local authorities' organisation. CIGRI operates within the following institutional and legal framework. The Region, in co-ordination with the Provinces has the responsibility for programming of hydro-geological resource management. To comply with this function, the Province of Livorno elaborated, with the assistance of the Istituto di Ricerca Ambiente Italia an integrated provincial plan for water and energy that contained the guidelines set down by the Province in water resources. The priorities identified for the Val di Cornia are the following: reduce the withdrawals from the aquifer, eliminate the withdrawal from coastal wells, protection of the water supply destined for human consumption.

### ***Partnership and networking***

Many types of partnerships were created by CIGRI. A recent one is constituted by a General Convention which regulates the relationship between the local authorities of Piombino, Sassetta, Suvereto, Campiglia Marittima and San Vincenzo, CIGRI and a national gas company, Italgas. The scope of the Convention is to permit the gas company to manage the operations related to distribution of potable water and to manage the treatment and wastewater in addition to the gas distribution operations. CIGRI is the programming agency and collective interlocutor with Italgas.

Networking is intensively utilised by CIGRI, being in close relationships with universities (e.g. Pisa, Vienna, Madrid), researchers, scientists, as well as with other consortia and enterprises of water resource management in Italy and abroad.

### ***Participation***

CIGRI has a long history of collaboration with the local communities, businesses, environmentalist groups and other associations. Their involvement in the business management is considered as being very profitable and useful to solve problems (e.g. with local agricultural businesses to solve irrigation problems). To this end, CIGRI has initiated a permanent confrontation and co-decision-making with trade associations, public technicians, etc. to satisfy the needs of the businesses.

## **PROCEDURES**

Flexible procedures have been introduced and enforced by CIGRI, as a consortium that has characteristics of a special business, giving it full entrepreneurial, functional and organisational autonomy. It has power to represent the local authorities in their relation with other businesses and institutions (e.g. Italgas, who were given the gas and potable water distribution concessions; the Water Basin Authority, etc.). CIGRI has acted to make the relationship with the population a high priority, both to avoid eventual conflicts and as an instrument to spread information and environmental sensibility.

## **CHANGES IN THE RULES OF THE GAME**

The adoption of a method centring around complexity makes CIGRI a type of "macroscope", an instrument for water resource management that allows for an integrated approach to territorial and environmental control. An instrument that can be utilised to examine the larger items "up close", analysing water deposits, elaborating best practises for savings and reclamation and stabilising the most appropriate use for different qualities of the resource.

## SUPPORTING MEASURES WHICH WERE USED

Technical information is gathered as part of the service that CIGRI performs, especially information related to changes in laws, regulation, financing, etc., in part with the assistance of the regional functionaries. Such assistance is particularly fundamental for the bureaucratic and administrative aspects of the initiatives.

### *Employment impact*

In 1985 there was a single dependant, presently there are six.

### *Financial resources*

The financing has been attained principally from the use of EU Structural Funds. The projects "Tirreno" and "Fenice" have obtained a financing of 7 million ECU, of which 4 million ECU are public (Resider II, ERDF) and 3 million ECU from private sources (including the largest steel and iron industry). With regard to these investments, CIGRI acted as guarantor, having access to loans of equal value through credit institutions whose accrual is covered by the industrial investor. In substance, it is a note guaranteed by a supply contract. The facilities at Fossa Calda was financed with the Integrated Mediterranean Programme (European Community 1988).

## SUMMARISED EVALUATION

During the last sixteen years, important changes have led to the integrated management of the water resources in Val di Cornia managed by a consortium which involves representatives from the traditional local authorities of the Valley, adjoining local authorities and the Mountain Communities of Elba and Capraia (archipelago islands).

The principal aim is to deliver water of good quality (healthy) to the citizens, stopping the historic process of water resource impoverishment (with the consequent increase in the saline levels in the acquifer and land) and reclaiming the resource by means of a Valley co-ordinated long term project of water savings. This project includes, among various activities, the following:

- A) Re-utilisation of purified water (civil, industrial, etc.) in industrial plants where they will be vaporised;
- B) Secondary utilisation of thermal water in agriculture and industrial plants.

As an overall assessment, the following features emerge which relate to the long term project and to the above mentioned specific activities.

## COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability

*expl = explicit; s.r. = some reference; impl = implicit*

Sectorial dimensions		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

Equity dimensions		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

Systemic dimensions			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

### CONSISTENCY of different targets by activity

Activities	Conflicting with	Independent of	Complementary to
A) Re-utilisation of purified water			B
B) Secondary utilisation of thermal water			A

### CONCRETENESS of intentions (objectives and targets) by activity

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) Re-utilisation of purified water	<i>expl</i>	<i>expl</i>	<i>expl</i>
B) Secondary utilisation of thermal water	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl* = explicit; *s.r.* = some reference; *impl* = implicit

### SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Project's creativity and innovation both in the objectives and in management style</li> <li>• Communication and visibility of the project to citizens, businesses, farmers, etc.</li> <li>• Important role played by the project as a good example at the EU level</li> <li>• Improvement of the local ecosystems by means of new water-savings activities which favour biodiversity</li> <li>• Utilisation of strategic and lateral thinking to improve the capacity for complexity management</li> <li>• Utilisation of humanistic culture in order to improve the entrepreneurial capacity</li> <li>• Quality standards (ISO and EMAS)</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Some technical aspects need to be solved to improve the overall effectiveness of the water management network</li> <li>• The presence of geological boron (because of the Larderello deposits) which recently has been revealed to be unhealthy for human beings</li> <li>• Bureaucratic behaviour still present in some public administrations which can influence negatively the effectiveness of this project since it is based on wide and intensive relationships</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Administrative constraints (e.g. a single operator throughout the provincial territory) which can hamper and lessen the diversity and richness of this experience as well as political and managerial autonomy within a natural homogenous water district (Valley and islands)</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Improvement of the overall project by a continuous research of needs, problems (e.g. boron) and solutions (based on water reclamation strategy and correct water utilisation)</li> <li>• Change in the role from provider of water to manager of direct services to citizens, with creativity and innovation</li> </ul>

## **BEST PRACTICES STEMMING FROM THE INITIATIVE**

### **SECTORAL DIMENSIONS**

#### ***The environmental dimension***

- To utilise humanistic and philosophical theories (e.g. E. Morin, G. Vattimo) in order to understand the current change (e.g. uncertainty, complexity and chaos) in order to improve the capacity for anticipating it, conceiving and implementing innovative courses of action
- To adopt a long term holistic thinking able to cope with present and future needs
- To conceive various alternatives in order to be able to take the necessary risk to solve problems (e.g. De Bono - lateral thinking)
- To conceive and diffuse a method which refuses political and administrative boundaries in favour of hydro-geological dynamics
- To emphasise the role of water savings and recycling as the first economical “well” to exploit (a virtual well with better yield than the real ones) and the best way to have more water
- To conceive and utilise “macroscope” as a way of thinking and a methodology which pinpoints the analysis of relationships between the individual components in order to allow the management of a complex system as water utilisation
- To analyse the resources of a territory as a single basin in order to identify the water budget (relationships between precipitation and utilisation), to elaborate maps of pollutants, polluted and still pure and clean resources, as well as the their best diversified utilisation, including recycling of purified dirty water
- To elaborate easy-to-manage mathematical methods in order to monitor and forecast the amount of water resources, their quality and level of consumption with the aims of having a just in time accessible instrument of information to the local population, actors, operators and authorities
- To create an integrated and homogenous mechanism which aims at aquifer reclamation (e.g. against pollution, increase in the saline levels, subsidence, water deficit, etc.) by means of its full re-utilisation and savings in a single large territory (e.g. the Valley, the archipelago, the Tuscan coast)
- To elaborate projects aimed at reaching a positive water balance, timing the reconstruction of hydro-geological resources in the medium and long term
- To increase the European significance of the project (e.g. to make it possible that Piombino can be the first Mediterranean town which does not sent its treated effluent to the sea)
- To conceive of water utilisation strategies which can have positive influence on the local ecosystems by means of new activities and interventions (e.g. protected small lakes and areas, didactic parks, etc.)
- To strengthen alliance with environmentalist and naturalistic associations in order to develop and manage these activities and interventions (e.g. WWF)
- To research new topics in order to cope with environmental and health problems of current and future utilisation of water (e.g. boron)
- To develop relationships with other local experiences in national and foreign regions, as well university, researchers, academics, etc.

#### ***The economic dimension***

- To make the public aware that the water deficit hampers the local economic development
- To make water utilisation an eco-profitable way to cope with market, businesses' behaviour, determining economic conveniences and limitations, as well as underlying

opportunities and threats which stem from the improvement and the worsening of the current situation

- To make the full secondary utilisation of treated wastewater attractive to industrial and farming activities (improving at the same time the treatment process and effluent)
- To make water savings attractive to the household economy
- To create a self financing way, supporting the project with adequate revenue from industries, farming, families
- To support all the above measures by increasing tariffs for increasing water consumption (especially if they are clean potable waters) and by decreasing tariffs for water savings and recycled water utilisation
- To support all the above measures with direct economical benefits (e.g. promoting the utilisation of financing provided by the regional laws to build low water consumption installations - 50% of the entire cost) and with economical disadvantage avoiding (e.g. fines enforced when water is wasted, not respecting local authorities' decisions for its more efficient utilisation in agriculture, industry, etc.)
- To make the water savings and rehabilitation an economic efficient way to reduce the water deficit and pollution in a large water district (Valley, islands and coast)

#### ***The socio-cultural dimension***

- To improve and transfer knowledge among the end-users of water resources (farmers, industries, inhabitants) in order to educate them as to a individual and collective behaviour assuring a correct lasting productive and efficient utilisation of resources
- To make the public aware of the fact that "water quality depends on its individual quantitative consumption"; individual water savings would make it possible to save an overall large quantity, to improve quality and cost (healthy and less expansive water), to create better environmental conditions, and to improve the overall quality of life and the ecosystem

### **EQUITY DIMENSIONS**

#### ***Social equity***

- To improve the quality of life of the local population, increasing water and aquifer quality and, simultaneously reducing consumption and costs in favour of citizens, farmers and industry which do not waste this precious natural resource, including the use of recycling (social equity through the integration of various and articulated saving measures)

#### ***Interregional (spatial) equity***

- To make water and aquifer reclamation a visible operative way through which all local communities of the area concerned give each other common opportunity to improve their standards of living

#### ***Intertemporal equity***

- To conceive water resources as an heritage for, and a loan from, future generation, fully recognising that the ongoing water deficit is a threat to current and future socio-economic development

### **SYSTEMIC DIMENSIONS**

#### ***Diversity***

- To assume complexity as method and approach to conceive and evaluate interventions upgrading each other effectiveness

- To fully recognise and monitor local water resources, taking into account their diversity in quality and quantity
- To lessen water consumption by means of an integrated system of measures and activities, each of them with its own autonomous function and role within a co-ordinated project
- To improve local human capital and entrepreneurial culture (within CIGRI and its relationships with other bodies) in order to feed a coherent learning system based on the leadership of change agents which continuously stimulate innovation, creativity, problem solving and risk taking by means of new projects, options, anticipation of future scenarios

### ***Subsidiarity***

- To elaborate and implement an integrated project which allows a flexible management of the many variables which influence each other
- To utilise regional and national laws, provincial plans and orientations, as well as European directives and programmes, in order to make possible the implementation of local projects
- To adopt organisational subsidiarity which is based on innovative theories concerning corporate vision, mission, motivation and participation (e.g. “open door” management; from control to responsible autonomy; from supervisors to coaching and tutoring; from hierarchical to flat decision making; from individual tasks to team work; etc.)
- To adopt a style of management which opens the corporate organisation to clients and final users’ involvement
- To closely collaborate with local authorities developing and promoting institutional subsidiarity as far as relationships with the Province, the Region and the State are concerned
- To help local authorities and public administrations to improve their own style of governance and management by means of a clear and evident example of de-bureaucratized organisational system

### ***Partnership/ networking***

- To foster the practice of co-ordinated initiatives historically adopted by local authorities in managing local resources and potentials
- To improve the capacity of local authorities and populations to cope with their own needs on a wide mutual networking base, where individual deficits are compensated by neighbouring resources and individual efforts have positive influence with each other
- To be a managerial operative example of partnership and networking between local authorities, as well as between private and public bodies
- To develop collaboration and co-operation with industrial consumers in order to stimulate them to invest and change their production processes in favour of more environmentally orientated water utilisation

### ***Participation***

- To involve clients and end-users in order to improve their participation which have direct effects in the management of the water resources
- To conceive of innovative ways of delivering information to and obtaining participation from citizens (e.g. real time electronic information windows on the water quality; customer, home-delivery and special services; fare policy; “water-taster”; clients’ rights charter; water savings special awards and campaigns; monitoring of clients satisfaction; conferences, meetings, training and education initiatives; media; didactic parks; etc.)
- To diffuse scientific information and knowledge, studies on current situation, forecasts, alternative scenarios, etc.

## **CHAPTER 9 - INITIATIVE n. 5**

### **ORGANIC FARMING "LA BULICHELLA"**

#### **THE ACTORS**

##### **PROMOTERS**

The original promoters were four non-local families that are connected through volunteer work. Presently, there remain two of the families.

##### **SUPPORTERS**

Local institutions, including the local health department and local authorities have always supported the project. Particular attention was given by the ex-mayor of Suvereto, but also the local population and the local police.

##### **TARGET GROUPS**

The principal target is the Val di Cornia population. The recipients of the initiative have changed through the years. Initially, the farm offered summer school preparatory courses combined with temporary housing for the students family at low prices, thereby combining make up lessons and vacation in a natural setting. The social activities have always been directed to the youth and in particular for problem youth. There are numerous stories of young persons who have had positive experiences on the farm, finding the opportunity to socialise, and assume new initiative. The target groups for the agricultural products are the consumers of high quality organic produce. The guests have consisted of 30% non-Italians, with the Italians coming predominantly from northern Italy. The guests are usually middle to upper class, younger than 50 years old who have chosen an agri-tourism vacation based on choice rather than economy.

##### **OPPONENTS**

There has never been significant opposition to the project. There was initial diffidence towards organic produce which dissolved after information campaigns and the positive results of the farm operations.

##### **PROCESS OF NEGOTIATION**

###### *Breaking the silence*

In the 1970's, the initial promoters discussed the creation of a family structure that was different than the traditional, closed structure. During this time the members were significantly involved with social work. Even while the religious and political backgrounds of the members varied, they shared a common vision of creating an open family condition and offer services to the disadvantaged. An agricultural setting seemed the most appropriate because they were convinced that the farm environment offered the more resources than an urban location for assisting needy or disadvantaged subjects, both from the employment viewpoint and from the human relations viewpoint being in direct contact with nature.

###### *New Partners' emergence*

New partners emerged in the form of a traditional agricultural consultants and local farmers (e.g. through the creation of a study group for the cultivation of olives utilising bio-dynamic techniques). Psychiatrists and social assistance organisations also became involved through the creation of a group for the study of youth problems.

###### *Relationship between actors*

The objective of the group was never to escape from the city, rather to enter into the life of the Val di Cornia area and to actively participate in the cultural and political life of Suvereto. This

objective was reached, in particular by a Bulichella member who became vice-mayor and municipal councillor, presently responsible for public works and budget planning for the local authority.

#### *Style of conflict management*

There were no noteworthy conflicts with external actors. More often efforts were needed to resolve internal conflicts that were often quite significant. These were related to the structure that the members gave to the group. The group was not organised as a commune, as was popular in those years, rather every family had its own space. There were however strict rules and all decisions had to be unanimously supported. When this could not be achieved, third parties were consulted.

#### *Role of facilitators and mediators*

The Bulichella members, in collaboration with local key actors (e.g. the mayor) developed an intense activity to diffuse the principles of this initiative and to demonstrate its results, realising a strong relationship with the local population.

### **CREATION OF COMMON REFERENCES (values, identity, and belief system)**

There was a strong desire to demonstrate that an agricultural business could act as the centre of a wide number of cultural activities. The objective was to create a situation in which the agricultural activities (e.g. production of olive oil, wine and cereals) could be combined with social services. This integrated approach could assist in raising agriculture from its marginal role strictly tied to the marketplace. This was part of an overall effort to make organic farming not only self sufficient but profitable, becoming suppliers for major food distribution chains.

### **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

The promoters, who had no agricultural background, utilised their past experience (e.g. one of them has acquired a long expertise as a manager for a multinational electronic corporation) to deal with the new activities, along with self training, exchange of experiences, lessons, methods and practices with other initiatives, in Italy and abroad.

## **THE ACTION**

### **BRIEF HISTORY**

After a period of planning that began in the late 1970's, four families from different parts of Italy created the Bulichella in 1984. The project was conceived to include agricultural, cultural and social activities. The four families looked for an geographical area that offered an excellent natural setting. The area between the cities of Siena, Grosseto and Livorno was seen to have the most attractive qualities. They began a search to determine a possible location for their activities in organic farming. They obtained the advice of one of the Italian fathers of organic and bio-dynamic farming (Ivo Totti). Agri-tourism activities were also initiated in parallel and the business was registered in the Regional agri-tourism list even though the law was only made on a national level. Presently there exist the Bulichella agricultural business (organic agriculture and agri-tourism), the non-profit Progetto Bulichella (Project Bulichella, registered as a volunteer social organisation) and the Bucchero store.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

The expectations have changed from the beginning days to the present. The group was not founded on religious or political grounds but has maintained the vision of the reconciliation between man and nature. However, the interpretation of this vision has been modified throughout the years, signifying a continuous maturation of ideas and direction. The promoters had a strong motivation that helped them overcome the absence of material gratification.

## **OBJECTIVES**

There were no major changes in the overall strategy of the business (organic farming, agri-tourism, social reinsertion of people with disadvantages) but a reformulation of objectives is planned for the future to renovate the business. The future objectives are directed at carrying forward the poly-functional business project and to create a new direction with respect to the agricultural business. The Bulichella is striving to increase the role of agriculture within its overall activities with respect to the marginal role that it has played for some years. For this reason the decision was made to open the Bucchero store and control all the production processes from within, producing preserves, conserves, vegetable broths, olive oil and high quality wines. They have decided to dedicate themselves to creative and stimulating agriculture, facilitating social integration for disadvantaged persons. For the objective, the Project Bulichella was created. Future efforts will be made to increase artisan activities on the grounds.

## **Sectorial dimensions**

### ***Environment***

After the beginning years of renovating the farm, the business became a sort of pilot project not only for the adoption of organic farming methods but for the introduction of technical innovations, one of the most advanced in the valley. One particular item of pride is the wine cellar that uses modern steel vases with electronic temperature controls. In fact, one of the most important results has been the creation of a high quality wine, made from organic grapes and an ecologically sound wine making procedure.

### ***Economy***

The farm received organic certification and the denomination of controlled origin labelling for the Val di Cornia wines. They participate in many of the major wine conventions, from Tokyo to Grosseto. Until a short time ago, the consumer of organic wines had to be satisfied with wines of average quality. The Bulichella proposes that wine must be above all good with the fact that it is organic as an added quality. The first red wine produced in 1996 ("Il Tuscanio") was judged as the best red organic wine in Italy.

The principal products, wine and olive oil are exported throughout Europe and in Asia. All the production, sales and marketing responsibilities are performed within the business. Related products (marmalade, honey, cereals, preserves) are sold in the group store along with other products not locally produced.

Some products are not for sale but for internal consumption as the decision was made to not purchase foodstuffs from outside sources but to produce everything on the premises, with the exception of several basic items, (coffee, rice, etc.). This decision of questionable economic advantage, was made for ethical reasons.

The physical structure can house a maximum of 30 persons and covers 34 hectares of land (from the original 26 hectares). The agri-tourism activities have diminished in the years following the decision of the promoters. During the initial years, agri-tourism counted for almost 40% of the earnings. This was the result of a need for capital to cover agricultural expenses and the need for quickly available money as agri-tourism offered immediate short term earnings. Presently, agri-tourism activities total 18% of the total earnings with the plan to reduce this to 10% by the year 2000 as a result of new sales from the increased production of wine.

### ***Socio-culture***

There are numerous activities that are performed in Bulichella, among those more directly related to the socio-culture dimension are:

- Organisation of the "youth summer" for children from Suvereto of 6 to 12 years
- Organisation of professional training courses for disadvantaged youth

- Social reinsertion through insertion into a family, drug recovery and assistance for the socially disadvantaged
- Management of a artisan laboratory, cloth and ceramics for children at risk
- Courses for agri-tourism operators and organic farming
- Predisposition of vacation structures for creative experiences, manual labour, art courses, traditional product making.

## **Equity dimensions**

### ***Social equity***

One of the best results was to offer to adolescents and young persons the possibility to be part of social group, helping them to avoid marginalisation through numerous projects (family living, Youth Summers, artisan workshops, professional training courses). With the opportunity of living on the Bulichella facilities, an exchange of experiences and culture facilitated an enrichment for both the residents and guests. An international setting intermingled in an agricultural atmosphere provided an excellent possibility for positive reciprocal exchange.

### ***Interregional equity***

The Bulichella model demonstrates that an agricultural activity can re-acquire a central role in the economy and the society. It is furthermore an example of an approach that can be transferred to other situations with different characteristics. For example, the Bulichella promoter will act as representative for the farmers within the Val di Cornia workshop, one of the three area identified by the regional association of local authorities (ANCI) to experiment local sustainable development (see initiative n. 2 – Manifesto on “Agriculture and Territory”).

### ***Intertemporal equity***

According to the promoter of the Bulichella, the future of agriculture will be in organic production, even if the present numbers are rather small. In fact the Bulichella is continuing research activities and information activities on new low impact techniques, most recently it formed a study group for the cultivation of olives using bio-dynamic methods. The combination of healthy production methods and environmental protection will benefit future generations.

## **Systemic dimensions**

### ***Diversity***

The Bulichella has, since the beginning, attempted to organically cultivate products that are typical of the area. This choice was made assuming a large business risk, as the area did not have persons who could support such a choice. In addition, organic agriculture, once started does not have a large area for cultivation variations, this is especially true with respect to wine production. Courses were offered in alternative cooking using local produce, but these could not be repeated for a shortage of human resources.

### ***Subsidiarity***

The Bulichella has developed an open style of management both internal and in respect of other businesses, the local authorities and the population. For these reasons, the Bulichella become a reference point for the population and the local institutions with respect to socio-cultural problems of man and his report with nature.

### ***Partnership and networking***

The collaboration with scientists and experts was instrumental in the cultural direction and organic production activities of the farm. The farm also collaborates with several universities in research on new wine making methods to reduce the concentration of sulfites in wine. A collaboration with the local health agency and the local administrations is also planned

regarding volunteer work. The Bulichella promoter is also a co-ordinator in the Tuscan Organic Producers Association and other similar associations.

The Bulichella project was an early shareholder in the ethics bank. The promoters strove to exchange ideas and experiences with other farmers, organic or not, in an effort to open up roads to communication and inform other producers of the importance of organic methods. The Bulichella contributed to the creation of a booklet with the European Partner for the Environment entitled "Tourism, leisure, nature protection and agri-tourism: principles, partnership and practice" (University of Exeter, 1996).

### ***Participation***

The entrepreneurial culture present in the organisation allowed all the collaborators to feel part of the overall direction of the business. This made it possible to create strong visible motivations that contributed to the success of the agricultural operations and the social actions, as well as to the increase in public consensus.

### **PROCEDURES**

The relationship with the local population has completely changed in the last 13 years. The promoting families came from other parts of the country and were therefore considered outsiders in the area. The project was considered more as a lifestyle choice and not related to the community. As time passed public attention about the farm increased based on the excellent relationships that were constructed with the local population. This reached its maximum the moment that an association member was given a public office and therefore called on to be a representative of the community.

### **CHANGES IN THE RULES OF THE GAME**

The Bulichella experience demonstrates that it is possible to perform agriculture in a creative and stimulating manner, not only producing high quality items but integrating social work to benefit the disadvantaged. One lesson that can be taken from this experience is that new agricultural businesses must understand how to make investments, be knowledgeable in marketing, finance and law and be tied into the local cultural setting. This requires a new agricultural entrepreneurial mentality. Obviously, the farmer must be knowledgeable of the land and cultivation processes, but new skills are necessary. While technical skills can be hired, entrepreneurial skills must come from within the business. The initial years were difficult because there was a strong decentralisation of the market, (organic wheat had to be transported to Val di Susa for an expensive milling process). The market, both supply and demand, for organic produce was not yet developed in the Val di Cornia. There were no persons who acted as representatives for fresh local produce. The solutions were found in transforming the product, while succeeding in maintaining its quality.

### **SUPPORTING MEASURES WHICH WERE USED**

As a result of the delay in Italian legislation with respect to European, there were difficulties in finding support for the activities performed. The promoters actually risked legal penalties for the wine making process utilised as the related regulations had not yet been developed. The information and organisational ideas were obtained in person through study, participation at conferences etc. The force required arose from the past professional experiences of all the promoters as well as from personal culture. Outside experts were brought in to acquire the necessary technical experience, (wine making, chemical analysis, etc.)

### ***Employment impact***

Presently the Bulichella employs four full time persons and an additional two persons for agri-tourism activities. The number of initial employees were two.

### Financial resources

The Bulichella has never accessed public or EU financing partly as a result of age limitations in available programmes. The investments came from the promoters themselves and the re-investment of the business profits, apart from a small bank loan. A significant part of the economic resources were invested in the restoration of the cultivation machinery and the modernisation of the wine cellar and equipment. In the next few years, the fruit of these investments should be visible. In the year 2000, the total sales is estimated to reach 5 million ECU which will allow for a sufficient economic equilibrium.

## SUMMARISED EVALUATION

Twenty one years of dynamic efforts and innovative change have characterised this local initiative which started as a multi-function organic farming in 1984. Created by external promoters, with different professional backgrounds (e.g. industrial manager), the Bulichella became an example of close integration in the local socio-cultural, political and economic environment. Its vision, missions and objectives are clearly shared by the local authority making it possible for the leader of this initiative to hold an important position in the local government for many years (as vice-mayor and responsible for many policy fields).

The main objective is to foster local sustainable development by means of an innovative entrepreneurial culture which combines the following activities:

- A) organic farming
- B) agri-tourism
- C) social reinsertion of disadvantaged people

As an overall assessment, the following features emerge which relate to the above mentioned activities.

### COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability

*expl = explicit; s.r. = some reference; impl = implicit*

Sectorial dimensions		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

Equity dimensions		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

Systemic dimensions			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

### CONSISTENCY of different targets by activity

Activities	Conflicting with	Independent of	Complementary to
A) organic farming			All
B) agri-tourism			All
C) social reinsertion of disadvantaged people			All

### CONCRETENESS of intentions (objectives and targets) by activity

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) organic farming	<i>expl</i>	<i>expl</i>	<i>expl</i>
B) agri-tourism	<i>expl</i>	<i>expl</i>	<i>expl</i>
C) social reinsertion of disadvantaged people	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl* = explicit; *s.r.* = some reference; *impl* = implicit

### SWOT ANALYSIS OF THE INITIATIVE

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<ul style="list-style-type: none"> <li>• Entrepreneurial capacity for accurate planning in medium - long term</li> <li>• Long term shared vision which anticipates change, gives options and hypotheses to solve problems</li> <li>• Ethical commitment to missions which are coherent to the vision</li> <li>• Strong engagement to meet the expected objectives in a flexible and pragmatic way</li> <li>• Right mix of experience in other activities, capacity for risk taking and problem solving, willingness to meet shared expectations of a new style of life orientated towards the reconciliation between human and environmental quality</li> <li>• Total environmental quality of products and processes</li> <li>• Economic and financial balance</li> <li>• Farming multi-functions in order to improve productive flexibility</li> <li>• Insertion in the local context by means of innovative social, economic, environmental and cultural activity</li> <li>• Member of ethics bank</li> </ul>	<ul style="list-style-type: none"> <li>• Concentration of responsibilities and activities in few persons</li> </ul>

<b>THREATS</b>	<b>OPPORTUNITIES</b>
<ul style="list-style-type: none"> <li>• Team disintegration if the vision is not longer shared by the partners</li> <li>• Continuity depends on future generations willingness to continue sustainable agriculture</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of the innovative role in the local and general context (e.g. being involved in not-for-profit sector, research and implementation of new activities and approaches in education, health, economy, etc.)</li> <li>• Multilevel and multi-sectorial methodologies which integrate and co-ordinate innovative courses of action with flexibility (both entrepreneurial, social, political and administrative)</li> <li>• Improvement of the activities to give them a more integrated multi-functional organisation</li> </ul>

## **BEST PRACTICES STEMMING FROM THE INITIATIVE**

### **SECTORAL DIMENSIONS**

#### ***The environmental dimension***

- To improve environmental quality related to agricultural activities in order to protect and increase the value of natural resources by means of their wise utilisation, landscape reclamation and reduction in soil depletion
- To utilise landscape and environmental quality as indicators of life quality
- To empirically demonstrate that a multi-functional organic farming can be a coherent wealthy and healthy way to pursue welfare towards sustainable agriculture, agri-tourism, recycling, etc.
- To elaborate a clear business vision (the reconciliation of humanity and nature, the combination of social and entrepreneurial role)
- To comply with the above vision by means of a coherent and ethical behaviour (sense of the mission)
- To adopt a flexible entrepreneurial culture which refuses ideological simplifications (“do not follow myths”) in order to cope with the environmental local and global complexity

#### ***The economic dimension***

- To give a clear example of how agriculture can shift from a marginal to a strategic role being competitive in the market by means of a multi-functional strategy (organic farming, agri-tourism, social activities)
- To act pragmatically, combining promoters’ motivations, market results, client satisfaction, business and socio-cultural gratification, local community behaviour
- To improve continuously entrepreneurial culture and professional quality since agriculture (and organic farming) is characterised by long term cycle of production, investment, etc.
- To change the conventional role of the farmer from the conventional provider of agricultural products to an innovative entrepreneur who is involved with all the typical business issues (market analysis, marketing, trade, organisation, fiscal and administrative components, laws, external and internal collaborations and relationships, etc.) in order to sustainably manage the resources that are available (from production to trade, consumption and recycling)

- To capitalise and utilise all previous experiences and lessons stemming from other activities in order to change and innovate his own professional capacity to deal with new economic (and social) sectors
- To maintain the focus of sustainable agriculture, balancing market successful and less profitable activities in order to achieve a business synergy (e.g. a wise combination between agri-tourism, social reinsertion, organic farming, organic food shop)
- To solve problems (e.g. lack of sectorial laws and regulations, market difficulties, lack of market demand and supply, lack of synergy between producers, delivers, traders, buyers, etc.) combining experience, creativity and innovation capacity in order to maintain and improve the agricultural product quality (e.g. wine, adequate high technology for the transformation of the agricultural products, etc.)
- To maintain and improve the distinctive quality and harmony of farming products and activities, considering what environmental and quantitative limits have to be respected by small and medium businesses

### ***The socio-cultural dimension***

- To reconstruct strategic links between agriculture and socio-culture activities
- To place farming at the centre of social life, as a promoter of wide cultural activities and a innovative producer of social services (sustainable local development)
- To be aware that the agricultural environment offers more opportunities and resources (direct contact with the nature, job, human relationships) than the urban context to favour the social reinsertion of disadvantaged people
- To promote innovative local farming initiatives in order to meet the above aim (e.g. training courses, artisan workshops, tutorship, etc.)
- To learn continuously from other experiences at local, regional, European and international levels
- To develop and diffuse new environmentally friendly agricultural techniques and methods (e.g. wine and oil production, etc.) in collaboration with scientific and university bodies (e.g. workshops, researches, meetings, training courses, etc.)

## **EQUITY DIMENSIONS**

### ***Social equity***

- To be fully involved in the local social fabric, taking part actively in the cultural and political life in order to promote solidarity among its members and families, as well as to foster diffusion of innovative thinking

### ***Interregional (spatial) equity***

- To promote fair and sustainable trade both in the Valley and abroad

### ***Intertemporal equity***

- To promote organic farming and sustainable local development initiatives by means of a long term strategic entrepreneurial thinking which is aware of the needs of the future generations

## **SYSTEMIC DIMENSIONS**

### ***Diversity***

- To foster quality agriculture as a means to develop local identity and cohesion

**Subsidiarity**

- To develop innovative initiatives which stimulate institutional subsidiarity by means of a close collaboration with local authorities and engagement in local economic, social and political scenario

**Partnership/ networking**

- To promote and develop close relationships with local authorities (e.g. Suvereto and the other Val di Cornia local authorities), local farmers, local and regional interest groups and associations, scientific and research organisations (e.g. the University of Florence - Urban Planning Department) in order to foster sustainable development (e.g. the 1995 manifesto-programme "Agriculture and Territory: a laboratory for sustainable development")
- To promote and develop relationships with other experiences of local multi-functional organic farming (meetings, contacts, information, media, etc.)

**Participation**

- To motivate and stimulate local population (e.g. the Suvereto community), clients (e.g. agri-tourists) and target groups (e.g. social reinsertion) to actively take part in the farming multi-functional activities

## **CHAPTER 10 - INITIATIVE n. 6**

### **ORGANIC FARMING "LA CERRETA"**

#### **THE ACTORS**

##### **PROMOTERS**

The promoters of the project were young people of the area who wanted to experiment with a developmental model that was compatible with the environment and differed from the industrial reality that dominated the Val di Cornia.

##### **SUPPORTERS**

The most decisive supporters were the public administrations and local authorities in the Val di Cornia and the Province of Livorno.

##### **TARGET GROUPS**

The local community was always considered the target of the project: the agricultural community for the production of organic produce and the youth community for the environmental education activities. In addition, the activities are directed to Europeans in general, and in particular those persons who are in search of positive situations that combine ecology and social change and who desire to have first hand experience with projects that give energy and hope. The typical guests have arrived from northern Europe, Sweden, Norway, Denmark, Holland, Germany, northern Italy and Tuscany. Recently there have been guests from southern Italy as well.

##### **OPPONENTS**

There has never been significant opposition to the project. There were initial areas of resistance to change, as from the hunting associations. Problems arose during the efforts to increase livestock operations and in the creation of an environmental education centre for young persons.

As time passed, the resistance was lessened as a result of a public awareness regarding the validity of the project and the positive results attained. The capacity to communicate with the local population was instrumental in breaking down resistance.

#### **PROCESS OF NEGOTIATION**

##### *Breaking the silence*

The promoters were part of an environmental movement that was active in the 1970's and did not follow the standard thinking of the time. Initially they were not positively viewed by the local population partially due to the high percentage of hunters in the Val di Cornia. The project was viewed as the utopian idea of two environmentalists. As their project became more entrenched, it began to have an outward aspect of a well organised entrepreneurial venture that was pragmatic and less ideological. Following these developments the local population became more curious and interested in the project.

##### *New Partners' emergence*

The promoters actively sought collaborations with agronomists and the regional association for agricultural development (ARSIA) to improve the cultivation of products typical of the area. Collaborations with the Province of Livorno and the local health department were made respectively regarding environmental education and reinsertion of person with psychological disabilities.

### *Relationship between actors*

The present and former mayors of Sassetta, were among the most supportive of the project. They were also partly opposed by their own political parties that had historically governed the towns in Val di Cornia. These mayors were able to catalyse those persons who saw the risk of a single industry economy and had the capacity to act early to avoid this hazard.

### *Style of conflict management*

The conflicts were overcome by personal reasoning, avoiding frontal confrontations by introducing elements of reflection. This was also important in changing the attitude of the hunters and traditional farmers.

### *Role of facilitators and mediators*

The public institutions, having a good relationship with the promoters acted as mediators between Cerreta and the population. The presence of enlightened administrators assisted the promoters efforts to coexist with other local actors.

## **CREATION OF COMMON REFERENCES (values, identity, and belief system)**

The promoters acted with determination to transmit to the local population that they believed in what they were doing. This helped to gain the attention of the population, with the strong involvement of the local youth that took into consideration the alternative development model that was proposed by the promoted and based on environmental protection.

## **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

Personal motivations drove the promoters to search for alternative models for development and society. The first positive results acted to further energise their hopes and convince the promoters of the possibilities of their efforts. Efforts followed to inform the population through conferences and meetings that are still presently conducted. The professional training of the promoters were based on direct on the job experience, numerous errors were committed as the result of the poor assistance from agronomists who had no technical experience in organic farming. The promoters also conducted training courses for the Province in bee raising. New information technologies are presently being accessed for continued training.

## **THE ACTION**

### **BRIEF HISTORY**

The actual project was the result of an experience born in 1977, when 15 young persons, utilising a national law which gave incentives to the formation of agricultural co-operatives by young persons to reduce youth unemployment. After the unhappy experience of failing to obtain the management of an area in the Mountain Community of Massa Marittima, many of the group abandoned the initial idea. In the end only two persons continued to work towards the original project, forming the Cerreta in 1979 as a sole proprietorship. They produced a small version of the original co-operative, not having a large quantity of available capital.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

The promoters were driven by a strong environmental orientation and the desire to demonstrate an eco-compatible development model that was outside the capitalist system, while maintaining the strong values that were at the base of their ideas. These values were maintained throughout the era of decadence and lack of societal vision. The previous experience was re-processed and together with the acquired entrepreneurial experience served to overcome economic difficulties that initially plagued the business.

## **OBJECTIVES**

To demonstrate the feasibility of a development model for the future through the following activities:

- organic farming
- balanced agri-tourism
- environmental education
- promotion of local culture, in particular farming and gastronomy
- social reinsertion of person with psychological disadvantages

## **Sectorial dimensions**

### ***Environment***

The Cerreta is an agricultural business for the production of certified organic produce according to the EU guidelines. The agricultural production is predominately vegetables, legumes, cereals, fruit and olives of high quality. Other aspects of the environmental dimension are:

- there is presently an effort to reinforce the balanced agri-tourism business, with a modification of the product offered, moving it closer to the local farmer culture and in closer syntony with the environment
- renovation of the chestnut tree area to start a control denomination guaranteed chestnut production project (chestnut flour, fresh product and preserves, wood) that has already been financed. Many young persons have asked advise about the financing available for chestnut production and the Cerreta is available for collaboration, planning also a centre for the transformation of the harvest to final products
- raising and training of local horses for hiking and horse riding through the Maremma mountains, other animals are also raised, boars, cows
- horse riding course for beginners
- horse riding trips in the areas forested hills, visiting cultural and naturalistic sites and passing through parks and medieval villages, castles and sampling the areas gastronomic delicacies
- guided bicycles excursions
- hiking excursions, guided by botanists through oak and chestnut forests, through the typical Mediterranean natural areas, in formerly cultivated zones to observe and collect the plant species of both consumable and medicinal interest that are used in the traditional culture.

### ***Economy***

The Cerreta has always striven to maintain their economic independence. This was obtained by significant efforts and by constantly reinvesting profits into new projects. A project for the management of a large formerly cultivated area has been made to create an area for livestock raising. The physical facilities of the Cerreta have also increased, the 15 original hectares are now 30, the number of rooms has passed from 5 to 12. The guests can stay in rustic houses formerly farmer residences from the 1700's, restored to reflect the original characteristics.

### ***Socio-culture***

Pieces of the Maremma history and culture are offered along with the hospitality of the agri-tourism in the form of gastronomic culture, horse riding, country fairs, agriculture and excursions. These reflect the efforts of the promoters to reinforce the farmer culture and recover antique traditions, other related activities include:

- environmental education; experiments in the elementary school in Livorno to help the children discover nature, animals, etc. In the end of the scholastic year, an exhibit of the activities performed is set up around the memories of the children and their experiences on the farm (designs, music, poetry, etc.)

- wine country tours; the Cerreta is part of the wine country tour programme promoted by the Province of Livorno even though wine is not produced on the property
- naturalistic photography, organised in collaboration with the Italian Society of nature photographers, with theory and practical lessons taught by photography experts and naturalists along with research and botanical excursions to observe and photograph birds and mammals and to discover the characteristics of the area
- green vacations for children; where they can experience farm life and participate in the work, such as milking cows, collecting fresh eggs, harvesting and transforming fruit and vegetables, olive picking, bread making, etc. These activities are coupled with nature excursions and classes in domestic animal physiology and anatomy, plant physiology, agronomy, organic farming, etc.
- an opportunity to live within a large multinational community while socialising, playing etc.

## **Equity dimensions**

### ***Social equity***

The activities of social reinsertion are very central to the Cerreta operations. There have been very positive results from participation with psychiatric centres and private practitioners for persons with psychological and physical disabilities that demonstrate that one can live with diversity, through programmes of adaptation and recovery of earlier experiences. Efforts are being made to improve these collaborations for cultural growth, re-qualification and an improvement in shared objectives favouring solidarity, internal and external, reciprocal esteem, group work, and research. Efforts are made to meet these objectives while at the same time avoiding the creation of a system of unhealthy competition. The promoters have attempted to create programmes where the participants feel like protagonists and collaborate with the business choices rather than having to submit to them.

### ***Interregional equity***

The Cerreta plays an important role within the valley to demonstrate an alternative development model. It has become an example for the organic and non-organic agricultural businesses for entrepreneurial initiative, communication, organisation, and above all economic and qualitative results. Relations with international organic businesses have also been initiated (South American coffee growers). The project is exportable in other areas for its points of reference, fundamental values, efforts to create a new productive reality, and its productive diversity.

### ***Intertemporal equity***

The fundamental characteristic of the project has been the willingness to demonstrate the feasibility of an eco-compatible development model that is exportable in other areas and in the future. The initiative therefore hinges on the willingness to use the resources in a way that does not compromise their future availability.

## **Systemic dimensions**

### ***Diversity***

Diversity is promoted through the cultural gastronomic activities of the area which have historical roots in the Maremma traditional use of organic produce, ancient food preparation methods, the use of aromatic herbs, wild fruit and vegetables from the forests and open areas. The business has initiated research with the Region to recover old varieties of grapes and fruit trees of the area. The Cerreta has collaborated for ten years with the Region in projects to maintain the biodiversity, in particular regarding local fruit species. A collaboration is underway with the botanical gardens and plant nurseries in Lucca to preserve the ecotypes and genetic information of the indigenous species.

### ***Subsidiarity***

A relation with the local authorities has been fostered that reinforces the role of the Cerreta project, efforts have also been made to follow both the regional and EU orientations. A flexible structure has been created that allows for easy and quick modifications along with a variety of production capabilities to better react to socio-economic changes. The model followed is that of avoiding large structural investments to avoid restricting production capabilities. The business must stay within the market, therefore it must maintain its flexibility in order to be more competitive than the larger organisations.

### ***Partnership and networking***

The relationship with the local administrations was decisive in the Cerreta's success, as was the collaboration with other actors: the Region for the research in local vine varieties, the local health agency for the reinsertion of persons with disabilities, the Province of Livorno for the wine country tours and environmental education, the environmental associations (WWF, Legambiente), the Regional agricultural agency for the research of the traditional organic farming methods of the area, the Val di Cornia Parks, the Italian Society of Nature Photographers, painters, botanical experts, social workers, etc.

The Cerreta is part of the Italian Agricultural Confederation, that furnished technical service of agronomists in promoting refresher courses and meetings with farmers. In the future, activities will centre around improving the relationship with other organic farmers and organising the assistance of agronomists to improve the quality of organic produce and develop products that are typical of the Val di Cornia. A collaboration with other bee farmers succeeded in creating a quality label and efforts are now being made to better commercialise the items produced. The competition created during this collaboration and the cultural difference between the members did not make the experience a completely positive one. The Cerreta is part of the organisation of organic farmers of Tuscany and has obtained the AIAB certification.

### ***Participation***

A significant effort was made to stimulate the entrepreneurial capacities of the farmers and tourism operators in the area, which was characterised by a lack of new ideas and a general ambivalence. The agricultural businesses were often incapable of converting their production to meet new demands and have remained attached to the traditional system, while the tourist businesses that had grown quickly paid little attention to the future and concentrated on short term profits. The Cerreta sought to close the gap between these mentalities. There are signs of new related businesses being created, especially related to artisan production that has grown in recent years tapping into a potentially large market.

## **PROCEDURES**

Through the Cerreta experience, the population has witnessed that it is possible to succeed at what you believe in. There has been an increase in the collective conscience, the sceptics began to see developmental options that differ from those commonly followed. Young persons have also expressed interest in creating similar initiatives of this type. From the beginning, the objective has been to create the conditions for exchange and communication with the local community. However in the early years the local population and businesses were too tied to the industrial model and considered the project abstract and unrealisable. Now, many businessmen in the area consult the Cerreta. The promoters furnish assistance for organic agriculture based on their acquired experience.

## **CHANGES IN THE RULES OF THE GAME**

The industrial mentality predominated the area and many persons in the town of Sassetta worked in the iron and steel industry in Piombino. As a result of this dominance, many of the traditional activities such as agriculture and artisan production were abandoned.

The Cerreta acted in those same years to initiate activities related to the local natural resources, traditions and culture. After the promoters opened a small store for the sale of honey, many in the area consulted them to open a larger general foods store. Now, many of these same persons who previously considered fast food as an emancipation have rediscovered the traditional cuisine of Sassetta. The promoters have succeeded in demonstrating the feasibility of a sustainable agricultural business. This was particularly important in this area where the old agricultural mentality was very strong. The project demonstrated an entrepreneurial spirit which led the way to technical, managerial, marketing and organisational innovations. This contributed to a change in the behaviour of the local community towards the project, no longer seen as a battleground in a war against capitalism but as a model that has achieved notable business success.

### **SUPPORTING MEASURES WHICH WERE USED**

The research for technical information is perhaps the aspect that created the most difficulty for the promoters. This was true especially in the beginning phases, when there was a great need for answers to production and technical problems in a sector that was undergoing a major evolution. To resolve these questions, the group continuously experimented and made numerous trips to study other experiences, creating an unofficial circle of alternative culture, with a constant exchange of information.

#### *Employment impact*

Also from the employment point of view the Cerreta has had a notable development. Initially there were two persons involved in the project, presently there are five families and four full time employees. There are numerous future projects that could open up new opportunities for employment.

#### *Financial resources*

Presently the total investment is valued at approximately 5 million ECU. 180,000 ECU has been obtained from the EU (e.g. Regulations n. 2081, 2078, 797) and from regional laws for agriculture (e.g. R. L. 63/80). Besides these, a bank loan of 150,000 ECU was obtained. The remaining capital has been raised by reinvesting profits.

### **SUMMARISED EVALUATION**

This innovative local initiative is the result of a twenty year process promoted by a group of local young people (15) and presently performed by two of the original members. Many modifications and improvements to the original programme have been made. The Cerreta has become a local example of successful organic farming. The vision of the current promoters is to pursue local sustainable development in an entrepreneurial way; a pragmatic approach which has substituted the prevalently ideological motivation of the initial group to demonstrate that it is possible to realise eco-compatible development in an market-driven society.

Presently the following activities are carried out by means of continuous innovation, creativity and learning:

- A) organic farming
- B) balanced agri-tourism
- C) environmental education
- D) promotion of local culture (farming and gastronomy)
- E) social reinsertion of psychologically challenged people

As an overall assessment, the following features emerge which relate to the above mentioned activities.

**COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability**

*expl = explicit; s.r. = some reference; impl = implicit*

<b>Sectorial dimensions</b>		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

<b>Equity dimensions</b>		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

<b>Systemic dimensions</b>			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

**CONSISTENCY of different targets by activity**

Activities	Conflicting with	Independent of	Complementary to
A) organic farming			All
B) balanced agri-tourism			All
C) environmental education			All
D) promotion of local culture (farming and gastronomy)			All
E) social reinsertion of psychologically challenged people			All

**CONCRETENESS of intentions (objectives and targets) by activity**

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) organic farming	<i>expl</i>	<i>expl</i>	<i>expl</i>
B) balanced agri-tourism	<i>expl</i>	<i>expl</i>	<i>expl</i>
C) environmental education	<i>expl</i>	<i>expl</i>	<i>expl</i>
D) promotion of local culture (farming and gastronomy)	<i>expl</i>	<i>expl</i>	<i>expl</i>
E) social reinsertion of psychologically challenged people	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl = explicit; s.r. = some reference; impl = implicit*

## SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Good results of the earlier initiatives</li> <li>• Clear demonstration of the feasibility of an eco-compatible and economically autonomous entrepreneurial farming in the local area</li> <li>• Strong commitment and involvement in business vision, missions and objectives</li> <li>• Positive combination of low level financial resources and high level of entrepreneurial flexibility (flexible organisational system)</li> <li>• Transferability of basic values to stimulate local farming initiatives , social, economic and political context</li> <li>• Improvement of quality and diversification in species and types of products and activities</li> <li>• Promotion of participatory relationships between people involved in the initiatives (team work)</li> <li>• Attention to environmental quality (relative integrity) of the local area</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Lack of co-operative projects, strong networking and partnership with other similar farming businesses</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Environmental degradation if mass-tourism is pursued instead of qualitative tourism</li> <li>• Decrease of support by local authorities, administrators and population to this type of initiative if economic growth orientations prevail</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Promotion of qualitative tourism orientated towards the increase of local traditions, culture, artisan activities and the environment potentials</li> <li>• Promotion of networking and partnership between farming businesses (both organic and not), agri-tourism operators, craftsmanship and other activities, as well as with local authorities and public bodies</li> <li>• Improvement in the incentives to acquire new lands, launching new activities and products, looking and caring for quality and diversification (biodiversity)</li> </ul>

## BEST PRACTICES STEMMING FROM THE INITIATIVE

### SECTORAL DIMENSIONS

#### *The environmental dimension*

- To have strong motivation and commitment in environmental issues
- To have a clear reference point (vision) of what is feasible in eco-compatible farming and local sustainable development

- To be environmentalist in practical and entrepreneurial ways utilising the current knowledge and improving personal cultural and professional training and education
- To try to influence, through concrete alternative examples and visible results, the current development patterns and society
- To study and implement farming biodiversity and quality (e.g. to protect and discover ecotypes, species and genoplasma in wine, fruits and other products) in collaboration with the Region and scientific agencies

### ***The economic dimension***

- To start businesses implementing small projects which are feasible according to the available resources (financial, human, natural)
- To increase business activities based on the results of the above projects, evaluating and modifying them in order to reinvest the acquired experience and knowledge in future programmes and projects
- To conceive and elaborate projects which are flexible and adaptable, giving elasticity to their objective within a clear business vision
- To innovate and experiment continuously diversifying production and activities in order to reduce entrepreneurial risk (e.g. balanced agri-tourism as an integrative stimulus to improve distinctive agriculture quality and organic farming in a dynamic and innovative way)
- To develop streamline and nimble entrepreneurial organisation with autonomous capacity for market analysis, marketing and corporate communication
- To increase employment, land space, activities (e.g. wine, stock farming, assistance to young disabled and disadvantaged people, environmental didactics) maintaining a flexible productive structure
- To utilise all opportunities (e.g. financial and technical support) which are provided by EU regulations and regional laws

### ***The socio-cultural dimension***

- To break conventional ways of thinking and acting (e.g. conventional farming) improving the capacity to communicate and diffuse values and contents of environmentally friendly initiatives (e.g. organic farming and eco-compatible agri-tourism) in order to increase the awareness of local communities and to demonstrate, through positive results, the feasibility of sustainable development patterns which are based on the synergetic utilisation of endogenous resources (e.g. natural and cultural heritage, traditions, history, gastronomy, etc.)
- To refuse ideological conflict while facilitating individual and collective reflection on social behaviour and quality of life
- To strength alliance with sensible key persons (e.g. mayors, town councillors) and political and cultural organisations
- To promote and manage environmental education in schools, professional training courses, etc.
- To stimulate a new entrepreneurial culture which is orientated towards sustainability and eco-compatibility of production processes and products both in agriculture and in related sectors (tourism, craftsmanship, trade, etc.)
- To improve personal professional knowledge, know-how and skills by on the job training and learning new organic farming techniques
- To facilitate exchange of information, knowledge, know-how and professional skills by means networking and contact with other experiences at local, regional, European and international levels

- To perform research and to diffuse findings in collaboration with scientific and university bodies, as well as with Regional agencies (e.g. recovery of old local types and species)
- To be persistent and to adopt a pro-active approach to the diffusion of values and contents of local sustainable development actions against criticisms of unfeasibility and non-transferability of this specific initiative

## **EQUITY DIMENSIONS**

### ***Social equity***

- To utilise the agricultural and rural environment as opportunity to improve social welfare as well as the reinsertion of disadvantaged people
- To manage work organisation according to the principles of solidarity, mutual confidence, co-operative motivation and competition

### ***Interregional (spatial) equity***

- To make this initiative a centre for fair and sustainable trade both in the local territory and developing international contacts with developing countries

### ***Intertemporal equity***

- To make this initiative an example of sustainable local development in favour of future generations (“a pattern for the future based on giving sense to individual and social life”)

## **SYSTEMIC DIMENSIONS**

### ***Diversity***

- To pursue the promotion of local identity in high quality agriculture, organic farming, gastronomy and cultural rediscovering and to develop forgotten integrated activities (e.g. a project aimed at re-launching the production and utilisation of local - Sassetta - chestnut with controlled denomination of origin)
- To demonstrate that human diversity (e.g. disadvantaged people) should be considered as a resource through socialisation and community re-insertion

### ***Subsidiarity***

- To strengthen alliance and negotiation with local authorities and key social and political persons
- To facilitate the transferability of contents and values of this initiative, adopting the approach by which a strongly motivated project should take into account the other local specific conditions
- To develop motivation, team work, external and internal collaborations to meet shared objectives and expected results

### ***Partnership/ networking***

- To take part in and to promote partnership and networking between local producers (e.g. organic farmers, beekeepers, etc.) aimed at developing quality production and marketing also by means of local seals of quality (e.g. wine-route' trademark successfully promoted by the Province of Livorno)
- To create the above partnership following the principles of flexibility and respect of each other' autonomy
- To develop close relationships with local authorities (e.g. Sassetta and the other Val di Cornia municipalities), environmental associations (e.g. Legambiente and WWF), organic farmers' associations (e.g. the regional co-ordination organism), local environmentally orientated key persons (e.g. mayors, politicians, elected representatives), scientific and research organisations, the Region (e.g. in projects to develop biodiversity)

***Participation***

- To consider tourist, local farmers and population as individuals who have their own culture and values and are interested clients for specific qualitative products and activities stimulating them to give suggestions and to take active part in this initiative

## **CHAPTER n. 11 - INITIATIVE N° 7**

### **ARSIA IRRIGATION DEMONSTRATION CENTRE**

#### **THE ACTORS**

##### **PROMOTERS**

The Regional Agency for Innovation and Development in Agriculture and Forestry (ARSIA), the Province of Livorno, local farmers associations, a host farmer in the area of Suvereto, the Universities of Pisa and Firenze were the main promoters of the project.

##### **SUPPORTERS**

Local farmer associations (CIA - Confederation of Italian Farmers -, Federation of Direct Cultivators, Union of Farmers) were the supporters of the project.

##### **TARGET GROUPS**

The targets of this project are public bodies that implement agricultural policies, farmers and experts in agricultural operations.

##### **OPPONENTS**

There was no significant opposition to the project, however, at the beginning, there was very low attention and collaboration on the part of technical experts, who were not fully convinced of the validity of the experimentation.

##### **PROCESS OF NEGOTIATION**

###### *Breaking the silence*

The growing environmental awareness on the part of agricultural operators and the general population has increased the attention on the correct use of water resources and the search for innovative solutions to reduce water consumption. The experiment lasts three years (1996-1998) and is dedicated to overcoming the localised vision of the problem.

###### *New Partners' emergence*

A collaboration with the Universities of Firenze (Department of Agricultural Engineering and Forestry) and Pisa (Department of Agronomy) was initiated in the first year of the experimentation.

###### *Relationship between actors*

During the project, a process of increasing awareness took place among the project actors. From this process a group of agricultural entrepreneurs emerged who were interested in utilising the new technologies and overcame the inertia of the agricultural stereotype. However, as the relationship between the farmers and ARSIA was governed by institutions and agricultural associations, a direct perception of the needs and requirements of the farmers was initially missing from the project.

###### *Style of conflict management*

The necessity for an improvement in the relationship between ARSIA and the associations emerged as did the necessity of direct contact between the project promoters and the end users. The diversification of activities related to the diffusion of scientific information, technical know how and new technologies was also brought out.

###### *Role of facilitators and mediators*

A local farmer actively participated by hosting the experimentation on his establishment and acted as a leader in communicating findings, results and methods to other farmers through direct contact.

## **CREATION OF COMMON REFERENCES (values, identity, and belief system)**

Apart from some diffidence on new technologies and techniques, attention to the experimentation is increasing also because agricultural businesses have a natural sensitivity to environmental problems as they work directly with nature.

## **PROCESS OF INDIVIDUAL AND COLLECTIVE LEARNING**

In the implementation phase of the project there was attention given to including the operators and persons directly involved in agricultural operations. Beginning in 1997, ARSIA included in the programme a training course on irrigation problems, directed at the technicians of the local agricultural businesses.

## **THE ACTION**

### **BRIEF HISTORY**

As a water shortage has been a valley issue for several years, a strong perception of the environmental consequences connected to water misuse is present. In 1985, when a local plan for agricultural development was prepared by the previous regional agency of technical assistance for agriculture, water resource problems were already identified. The present project, prepared in 1994/1995, initiated in 1996 and ending in 1998 is specifically directed at irrigation methods for reduced water consumption within the local environmental and productive setting. Experimental activities implemented in the Suvereto Demonstration Centre are being carried out in parallel at the National Irrigation Laboratory near Pisa.

### **MOTIVATIONS AS PERCEIVED BY THE ACTORS (expectations, visions)**

The principal motivation of the experimentation is to increase awareness of low impact and environmentally positive irrigation practises and water usages in agricultural and coastal areas and to find innovative solutions to the reduction of water consumption while improving agricultural production.

### **OBJECTIVES**

The overall objective of the project is to experiment with agricultural practises that are less intensive and compatible with environmental protection. The project is directed towards the identification of practises for water management that, while maintaining agricultural productivity, lead to the optimisation of irrigation waters and the reduction of overall water usage. The experimentation conducted by the Centre is dedicated to the following activities:

- the determination of the feasibility of drip irrigation systems on tomato, melon and watermelon production, calculation of the relationship between production and water use
- the use of deficit irrigation for the production of sugar beets, the identification of development phases and water requirements
- the use of drip irrigation for vegetable production and the study of minimum requirements, both quantitative and qualitative
- the use of deficit irrigation to study the conditions of controlled water stress during phases of development in which the cultivation is sensitive to irrigation variables in order to obtain information on the water requirements of different moments in the productive cycle.

All the activities of the Centre have the objective to rationalise water use through the identification of specific irrigation parameters and the physiological responses of the plant.

### **Sectorial dimensions**

#### ***Environment***

The project is directed at an environmental problems of significant dimension which are effecting the entire Val di Cornia. The lowering of the aquifers, the growing competition for

resources with other economic activities and the historical high water use by the iron and steel industries have led to the deterioration of aquifer quality and quantity and the intrusion of salt water. Furthermore, a reduction in the total water use during irrigation allows for the lowering of pesticide and fertiliser use for agriculture. This will result in a positive impact on the overall environment.

### ***Economy***

The economic consequences of lower water consumption are related to possible savings in water, energy, labour, equipment costs. The project is dedicated to examining these benefits while maintaining qualitative and quantitative productivity. The identification of water requirement indicators will allow for the more controlled production of quality products at a lower cost.

### ***Socio-culture***

The project gained the interest of farmers and experts and assisted in increasing the awareness of the environmental consequences of agricultural activities. The innovative technologies studied in the project gathered the attention of the local farmers, in particular the young operators and assisted in promoting a process of transforming the traditional sector of producers to entrepreneurs.

A survey conducted in 1994 and 1995 (by ARSIA and the Regional Department responsible for agriculture and forestry; see Part I – Chapter 1) on irrigation practises in Tuscany demonstrated that in the Val di Cornia there was a high willingness to modify the irrigation methods practised.

Of the 40 agricultural businesses utilising irrigation that were interviewed in the valley (5% of the total 863 irrigating agricultural businesses, 15% of the total irrigated land) 85% responded that they were willing to improve their irrigation systems, 33% were willing to act to reduce water consumption and 24% were willing to make improvements if supported by technical assistance.

### **Equity dimensions**

#### ***Social equity***

The techniques experimented are characterised by an high transferability within the territory and are particularly adapted at those smaller agricultural businesses that can not make major investments in irrigation practices. In this manner the project has the potential to produce improved earnings throughout the agricultural sector in the Val di Cornia. Furthermore the results of the project assist in increasing the awareness of the environment and the benefits related to the use of environmental friendly techniques.

#### ***Interregional equity***

A process of the increasing the idea of shared water resources and the interrelated nature of all the valley resources is overcoming the localised vision of water resource problems and helping to increase the understanding of individual actions on the wider territorial problems. Besides the Centre in the Val di Cornia there are two other irrigation centres in the adjoining Provinces (Grosseto and Arezzo) testing irrigation technologies for tomato, melon and pepper cultivation.

#### ***Intertemporal equity***

The experimentation and transfer of agricultural technologies related to the reduced environmental impact will have positive consequences on future generations related to improved water and environmental quality. The actions involving the local farmers and in particular young local farmers will assist in developing a new relationships between environmental protection and agricultural production.

The overall benefits of the diffusion of lower consumption irrigation technologies will assist in creating a more positive future for the valley.

## **Systemic dimensions**

### ***Diversity***

The methods examined in the project will lead to a lower environmental impact of agricultural activities thereby increasing the possibility for biodiversity and improving overall water quality. Through this experimentation, the modernisation of the irrigation practises will not reduce the local characteristics and the quality of the agricultural practises in the area.

### ***Subsidiarity***

The project integrates a top down and bottom up approach. The project was financed through Regional laws and provincial programmes relative to the agricultural services. The cooperation of the host farmer was instrumental in project experimentation.

### ***Partnership and networking***

The collaboration of the promoters with the Universities of Firenze and Pisa assisted in increasing the visibility of the project. Cooperation with the Province of Livorno began was established in 1996.

### ***Participation***

The decisive element in stimulating the interest of local farmers was the participation of the host farmer and his actions as a leader and divulger of experiences gained.

## **PROCEDURES**

During this initiative, the necessity to change the current procedures emerged since they did not allow for the flexibility and autonomy that is necessary for good experimentation. Problems arose concerning the shortage of human and organisational resources within the rigid and bureaucratic public system. A positive orientation to find out practical solutions is stimulated by the fact that the environmental awareness of the valley population and in particular the agricultural community has increased in relation to the experimentation initiated.

## **CHANGES IN THE RULES OF THE GAME**

The inherent rigidity of the public functionaries that managed the project was gradually changed through the efforts of the ARSIA staff, the host agricultural business and the University of Pisa. This new flexibility was facilitated through the continuously positive collaboration amongst the project partners.

## **SUPPORTING MEASURES WHICH WERE USED**

Regional law related to the creation of innovated services for agricultural development and the creation of ARSIA were fundamental in the implementation of the project.

### ***Employment impact***

An evaluation of the employment impact of the techniques experimented with in this project has not been performed. The project is directed at environmental and resource protection which will have a direct effect on the continuation of the agricultural activities in the valley and therefore is related to the preservation of future employment in this field.

### ***Financial resources***

The project is completely funded by the Region (75%) and the Province of Livorno (25%). The total budget for the Demonstration Centre at Suvereto is 40,000 ECU per year.

## **SUMMARISED EVALUATION**

As underlined in the top-down analysis, awareness has been increased in correct irrigation practices and control of water usage in agricultural and coastal areas. Fostered by the results of a research published in 1995, ARSIA promoted, with the participation of the Province of

Livorno, the local farmers associations, a host farmer (in Suvereto) and Universities of Pisa and Firenze, a three year (1996 - 1998) project to experiment with water savings irrigation methods in a specific environmental context and typical local productions.

This project includes the following activities:

- A) Identification of irrigation indicators to minimise water consumption in tomato, melon and watermelon cultivation
- B) Analysis of the “deficit irrigation” performances during the growth phases of sugar beet cultivation to optimise irrigation efficiency

As an overall assessment, the following features emerge which relate to the above mentioned activities.

**COMPLETENESS of intentions (targets and objectives) according to the elements of sustainability**

*expl = explicit; s.r. = some reference; impl = implicit*

Sectorial dimensions		
Environment	Economy	Socio - culture
<i>expl</i>	<i>expl</i>	<i>expl</i>

Equity dimensions		
Social equity	Inter-regional equity	Inter-temporal equity
<i>expl</i>	<i>expl</i>	<i>expl</i>

Systemic dimensions			
Diversity	Subsidiarity	Partnership networking	Participation
<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

**CONSISTENCY of different targets by activity**

Activities	Conflicting with	Independent of	Complementary to
A) Irrigation indicators		B	Water savings
B) “Deficit irrigation” performances		A	Water savings

**CONCRETENESS of intentions (objectives and targets) by activity**

Activities	Basic principles and guide lines	Qualitative targets	Quantitative targets
A) Irrigation indicators	<i>expl</i>	<i>expl</i>	<i>expl</i>
B) “Deficit irrigation” performances	<i>expl</i>	<i>expl</i>	<i>expl</i>

*expl = explicit; s.r. = some reference; impl = implicit*

## SWOT ANALYSIS OF THE INITIATIVE

<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>• Project's objectives and first results aimed at improving technological innovation in agriculture, experimenting new irrigation systems and methods</li> <li>• Scientific support by the Universities involved</li> <li>• Involvement of a local farmer who actively participates in the experimentation and acts as a leader in divulging findings, results and methods to other farmers by direct relationship</li> <li>• Information on and transfer of the above innovation to local farmers (e.g. scientific and divulging communication; involvement of the farmers' associations and the collaboration of their experts)</li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>• Lack of direct perception of farmers' needs , awareness and willingness to innovate, since the relationship between ARSIA and local farmers is, institutionally, mediated by farmers associations and their experts</li> <li>• Lack of human and technical resources which, combining with still bureaucratic and rigid organisational style, does not allow high levels of flexibility and autonomy to manage these experimental activities</li> </ul>
<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>• Possible lack of collaboration by the experts of the local farmers' associations who, if not fully convinced by the experiment, can hinder its transfer to other farmers in the Valley especially if the final results will not be positive and tangible from the environmental and entrepreneurial points of view</li> </ul>	<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>• Improvement of relationship with experts of the farmers' associations and development of direct contacts with local farmers</li> <li>• Increase and diversification of activities aimed at diffusing scientific knowledge, professional know-how and skills, innovative technology and methods to the end-users (farmers)</li> <li>• New experimental initiatives in the near future (e.g. resource recovery, improvement in irrigation efficiency)</li> </ul>

## BEST PRACTICES STEMMING FROM THE INITIATIVE

### SECTORAL DIMENSIONS

#### *The environmental dimension*

- To improve and promote farming organisation skills in order to reduce agricultural inputs (e.g. water usage, fertilisers, etc.) by means of cultivation rotation and other methods
- To organise water collection in rational and economic way according to the quality of available sources, cultivation requirements, actual irrigation needs (instead of the presumed ones) in order to reduce environmental damages as well as to maintain and protect local environmental resources
- To experiment and organise new methods in order to protect aquifer quantity and quality

#### *The economic dimension*

- To improve entrepreneurial culture of local farmers (from producer to entrepreneur able to cope with market analysis, marketing, cost analysis and business planning) making him aware that a more environmentally orientated water utilisation (saving) can reduce

production costs, decrease the utilisation chemical fertilisers and reach better production flexibility (both in quantitative and qualitative terms)

### ***The socio-cultural dimension***

- To develop innovative experiments improving and transferring knowledge, know-how and professional skills among the local farmers (demonstrative centres, show-areas, meetings, courses, conferences, audio-visual media, etc.)
- To improve environmental awareness of farmers, utilising their daily contact with nature and underlying individual and social risks of the mismanagement of local resources, chemical inputs, etc.
- To provide technical and organisational assistance to local farmers in collaboration with the experts of their associations (e.g. training courses, professional advises, meetings, workshops, etc.) especially in new fields of activities and methods (e.g. organic farming in Grosseto and Alberese, water saving in Val di Cornia, Grosseto and Arezzo, etc.)

## **EQUITY DIMENSIONS**

### ***Social equity***

- To improve the awareness of social effects provided by environmentally sound methods and technology within the farmers' communities and the wider local context (e.g. increase of water and aquifer quality and, simultaneous reduction of chemical fertiliser, etc.)

### ***Interregional (spatial) equity***

- To stimulate the perception and the awareness of the interrelationships between individual and local behaviour within a wide global dimension of environmental issues ("if you mis-consume or pollute an aquifer all Valley will be affected by your action")

### ***Intertemporal equity***

- To improve professional abilities of all local farmers (especially young farmers which seem to be more entrepreneurial and environmentally sensible) in order to transfer innovative environmentally friendly methods and technology to future generation displacing the conventional pollutant practices

## **SYSTEMIC DIMENSIONS**

### ***Diversity***

- To finalise experiments of innovative technology and methods taking into account local identity, variety and diversity of cultivation practices and ecosystems (in order to protect and develop biodiversity)

### ***Subsidiarity***

- To elaborate and implement experiments and projects, utilising regional and EU laws and regulations, promoting and strengthening collaboration and co-decision with Provinces and local authorities (e.g. olive and wine quality production in Suvereto, organic farming in Grosseto and Alberese, etc.)

### ***Partnership/ networking***

- To develop collaboration and co-operation with Universities, local bodies (e.g. CIGRI), farmers associations and their experts

### ***Participation***

- To involve end-users (farmers) in order to experiment more effectively by means of their direct participation in managing new technology as well as diffusing findings and results

## CHAPTER 12 - THE VAL DI CORNIA CONTEXT

### OTHER RELEVANT PROGRAMMES AND PROJECTS

The seven local innovative initiatives are part of a context in which other relevant programmes and projects are carried out by the local actors, for example:

- A) the integrated and co-ordinated spatial planning (land use, parks, soil conservation, landscape, urban and rural settlements, infrastructures, etc.) - see **box n. 1** -
- B) the close collaboration between local authorities and regional agencies (e.g. ARPAT, for the environment protection) - see **box n. 2** -
- C) the integrated and co-ordinated management of resource recovery programmes (waste reduction, recycling, etc.) - see **box n. 3** -
- D) the creation of the Val di Cornia administrative district (*circondario*) between the five local authorities - see **box n. 4** -
- E) a territorial employment pact - see **box n. 5** -
- F) the co-ordinated management of social welfare services - see **box n. 6** -, as well as in public transport and professional training

The ten INSURED-sustainable development-elements are covered to a large extent by the above mentioned programmes and projects, when individually analysed.

*expl = explicit; s.r. = some reference; impl = implicit*

Programmes and projects	Sectoral dimensions		
	Environment	Economy	Socio – culture
A)	<i>expl</i>	<i>expl</i>	<i>impl</i>
B)	<i>expl</i>	<i>impl</i>	<i>expl</i>
C)	<i>expl</i>	<i>expl</i>	<i>expl</i>
D)	<i>expl</i>	<i>expl</i>	<i>expl</i>
E)	<i>expl</i>	<i>expl</i>	<i>expl</i>
F)		<i>impl</i>	<i>expl</i>

Programmes and projects	Equity dimensions		
	Social	Inter-regional	Inter-temporal
A)	<i>expl</i>	<i>expl</i>	<i>impl</i>
B)	<i>impl</i>	<i>expl</i>	<i>impl</i>
C)	<i>impl</i>	<i>expl</i>	<i>impl</i>
D)	<i>expl</i>	<i>expl</i>	<i>impl</i>
E)	<i>impl</i>	<i>impl</i>	<i>impl</i>
F)	<i>expl</i>	<i>expl</i>	<i>expl</i>

Programmes and projects	Systemic dimensions			
	Diversity	Subsidiarity	Partnership networking	Participation
A)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
B)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
C)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
D)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
E)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>
F)	<i>expl</i>	<i>expl</i>	<i>expl</i>	<i>expl</i>

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**STRENGTHS**

- Strong historical Valley identity (cultural, social, environmental, political, economic, etc.) which contains local diversity (traditions, styles of life, beliefs, gastronomy, folklore, etc.)
- Richness and diversity of landscape (“archipelago of land and sea” which connects mountains, hills, coast, islands, lowlands) and of historical, cultural, natural and archaeological heritage
- Historically strong relationship between local inhabitants and nature, which has favoured the increase in environmental awareness
- Long standing co-existence of different social patterns between rural and urban populations
- Long standing orientation towards social welfare, solidarity and quality of life issues
- Strong sense of social networking with volunteer associations (social, cultural, political) and the dominant role of left wing parties (labour movement)
- Long standing resistance of the medieval fabric of small towns, boroughs, villas, rural sites, etc. and its renewal as a basis for networks (socio-cultural, political, economic, etc.)
- Historical distance from powerful and relevant centres of economic and political decision making
- Long standing socio-political culture of self-government
- Long standing social and political stability
- Long lasting “open door” style of local government with decentralised, far-sighted, innovative, citizen based, rational and attentive public management
- Long lasting co-operative political and administrative culture between the Valley local authorities, conceiving and implementing co-ordinated plans and projects to manage local resources
- Willingness to cope with industrial crisis by experimenting with new courses of action within a vision of integrated sustainable development, promoted by local leaders and key persons (in collaboration with Universities, scientists, researchers, development agencies) and formally shared (institutionalised) by the local authorities
- Conceiving and implementation of actual sustainable development initiatives, some managed with innovative and pro-active entrepreneurial culture, being able to cope with complexity, anticipate change and solve problems

### ***THREATS***

- Progressive loss of ecosystem stability and biodiversity (e.g. aquifer salinisation, land subsidence, quarries, reduction of biodiversity, increases in pollution, waste, transport traffic, etc.)
- Progressive reduction in the quality of man-made environments and utilisation of resources (e.g. urban settlements and housing which do not respect local features, historical landscape, architectural and cultural heritage, environmental protection)
- Risks to diversity caused by standardisation both of products and consumption (e.g. industrialised agriculture, mass-tourism, etc.)
- Insufficient capacity for monitoring, analysing and utilising indicators of environmental quality and sustainable development
- Probable insufficient capacity for defining a shared vision of sustainable development against the previous leadership of a mono-industrial development; thus the progressive loss of a Valley common identity can result in social fragmentation, radical localism, corporatism, short term thinking
- Probable limited capacity to maintain, foster and disseminate a clear orientation towards sustainable development until now provided by a catalyst-group of local key persons; the unexpected progressive loss of the leadership exerted by this group along with the lack of renewal, replacement and enlargement of its members can result in decreasing consensus, motivation and mobilisation on the part of local authorities, economic, political and social actors, public institutions and private bodies, agencies and agents, as well as the general public
- Conflicts and open opposition which can arise from suffused resistance, suspicion and rigidity of local businesses, farmers, large industries (and their associations) which do not fully agree with specific objectives included in programmes, projects, etc. promoted by the local authorities and geared towards sustainability

## ***WEAKNESSES***

- Environmental deterioration due to: the long standing predominant role of heavy industry (e.g. iron, electrical energy production and quarrying); the concentrated seasonal mass tourism; the considerable depopulation of small towns and rural areas during the last thirty years; the phenomenon of second-home ownership (for holiday) which increases seasonal resident population (especially in countryside), etc.
- Loss of the historical culture of sea-land relationship (archipelago) with loss of creativity in innovation in transport, tourism, economic and other activities
- A substantial delegation of duties, responsibilities and power from citizens to their representatives (in local authorities, political parties, etc.), because up to now they have demonstrate capacity for problem solving, “open door” style of local government, efficient and citizen orientated administration
- Filtering-effect provided by a strong institutionalised social networking which gives voice to all components of the local community through the representatives of their associations (collective intermediaries) in various fields: cultural, economic, societal, political, etc.
- Day-by-day administration and management which lessen the capacity for co-ordinated and integrated long term planning towards sustainability as well as weaken the capacity for promoting participation, involvement and co-operation of local actors and citizens
- Administrative and institutional boundaries which do not reflect the environmental, cultural, social and historical homogeneity of the local area
- Low innovation and environmentally orientated entrepreneurial culture both in private and public sectors (bureaucratic behaviour, rigidity, limited autonomy, closed-mindedness, short-sightedness, low risk taking, etc.)
- Low networking and partnership aimed at promoting co-operation between the existing sustainable development initiatives and the diffusion of analogous new projects and courses of action

## **OPPORTUNITIES**

- Maintenance and enhancement of environmental resources and of the diffused variety of local diversities in order to create a Valley common identity on renewed innovative basis
- Recovery and increase in value of the historical and territorial continuum which combines sea and land, coastal and rural areas with urbanised areas
- Increase in diversification, co-ordination, partnership and networking in development strategies following the efforts up to now made by the local actors towards sustainability
- Improvement of local willingness to collaborate with local, regional, European and international centres and agencies for sustainable development
- Improvement of local capacity for research, monitoring and territorial analysis with the selection of a co-ordinated set of basic indicators aimed at increasing: production quality; organic and bio-dynamic production; biodiversity; energy and water saving management; utilisation and recovery of local resources; environmental quality; organisational and administrative quality; financial and economic quality; welfare, individual and collective behaviour and quality of life; participation; etc.
- Improvement of entrepreneurial culture toward total quality environmental management and sustainable development through training, technical assistance, business services, education, etc., in all sectors (public services, farming, manufacture, tourism, craftsmanship, trade, etc.) and business dimensions (medium, small, very small, self-employment) to promote integrated innovation and diversification of the Valley productive fabric
- Involvement of local actors, improving their knowledge and updating the methods for participatory democracy in social and political arenas and in corporate management (from information to co-decision of alternative scenarios of sustainable development)
- Enhancement of long term open-minded strategic thinking and planning in order to create a Valley shared vision of sustainable development
- Strengthening of the above vision through integrated programmes and articulated projects finding appropriate collaboration, partnership, sources of financing, at local, regional, national and EU level
- Enhancement of the above programmes through a strong alliance with the Regional Government aimed at fostering sustainable development in the Valley by means of a co-ordinated and integrated implementation of innovative regional laws

## **THE CURRENT BEST PRACTICES' ORIENTATION**

An overall assessment of the current best practices (considering the selected seven local initiatives together with the other cited programmes and projects) reveals the following common orientation. This orientation is embedded in the basic features of the Val di Cornia context which will be analysed in the following paragraphs.

Practices stem from the interaction of local development efforts, implying the capacity of initiative-taking, leadership, networking and partnership.

A practice (LRDP, 1995) expresses how the local actors (as a competent operator) combine the local resources (hardware) by means of adequate programmes (software). Therefore, a practice is a symbolic representation of what has been done; it is the result of an (social) action and the learning process which goes on between actors by means of a continuous negotiation and exchange of meaning.

For this reasons “a practice that works in one circumstance will not necessarily work in another” (Covey S. R., 1994); it is situationally specific and depends on principles and values which are shared by the local community concerned.

<b>Sectorial dimensions</b>		
<b>Environment</b>	<b>Economy</b>	<b>Socio – culture</b>
<i>From protection to recovery and increase in value of natural resources</i>	<i>From the leadership of a mono-industrial development to diversification and integration between different sectors and the environment</i>	<i>From conventional industrialist values to concepts of sustainable development</i>

<b>Equity dimensions</b>		
<b>Social equity</b>	<b>Inter-regional equity</b>	<b>Inter-temporal equity</b>
<i>From long term experience of conventional social welfare to a pro-active culture and interventions to promote new concepts of quality of life and equal opportunities between genders and citizens</i>	<i>From a long term experience of local interactions within the Valley communities to the increasing awareness of the interdependencies between the Valley and other communities at provincial, regional and European levels</i>	<i>From long term experience of conventional relationship between generations (e.g. rural and urban family) to new concepts of solidarity and alliance (e.g. futurity)</i>

<b>Systemic dimensions</b>			
<b>Diversity</b>	<b>Subsidiarity</b>	<b>Partnership and networking</b>	<b>Participation</b>
<i>From values and products standardisation to promotion of diversity and quality of local values and resources (environmental, economic, socio-cultural, historical, etc.)</i>	<i>From a long term experience of effective local government to the strengthening of the local authorities' role in decision making by means of an innovative combination between bottom-up and top-down approaches</i>	<i>From a long term experience of collaboration and co-ordination in specific fields (e.g. parks, spatial planning, etc.) to the strengthening of joint-projects and tasks between the local authorities, public, private and social sectors and agencies</i>	<i>From information and formal participation (e.g. delegation from citizens to efficient local authorities and collective key-agencies) to fostering co-decision, individual involvement and commitment</i>

THE CONTEXT WHICH HAS HELPED THE CURRENT BEST PRACTICES related to THE “SECTORIAL DIMENSIONS”

#### **THE ENVIRONMENTAL DIMENSION**

*From protection to recovery and increase in value of natural resources*

The most important environmental problems in the Val di Cornia can be summarised as follows: (Associazione Intercomunale Val di Cornia, 1990; ARPAT, 1997; Franchini D., Pozzana G., 1997; Pizziolo G., 1996):

- geological degradation in the low hills;
- slope erosion phenomena in the middle hills;

- erosion processes on the southern coast including damage to dune areas;
- deterioration in the quality of the coastal aquifers due over pumping and the consequent entrance of high salt containing waters from sea aquifers;
- environment impacts from mining activities;
- environmental impacts from the activities of heavy industry (iron and steel big factories);
- the intense environmental pressure exerted by mass tourism, especially along the coastal areas

The above issues can be considered the results of an intensive relationship between man and nature which has been forged throughout the centuries of the Valley history (Arrigoni T., Pierini M., Saragoza C., 1996): beginning in the Etruscan and Roman periods, throughout the medieval era, the Medici and Lorena administrations, the Italian unification, the industrialisation which characterised the Valley up to recent time (1980) and the recent phase of de-industrialisation.

Important factors that should be considered in relation to the above process in the Val di Cornia are as follows.

The territorial fabric is based on the medieval structure of boroughs, villas, small towns, fortifications, etc. (between the 10<sup>th</sup> and 15<sup>th</sup> centuries) and continues to act as the infrastructure web of rural roads and hydraulic veins which link cultivated lands.

Cosimo the 1<sup>st</sup> (1519 – 1574)<sup>6</sup> is considered as the “iron lord” since he created the Maremma mines - iron production system (which connected large territorial areas, the Elba island included). The era of modern big industrial plants started in the late 19<sup>th</sup> century and has interested the Val di Cornia (especially Piombino territory) until the present (Arrigoni T., Pierini M., Saragoza C., 1996; Gazzola L., Insolera I., 1982). The territory was deeply restructured by means of large integral land reclamation projects (started during the Lorena times and continued by the fascist regime) and this, for example, allowed tourists settlements to be developed, especially along the coastal area.

Environmentally damaging projects occurred especially as a consequence of heavy industrial installations linked to iron, quarrying and electric-power activities, as well as of seasonal mass tourism. Age-old orientations to wisely utilise local natural resources are still present. They constitute the basis from which the community has chosen to contrast the devastating industrial crisis, by calling for concrete alternatives of economic diversification. Examples of this orientation in recent times follows.

During the '60s, when Italy was plagued by land speculation and illegal construction activities (motivated by fast industrial, urban and tourist development), in Val di Cornia the local authorities initiated the practice of Valley co-ordinated territorial plans (spatial planning) which included natural parks and established rigorous limits to short-sighted private interests (see box n. 1; Gazzola L., Insolera I., Roma 1982).

At that time, the actions carried out by local authorities were very interesting for two reasons: for their courage to fight against big industrialist and speculators; and, being strongly left wing orientated, they were not fully supported by national centrist government. Stimulated by the leftist policy to protect areas of public interest against land speculation, nowadays the Valley territory shows an unfragmented and intact system of environmental, cultural and historical parks. The history of the parks has become a value which still permeates all the Val di Cornia, with a strong collaboration between the local authorities, populations, political parties, social and cultural organisations, not only in the rural areas and in the countryside but also in urban heavily industrialised areas (see initiative n. 1).

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<sup>6</sup> The first true duke of Florence who extended his dominion to the whole of Tuscany, began the construction of the port of Livorno (Leghorn), introduced methods of agriculture based on the use of the most modern equipment then available, made it possible to repopulate the country areas, even in the Maremma region, promoted new works of art and architecture in the cities of Tuscany, and not just Florence, the capital.

Other examples of increasing environmental awareness that have acquired a “Valley and surroundings” significance are:

- in 1981, a struggle was carried out by the mayor and the local authority of Suvereto, gaining a large consensus of the citizens, against a project aimed at opening a new kaolin mine within the Montioni park; the victory was reached utilising all formal and procedural power available on the part of the local authority; in order to gain popular consensus, the local authority prospected a development pattern based on local initiatives which combined agriculture, forestry, stock-farming, etc.<sup>7</sup>;
- the highest catalyst point was in 1987 when a referendum against the doubling of the national strategic electric-power-station (Torre del Sale) located in the valley gained a large consensus in votes. The struggle initiated in 1984 and was characterised by a strong participatory involvement and commitment of the local populations of the Val di Cornia. Political parties were also affected by a strong confrontation both within and outside their individual groupings. Only the green and environmentalist movements were clearly against the redoubling as well as a determined minority of the leading main leftist party (PCI, communist party), whilst the PCI majority accepted the increase. A set of environmental constraints were included in a proposed agreement with ENEL (the national electric energy company). The latter rejected the proposal making a referendum unavoidable. Nearly 85% of the voters rejected the ENEL redoubling project, demonstrating that environmental awareness had increased by mobilisation and participation;
- in 1996, a proposal to create a cement factory in S. Vincenzo was rejected by the local authority; the factory promised nearly 300 jobs; the local mayor, with technical and scientific help provided by its staff and specialised agencies (e.g. ARRR, regional agency for resources’ recovery), gained the consensus of the population concerned strengthening the local development plan based on the parks system, tourism, high quality agriculture, etc.<sup>8</sup>

Significant projects and initiatives promoted by the local authorities and individuals are:

- the “Cultural District Park of the Val di Cornia” (see initiative n. 3) as an actual alternative between land speculation and a static image of natural, environmental or archaeological museums’ guardianship;
- the “Alta Maremma Covenant” (initiative n. 2) which constitutes the basis of a sustainable development, integrating rural areas, organic farming, ecological agriculture, cultural and natural tourism, agri-tourism, small businesses, craftsman, local trade, traditions, etc.;
- co-ordinated spatial planning as a relevant instrument which strives for the incorporation of the environmental dimensions into the initiatives of each local authority (box n. 1) arriving at the elaboration of the Piombino Local Agenda 21 (initiative n. 1);
- the utilisation of the local resources based on new concepts and methods. These are supported by innovative collaborative management efforts as well as by new technologies in environmental protection (box n. 2), in water savings (initiatives n. 4 and 7) and in waste (box n. 3) reclamation;
- the current process to give a more decentralised autonomy to the local authorities within the Valley (box n. 4); a process stimulated by all the above initiatives since they have acquired a transversal role;
- private initiatives which have acquired a leading role as examples of innovative and courageous sustainable entrepreneurship (initiatives n. 5 and 6) even though, at their start-up, they were considered high business risks and not feasible.

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<sup>7</sup> Gasperini W. – interview

<sup>8</sup> Banti L. - interview

The Val di Cornia has reached the point of critical mass in which the elaboration of a shared (by its local actors) feasible vision of the sustainable development in the Valley is facilitated by an increase in the awareness of basic concepts such as<sup>9</sup>:

- environmental and human needs exist which must limit a simple economic growth;
- resources must be maintained and their quality increased and not diminished;
- the environmental dimensions must be incorporated into all policies, projects and activities;
- clients and producers must pay the probable environmental damage derived from their style of life and consumption (e.g. quarries, etc.).

Further efforts need to be made towards a more coherent range of initiatives based on territorial analysis, indicators for sustainable development, etc.<sup>10</sup>; in this way a higher qualitative profile can foster the current courses of action. The overall orientation is growing away from mono-industrial to the creation of a diversified local economy.

## THE ECONOMIC DIMENSION

*From the leadership of a mono-industrial development to diversification and integration between different sectors and the environment*

Between 1961 and 1991 (according to ISTAT census data), employment profiles of the Val di Cornia underwent the following changes: from 54% to 36% in industry; from 19% to 7% in agriculture; from 27% to 57% in other (various types of tertiary and services) activities.

	1961				1991			
	agricultu re	industry	other	total	agricultu re	industry	other	total
Campiglia	1215	1524	772	3511	613	1731	2501	4845
Piombino	1280	7577	3671	12528	548	4511	7370	12429
S.Vincenzo	450	994	634	2078	114	860	1632	2606
Sassetta	172	82	89	343	29	53	93	175
Suvereto	663	406	192	1261	240	406	528	1174
Valley Total	3780	10583	5358	19721	1544	7561	12124	21229

<sup>9</sup> These concepts were affirmed by the persons interviewed

<sup>10</sup> Saragoza C. and Bagatti M. - interviews

## BOX n. 1

### **SPATIAL PLANNING ALONG STANDING PRACTICES OF COORDINATION**

**Actors:** local authorities (Campiglia Marittima, Monteverdi, Piombino, San Vincenzo, Sassetta, and Suvereto).

**Brief history:** the creation of a co-ordinated territorial planning scheme began in the late 1960's with the support of the Province of Livorno and the regional committee for economic programming (the Regions did not officially exist until the 1970's). The scheme called for a system of natural parks in an effort to preserve the natural resources from the growing land speculation.

**Motivations as perceived by the actors:** the actors were striving to integrate the economic-social programming for the area with territorial planning. The connection between the two is an important historic factor in the area.

**Objectives:** to protect the territory from land and property speculation and create an economic development programme based on the correct use of territorial resources.

#### **Sectoral dimensions**

**Environment:** the protection, recovery and restoration of natural resources is directly related to this dimension. Furthermore the study of the compatibility of new construction and infrastructure projects and the creation of natural, archaeological, mining and river parks reinforce attempts to create a new attention to the environment.

**Economy:** the programmes give priorities to the co-ordination of territorial planning instruments for the following areas: infrastructure, tourism, re-industrialisation, environment and agriculture. In particular, attention is given to: guaranteeing connections and developing relationships with centres outside the valley, the capacity of the infrastructure to respond to social and productive needs, protection of the natural environmental and historic resources (buildings) of the territory.

**Socio-culture:** the integration of needs of the economic and environmental dimensions has an implicit positive socio-cultural effect on the entire valley.

#### **Equity dimensions**

**Social equity:** the concept of social equity is inherent in the programming culture of the areas leftist controlled local governments.

**Interregional equity:** the experience involves not only the Val di Cornia but also the Colline Metallifere and the Val di Pecora

**Intertemporal equity:** the protection of environmental and landscape values has an implicitly strong element of intertemporal equity.

#### **Systemic dimensions**

**Diversity:** the development of the local resources is central concept of the action.

**Subsidiarity:** the plans are co-ordinated but autonomous and as such are promoted on a municipal level (co-ordination from below). The actors anticipated regional objectives in the subject of co-ordinated territorial planning introduced in the Region in 1984.

**Partnership and networking:** a systemic planning vision for the valley and for its relations with the surrounding centres are present throughout the programmes for territorial planning of the area. The present plans were a reinforcing experience for the actors to overcome municipal boundaries and create a territorial approach to programming in activities related to economy, culture, and housing.

**Participation:** the battle against land and property speculation united both the municipal authorities and the population, creating a consensus for the programme; nowadays the concept of a participatory spatial planning still remain in their culture.

The core of industrial employment has been historically concentrated in Piombino (the city-factory) with 60% in 1961, to 36% in 1991. However the influence of the city-factory culture has spread over the Valley. In fact, in comparison to Piombino, other local communities in 1991 had similar industrial employment (from 30% in Sassetta, 36% in Campiglia) while the difference was larger in 1961 (from 24% in Sassetta to 48% in San Vincenzo).

Within this scenario, some local communities resulted (in 1991) more agricultural orientated (Suvereto 20%, Sassetta 17%, Campiglia 13%) than others.

The above data confirmed what is well known from literature (and continuously affirmed by all interviewed key-persons):

- the role of industrial employment has always been of great importance to the Valley even though it has decreased; industrial workers remain 19% of all the resident population in 1961, and 13% in 1991;
- the industrial employment has been strongly concentrated in the city-factory of Piombino and based on iron and steel manufacturing, as well as on the related service activities and on the electrical power production;
- the above phenomenon did not result in a wild urbanisation of Piombino and the Valley since previously indicated interventions were made in town planning<sup>11</sup>. Local authorities were far-sighted in: a) promoting a co-ordinated public transport which was aimed at commuter industrial workers; b) co-ordinating their spatial planning (box n. 1);
- the beginning of the 1980s can be interpreted as the starting point of a tremendous crisis which involved heavy industry (iron) and a modification of the Valley socio-economic fabric which fostered a de-industrialisation process; according to data from the current "territorial pact" ( box n. 5) in 1980 workers employed by the three big iron industries (Magona, Acciaierie, Dalmine) amounted to 10,238 units which fell to 3,791 in 1995;
- even though agriculture lost ground, islands of resistance and renewal exist in the Valley (as above mentioned, especially in Suvereto, Sassetta and Campiglia) and the tertiary sector increased its overall role in particular in S. Vincenzo (where it represents a 63% share of employment especially in tourism industry) as well as in Piombino itself (59%).

Other consequences linked to the relevant mono-industrial development are related to the characteristics of the production cycle and market of big iron industries. These latter have been very close and monopolistic with a series of related activities (e.g. mechanical workshops, maintenance, servicing, etc.) performed by small and medium sized enterprises (SMEs).

Even though they were locally managed, these activities have always been dependent upon a sector which was directed by external centres of decision-making and power placed somewhere else (both at national and international level). As a result, a prudent and conservative entrepreneurial culture has prevailed (Falorni A., Daurù C., Freschi A. C., Pagni R., 1966) with a low degree of risk taking and autonomy, since it principally relied on exogenous resources (i.e. financing, investments, knowledge, etc.)<sup>12</sup>.

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<sup>11</sup> From an urbanistic point of view, Piombino was the site of numerous architectural -urbanistic experiments in the housing and commercial centres, often times designed by important architects such as Romano and Insolera. This attention to the overall urban territorial planning began in the early 1900's and by 1970 had become an important local characteristic. This resulted in several battles successfully wage against large scale construction projects. Territorial zoning was initiated, dividing the city into park, industry, commercial and residential, thereby protecting large areas from speculative ventures (Saragoza C. – interview).

<sup>12</sup> Bucci M. and Nardi R. – interviews

## BOX n. 2

### **CLOSE COLLABORATION BETWEEN LOCAL AUTHORITIES AND REGIONAL AGENCIES: THE CASE OF ARPAT, the regional agency for environmental protection**

**Actors:** local authorities and the local (sub-provincial) branch of ARPAT

**Brief history:** ARPAT was created in 1995 by regional law. It was given administrative and management autonomy and is organised in provincial departments. Its activities include: monitoring of the marine environment, water pollution, atmospheric pollution, ground pollution, and technical assistance for environmental restoration projects.

**Motivations as perceived by the actors:** the approach is one of environmental restoration based upon the horizontal and vertical integration of initiatives.

**Objectives:** to integrate environmental protection with economic development.

#### **Sectorial dimensions**

**Environment:** the priority areas with regard to Piombino are: the industrial area and port, the waste treatment facilities, the park of the Tuscan Archipelago, and the areas requiring reclamation efforts. The Piombino ARPAT service provides a operating unit of environmental engineers to control the industrial facilities in Piombino and a group of specialists for: ground protection, reclamation projects, waste treatment, and water resources.

**Economy:** the incorporation of the environmental and economic dimensions is implicit in the project

**Socio-culture:** the pollution form of the iron and steel industry as well as the degradation of the water resources in the Val di Cornia have created social problems. Environmental awareness has increased in both the local authority's programme as with the public in general. ARPAT promotes information campaigns and environmental auditing to improve the capacity for environmental planning and personal training.

#### **Equity dimensions (social, interregional, intertemporal)**

Social and intertemporal equity are implicit in the enlarged scope of the ARPAT's programmes and in the efforts to tie together environmental protection and economic development. Interregional equity is clearly performed since ARPAT is an agency which covers all the regional territory and has close links with the other Tuscan regional agencies, as well as agencies which operate in other Italian regions.

#### **Systemic dimensions**

**Diversity:** diversity is present both as a dimension of the environmental efforts as well as part of the specialisation in the environmental sector of the territorial services.

**Subsidiarity:** the provincial ARPAT department corresponds to the former local health services, who were responsible for these sectors. The relationship of this department with the local authorities needs to be further improved, also with respect to the future institution of the Val di Cornia administrative district (see box n. 4).

**Partnership and networking:** the activities of ARPAT are in collaboration with the other authorities who participate in the individual projects: local authorities, the regional agencies for resource recovery (ARRR), for agricultural and forestry assistance and innovation (ARSIA), the local health agency (USL, see box n. 6), the intermunicipal consortium of water resource management (CIGRI, see initiative n. 4), local representatives. The department is connected to the national Minister of the Environment and participates in the Piombino Local Agenda 21 activities (see initiative n. 1).

**Participation:** the involvement of the population is sought after, by supplying information and stimulating participation in the projects.

Moreover, SMEs have frequently had a primary training function in favour the big industry: many workers trained by and within the former (prevalently on the job) were hired by the latter. This situation lasted for many decades, when the certainty of good contracts and work (and thus good turnover) was fed by good relationships with the big industries which were managed by the state-participation system (Partecipazioni Statali). The crisis, within an international market decrease, dragged the connected SMEs into the economic turmoil which added to the overall unemployment effects. When, more recently, the iron production system was taken over by a private company (Lucchini, a North conglomerate based in Brescia but with international role and ramifications), new entrepreneurs entered in the related sector displacing a large number of the previous businesses.

Another consequence of the relevant mono-industrial development has been the disappearance of old trades and crafts from the effect exerted by big external industry in many fields (housing, food, clothing, furniture, etc.). On the contrary, the traditional farming was not completely destroyed (especially in Suvereto, Sassetta and Campiglia) and nowadays, with a slight return to agriculture by young people and with a new generation of farmers, new perspectives are visible also in this sector<sup>13</sup>.

To sum up, in the entrepreneurial field, two areas can be distinguished: the big mono-industry (and to a lesser effect. the related businesses) for many years characterised by advanced technology and dominating the employment market; and the small and medium sized businesses (self-employment included) which operated in other sectors (agriculture, tourism, trade, craftsmanship, services, etc.) with a low level of modern technology, employment and widely based on local markets. In respect of the latter, the former was considered as a more certain and progressive basis for income, employment and development. This was also a foundation of the traditional leftist culture (very strong in the Val di Cornia) which identified the worker class (and, on the opposite front, the big capitalistic industry) as the core of a modern development strategy. Within this typical industry based culture of the Western countries, small businesses were seen as backward, not innovative and with low levels of labour protection, income, and healthy work<sup>14</sup> (De Marco C., Talamo M., 1976; Crespi F., Segatori R., Bottacchiari V., 1975). The above vision became, in recent time, "out of focus" and considered no longer realistic and progressive, whilst its secondary effects from large industry became more clear on unemployment, low family income, the environment and the landscape (air pollution, water pollution, land subsidence, etc.) exerted by quarries, iron and steel production, electric power production throughout one of the larger industrial territories in Tuscany.

As already mentioned, the deep crisis which interested Piombino and the Val di Cornia revealed how what was considered as strong and safe became weak, uncertain and risky; and vice versa, how what was considered to be backward and less modern (and, in many cases, marginal) became a basis for an alternative development strategy.

Data (source: Direzione Provinciale del Lavoro, INPS, Camera di Commercio, Provincia, various years; Ruocco M., 1997) and interviews<sup>15</sup> regarding the Province of Livorno shows the change in the entrepreneurial fabric of the Val di Cornia during the last decade: the employment share linked to medium and small businesses (1-49 employees) has increased from 41% in 1987 (6,838 people) to 57% in 1996 (8,244 people), whilst the employment share held by firms of larger dimensions (more than 49 employees) decreased from 59% (9,929 people) up to 43% (6,153 people).

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<sup>13</sup> Saragoza C., Gasperini W. and Pazzagli R. – interviews

<sup>14</sup> Nardi R. – interview

<sup>15</sup> Ruocco M. (Chamber of Commerce) and Orsini R. (Province) – interviews

## BOX n. 3

### **RESOURCE RECOVERY: THE CASE OF ASIU (the special agency of the Piombino municipality for the collection and treatment of solid waste)**

**Actors:** the local authorities of Piombino, Suvereto, San Vincenzo, Castagneto Carducci and ASIU.

**Brief history:** between the last 1980's and the beginning 1990's, new approaches emerged concerning wastes (e.g. from discharge to recovery and recycling). Many local authorities of the Val di Cornia gave the concession to ASIU for the collection and treatment of residential and industrial solid waste (RISW), including large item collection, RISW assimilated special wastes and recycling.

**Motivations as perceived by the actors:** the actors programmed the extension of the service to the entire Val di Cornia and to the Colline Metallifere

**Objectives:** to create a service that would be efficient, diffuse and economical and that would lead to increased collection of waste products, including those from industrial production.

#### **Sectorial dimensions**

**Environment:** the central concept of this project was the promotion of waste as a resource, including the recycling of paper, plastic bottles, etc.

**Economy:** the project is directed at improving efficiency and lowering the cost of RISW, improving employment opportunities in this sector (e.g. by the start-up of co-operative businesses)

**Socio-culture:** in the last 15 years, environmental awareness amongst the general population has increased, as a result of increased atmospheric pollution. ASIU is involved in educational activities in the school on recycling (questionnaires, videos, etc.) and it created a special service of environmental communication.

#### **Equity dimensions (social, interregional, intertemporal)**

Social and intertemporal equity are implicit in the enlarged scope of the ASIU's programmes: the quality of life will be bettered in the valley from the resulting improvement in the overall health and environmental quality). Inter-local equity is clearly performed by ASIU since there are efforts to increase the programme from the Val di Cornia to the near Colline Metallifere.

#### **Systemic dimensions**

**Diversity:** the project involved a in-depth study of the territory, including waste flows and material markets, in the attempt to highlight submersed flows in productive cycles of the local businesses.

**Subsidiarity:** the regional waste plan is concerned predominately with RSW and gives little attention to industrial wastes that are a significant problem in Piombino. The recent changes in the regional and national laws will create provincial basins for the collection and treatment of wastes, controlled by a single subject, transforming the ASIU into a joint stock company with the local authorities as shareholders.

**Partnership and networking:** the collaborations between workers and teachers, and between the local governments, ARPAT, Local Agenda 21, and the regional agency for resource recovery (ARRR) are central to the project; a partnership with the largest steel manufacture in the area was made to construct a collection facility for recyclable materials.

**Participation:** the amount of recyclable waste totals 16% for Piombino. To reach such a figure, the participation and comprehension of the population is necessary. A reciprocal consultation between ASIU and the local authorities has been initiated to study the end user requirements.

This occurred within a condition of overall decreasing employment (-14% = 2,370 people) related to the big industry and its related activities (-38% = 3,776 people). On the contrary, employment has clearly increased in SMEs (+21% = 1,406 people), partially replacing the big industry losses (i.e. jobs created by the latter correspond to 37% of the jobs lost by the former). Moreover, while Piombino is clearly dominated by the big industry (70% of employed people in 1987, to 56% in 1996), the reverse situation is true in other local communities where employment is provided by SMEs (practically 100% in Sassetta, Suvereto, S. Vincenzo, and from 89% to 92% in Campiglia between 1987 and 1996).

Therefore, the entrepreneurial fabric of the Val di Cornia is changing. To cope with the big industry crisis, alternatives are based on diversification of activities with recourse to the endogenous capacity for creating small businesses (e.g. +25% of local units from 1987 to 1996).

If it true that the above capacity has been inactive for a long time with respect to other Tuscan areas (e.g. the so called industrial districts - Prato, S. Croce sull'Arno and many others), it is also true that nowadays it is increasing because it is rooted in the local traditions.

During this decade, new small businesses (self-employment included) have increased in number both in Piombino (especially as initiatives undertaken by redundant and unemployed industrial workers) and in the other local communities, where unemployed people (e.g. women and the young persons) have been attempting by themselves to create their own employment in other sectors (e.g. tourism, services, trade, agriculture, etc.)<sup>16</sup>.

The above phenomenon shows a certain degree of vital and innovative entrepreneurship, even though markets (niches) and territories have not reached the size of those which have been historically covered by the big industry. Two stereotypes are no longer true to a large extent: the image of the Val di Cornia as a Piombino-centred productive area; the presumed low level of entrepreneurial culture.

The growing range of activities and small businesses regards: parks, natural and cultural tourism, agri-tourism, gastronomy, nautical sector, thermal baths, etc. They are clearly favoured and supported by programmes, projects and initiatives promoted by local authorities. As a result, market and economic interests make it possible to re-address, day by day and in a pragmatic way, local development and employment patterns towards the maintenance, renewal and increase in the value of the environmental resources.

Of course, there is always the threat of those who pursued prompt profits but this is contrasted by a wide spread orientation to lower the consumption of natural resources and better utilise of the environmental heritage. The period of dangerous threats has probably come at an end, since they were represented by the strengthening of big industries and exogenous development patterns.

Also in Piombino, after a long period, a pro-active attitude stems from the previous conservative orientation: "beyond the smog" a new development appears to be feasible (Guerrieri L., 1997).

Thus the industrial crisis became an opportunity to change the conventional economic model. It was also, paradoxically, both a leading factor in the environmental degradation but also it acted to prevent other types of excessive exploitation of natural resources, since it was the principal source of the family income, drawing attention from agriculture and lessening the effects of intensive industrial agricultural practises.

At the same time, the action to protect and develop the parks network became a visible point of reference for inventing new ways of economic development and to understand that the environment can offer development opportunities in a new era based on economic diversification. This challenge, as already demonstrated, has become the new commitment of many local authorities, both within the Valley and around it. Concepts of sustainable development are already and clearly declared in many official projects and documents.

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<sup>16</sup> Bertini P. - interview

## BOX n. 4

### CREATION OF THE VAL DI CORNIA DISTRICT

**Actors:** the local authorities of Suvereto, Campiglia, Piombino, San Vincenzo and Sassetta.

**Brief history:** there has always been a strong collaboration between the Val di Cornia local authorities, e.g.: during the 1960's and the 1970's through integrated and co-ordinated spatial planning (box n. 1), social services, transport, etc. (box n. 6); during the 1980's with the creation of an Intermunicipal Association. This last experience was concluded in 1993, when the Val di Cornia local authorities created a new form of intermunicipal authority, the Committee of Territorial Coordination (CCT). The creation of a Val di Cornia administrative district ("circondario") in 1998 was the result of an institutional and political negotiation between the 5 local authorities, the Province of Livorno and the Region (in May 1996, the Region identified the Val di Cornia as one of the three areas in which to experiment new forms of subsidiarity).

**Motivations as perceived by the actors:** the "circondario" is perceived as a primary political objective to guarantee a more comprehensive vision of the area and its planning.

**Objectives:** the central objective is to better co-ordinate government and the territory, allowing for a institutional and bureaucratic simplification and a more efficient co-ordination of municipal programmes. The goals include the promotion of sustainable development in the Valley.

#### **Sectorial dimensions**

**Environment:** the CCT recognised the complex system of realities as an opportunity for co-ordinated development that is compatible with sustainable use of natural resources.

**Economy:** the strategic objectives of the CCT are the protection and the enhancement in the value of the local resources and the co-ordination of public and private projects that are based on a sensibility of market requirements. The subjects that fall under the direct responsibility of the "circondario" are: environmental and cultural resources, agriculture, training.

**Socio-culture:** the value of the local human capital is at the basis of the CCT institutional agreement for an integrated and diversified development of the valley (humanised development), pursuing co-ordinated management of professional training programmes, local culture, etc.

#### **Equity dimensions**

**Social equity:** the CCT institutional agreement affirms that: the solidarity towards the weaker members of society is an ethic responsibility; the social quality of life is a basic goal, as is the extension of the public's rights in their government's actions.

**Interregional equity:** the CCT is based on the social cohesion between different local communities.

**Intertemporal equity:** this dimension is implicit in the concept of "humanised development, compatible with the environment".

#### **Systemic dimensions**

**Diversity:** the recognition of the value of diversity as an opportunity for local development is one of the strategic objectives of the CCT.

**Subsidiarity:** the new administrative district is considered as a form of self government for local development, aimed at improving and integrating the practices of the current CCT in streamlined management and co-operative decision-making over a homogeneous area.

**Partnership and networking:** the "circondario" is composed of representatives of the five local authorities and of the Province, and is directed at stimulating the integration of political and administrative activities in the valley.

**Participation:** a strategic objective of this initiative is to reduce the gap between the citizens and the government activities, improving and updating the "open-door" style of governance which is typical of the local authorities of the valley.

These should be coherently enforced and put in practice. This means that, if all actors should be involved in this mission, important roles should be played by the local authorities, their mayors and councillors, to create a shared vision and to pursue it “without hesitation and short cuts”<sup>17</sup>.

Public programmes, initiatives and policies (see initiatives n. 1, 2 and 4) should be strengthened, consensus and participation should be promoted, citizens and entrepreneurs should be supported (see initiative n. 7) to elaborate projects and carry out businesses, managed individually or co-operatively, which are more and more orientated towards sustainable development (see initiatives n. 5 and 6) .

The quality of the environment, entrepreneurship, employment and development are closely correlated each other; their synergetic integration can determine the way out from the industrial crisis, given that:

- in **agriculture**, there are cases of excellence represented by organic farming (see initiatives n. 5 and 6) and, high quality production (e.g. local seals of quality, “the wine country tours”, etc.); problems need to be solved regarding the transformation and trade channels of agriculture produces, especially the organic ones; the few cases of organic farming took more than ten years to be appreciated as feasible methods of production, nowadays there is an increasing awareness of the importance of organic farming both in new development patterns and in the economy of the future<sup>18</sup>;
- in **craftsmanship**, vital businesses exist in some areas (e.g. Campiglia); problems should be solved which concern artistic and classical production (e.g. wood and furniture) giving support in order to recover and develop old tradition of arts and crafts<sup>19</sup> (e.g. integrated projects of training and enterprise creation);
- in **tourism**, there are new initiatives based on a wise utilisation of cultural, historical and natural resources (see the parks system, initiative n. 3), of the local farming (e.g. an increasing network of agri-tourism activities, some of them really innovative – see initiatives n. 5 and 6); there are two basic pre-conditions which should be respected: a) lessening the environmental impact<sup>20</sup> both as a general matter and as due to conventional mass tourism (seasonal and concentrated along the coast, e.g. S. Vincenzo); b) promoting eco-compatible tourism; to this end, sustainable indicators should be introduced, quantity of visitors, wastes, water, damages should be monitored<sup>21</sup>, coherent and integrated projects should be developed to market the Val di Cornia<sup>22</sup>, promoting organic farming, craftsmanship, balanced agri-tourism<sup>23</sup>, etc.;
- in **industry**, there is by now awareness of the sectorial (e.g. market globalisation, technological labour saving, etc.) and environmental limits to growth and there is willingness to diversify manufacturing activities within a commitment of urban and industrial reclamation to improve the quality of life (see initiative n. 1) and to develop SMEs<sup>24</sup> (box n. 5);

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17 Bertini P. - interview

18 Gasperini W. and Arnofi S. – interviews

19 Bucci M., Nardi R. – interviews

20 Bertini P. – interview

21 Bagatti M. – interview

22 Nardi R. – interview

23 Mazzanti D. – interview

24 Ponsini P. – interview

## BOX n. 5

### THE VAL DI CORNIA "TERRITORIAL PACT"

**Actors:** promoted by five local authorities (Piombino, Campiglia Marittima, San Vincenzo, Sassetta, Suvereto), the Province of Livorno and the port authority of Piombino, the pact was signed by nearly 30 local institutions, agencies, associations, banks, private and public companies, including the Chamber of Commerce, employers' association and trade unions.

**Brief history:** the decline of the industrial sector, which dominated the economics of the Valley until the '90s, resulted in social and employment problems (a loss of nearly 6500 jobs between 1981 and 1995). Attempts have been made to cope with this crisis. Furthermore in the beginning of the 1990's, the most important company passed from State ownership to private, followed by a significant downsizing and restructuring. Last year the local actors initiated a negotiated and co-decisional process to stimulate spontaneous business initiatives by means of co-ordinated services and financing. This process led to a final agreement between all the parties involved (*territorial pact*) in February 1998. CEVALCO (the centre for economic development of the Val di Cornia, created in 1988 by local authorities, businesses, banks and citizens) has been chosen to support business planning, to collect individual projects and to co-ordinate the initiative.

**Motivations as perceived by the actors:** to realise concrete projects that lead to the sustainable development for the whole territory of the Val di Cornia.

**Objectives:** to modify the mono-economic base of the area, by promoting the development of a diversified economy that incorporates a significant attention to the territory's environmental and cultural resources.

#### **Sectorial dimensions**

**Environment:** projects that are proposed must incorporate an element of environmental improvement or at least give attention to preventing further degradation. Particular attention has been given to completing the Cultural District Park of Val di Cornia (see initiative n. 3).

**Economy:** the economy will be strengthened by improving the artisan, tourism, agriculture and SMEs sectors in such a way to favour innovation and new entrepreneurial possibilities.

**Socio-culture:** investments in the professional training and similar activities are dedicated to improving the human capital of the area, according to the principles of equal opportunities between men and women.

**Equity dimensions** (social, interregional, intertemporal)

Equal opportunities between men and women, social reinsertion of people at risk of marginalisation are some of the objectives of the Pact. Interlocal and intertemporal equities are implicit in the basic concept of sustainable development pursued by the Pact.

#### **Systemic dimensions**

**Diversity:** economic diversification through the increase in the value of the cultural, environmental and human resources related to the territory.

**Subsidiarity:** the "thinking together" and homogeneity of the area is reinforced, re-affirming the consolidated capacity for co-ordinated planning and management (see the other boxes and the initiatives n. 3 and 4)

**Partnership and networking:** the Pact is based on a close collaboration between local businesses, administrations, development agencies, banks, etc.

**Participation:** the active involvement of local actors and entrepreneurs is clearly demonstrated by about 150 projects which will create 2000 jobs in environmental and cultural tourism, agri-tourism, environmental infrastructures, small industries, services, etc.

- in the **sea-land archipelago**, an interesting willingness to recapture the disappearance of the traditional culture of the Val di Cornia (see next paragraph) which historically connected many activities (e.g. harbour, sea, industry, tourism, agriculture, services, etc.)<sup>25</sup>; problems should be solved which regards the quality of the sea, the environmental pressure of the Port of Piombino (due to its intensive utilisation for industrial purposes and for mass tourism which interest the archipelago islands) and of the transportation system of which the port is a key point; the consolidated tradition of spatial planning (box n. 1) represents a way to cope with these issues if it incorporates sustainable transportation policies.

Thus, opportunities are emerging, the industrialist mono-sectorial culture and image of the Valley are moving towards a multi-faceted one within a more coherent diversification of the local economy<sup>26</sup>. It is however clear that a long term strategic thinking is necessary to coordinate and integrate the above orientations within an overall statement: environmental resources are of public and collective use, they should not be impoverished but improved<sup>27</sup>.

## THE SOCIO-CULTURAL DIMENSION

### *From conventional industrialist values to concepts of sustainable development*

Two distinctive souls have always co-existed in the Val di Cornia: the naturalistic one (very sensible of environmental problems, rural and farming issues, archipelago connection of “sea and land” - Pizziolo G., 1992) and the industrialist one (more recent but with old vocation for mines, quarries, iron production since the Etruscan time).

The relationship between these two souls constitutes a very long term process, not linear, partly in conflict, but in any case animator of innovation and continuous change within continuity of traditions, identities, local diversity, common matrices of history, culture, social and territorial fabric. In other words “an historical heritage characterises local environmental values”<sup>28</sup>.

The only cultural lost is that related to the unity of sea and land, as a result of the industrialisation and mass tourism: the former because Piombino harbour became an iron and coal industrial port and its activities have been full devolved to the existing large facilities; the latter because the “sea and land” archipelago declined in its role as a vital local network of social interactions whilst increased its function of platform for the tourist industry.

As already stated, between the end of the 19<sup>th</sup> century and during the 20<sup>th</sup> century, exogenous capitals (both stranger and national) invested in the Piombino area-based iron and steel big industry. From about two thousand of inhabitants at the end of the 19<sup>th</sup> century, Piombino arrived at tens of thousands at the beginning of the 20<sup>th</sup> century. Factories became the central focus of the town influencing its urban planning, housing, streets network, and more and more its daily life and lifestyles (culture, leisure, entertainment, recreation, education, etc.).

The industrial Piombino appeal spread across the Valley, especially when, during the 1960s, the Italian economic boom fostered migration from agricultural and rural sites to the industrial urbanised areas. For a long time (before, during and after this exceptional period) the cultural image of Piombino remained that of an advanced industrial model: city-factory, positivism, certainty, thrust in an imperishable and continuous development, technology. Piombino, within the Italian scenario, is the symbol of modernisation and innovation; linked to the rest of the world. For many inhabitants of the Val di Cornia it represented emancipation because it freed

<sup>25</sup> Saragoza C., Nardi R., Bertini P., Pazzagli R. – interviews

<sup>26</sup> Examining the Internet page for Piombino, the industrial side of the city appears completely marginalised with respect to the service sector and the development of the port tourism and environmental activities. The site contains images of the coast and historic centre. There are few images of the actual city and industrial areas. The future vision of Piombino emerges, including the efforts related to Local Agenda 21. In this vision industry has its role but it is not the only economic activity and there is an emphasis on the quality of life issues. The city of Suvereto is a promoter of this new direction for all the Val di Cornia. The mayor of Suvereto, who has governed for 15 years has paid much attention to the cultural evolution of the city, assisting in the development of key sectors, in particular agriculture which is becoming a major force in the valley (Saragoza – interview).

<sup>27</sup> Gasperini W. – interview

<sup>28</sup> Pazzagli R. - interview

them from the unpleasant and heavy work in woodland, land reclamation, mines, old agricultural work, etc. It also represented a new rooting because industry allowed more certainty of income, civilised life, etc. and, thus reducing the need to migrate to other developed areas.

Some features (ISTAT census) help to understand the changing social phenomena.

<b>Population</b>	<b>1961</b>	<b>1971</b>	<b>1981</b>	<b>1991</b>
<b>Campiglia</b>	9266	11350	12463	12513
<b>Piombino</b>	36102	39654	39401	36774
<b>S.Vincenzo</b>	5673	7182	7558	7175
<b>Sassetta</b>	873	682	585	553
<b>Suvereto</b>	3246	3025	3173	3053
<b>Valley Total</b>	55160	61893	63180	60068

Piombino is the most populated municipality of the Valley, having the largest share of inhabitants (from 65% in 1961 to 61% in 1991). It increased in population especially between the 1961 and 1971 (+10%), whilst it decreased between 1971 and 1981 (-0,6%) and especially more recently (-6,7% from 1981 to 1991). Among the other municipalities, only those which are nearer to Piombino and in the lowlands increased, while the other ones (more distant and hill-mountain placed) decreased. The former are Campiglia and S. Vincenzo; the latter Sassetta and Suvereto. Between 1961 and 1991, Campiglia (with the lowland town of Venturina) and S. Vincenzo enhanced their role as the Valley population second (from 17% to 21%) and third cities (from 10% to 12%). The increase has been steady from 1961 to 1971 (S. Vincenzo +27%; Campiglia +23% ), and has continued between 1971 and 1981 (Campiglia +10%; S. Vincenzo +5%), where it is practically stopped in the following decade (Campiglia +0,4%) or declined (S. Vincenzo – 5%).

If during the last decade there has been a decrease in the Valley population (- 4,9%), confirming the characteristics recorded in many other Italian areas with the correlated ageing of their inhabitants, it seems evident that what the above cited municipalities have gained was at the expense of Suvereto and Sassetta. In fact, between 1961 and 1991, the share of the Valley population which lived in Suvereto decreased from 6% to 5%; that in Sassetta from 2% to 1%. The largest rate of population-loss occurred over the period between 1961 and 1971 (Sassetta – 22% and Suvereto – 7%), but the decline has continued over the following two decades. In fact, from 1971 to 1981, Sassetta decreased (- 14%) whilst Suvereto increased (+ 5%); from 1981 to 1991, both of them diminished (Sassetta – 6%; Suvereto – 4%).

To sum up, the Val di Cornia has been one of the first Italian zones which experimented the rise of the industrial revolution, essentially because of its local resources and historical “wood-mines-iron” cycle of production. This determined significant changes especially when Italy became an industrial country after the second world war and during the economic boom of the ‘60s. Population trends were witnesses of this phenomenon. Within a Valley general population budget which is moderately positive (+ 9%) between 1961 and 1991, Sassetta and Suvereto present a negative trend (- 37% and – 6%), whilst positive results are in Piombino (+ 2%) and extremely abundant in Campiglia (+ 35%) and S. Vincenzo (+ 27%).

Therefore, it is evident that industrial urbanised lifestyles effected also the more rural orientated areas, but the above styles included a further characteristic which has contributed to the recent orientation towards sustainable development: the industrial soul of the Val di Cornia manifested environmental considerations and awareness since the ‘70s.

A very strong labour movement has accompanied the Valley industrial revolution. During the 19<sup>th</sup> century, republicans, anarchists, socialists, communists formed labour movement and trade unions (Arrigoni T., Pierini M., Saragoza C., 1996). It was a social phenomenon which affected the local culture especially from the late period of the 1800’s up to the fascism period. In 1943 (September 10), the Piombino population “took a very active part in the fight against

the German and Fascist tyranny, and long before the liberation of the town by the Allies, the patriots had taken charge of the place” (from a report written by the Office of Strategic Services, Washington DC, 1944 – quoted by Tognarini I., 1997).

Labour movement increased in strength. During the '70s it was very innovative, looking for better and healthy working conditions and to improve the work environment. In 1974, as one of the first example of efficient industrial relations and company collective bargaining, offices of industrial medicine were introduced within the factories. Strong motivations for an improved quality of life characterised the labour movement and a clear connection can be discovered between struggles which were factory-based and those orientated towards the surrounding environment (the industrial city of Piombino and the Valley), arriving at the elaboration of the Local Agenda 21 (see initiative n. 1).

Thus the claim to better quality of life has become, more or less spontaneously, the conjunction ground between two main different ways of understanding and favouring better environmental condition: a traditional attachment to the earth (the naturalistic soul) expressed by the populations of the countryside and rural areas; an expectation of a progressive role of industrial development, expressed by the urban workers and the labour movement. As a result an environmental culture has prevailed which is not radical and does not seem to have prejudiced closure to industrial activities<sup>29</sup>.

During the migration from agriculture and rural sites, many people who went to work in the factory brought with them a culture which was still rural (land, agriculture, the natural environment). This culture did not come to an end. Indeed, there is a mixture between two cultures, that coming from industrial urbanised areas and that from rural areas and the countryside. Moreover the above cultural mixture has been embedded within a leftist worker orientated training and education based on mobilisation, collective values and ethical behaviours. Step by step, the farmer became less individualist and “locally-closed-minded”, but, at the same time, industrial worker became less “factory-closely-minded”.

Within an overall change of time and space perceptions, time spent by commuter workers in coaches, scheduled according to factory working hours, became the period and place where the above cultural mixture was made<sup>30</sup>. Thus, a territorial continuity between rural and industrial lifestyles was provided by coaches for the many commuter workers who came from and came back to their countryside. Moreover many of them continued to practise agricultural activities within their families (e.g. in Suvereto, Sassetta, Campiglia). The result was that the industrial worker of the Alta Maremma was not totally urbanised and was not completely absorbed by industry. There were also family welfare improvements, since the important share of income was provided by the industrial work and integrated by farming and other related activities.

The above considerations explain partially the reasons why the neighbouring areas reacted to the industrial crisis more rapidly than Piombino<sup>31</sup>. While Piombino based industrial workers were strongly effected by the downturn of the big mono-industrial development pattern, those living in the countryside and in the rural areas were less so.

For them, industry was not the only way of life. In the industrial urbanised area, disappointment became disaster. Many workers and their families felt themselves as betrayed by the “big father” which had up to then been the iron industry with the related activities and culture. They felt themselves as “fatherless” people and many arrived at a situation where they began to hate the industry and to have nothing else to do with it.

To the citizen of Piombino, the industrial crisis represented the end of an era: the iron-era. A sense of powerlessness spread for many years, but the other citizens of the Valley, those living outside Piombino, had a different feeling: they had never completely shared the vision of the industrialist model; already thought that industry was not a faithful ally to agriculture. They saw

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<sup>29</sup> Pierozzi I. – interview; initiative n. 1

<sup>30</sup> Pazzagli R., Saragosa C. and Bagatti M. – interviews

<sup>31</sup> Banti L. and Pazzagli R. - interview

the changes as time continually modifying power-relationships and role (the earth is always the earth and, at the end of the day, people cannot survive without agriculture and the environment).

The path towards sustainable development seems to be open by means of the courses of action supported by the local authorities and key actors.

Suvereto (its mayors and town councils) has had a leading role, recapturing its consolidated farmer culture and strengthening the concepts of healthy relationships between man and nature within an integrated diversification of activities<sup>32</sup>. For instance, since 1983, an annual conference has been held to discuss environmental topics with the collaboration of WWF, environmental scientists, etc., as well as other meetings to analyse innovative methods and strategies (e.g. recovery and reclamation of historical small towns). Organic farming and food have always constituted topics of exhibitions, annual fair, and experimentation (e.g. in school refectories), provision for free of charge consultancy to convert conventional systems and farms, etc.

Suvereto has shared the leadership in the path towards sustainability with other agricultural and rural areas (Campiglia, Sassetta) and gradually with the urban and industrial areas (Piombino, S. Vincenzo). Nowadays, important co-ordinated and joint initiatives are carried out throughout the Valley. For instance, attention is focused on vocational training also in order to improve environmental awareness, culture, knowledge, know-how and skills in agriculture (organic farming), tourism, small businesses, maritime environment, craftsmanship (see box n. 6). In fact, as already underlined, a relevant weakness was revealed by the interviewed local actors: the lack of a new entrepreneurial culture which can support the creation of local initiatives and projects to cope with a change which must be more and more orientated towards sustainability. To sum up, during the '80s, the fifty year social pact between industry and citizens was dissolved<sup>33</sup>.

Nowadays, sustainable development seems to have become the clear vision which is the basis of a new social pact, as is demonstrated by the current negotiation for the "territorial pact" (see box n. 5). In other words, the Val di Cornia is actor in a long standing process of change.

Confronting time when the initiatives quoted in this report incubated, started, changed in contents and values, the following matrix can demonstrate how long it takes to move from conventional to new development patterns which are more orientated towards sustainability.

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<sup>32</sup> Gasperini W. and Pazzagli R. – interviews

<sup>33</sup> Reggiani P. - interview

<i>Initiative</i>	<i>Recognition of environmental and development issues (*)</i>	<i>From ideas to projects</i>	<i>Current phase of implementation (**)</i>	<i>Time span from incubation up to now</i>
<i>Local Agenda 21 - Piombino</i>	<i>Beginning of the '80s, when industrial pollution became a top agenda commitment of the local authority</i>	<i>From 1982, co-ordinated programmes against pollution, etc. to 1996 when L.A. 21 was approved</i>	<i>Start-up</i>	<i>15 years</i>
<i>Alta Maremma covenant</i>	<i>Beginning of the '90s, when a different approach was followed to cope with the Valley crisis</i>	<i>Since 1992 up to 1993 when the first covenant was approved</i>	<i>Development</i>	<i>7 years</i>
<i>S. Silvestro park within the single management of parks network</i>	<i>Late '60s when spatial planning included parks against land speculation</i>	<i>Since the beginning of the 1980's up to 1993 when a single company was created</i>	<i>Start-up</i>	<i>30 years</i>
<i>CIGRI water management (savings and reclamation)</i>	<i>Beginning of the '80s but in 1990 a different approach was followed to cope with water issues</i>	<i>From 1990 to 1993 when first reclamation works initiated</i>	<i>Start up and development according to different projects</i>	<i>16 years</i>
<i>La Bulichella – organic farming</i>	<i>Late '70s when different lifestyle became important to the promoters</i>	<i>From 1977 to 1984, when the farm was created</i>	<i>Maturity, verification and new planning</i>	<i>20 years</i>
<i>La Cerreta – organic farming</i>	<i>Late '70s when young people wanted to change their lifestyle</i>	<i>Since 1977 up to 1979 when the farm was created</i>	<i>Development</i>	<i>20 years</i>
<i>ARSIA – demonstration centre of irrigation</i>	<i>1985 when a local plan for agricultural development was elaborated</i>	<i>From 1992 up to 1995, when the project became feasible</i>	<i>Maturity; the experiment will end in 1998</i>	<i>12 years</i>
<p>(*) the term "different" is here used to mean innovative efforts (e.g. environmental and /or sustainability orientation) versus the conventional ones (e.g. mere industrialist orientation)</p> <p>(**) the implementation phases are considered as those of enterprise creation, local employment and development initiatives: start-up; development; maturity; decline. They follow the idea and project phases (SRS, 1995).</p>				

The above matrix shows not only how long it took the process to open the path of sustainable development in Val di Cornia, but it allows to consider the “stages of development” in terms of local capacity building (LRDP, 1995).

First of all, it is clear that in Val di Cornia, the path was initiated with the intensive actions aimed at protecting natural, cultural and historical heritage. This defensive strategy opened the viability of innovative elaboration, improving the local knowledge and know-how towards sustainability (development strategy).

Secondly, it is clear that apart from two private local initiatives (La Cerreta and La Bulichella), the others are promoted by public actors. These latter include the set of other programmes and projects described in boxes n. 1 to n. 6. The privately-promoted initiatives have assumed the role of reference points (“good examples”) to stimulate and improve local entrepreneurial capacity in managing an innovative and sustainable development (exchange and diffusion of experience and best practices) within the Valley and abroad. The public-promoted initiatives have assumed the role of wide “flagship” projects or programmes which help raise general public awareness, mobilise the local communities, provide transversal “pre-conditions” in order to make the start up of local private sustainable initiatives feasible. For example, the “territorial pact” (box n. 5) shows that (February 1998) about 150 projects have been presented which include also environmental and cultural tourism, agri-tourism, environmental infrastructure, etc. Thirdly, the above conditions seem to allow the incentives to be located where sustainable development projects will be initiated and managed spontaneously by private local actors.

<i>Motivations as perceived by the actors (expectation, vision)</i>		
<i>Initiative</i>	<i>Implementation</i>	<i>Motivations</i>
<i>Local Agenda 21 – Piombino</i>	<i>1996 – 1997</i>	<i>Sustainable development, based on reclamation and diversification of industrial areas</i>
<i>Alta Maremma covenant</i>	<i>1993 – 1997</i>	<i>Sustainable development based on the improvement of agriculture and rural areas</i>
<i>S. Silvestro park within the single management of parks network</i>	<i>1993 – 1997</i>	<i>Sustainable development based on the increase in value of natural, historical, cultural resources</i>
<i>CIGRI water management (savings and reclamation)</i>	<i>1993 – 1997</i>	<i>Sustainable development based on water savings and aquifer reclamation</i>
<i>La Bulichella – organic farming</i>	<i>1984 – 1997</i>	<i>New lifestyles based on the reconciliation between humanity and nature by means of a new entrepreneurial culture of sustainable development</i>
<i>La Cerreta – organic farming</i>	<i>1979 – 1997</i>	<i>Lasting eco-compatible example of life and development, innovating local farming entrepreneurial culture towards sustainability</i>
<i>ARSIA – demonstration centre of irrigation</i>	<i>1995 - 1997</i>	<i>Improvement of water savings and aquifer reclamation adopting innovative low-cost technology adequate to local farming conditions</i>

An overall evaluation of the above characteristics helps to distinguish the three principal stages of the overall dynamics:

- a foundation stage which is characterised by acquiring the knowledge and know-how of sustainable local development, learning, mobilisation, animation of local communities, creation of transversal pre-conditions (the above “good examples” and “flagship” projects and programmes provided by key local leaders, actors and institutions); this stage required

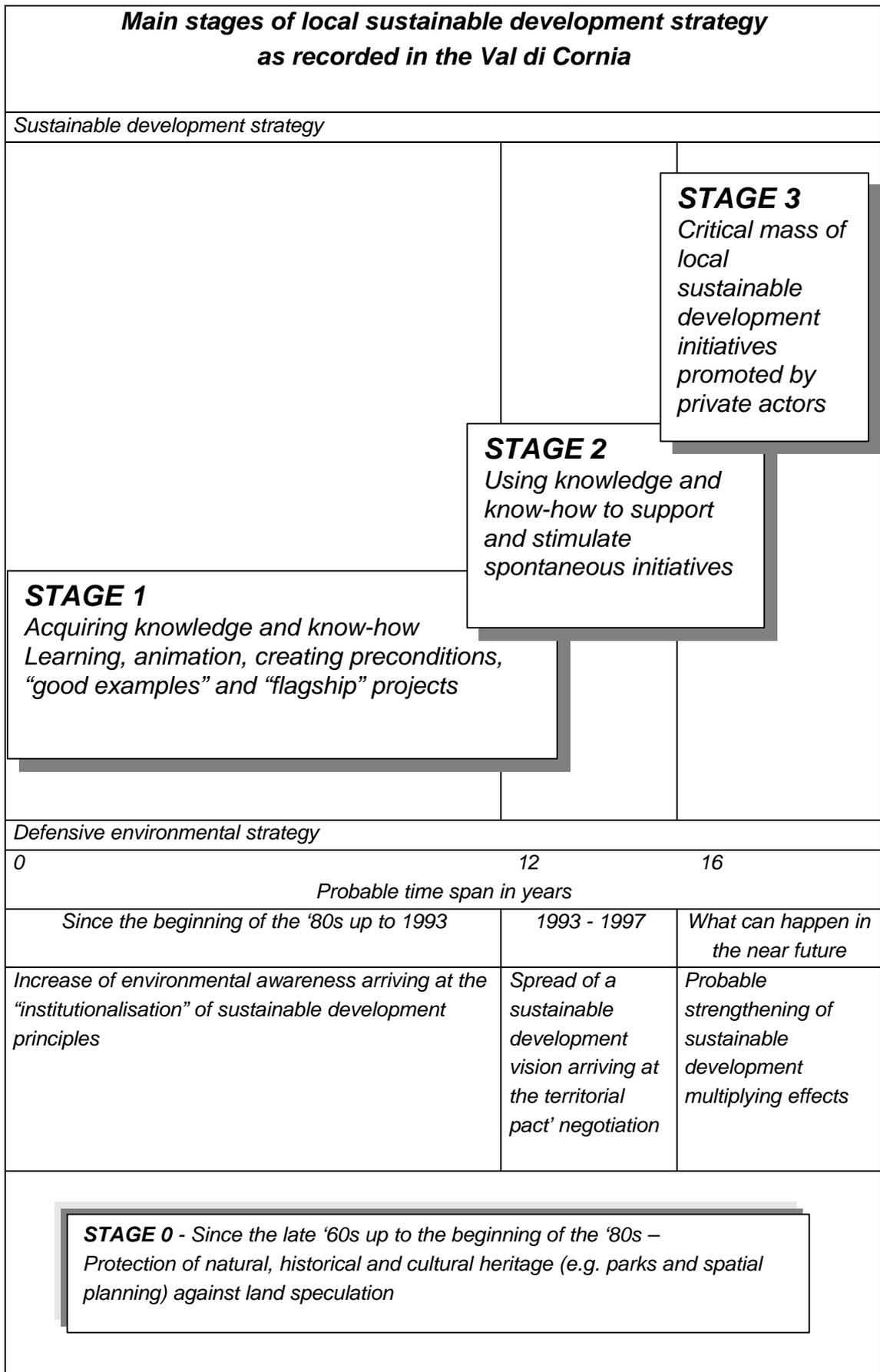
nearly twelve years and was helped by the previous period of nature protection which lasted at least another fifteen years (e.g. parks and spatial planning against land speculation);

- a current stage which is characterised by using the above knowledge and know-how; spontaneous initiatives are initiated by local actors which assign to a core of actors and institutions the role of facilitators; the identification of problems and solutions, targeting, business planning, innovation and evaluation are improving; co-operation is increasing between local businesses and their associations; this stage, which is still in progress, required about four years;
- a next probable stage where a multiplying effect will be fed by imitative process; in fact a basic conceptual innovation is becoming reality; this means that the vision of sustainable development will be carried over the Valley, acquiring more consensus and participation by the local communities; hints of the initiation of this stage have appeared during the current year (see box n. 5).

The following figure describes of the above considerations and arrives at identifying the length of all the examined process and dynamics. The figure indicates that the time to arrive at a vision of local sustainable development is longer than the usual time of conceiving and managing a “normal” local development, at least as it emerges in the Val di Cornia case study. According to the analysis provided by LEDA, the first stage usually occupies five years (here twelve); the second one, other five years (here still in progress); the third one, other five years (here, this stage seems to have just been initiated).

It is evident that in the Val di Cornia, the two souls still conflict with one another but in a socio-cultural context which has consistently improved and where the industrialist soul is nowadays less present and it is perceived as an old exogenous influence, while the environmental one is increasing and it is perceived as an endogenous necessity and orientation.

This dual system of thinking has clearly been reflected in local administrators, authorities, politicians, elected bodies, political parties and other economic and social organisations. As a result, the vision of sustainable development seems to be increasingly shared by local communities and population, but resistance and diffidence still remain and conflicts shall always exist. The reasons which explain this dynamic will be further examined in the following paragraph.



(adapted from “Lessons from the LEDA programme”, 1995 – already quoted)

## THE CONTEXT WHICH HAS HELPED THE CURRENT BEST PRACTICES related to THE “EQUITY DIMENSIONS”

### SOCIAL EQUITY

*From long term experience of conventional social welfare to a pro-active culture and interventions to promote new concepts of quality of life and equal opportunities between genders and citizens*

All the topics discussed up to now involve social and gender equity.

The industrial pattern of development in the Val di Cornia, as well as in Italy in general was orientated to labour. The strong labour movement facilitated the acquisition of civil right and improved the social and family welfare but the woman's role in the economy has always been relegated to the social reproduction cycle and to family activity.

In other words the industrialist soul of the Val di Cornia has fostered a stereotype sub-culture and the large iron industry did not help to increase women employment (a job taken by a woman was considered a job lost by a man, head of family).

On the other side, in the more agricultural and rural orientated areas, the second soul (the naturalistic one) has maintained the traditional role of women involved in many farming activities, besides those linked to family and social reproduction.

During the long term crisis of the big industry, the two souls again conflicted and mixed with each other: adult men had lost their jobs; industrial permanent and regular employment has become a chimera; families had to cope with unemployment of their adults and younger members; everybody had to act to earn his living and women had to contribute to the family income. Not only adult and young men but also women have tried to change their conditions and some of them have become self-employed and entrepreneurs, diversifying the fabric of small businesses (see the section on the economic dimension).

As a result, during the last decade, employment has increased more for women than for men. Moreover, in the countryside (e.g. Suvereto) women entrepreneurship has improved both in quality and in activity (e.g. agriculture, trade, restaurants, etc.)<sup>34</sup>. Nowadays awareness is increasing that women have an important role to play in the path towards sustainability<sup>35</sup>: they seem to be more sensible than men to move to a diversified, articulated and flexible economy which needs the contribution and the combination of all local resources and components; with respect to men, women seem to demonstrate more capacity for entrepreneurial culture and problem solving with creativity, since for longer periods, they have been excluded from direct involvement in industrial, rational and linear organisation of work and life.

Looking at micro social facts, combining them, changing patterns can be discovered. Equal opportunities between men and women have emerged thanks to the women's pragmatic intervention in the local societal context; more informally determining a new scenario which requires adequate supporting policies.

In a two decade time span the social fabric of the Val di Cornia has been significantly modified. The employment crisis has been dramatic while competition between adult, men, women, young people has increased in a decreasing labour market. The phenomenon of poverty, which have been practically unknown for many years of relatively good family income provided by industrial employment, reappeared: not only in the conventional areas of social exclusion, but increasingly in entire families whose men had been made redundant workers applying for unemployment benefits and social services since they could not find other work.

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<sup>34</sup> Bertini P. and Nardi R. – interviews

<sup>35</sup> Gasperini W. - interview

## BOX n. 6

### SOCIAL WELFARE SERVICES

**Actors:** local authorities (Campiglia, Piombino, San Vincenzo, Sassetta, Suvereto and Monteverdi Marittimo) and the local health agency with various volunteer associations.

**Brief history:** the local authorities have always been active in social service for the population. In 1996, an agreement with the local health agency was made for the associated management of the social and assistance related activities.

**Motivations as perceived by the actors:** social policy is considered the capacity to relate to the requirements of the population. The motivations follow the culture of prevention and development of the territory, and are rooted in the general sense of community.

#### **Objectives**

The principal objective is the implementation of co-ordinated programmes, integrating actual organisational health and social activities and creating a homogeneous approach to the territory.

#### **Sectorial dimensions**

**Environment:** this dimension is not directly present in this project, as the functions of the local health department that related to the environment have been transferred to ARPAT (see box n. 2), with whom there is a close collaboration.

**Economy:** the dimension is implicitly present in the support given to co-operatives that perform social services and the economic benefits of increasing the social services sector.

**Socio-culture:** social solidarity is a value to the community which is promoted by education, training and actual initiatives through specific projects (target groups).

#### **Equity dimensions**

**Social equity:** the services are directed at protecting the rights of the citizens and assuring equal attention for equal needs. The activities and services performed include: assistance, recovery, social and scholastic integration, professional training, employment assistance for disadvantaged persons. Educational, cultural, free time, and social programmes and projects are promoted.

**Interregional equity:** the integrated management of social services assists in overcoming conflicts between different local authorities and increase the cohesiveness between citizens.

**Intertemporal equity:** the project reinforces intra-generations solidarity and creates a stronger base for future generations.

#### **Systemic dimensions**

**Diversity:** attention is directed to problem situations for: youth, children, families, the disabled, immigrants, persons with drug problems, elderly persons, non-self sufficient persons, and persons with psychological disturbances.

**Subsidiarity:** the programmes are managed by the local health agency with respect to their organisational autonomy. The annual and multi-year activity and service programmes follow the general guidelines of the Steering committee, formed by the mayors who perform follow up investigations on the fulfilment of the objectives.

**Partnership and networking:** the agreement explicitly brought out what was historically a close relationship between the local authorities and the local health agency. Partnership exists also with the Province of Livorno and the associations of volunteers.

**Participation:** the municipal administrations and the local health agency are open to the populations problems and have involved the public through debates and conferences. Also the participation of young persons is increasing, partly as a result of volunteer associations.

If this crisis did not result in riots, disorder and social dissolution, it is due to the capacity of local communities to maintain their cohesive foundation based on solidarity values and identity. One of the principal factors has been the family itself which utilised unemployment benefits, early retirements and pensions to cope with bad times. A paradox has emerged which is common to many parts of Italy: the elderly population has guaranteed, by means of its pensions, the family income. The other two important factors are those already examined: the social networking with a lot of associations devoted to social welfare; the local authorities, mayors and councillors with their “open-door” administration and programmes to maintain and, as far as possible, to improve social welfare (see box n. 6)<sup>36</sup>.

Social equity has always been an intrinsic value for the local and regional programming which has characterised the local “red” governments for long time. For example, during the ‘60s and the ‘70s, when their role was very limited, they have tried to mitigate the impact of the impetuous industrial development providing, above all, social services.

Local authorities were fully involved in: limiting the disintegration of the socio-cultural and institutional fabric which was based on the relationships between cities and countryside, industrial towns and rural areas; enlarging the quantitative and qualitative spectrum of social services and assistance, as well as of transport, education, housing; performing, by means of co-ordinated spatial planning, the control and protection of their territory against land speculation. These distinctive elements have characterised the Val di Cornia (see boxes n. 1 and 6, together with initiative n. 3) as well as other zones and regions which were administrated by leftist governments (Bagnasco A., Trigilia C., 1985).

In fact social integration and insertion required commitment and mission-driven objectives: knowing the territory, the local societal context, the public; staying within the local community with decentralised structures in order to provide services to all components of the local community; educating families and population; collaborating with volunteers and their associations; taking care of all old and new problems; making it possible that problems and needs emerge in anticipation before they become ungovernable; fostering tolerance and solidarity; and, of course, all this is affordable if the geo-demographic structure remains small scale though the development of the concept of “small town network” (see the section on subsidiarity)<sup>37</sup>. The local authorities of the valley adopted since the 1960’s co-ordination and integration in the management of local public transportation services. Vocational training and guidance became a central point of co-ordinate activities to cope with the economic crisis and to improve the local human capital with the recent inclusion of courses on environmental knowledge, know-how and skills in various sectors.

## **INTERREGIONAL (SPATIAL) EQUITY**

*From a long term experience of local interactions within the Valley communities to the increasing awareness of the interdependencies between the Valley and other communities at provincial, regional and European levels*

The practice of co-ordinated territorial programming is not very diffused in Italy, especially where spatial planning is concerned. On the contrary, as demonstrated by many analyses (this study included), it has constituted one of the strong points of the Val di Cornia. Without losing their own autonomy, the local authorities have always elaborated and performed actions which were not only targeted towards their individual community but concerned with all the Valley population.

In fact local has been seen as the way to increase the value of the available resources also by means of an intensive activity of open networking and relationships with:

- the neighbouring communities (Arrigoni T., Pierini M., Saragoza C., 1996; e.g. spatial planning has interested not only the Val di Cornia but, for instance, it influenced a larger

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<sup>36</sup> Caroti N. – interview

<sup>37</sup> Caroti N. - interview

area, that of the Colline Metallifere and the Val di Pecora), the Province and the Region (see box n. 7), as well as at national and international level;

- scientists, academics, universities, especially those environmentally and sustainability orientated.

Thus, global thinking and local acting improved the capacity of local authorities, mayors, councillors and other key actors in conceiving initiatives orientated towards economic diversification and sustainable development. Practically all the initiatives taken into account show this tendency:

- from the innovative water management (n. 4) which links all aquifer resources of the Valley to the parks system (n. 3) which is embedded in a provincial network and in a regional co-ordination networks;
- from the Local Agenda 21 (n. 1) which interconnects the urban-industrial reclamation of Piombino with the park systems, contributing also to the Mediterranean sea reclamation, to the ARSIA irrigation demonstration centre (n. 7) whose results are expected to be useful in improving farming at a regional level;
- from the Bulichella and Cerreta organic farming (n. 5 and 6) which are a point of reference both at local and regional levels, to the Alta Maremma Covenant (n. 2) which interests geographical areas located in three provinces and has provided examples of sustainable development practises for regional local authorities.

As a result, the problem of administrative boundaries and constraints has often emerged. Recently a new institutional and organisational system was created as an administrative district ("circondario") to increase subsidiarity (box n. 4).

The Val di Cornia has a history which is not directly tied into the well known "industrial districts" of Tuscany (Bianchi G., 1993). It is part of the areas known as the "Maremme" which is a historically difficult territory but rich in opportunities. It presents an opportunity to create an example of "sustainable district" in order to demonstrate how the presence of contrasting conditions presents an opportunity for a sustainable Tuscany (Clementi A. et al., 1996; Corso Euroform – Val di Cornia, 1994 – 1996).

Indeed, it is important to note that the Manifesto elaborated to give overall orientation to all of Tuscany: "Agriculture and territory: a workshop for the sustainable development of Tuscany", published in 1996 (initiative n. 2) by the Tuscan association of local authorities, in collaboration with scientists, the three Universities of Tuscany and other research institutions used as a starting point the Val di Cornia experiences, motivations and expectations of sustainable development. Thus, the local key actors have been capable of transmitting knowledge, amplifying concepts, creating alliances, networks and partnership, and promoting initiatives which nowadays can be considered as milestones for all of Tuscany.

## **BOX n. 7**

*(first part)*

### **RELATIONSHIP WITH PROVINCIAL AND REGIONAL SCHEMES**

#### **Territorially (spatially) co-ordinated planning (L.R. 5/95)**

The Province of Livorno, even before the regional law on territorial planning (1995) had conducted studies regarding the sustainable use of water and energy resources. In 1996 the province adopted the Integrated Plan for Water and Energy (PIIE), which outlined guidelines for the correct use of the local water and energy resources. These guidelines formed the basis for the preliminary Territorial Coordination Plan (PTC) that is presently being constructed. The PTC acts as a provincial territorial programme, addressing the overall environmental conditions and in particular the landscape integrity. The objective is to favour a sustainable socio-economic development of the area, concentrating on the aspects of water and energy planning, which are of a transversal nature and interest all sectors. In the Plan, authorisations and concessions for construction are related to sustainability criteria and parameters that reflect a guided transformation of the territory. The PTC is based on the theory of "dynamic subsidiarity" and on the co-ordination between public institutions and the provincial economic and social forces. The primary objective is to transform the local authorities from passive subjects to real protagonists in the choices and planning efforts that directly affect them. A classification of the local authorities is made based on the pressure from anthropic activities on the territory and its resources, followed by the assignation of differentiated regulations and limitations. The local authorities can modify their individual regulations based on results obtained and on the condition of local resources and their use. The more positive the results obtained, the greater responsibility is given to the local authority for future programming of its territory.

#### **Park planning (L.R. 49/95)**

Regional law provides for the elaboration of three year plans for protected areas that are dedicated to their identification and delimitation. The provinces, based on recommendations from the local authorities and the Mountain Communities send proposals to the Region identifying territories to be transformed into parks, nature reserves and local protected natural areas (ANPIL). The Province of Livorno, on the basis of a systematic evaluation of the provincial territory and its social, natural and cultural relationships approved the Provincial Protected Areas System Project. The objectives of the project are to strengthen the bonds between nature, culture and tourism and to create a network for the provincial parks through co-ordinated management (2 parks, 8 ANPIL, 1 nature reserve). The Val di Cornia constitutes one of the territories in which the project defined the provincial landscape. Other provincial projects are: the Etruscan Park and the Via Aurelia Park; the Monte Livornesi Park that includes improving the park's viability and the creation of a socially useful work programme.

#### **Water resources (L.R. 81/95)**

The provincial programming guidelines for water resource use are contained in the PIIE and were prepared with the assistance of the Italian Institute of Environmental Research. The Plan identifies the geographical areas of severe water stress, the priority use sectors and intervention guidelines based on territorial and environmental planning. The approach and objectives of the PIIE were derived from the Dublin and Aalborg Agreements. The complete water cycle was considered, overcoming administrative boundaries and end user locations. The PIIE concerned five action programmes: reuse, recycle, savings, production and supply network and is directed towards the residential, agricultural and industrial sectors. The strategic objectives are: the reduction of residential, agricultural and industrial water consumption and the improvement of overall water use efficiency. The policies elaborated in the PIIE are presently being studied to create a clear application in the actual territorial management plan (PTC). Studies are underway to quantify the vulnerability of the aquifers and to create a geographical database for wells and pumping stations.

## **BOX n. 7**

*(second part)*

### **RELATIONSHIP WITH PROVINCIAL AND REGIONAL SCHEMES**

#### **Energy (L.R. 45/97)**

The provincial programming guidelines for the territorial energy resources are contained in the PIIIE. The approach of the Plan follows the CIPE 1993 directive in Agenda 21 material for Italy. The strategy is to territorialise energy programmes and base resource management on the principles of energy savings and reuse. The objectives are: energy reduction through reuse by arranging in series the individual users and increasing the thermodynamic efficiency of the whole system. In 1996, in collaboration with the National Agency for Alternative Energy, the Provincial Energy Assistance Counter was opened to facilitate correct energy use methods and exploit local energy resources (renewable resources, co-generation and heat recovery). The Assistance Counter will be followed by the creation of the Provincial Energy Agency that acts to identify local energy sources and analyses the environmental problems related to energy use, in particular on the urban level (transport, industry, electricity production). The objective is to reduce pollutant emissions and improve the quality of life following the ideals of a sustainable development. The project for the Agency was presented to the EU under the programme SAVE II.

#### **Waste (L.R. 35/95; L.R. 7/97)**

The Provincial Plan for Waste Treatment describes the strategic guidelines of the Province with regard to refuse and landfills: minimise the quantity of wastes produced, lower the toxicity of the material to be land-filled, favour material recycling and increase the recovery of material and energy. The Plan will be integrated into the soon to be completed Provincial Recycling Plan. The proposed reorganisation of the collection services will be defined based on user areas and waste material typologies. Material and recycling centres will be identified in urban areas.

Re-qualification and separation facilities will be created as well as composting areas. Collaborations with local packaging distributors and trade/business associations will be included in the Plan. A residential waste separation system will be tested (dry fraction / wet fraction / unseparated) on a municipal basis.

#### **Agriculture (L.R. 63/81; L.R. 76/94; L.R. 31/94)**

The provincially strategic guidelines for agricultural development are: rural development, promotion of high quality agricultural products and support for eco-compatible agricultural practises. Rural development is considered as the overall development of the local agricultural territory, autonomously managed by the local community. In the Val di Cornia, the agricultural development programme will be based on subsidiarity and the formation of the administrative district (see box n. 4). The Agritourism Plan is directed at consolidating the territorial resources, considering the limits in which the quality of the rural territory is maintained. To favour the tourism activities related to the use of the local natural hot springs and in particular the local wine production, the "Wine Country-Etruscan Coast" project is being created. This project will be dedicated to improving the activities related to quality agricultural products, in particular wine and olive oil. The Province has also instituted the Organic Farming Assistance Counter and has continuously supported promotion efforts in the Suvereto local authority, such as the organic produce market and the organic wine conference. Given the inter-provincial nature of agricultural development, an agreement protocol has been signed between the Province of Livorno and the Province of Pisa. A similar agreement is being made with the Province of Grosseto.

## INTERTEMPORAL EQUITY

*From long term experience of conventional relationship between generations (e.g. rural and urban family) to new concepts of solidarity and alliance (e.g. futurity)*

In the Val di Cornia context, the capacity for long term strategic thinking seems to have been renewed with the incorporation of some basic principles of sustainability. The previous sections demonstrate that social equity has been the basis of a kind of social pact which cemented an alliance between local communities and improved the Valley identity. What is important to notice is the awareness of the need to reconstruct the intergenerational solidarity. The population is ageing. Its role in the society is increased and, together with it, its bargaining power. Moreover, during the industrial crisis, it had the function to guarantee the family income by means of pensions. Relatively speaking more attention was given to them than to the young people. This does not mean that they were abandoned, but just that only the conventional instruments of social welfare were improved (education, health, training, etc.). Nowadays the local health agency, along with the local authorities, the social and volunteer associations are preparing courses of action towards a new intergenerational solidarity<sup>38</sup>.

The strategic contents of local sustainable development initiatives (see those analysed in this report) and supported by new instruments are dedicated to the future generations who are recognised as one of the most important resources of the Valley, “a territory which is not ours but on loan to us and that must be wisely administrated and utilised, without damaging it for the future”<sup>39</sup>.

## THE CONTEXT WHICH HAS HELPED THE CURRENT BEST PRACTICES related to THE “SYSTEMIC DIMENSIONS”

### DIVERSITY

*From values and product standardisation to the promotion of diversity and quality of local values and resources (environmental, economic, socio-cultural, historical, etc.)*

The Val di Cornia represents one of the individual Tuscanies which are present in the Region of Tuscany.

As previously analysed, the industrialist appeal pervaded the expectations of the local population changing their traditional behaviour in life style and consumption (introducing the variety of mass products) which were considered to be more modern. In other words, the factory assumed the “image of civil and technological progress”. Of course these habits were more diffused in the city-dwellers (e.g. Piombino) than among the inhabitants of rural zones of the Valley or in the countryside.

Slowly, the increasing environmental awareness along with the crisis (both economic and socio-cultural) of the industrialist model showed that other development patterns were possible which combine activities diversification and the environment, arriving at the principles of sustainable development in formal declarations and documents.

There was a conscious rediscovery of the territorial potential based on local identities, considered as a rich heritage to be enhanced in value. Innovative links have been created between agriculture, craftsmanship, manufacture and tourism, since they can be nurtured by a wise utilisation of the local diversities and traditions (e.g. “the wine country tours” which connect parks, boroughs, castles, farms, museums, monuments, churches, historical places, gastronomy and agriculture produces).

According to the interviewed persons:

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<sup>38</sup> Caroti N. – interview

<sup>39</sup> Gasperini W. – interview; this phrase echoes the Kenyan proverb “We didn't inherit the Earth from our parents; we borrowed it from our children” quoted by Welford R., 1995

- there exists abandoned and under-utilised areas, lands, estates, housing, historical sites which can be transformed in infrastructure and facilities to support the above innovative links;
- these opportunities should focus on: biodiversity and environmental compatibility of new development initiatives, sustainable indicators, integrated of resource recovery, reclamation, and utilisation in order to preserve this heritage.

## **SUBSIDIARITY**

*From a long term experience of effective local government to the strengthening of the local authorities' role in decision making by means of innovative combination between bottom-up and top-down approaches*

There are historical reasons which foster the feeling of autonomy in Val di Cornia. This territory was formerly a city-state (between 1399 and 1815) of a single diocese for many centuries since the medieval era. The Val di Cornia has always been characterised by a significant distance from centres of powers (economic, political, administrative and cultural). This is still true given that the nearer provincial capitals (Livorno, Siena, Grosseto) are distant as well as the regional capital (Firenze).

There is a cultural identity and a network of relationships which make local communities feel, above all, as inhabitants of the Val di Cornia, and secondly members of the Province of Pisa and Livorno. In fact the Province of Livorno, with the simultaneous incorporation of the Val di Cornia, was created only in 1925 during the fascist period (to comply with the political ambitions of an important party leader – Costanzo Ciano). The Valley inhabitants considered this administrative configuration as a limit and a burden to their autonomy and their usual network of relationships (Arrigoni T., Pierini M., Saragoza C., 1996)<sup>40</sup>.

Of course, this historical feature brings conflict: on the one hand capacity for and willingness of autonomous decision making; on the other hand, risk of isolation, and the feeling of being peripheral and marginal.

The above conflict does not exit (or it is present with an actual low intensity) within the Valley local communities, even though it is still partly diffused along the medieval territorial fabric. In fact, the old administrative traditions have been continuously renewed arriving at the concept of “small town network”, which is at the basis of the current negotiation with the Province of Livorno and the Tuscan Region to create the Val di Cornia administrative district (see box n. 4). The role of the local authorities has been strong and determined, they have strengthened the common identity of the Valley, respecting its local diversities and developing an efficient style of governance and streamlined local administrative institutions (in respect of the Italian average). Of course, in doing their own best, the local authorities have been not alone, they have been supported by the regional government and many regional laws. Subsidiarity became a practical way to combine top down policies and programmes with bottom up initiatives, plans and strategies. Power has been progressively delegated from the regional to the provincial and local level.

Nowadays, as above mentioned, a new stage is about to begin which will further improve subsidiarity; this represents the result of a long standing tradition of collaboration between the different levels of power (see, for example, box n. 1) to affirm common goals and visions.

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<sup>40</sup> Pazzagli R., Bagatti M. and Saragoza C. - interviews

## **PARTNERSHIP/ NETWORKING**

*From a long term experience of collaboration and co-ordination in specific fields (e.g. parks, spatial planning, etc.) to the strengthening of joint-projects and tasks between the local authorities, public, private and social sectors and agencies*

In the previous paragraphs several factors have been underlined which demonstrate an intensive activity of partnership and networking. Further analysis can illustrate the dynamics of a long process which is based on the implementation of co-ordinated plans and projects in the Valley (e.g. spatial planning, social and welfare services, etc.) as well as on the utilisation of the local resources (e.g. single companies to manage parks, water resources, public transportation, waste, etc.).

The practice of networking has been always a basic component of the Valley local communities and their lives; especially social networking. During the '70 this fabric was re-motivated by vigorous demand for participation. Associations and volunteers were everywhere in the Valley, including those which promoted environmental thinking.

It must be remembered that the history of social networking is strictly connected with that of the co-operatives movement, which began during the last century as a component of the labour movement (see paragraph on the socio-cultural dimension). There is an historical heritage which is symbolised by the most important (also in employment terms) consumer co-operative of the Val di Cornia: "La proletaria" ("the proletarian"). Its origins can be found in 1868 even though the above name has been formally given in 1945 (Tognarini I., 1997). Nowadays this co-operative operates throughout two regions with 40 supermarkets, its name is "Coop Toscana Lazio", its total membership amounts at 300,000 people. They are involved in many socio-cultural activities and recent enquiries (Coop Toscana Lazio, 1997) demonstrate their high ethical profile (corporate culture, respect of clients, participatory management, healthy and quality products) and their increase in environmental awareness and behaviour (utilisation of products which respect the environment). In order to understand how this co-operative became a central knot of social networking in Val di Cornia, it is enough to consider the total membership reached in 1996: 35,230 people. Statistically the above number means that more than half of the Valley population (in 1991 60,068 inhabitants and 22,810 families) is member of the co-operative and each family provides nearly 1.5 members. Socially it means that whoever undertakes an initiative involves in various ways the co-operative (as funding provider, sponsor, etc.)<sup>41</sup>. Of course, social networking remains and grows not only by means of "Coop Toscana Lazio".

Looking for example at the Piombino context (in 1991, 36,774 inhabitants and 14,276 families), which it has always been the focus of social and labour movements, it is possible discover how this practice is relevant.

Data (1997) provided by the local authority<sup>42</sup>, even though not complete, make it possible to estimate that every inhabitant is a member of nearly two associations and each family involved in four and five. The number of associations in Piombino alone amounts to nearly two hundred and includes more than sixty-five-thousand members.

The associations are distributed in different sectors. Those which seem to be more attractive (rate of sectorial membership in relation of the Piombino total amount of membership) are involved in socio-political life (36% - besides the current political parties), social assistance and self-help (32%), umbrella federations (13% - with transversal activities) and sports (11%). They are followed by leisure and recreational time (5%), culture (2%) and environmental and public protection (1%).

Within the above scenario, it must also be noted that the environmentalist associations exerted a very important role during the '80s and especially in the late '80s (i.e. the referendum against the doubling of the electric power station of Torre del Sale). Nowadays their presence and

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<sup>41</sup> Bertini P. - interview

<sup>42</sup> Bezzini A. (interview) and Di Rosa F. (data elaboration)

influence are not as impressive. There is a loose correlation between the increase in environmental awareness and successes and the reduced participation in environmental associations and parties (at least in the capacity for mobilisation and animation). A new level of confrontation is indeed constituted by the current projects and programmes carried out by local authorities (up to the “institutionalisation” of the principles of sustainable development).

Therefore, the general Val di Cornia population is involved in social networking and it is represented by associations.

Within the clearly left-orientated political culture, associations, as mediators and facilitators of social interests, have been constantly involved by the local authorities (by means of consultations, confrontation, joint initiatives) in policies and programmes which refer to specific fields of activities, as well as in general issues which concern the local communities. This process has resulted in a high level of institutionalisation of the social networking. The involvement of interest groups in the decision making has created formal methods of co-decision. It is evident that the institutional level of decision making when other interest groups are concerned, namely trade unions and businesses associations. The former, which have always sustained the struggle for better and healthy work environments, are nowadays less important, because of the industrial crisis which decimate factory employment. The latter is articulated in many sectors (farmers, small businesses, craftsmanship, big companies, tourism, industry, etc.) and usually characterised by the traditional immediate-profit-orientated entrepreneurial culture; even though entrepreneurs exist which are sustainable development orientated, their networks are presently not so powerful to influence the above associations.

Some conclusions can be drawn from all this and they are:

- the increasing networking (in number of associations and memberships) means an improvement of the way to manage the relationships within and between social systems and environments; indeed the Valley citizens are covered by a dense network of leaders and representatives;
- the above increase is the result of a mix constituted by 1.) the traditional ways of social aggregation (labour movement, industrial and business conglomerations) and 2.) by the recent post-industrial way “to make society” (Donati P., 1991; formal and informal networking where people share different roles, activities and transversal values); in both the cases, associations and networks constitute an intermediary system between citizens and the State (in a broad meaning, local authorities included);
- both of them are mechanisms to mediate the structure of social relations among the members of the local communities, as well as within the valley population; they are necessary “since there is no direct social interaction among most members of a large community or entire society”(Blau P., 1964); they receive, elaborate and exchange values and norms (both particularistic and universalistic) which “serve as media of social life and as mediating links for social transactions” (Blau P., 1964);
- the networks’ leaders are fully recognised and legitimated as representatives of the local communities; this traditional practice is increasing by means of the co-decision making style adopted by the local authorities; the “legitimised authority” which is accorded to them has three effects; the first one is that it extends the scope of their associations’ interests; the second one is that the most of the leaders lose direct connection with the basic interests of their original membership; the third one is that another networks arise which are created by the ongoing interactions (made by conflicts, negotiations, agreements) between the leaders determining values and norms able to maintain an organised social control on flexible bases; in fact it is not repressive or coercive, it is soft and operates through the shaping of ideas, values and attitudes;
- opposition values can arise; they legitimise opposition networks to those whose power have been recognised as a component of the co-decision-making table; confrontation and negotiation with them are assured by the local authorities which act as facilitators and

mediators; thus a turnover of the “network of leader networks” is refreshed by the newcomers; indeed a network “does not function automatically because of some inner dynamics or system requirements; it functions because people at different points do something, and what they do is a result of how they define the situation in which they are called on to act” (Blumer H., 1969).

Thus there is a filtering-effect determined by the very wide range of associations and networks: upwards (from the citizens to their local authorities) and downwards (vice versa). This cycle can reduce speed and opportunities of innovation; it can limit the capacity for changing strategically the traditional ways of thinking, views, belief, values and behaviour; but it is unavoidable to maintain social cohesion since without it, it would be impossible to find out common orientations to cope with the long term industrial crisis.

Indeed, it took time (twelve years) for key local actors (promoters) to introduce concepts of sustainable development in the Valley by means of the seven initiatives and the other relevant programmes and projects. Nowadays these undertakings receive a general public consensus, even though areas of resistance (diffidence, low attention) are still present; in particular with respect where the traditional businesses associations and trade unions are concerned; and in some case, open conflicts are expected.

The following matrices help to compare the seven initiatives.

<i>Initiative n. 1 – Local Agenda 21 – Piombino</i>		<i>Implementation 1996 -1997</i>
<i>Promoters</i>	<i>Local authority</i>	
<i>Supporters</i>	<i>General consensus from citizens</i>	
<i>Target groups</i>	<i>Citizens and economic actors</i>	
<i>Opponents</i>	<i>No real opposition but areas of resistance from big industry and some economic interest group; this resistance can result in open conflicts; moreover scepticism from trade unions</i>	
<i>Conflict management</i>	<i>By means of discussions, debates, involvement and negotiation</i>	
<i>Facilitators and mediators</i>	<i>Local authority</i>	
<i>Partnership / networking</i>	<i>Aims to involve all possible institutional levels and businesses concerned to provide economic resources within a shared vision</i>	

<i>Initiative n. 2 – Alta Maremma Covenant</i>		<i>Implementation 1993 – 1997</i>
<i>Promoters</i>	<i>Local authorities within and abroad the Valley</i>	
<i>Supporters</i>	<i>Universities, regional government, general consensus from inhabitants</i>	
<i>Target groups</i>	<i>Citizens, farmers and other economic actors, local authorities themselves</i>	
<i>Opponents</i>	<i>No real opposition but areas of resistance from farmers’ associations and, limited to some objectives, from some Provinces</i>	
<i>Conflict management</i>	<i>By means of open debates, involvement and confrontation</i>	
<i>Facilitators and mediators</i>	<i>Local authorities and their steering committee</i>	
<i>Partnership / networking</i>	<i>Co-ordination between local authorities, involvement of the Provinces, the Region, universities</i>	

<i>Initiative n. 3 – San Silvestro Park</i>		<i>Implementation 1993 – 1997</i>
<i>Promoters</i>	<i>Local authorities, universities and local businesses</i>	
<i>Supporters</i>	<i>General consensus from citizens; tourist businesses; Province and Region</i>	
<i>Target groups</i>	<i>Local communities, naturalist, environmental and cultural tourists, pupils and students, researchers</i>	
<i>Opponents</i>	<i>None</i>	
<i>Conflict management</i>	<i>By means of discussions, debates, communication</i>	
<i>Facilitators and mediators</i>	<i>Local authorities</i>	
<i>Partnership / networking</i>	<i>A very wide range of collaboration and interrelationships both on the scientific side (Italian and EU universities) and on the business side (in the cultural sector, crafts and arts, tourism, etc.)</i>	

<i>Initiative n. 4 – CIGRI – water management</i>		<i>Implementation 1993 – 1997</i>
<i>Promoters</i>	<i>Local authorities</i>	
<i>Supporters</i>	<i>Region, European Union; general consensus from all components of local communities</i>	
<i>Target groups</i>	<i>Citizens, farmers and the other economic actors</i>	
<i>Opponents</i>	<i>None; only the risk of administrative and institutional burdens</i>	
<i>Conflict management</i>	<i>By means of innovative and participatory style of management based on effective and assertive communication</i>	
<i>Facilitators and mediators</i>	<i>CIGRI and local authorities</i>	
<i>Partnership / Networking</i>	<i>A very wide range of collaboration and interrelationships of scientific profile (Italian and foreigner experts, academics and Universities), of entrepreneurial level (farmers, businesses) and of institutional context (regional, provincial and local authorities, UE, etc.)</i>	

<i>Initiative n. 5 – La Bulichella – organic farming</i>		<i>Implementation 1984 – 1997</i>
<i>Promoters</i>	<i>Exogenous adults with different professional background</i>	
<i>Supporters</i>	<i>Local authorities, mayors and key persons</i>	
<i>Target groups</i>	<i>Local community, biological and naturalist consumers and tourists, people at risk of social exclusion</i>	
<i>Opponents</i>	<i>No real opposition but areas of diffidence and low conviction from local population and farmers; this is changing as the long term (up to now) interests and appreciation are presently emerging</i>	
<i>Conflict management</i>	<i>By means of good examples, discussions, communication and strong integration in local community</i>	
<i>Facilitators and mediators</i>	<i>The promoters along with local mayors and key persons</i>	
<i>Partnership / Networking</i>	<i>A very wide range of relationships and collaboration with scientists, universities, health services, local authorities, other similar initiatives in Italy and abroad, etc.</i>	

<i>Initiative n. 6 – La Cerreta – organic farming</i>		<i>Implementation 1979 - 1997</i>
<i>Promoters</i>	<i>Endogenous young people</i>	
<i>Supporters</i>	<i>Local authorities, mayors and key persons</i>	
<i>Target groups</i>	<i>Local community, environmentalist and naturalist tourists, young people at risk of social exclusion</i>	
<i>Opponents</i>	<i>No real opposition but areas of diffidence and low support from local population and some interests groups (e.g. hunters) in the beginning; slowly interest increased and nowadays there is full interest in and appreciation of the positive results</i>	
<i>Conflict management</i>	<i>By means of involvement, discussions, good examples, assertive communication, maintenance and renewal of the original close links with local communities</i>	
<i>Facilitators and mediators</i>	<i>The promoters, local mayors and key persons</i>	
<i>Partnership / Networking</i>	<i>A very wide range of relationships and collaboration with regional, provincial and local authorities, health services, environmental associations, ARSIA, the park system company, local farmers, universities, experts, other similar initiatives in Italy and abroad, etc.</i>	

<i>Initiative n. 7 – ARSIA – demonstration centre of irrigation</i>		<i>Implementation 1995 – 1997</i>
<i>Promoters</i>	<i>ARSIA (regional agency for innovation and development in agriculture and forestry), Province of Livorno, local farmers associations, universities</i>	
<i>Supporters</i>	<i>Local farmer associations, CIGRI</i>	
<i>Target groups</i>	<i>Local farmers, experts, development and innovation agencies</i>	
<i>Opponents</i>	<i>None, only hints of low collaboration from some experts at the beginning; interest and collaboration has improved up to now</i>	
<i>Conflict management</i>	<i>Scientific communication, debate and involvement</i>	
<i>Facilitators and mediators</i>	<i>ARSIA, the host local farmer, local authority</i>	
<i>Partnership / Networking</i>	<i>Universities, CIGRI, local farmer associations, regional, provincial and local authorities</i>	

Also the other relevant programmes and projects (see boxes 1 to 6) have been promoted by the Valley local authorities and reveal a wide and intensive partnership and networking. They have been up to now characterised as individual webs (each initiative with its own networks and partnerships) but it is possible to discover that the common spider is represented by the local authorities, mayors and key persons.

In the path towards sustainable development, the leadership exerted by the above mentioned key persons have been determinant. They still cover important administrative and managerial roles (mayors, councillors, executive directors, chairmen of boards of directors, representatives of business associations etc.).

The entrance of other younger key persons have assured a certain turnover in the above roles. Those who are still mayors have gained a very large public consensus in the last administrative elections (1995): 80% in Suvereto; 65% in Sassetta and Campiglia; 54% in S. Vincenzo and Piombino.

It can be observed that a “virtual” team of environmentalists and “sustainabilitysts” has always existed. They promoted values, concepts and courses of actions to the extent that they have acquired the necessary knowledge by themselves, by means of personally motivated studies

and commitment developing collective confrontations, collaborative close relationships with scientists, universities, environmentalist and naturalist exponents. In fact the real school of sustainability has always been daily life, whose problems needed to be solved in the local communities looking toward the future, inventing, expressing a pragmatic, open and flexible, far-sighted thinking. Some of these persons have farming or rural origins, clearly they represent the naturalistic soul of the Val di Cornia (see paragraph on the socio-cultural dimension). Some of them (especially the younger) are professors or have university backgrounds. The many of them are members of the leftist major ruling political party (some time ago, the communist party - PCI; nowadays the left democratic party - PDS). They found support in the less industrial-labouristic area of the party and in the environmental organisations. Some of them earned the respect of the green parties (even though combined with diffidence) which never have been strong and have assumed the role of opponents in many situations. They found allies also in other groups and people within traditional political parties (e.g. socialist, Christian democrat)<sup>43</sup>.

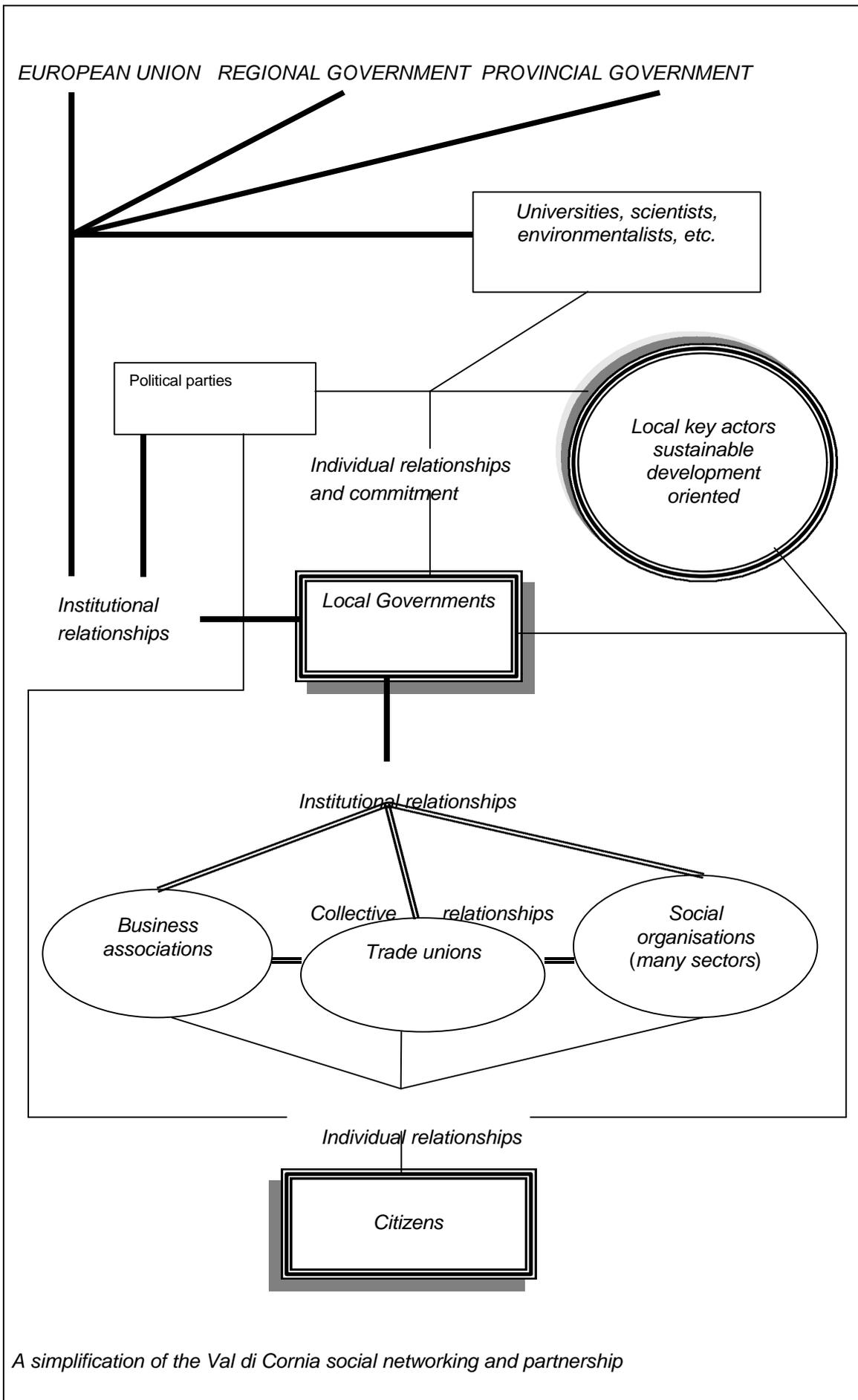
All the above elements figure a context where a clear leadership has been created and already exist which is concentrated in key persons, their role in the local authorities and the political parties; this leadership is mediated by individual, collective and institutional relationships by means of an intensive social networking and partnership (see below representation).

Rules of the game have been changed since the '70s up to now:

- at the beginning (and during the '80s), local authorities performed a role of "general representatives" of the local communities, being recognised and legitimised as a basic interlocutor 1.) to guarantee the reduction of social unbalances, 2.) to act as a mediator between different social interests, and 3.) to channel social demands and expectations towards the higher levels of government (provincial, regional, national); during this period, an intensive and informal local framework of mediation and negotiation has prevailed;
- in the end (during these '90s and, probably, also in the next future), local authorities have acquired the role of legitimised agents of partnership and networking to define and perform target-policies based on specific objectives and projects; during this period, local government has had to demonstrate its capacity to build up a "system" based on formalised relationships between social and economic actors; a system where individual, collective and institutional relationships are fully legitimised by means of institutionalised structures of organisational instruments (e.g. initiatives managed by innovative formula of private and public co-operation; see, for example, initiative n. 3).

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43 Gasperini W., Saragoza C., Pazzagli R. and Bagatti M. - interviews



What has happened in the Val di Cornia can be observed also in other local contexts (Bianchi G., Baldi P., Cerilli S., 1996), confirming a general tendency which is very typical of the so-called "industrial districts" (local systems based on SMEs). The political regulation of the local economy has increased its role; it is locally thought and managed, but, at the same time, it is open to the external world. It is the place of new procedures of political and social exchange which, in respect of the past, acquires more and more the form of a co-decision-making process (Florida A. et al., 1994). This is, for example, the case of the local (territorial) pacts defined in a participatory way, agreed upon by means of open negotiation and mediation, and very importantly managed and performed by all the actors involved.

In the Val di Cornia, this process has become relevant. What can be noticed is a low direct networking and partnership between the already mentioned sustainable development initiatives. Of course, the situation is improving, at least during the last year, as local businesses and their associations, trade unions, local authorities, business innovation and service centres, banks etc. are clearly involved in the effort to determine a diversified sustainable development in the Valley by means of joint tasks and projects (see box n. 5). This effort can facilitate the natural exchange of knowledge, know-how, experience and good practices; The process would be more effective and faster if specific instruments were utilised (e.g. forums, meetings, vocational training, etc) within a "virtual" agency for sustainable development based on innovative methods of networking and partnership. In other words, new "holonic" organisational systems (McHugh P. et al., 1995), procedures, methodologies can be promoted within the existing ones. If the practices of business services and centres are more diffused in the so-called "industrial districts", as a basic need expressed by the local fabric of SMEs (Freschi A.C., 1992; Florida A. et al., 1994), here, in Val di Cornia, they can become tools clearly conceived to foster the re-addressing of local economy towards sustainability.

## **PARTICIPATION**

*From information and formal participation (e.g. delegation from citizens to efficient local authorities and collective key-agencies) to fostering co-decision, individual involvement and commitment*

Networking and partnership are developing towards sustainability. There is a shared vision of the basic characteristics necessary for a new type of development. A general consensus accompanies the already mentioned frame of sustainable initiatives, even though resistance and probable conflicts are expected mainly on the part of big industry and employers' organisation, as well as not explicit resistance and diffident prudence on the part of trade unions (e.g. employment concerns). More than opposition, there is a lack of convinced participation along this innovative path, but local administrators (mayors and councillors) should act anyway since they should find solutions to meet the necessities of their citizens' daily life in a long term perspectives. This is a clear commitment of the already mentioned key local leaders which are more orientated towards sustainability than other local actors and which are pushing local authorities and institutions to follow this vision. After all, this is also the role which many local actors would like to be covered by the local mayors and authorities distinguishing between: 1.) mayors and councillors who should be "deal makers" to pull the public and private sectors and resources together; they should identify the vision; they should steer, strengthening their catalyst and facilitator function in order to balance needs, solutions and resources, while promoting consensus and negotiations; 2.) local authorities, as institutions and organisational systems, should focus on missions and perform them coherently; they should "row the boat" in order to stimulate participation and a initiative from the citizens (Osborne D. and Gaebler T., 1992).

The above principles are not new in the Val di Cornia. The local governments have characterised themselves as effective instruments to cope with citizens' needs.

The roles of the elected representatives in town councils, that of mayors and councillors have been always mission-driven: to understand problems and needs of the local population; to know territory, people and resources; to be close to the citizens; to create alternatives; to elaborate programmes and policies that improve the local social welfare; to adopt an “open door” style; to foster a efficient and streamlined local public administration to perform programmes, projects, etc. The mission-driven government, which is nowadays still important and reaffirmed<sup>44</sup>, has been an intrinsic value and part of the strong leftist orientation which has dominated the Valley since the end of the second world war, as the following election results show.

They regard the Chamber of Deputies since it is easy to compare them with the Province of Livorno and Italy. Left wing parties obtained 70% of votes in 1953 (57% in the Province of Livorno). This “golden” share of votes has remained, more or less, constant up 1968, when it increased to 74% (65% in the Province). About the same percentage has lasted during the following decade. As it is well known, during the ‘80s and especially at the beginning of the ‘90s, many changes have happened in the Italian political scenario e.g.: the rise and fall of the socialist party; the dissolution of the Christian democrat party in other less-powerful parties; the separation of the former communist parties (PCI) in two new parties, the democratic party of the left (PDS) and the communist re-foundation party (RC); the dissolution of the numerous new-leftist parties; the entrance of the green parties in the political arena, etc. Notwithstanding these relevant changes, the Valley left-electorate did not to a large extent. Indeed in 1996 it reached 62% of votes (56% in the Province of Livorno). Looking at the core-party within the leftist political side, it is clear that major role has been that of the communist orientated parties. PCI in 1953 gained 53% of votes (43% in the Province and 23% in Italy); in 1968, 56% (47% in the Province and 27% in Italy); in 1996, 48% (40% in the Province, 21% in Italy), but RC gained 11% of votes (13% in the Province and 9% in Italy), giving an amount of 59% of votes ascribable to the original party base.

Electoral participation has always been high. Voter participation was 97% in 1953 (the same in the Province and 94% in Italy); and has remained, more or less, the same up to the ‘80s; it decreased afterward but in a very low terms, reaching 91% in 1996 (88% in the Province and 83% in 1996). Therefore the population of Val di Cornia have historically (four decades) been one of the most participating and left-orientated electorate in Italy. This does not mean that the communist parties (e.g. PCI) have dominated the politics of the Valley. It means that the party is deeply rooted in the local population: being a component and, in many case, the ideological mediator of the dense social networking already analysed; being the place where the already described two souls (the industrialist one and the naturalistic – rural - one) confronted each other with conflicts, mediations and mixture. The image of the socio-political context of the Val di Cornia has become that of a society with high level of “institutionalised participation” by means of legitimised authority given to each collective agency which represents social (in a broad meaning) interests. Indeed, as previously analysed (see the section on “partnership and networking”), the typical cycle of Western democracy can be discovered as it is fully applicable to the Val di Cornia scenario.

Institutionalised and non-institutionalised participation will co-exist. The first one is more formal, more regulated, it is performed within and by specific structures (associations, organisations, and their relationships with the decision making centres) which are commonly perceived as the usual channels of expression and action. The second type of participation is informal and spontaneous. It is performed by citizens and groups non-aligned with the traditionally accepted ways and it is carried out outside the conventional rules and behaviour. Informal and spontaneous participation often represents a breaking off of traditional values and patterns.

This happened with the labour movement in the 19<sup>th</sup> and 20<sup>th</sup> centuries, with the student movement in the late ‘60, with the feminist movement in the ‘70s and with the environmental movement in the ‘80s.

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<sup>44</sup> Gasperini, Bagatti - interview

Of course, the unconventional characters of this type of participation cannot last long. As contents, values, beliefs and behaviour which are promoted by the above groups and citizens spread across the local community, they are transformed from a novelty to a progressively accepted way of thinking and living. Therefore, they end up with institutionalised participation. In the end with more co-decision making and choices (policies, programmes, projects, etc.) negotiated between the different representatives of the local community, and more participation its essence changes from antagonist, to integrative and collaborative. The process of institutionalisation, thus, operates in such a way as to conciliate efficiency with consensus (Baglioni G., 1995; Bobbio N., 1984). While the former improves, the role of technocracy and streamlined management increase, along with consensus, lessening direct participation on the part of the citizens. Moreover, often, communication and language acquire specialised functions and contents which are not easy accessible to each citizen. Therefore they delegate important tasks to their representatives, associations and networks, asking for their further legitimisation.

Delegation become a style of life, especially for collective problems, while direct participation is still asked for when individual problems and needs emerge. Simultaneously the society (as a complex systems of institutions, rules, values, belief and, thus, people) becomes, unavoidably, protective, a little bit paternalistic and covers large parts of individual life (Sani G., 1996). In other words, those which are good democratic practices (e.g. close relationships between local authorities, mayors and citizens; information and communication between them; co-decision and involvement of the leaders of the social networking, etc.) have the risk of lessening direct participation and spontaneous animation and mobilisation of the social community concerned; in this way legitimised social networking assumes the aspect of a network of systematic decision-delegation from the citizens to their representatives but without definitive separation since the latter should be coherently part and parcel of the former (e.g. during the labour conflicts as well as the struggles against the redoubling of the Torre del Sale electric power station and against land speculation, a strong alliance has existed between mayors, local authorities and citizens).

Of course, the Val di Cornia is not an isolated case. Similar characteristics of the leftist culture of networking, partnership and participation have been observed in other “red” areas, namely concentrated in the central regions of Italy (e.g. Toscana, Emilia Romagna, Umbria, Marche) arriving at the identification of a third Italy, beyond the classical dualism between the North and the South (Bagnasco A., 1977; Bagnasco A., Messori M., Trigilia C., 1978).

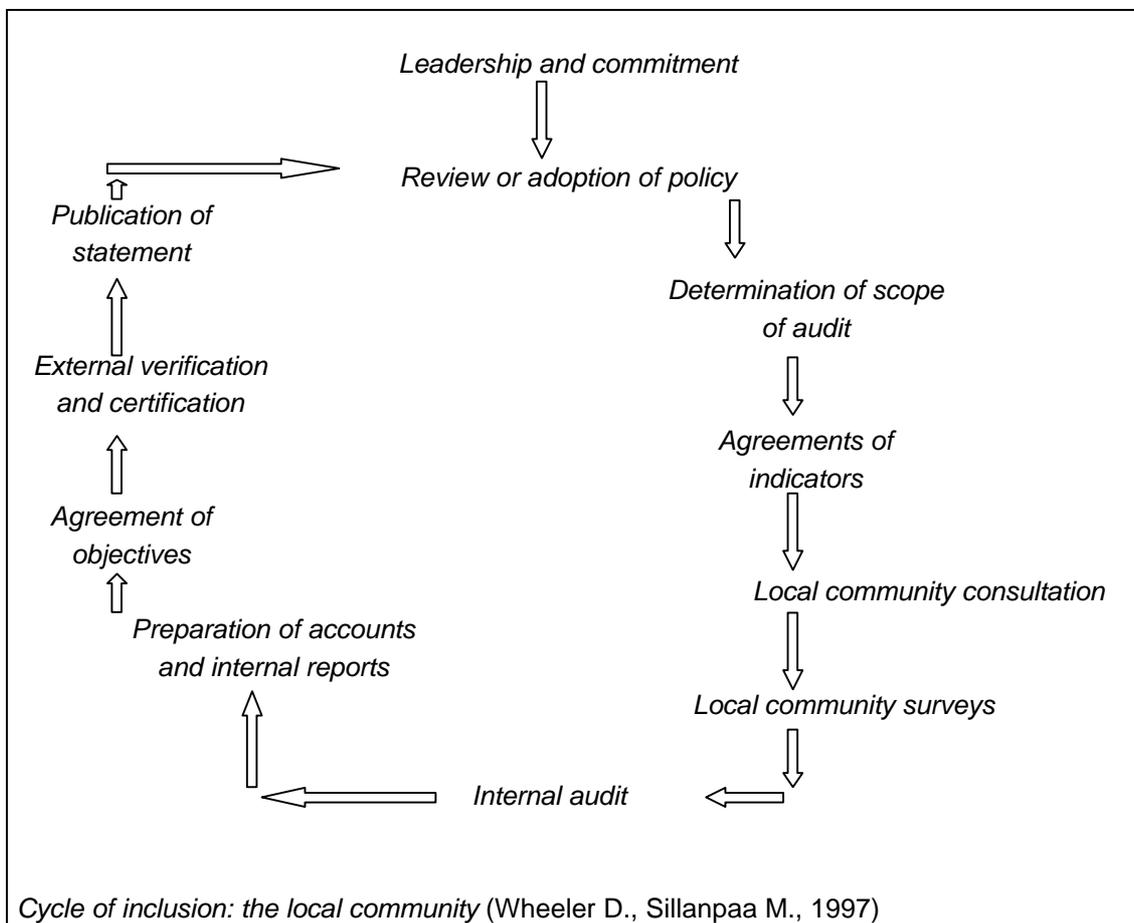
The dynamic of “participation – delegation” has been analysed revealing a significant change during the ‘70s: the lowering of ideological consensus in favour of a clear orientation towards specific and conditional consensus based on meeting the demands of citizens immediately and by means of feasible programmes and initiatives within a process of integration and aggregation of diverse interests (Bagnasco A., Trigilia C., 1985). This tendency has been clearly present in Val di Cornia, where the local governments have been pushed to act in order to find immediate solutions and long term perspectives to cope with a crisis which lessened the capacity for problem solving and change on the part of many sectors of the local society. Crisis did not help to increase participation, diffused frustration, feeling of impotence, etc.<sup>45</sup> Apart from the utilisation of a large amount of unemployment benefits and early retirements, the local society survived because of the fabric of social and political networking and partnerships, which again was maintained and renewed by far-sighted local leaders. The results of their actions are clear and positively demonstrated by the administrative elections of 1995 when local mayors obtained a higher percentage of votes than that obtained by their political parties in the 1996 political elections; thus, consensus increases in relation of a pragmatic approach to affirm a strategic vision of a new and alternative local development.

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<sup>45</sup> Bertini P. – interview

The problem of active participation of population remains, however, relevant. The seven initiatives, previously analysed confirm that information and communication are usually provided by local authorities and local promoters as well as consultation meetings and reporting.

Also the other relevant programmes and projects (see boxes from n. 1 to n. 6) have been supported by the combination of: co-ordinated actions; public reflection; shared meanings, values and vision; joint planning. But something better must be done, as all the local promoters say. There is willingness to conceive innovative methods and tools to improve participation (see initiative n. 1). This is demonstrated in the fact that the awareness exists which considers participation not only as a condition of democracy, but as an objective of the programmes, projects and initiatives themselves. Often, the far-sightedness of the local mayors and administrators, who are capable of anticipating demands and needs of the population, lowers the awareness of their citizens. Since all is covered and provided by the former, scarce participation arises and scarce inclusiveness becomes evident in the undertaken initiative. Participation means presence, activation, counting, taking part in creating democracy; it requires competence according to the levels of responsibility and interest; it is control by citizens (as end-users, customers and clients); it must be targeted; it must be promoted by means of adequate "citizen – marketing"; it is a continuous dialogue with and within the community; it must be taught and learnt (Gabbi M. e Terzi A., 1990). Participation can be promoted lubricating the "wheel of learning" (the wheel is divided into four parts: question, theory, test, reflection; Handy C., 1989; Senge P. et al. 1994): reflecting (thinking, feeling, evaluating problems, dilemmas, challenges, theories utilised, etc.); connecting (creating ideas and possibilities for action, dis-embedding and re-embedding things and concepts), rearranging them in new forms; deciding (settling on a method for action from alternatives and opportunities generated in the connecting stage); doing (performing a task with as much of an experimental frame of mind as possible).



When the cycle is completed, it moves immediately back to the reflecting stage. Therefore, there is no fixed end but an uninterrupted cycle, where each stage demands deliberate attention before moving to the next one. What is clear is that local communities' involvement "must be a genuine, two-way, participative and inclusive deal. It should not be based on a paternalistic "gift" mentality" (Wheeler D., Sillanpaa M., 1997).

The community has to take part in decision making, being able to articulate its needs and develop joint initiatives. For example, in the sector of social welfare and services, where a lot of volunteers and associations are actually present, participation is active. Their daily initiatives are immediate when the problems to be solved are immediate: individuals should be helped. Thus, the citizen has a direct role. He engages himself in many activities, trusting in the programmes performed by the local authorities, because he knows that his proposals are given hearing and are supported<sup>46</sup>. Elected local representatives and politicians should act to genuinely empower their communities, as "virtual and factual" forums of democracy. Tools exist in order to make participation feasible and active (see again, for example, the best practices suggested by the promoters of the Local Agenda 21, in initiative n. 1), as well as qualitative and quantitative indicators (Gabbi M., Terzi A., 1990; Wheeler D., Sillanpaa M. 1997).

## **THE VAL DI CORNIA IMAGE: A FEASIBLE LABORATORY FOR EXPERIMENTING SUSTAINABLE DEVELOPMENT**

The best practices' orientation here underlined reveals that the Val di Cornia is historically characterised by important changes and consolidated experiences, both deeply rooted in social welfare and quality of life. Relevant consolidated experiences are in the "open-door" style of local governance and of co-ordinated methods in programming and management. Relevant changes are in the clearly increased awareness of the strategic role played by:

- environmental scientific direction
- integrated multi-disciplinary and multi-sectorial approaches
- updated methods of intensive partnership, networking and participation

This mixture of important changes and consolidated experiences is nowadays the actual answer to the long term and heavy industry (iron) crisis which has strongly affected the Valley communities. It is a mixture that has, up to now, made it possible to maintain and renew the strong sense of community with its institutional foundations. No social or institutional branch has been destroyed but there have been numerous transformations.

In other words, Val di Cornia seems to be characterised by *continuous change within a locally consolidated socio-cultural and political fabric*; a mixture determined by the need to cope with the above deep socio-economic and employment crisis.

This process has resulted in the present Valley image which shows two principal and distinctive features

- 1. a strong commitment towards creative subsidiarity (both formal and not formal)**
- 2. significant orientations towards the concepts of sustainable development**

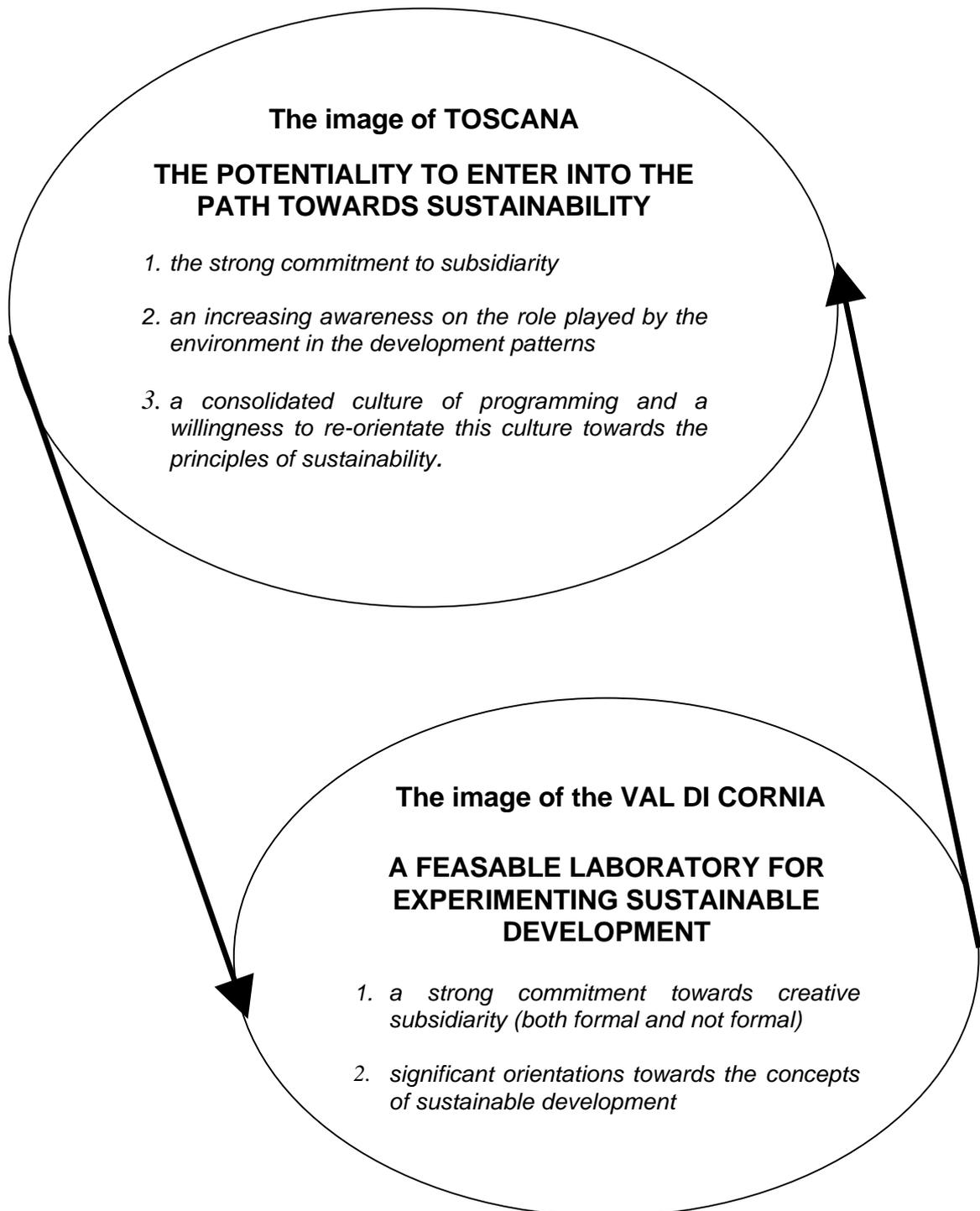
Both of the above features are clearly "institutionalised" (stated in official documents, programmes and projects). When closely combined, they assist in the development a vision of sustainable local development (Val di Cornia as an open "sustainable district" and innovative laboratory); but this vision needs to be widely shared by local actors and citizens. These features must be clearly evident in order to gather the support of the actors in this "sustainable laboratory" and their involvement of their own activities by means of feasible plans.

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<sup>46</sup> Caroti N. – interview

# PART III

## Interrelationships





## CHAPTER 13 - TOSCANA AND THE VAL DI CORNIA

### INTERRELATIONSHIPS

In Chapter 12 (Part II) on “the Val di Cornia context”, a first look was given at the relationships between local initiatives, provincial and regional schemes (see box n. 7).

A further résumé of these interrelationships reveals that many of the selected local initiatives refer to several fields of regional policies, programmes, laws, etc. The most relevant are shown in the following matrix:

Local initiatives	Regional outline of policies, programmes, laws and other supporting measures
<p style="text-align: center;"><b>1</b></p> <p>Local Agenda 21 – Piombino</p>	<ul style="list-style-type: none"> <li>– Water management (L.R. 81/95)</li> <li>– Spatial planning (L.R. 5/95; L.R. 36/95)</li> <li>– Air pollution (L.R. 33/94; L.R. 19/95)</li> <li>– Noise pollution (L.R. 66/95 and related three-years plans)</li> <li>– Energy policy and REA (L.R. 45/97)</li> <li>– Waste management and ARRR (L.R. 60/88; L.R. 19/90; L.R. 4/95; L.R. 35/95; L.R. 7/97)</li> <li>– Environmental protection and ARPAT (L.R. 66/95 and related three-years plans)</li> <li>– Reclamation of compromises areas (L.R. 29/93; L.R. 85/94; agreement between the Region and the Ministry for the Environment)</li> <li>– Parks, nature reserves, protected areas (L.R. 49/95; related three-years plans and framework of procedures)</li> <li>– Subsidiarity (L.R. 77/95 and related agreements on the Val di Cornia administrative district)</li> </ul>
<p style="text-align: center;"><b>2</b></p> <p>Alta Maremma Covenant</p>	<ul style="list-style-type: none"> <li>– Agriculture policy, technical assistance and innovation services, ARSIA (L.R. 63/81; L.R. 32/93; L.R. 37/93; L.R. 73/94)</li> <li>– Agritourism (L.R.76/94)</li> <li>– Agricultural loan agency (Fidi Agricola - L.R. 41/94)</li> <li>– Spatial planning and building within rural areas (L.R. 5/95; L.R. 36/95)</li> <li>– Water management (L.R. 81/95)</li> <li>– Reclamation of compromises areas (L.R. 29/93; L.R. 85/94)</li> <li>– Active labour policies (vocational training L.R. - 70/94)</li> <li>– Subsidiarity (L.R. 77/95 and related agreements on the Val di Cornia administrative district)</li> </ul>
<p style="text-align: center;"><b>3</b></p> <p>San Silvestro Archaeological Mines Park</p>	<ul style="list-style-type: none"> <li>– Parks, nature reserves, protected areas (L.R. 49/95; related three-years plans and framework of procedures)</li> <li>– Cultural heritage (L.R. 14/95)</li> <li>– Active labour policies (vocational training - L.R. 70/94)</li> <li>– Tourism policy (L.R. 84/96)</li> <li>– Subsidiarity (L.R. 77/95 and related agreements on the Val di Cornia administrative district)</li> </ul>
<p style="text-align: center;"><b>4</b></p> <p>Intermunicipal Consortium Of Water Resource Management (CIGRI)</p>	<ul style="list-style-type: none"> <li>– Water management (L.R. 81/95)</li> <li>– Subsidiarity (L.R. 77/95 and related agreements on the Val di Cornia administrative district)</li> </ul>

Local initiatives	Regional outline of policies, programmes, laws and other supporting measures
<p style="text-align: center;"><b>5 and 6</b></p> <p>Organic Farming "La Bulichella" "La Cerreta"</p>	<ul style="list-style-type: none"> <li>- Organic farming (L.R. 31/94)</li> <li>- Biological methods for livestock (L.R. 54/95)</li> <li>- Agritourism (L.R.76/94)</li> <li>- Agriculture policy, technical assistance and innovation services, ARSIA (L.R. 63/81; L.R. 32/93; L.R. 37/93; L.R. 73/94)</li> <li>- Agricultural loan agency (Fidi Agricola - L.R. 41/94)</li> <li>- Social reinsertion and non-profit sector (L.R. 73/82; L.R. 28/93; L.R. 29/96)</li> </ul>
<p style="text-align: center;"><b>7</b></p> <p>ARSIA Irrigation Demonstration Centre</p>	<ul style="list-style-type: none"> <li>- Agriculture policy, technical assistance and innovation services, ARSIA (L.R. 63/81; L.R. 32/93; L.R. 37/93; L.R. 73/94)</li> </ul>

## HOW DO POLICIES SUPPORT INNOVATIVE ACTIONS

The capability of the Val di Cornia territorial government is reflected in the connection of elements which come from both the local side (resources, traditions, innovative initiatives, etc.) and the regional side (laws, programmes, schemes).

All the local initiatives reviewed reflect the influence of regional policies, schemes and laws which give a framework in instruments and opportunities.

The innovativeness of the analysed local initiatives mainly consists in the creativity of combining these opportunities. Clear examples are initiatives n. 1 (Local Agenda 21 – Piombino) and n. 3 (San Silvestro Park).

Up to now, this interrelationship has been more sectorial than general (spatial planning, water management, resources recovery, parks and the environment, social services, transport, economic promotion), but a new perspective will open if the process of subsidiarity (the next administrative district) is closely linked to all the other principles of sustainability according to the horizontal and vertical cohesion between and within strategies, programmes and initiatives.

## HOW DO INNOVATIVE ACTIONS INFLUENCE POLICIES

All the local initiatives reviewed have influence in regional policies, schemes and laws which soon or later incorporate some of the successful innovative courses of action.

The Val di Cornia can be considered, at the moment, as one of the advanced places of the Tuscany in experimenting sustainable local development initiatives.

As already demonstrated this path took a long time. In 1993 important documents and initiatives incorporated the concept of sustainability, and presently, after an incubation of 16 years, the critical mass phase seems to have been reached where the vision of sustainability is more clear and shared among a larger range of local actors.

Similar orientation appeared in 1995 at the regional level, when a set of laws was initiated to incorporate the environment and subsidiarity dimensions within regional policies and programmes.

Examples of this interrelationship are demonstrated in initiatives n. 5 (La Bulichella), n. 6 (La Cerreta) and n. 2 (Alta Maremma Covenant). Indeed it is important to note that they contributed to regional innovative policies providing successful experiences. Thus, the local key actors have been capable of transmitting knowledge, amplifying concepts and creating alliances which can be considered as milestones for Tuscany.

## HOW DO INNOVATIVE ACTIONS INFLUENCE THE BROAD PUBLIC

The path towards sustainability requires a long incubation period (16 years in the Val di Cornia) to foster a notable influence in the broad public.

These innovative actions are inherently driven towards expanding public participation. This is clearly demonstrated in initiatives n. 4 (CIGRI) and n. 7 (ARSIA). In fact the former was partially dedicated to develop instruments for improving communication with local communities; in the latter, participation of the public became an evident necessity to successfully meet the objectives of the initiatives.

Local innovative actions are based on participation and involvement. They should be supported also by the regional government in understanding practices, exchanging experiences, methods and lessons, supporting the transfer of knowledge and know-how, creating instruments (financial incentives, procedures, consulting bodies, technical assistance agencies, etc.).

## HOW DO POLICIES INTERACT

The analysis demonstrated how a local area can anticipate regional policies, because of its historical homogeneity (from the political, administrative, social, cultural and environmental points of view), because of its distance from high-level-decision-making, because of its original way to combine a decreasing industrialist soul with an increasing “sustainabilistic” soul, because of its cohesion between different identities.

There is room to improve all legal, institutional and organisational arrangements, learning from the other European experiences and local examples: a concentric movement from the outside and the inside which surely shall facilitate the re-addressing of the regional policies.

In this sense, the bottom up approach is vital to the extent that it stimulates a loop which goes to the higher level, passes through innovative change and returns to the lowest level; at the same time, the top down is vital if it supports this open ended cycle.

Clear example of this interrelationship is demonstrated by the recent agreement between the Region, the Province of Livorno and the Val di Cornia local authorities (26 September 1997). The agreement covers in a transversal way many policy fields: subsidiarity, the environment, economic development, active labour policies (vocational training), technological innovation, infrastructures and spatial planning, health and social services.

## SWOT ANALYSIS OF TWO CONVERGING IMAGES

In the overall analysis of the Region (*INSURED - TUSCANY – Description of the region*) a primary SWOT analysis was carried out to determine the current situation of Tuscany. Now, some relevant links can be identify between the above overall picture, that which emerged from the analysis of the regional policies (top down approach) and from the enquiry concerning the Val di Cornia context (bottom up approach).

The top down approach gave an image of Tuscany which shows “the potentiality to enter into the path towards sustainability” since the following three basic characteristics have been detected:

1. the strong commitment to subsidiarity;
2. an increasing awareness on the role played by the environment in the development patterns;
3. a consolidated culture of programming and a willingness to re-orientate this culture towards the principles of sustainability.

The bottom up approach gave an image of the Val di Cornia as “a feasible laboratory for experimenting sustainable development” since the following two basic characteristics have been detected:

1. a strong commitment towards creative subsidiarity (both formal and not formal);
2. significant orientations towards the concepts of sustainable development.

Mixing the elements which contribute to identify the above images, a new SWOT analysis allows the selection of aspects and factors which are finalised in the principles of sustainability. The results are showed in the following sections.

## **STRENGTHS**

- different Tuscanies in Tuscany with strong sense of local community, richness and diversity of landscape, historical, cultural, natural and archaeological heritage (e.g. the Val di Cornia as an “archipelago of land and sea” which combines local diversity within a common Valley identity)
- strong sense of mutual help with a wide dimension of the voluntary sectors (e.g. the Val di Cornia which reveals a long standing orientation towards social welfare, solidarity and quality of life)
- important economic and social role played by industrial districts (local systems of SMEs)
- important role, in the path towards sustainability, played by other types of local districts where historically deep relationship between inhabitants and nature, rural and urban-industrial patterns of social life favour the increase in environmental awareness (e.g. the Val di Cornia)
- co-operation, partnership and networking between local and regional authorities, SMEs, social interest groups, development agencies, Universities, research centres, etc. (e.g. the Val di Cornia wide social networking, institutional partnership between private and public sectors as well as the affirmed concept of “ network of small towns ”)
- new regional laws and procedures orientated towards subsidiarity and participation in decision making (e.g. sectorial policies and co-ordinated programming) along with a consolidated local culture and practice of self-government (e.g. the Val di Cornia “open door” and mission-driven governance, social and political stability, co-ordinated elaboration and implementation of plans and projects)
- new regional laws, procedures, organisational arrangements and schemes to promote elements of environmental and sustainable development (e.g. energy, spatial planning, agriculture, the environment, the PRS - regional development programme, etc.) along with some local sustainable development initiatives (e.g. those promoted in the Val di Cornia by local leaders, key persons and local authorities)

*The effect of above principal Strengths can be reduced if the following basic Threats emerge more vigorously in the future.*

## **THREATS**

- increase in fragmentation of organisational systems (social, entrepreneurial and institutional) and procedures (e.g. overlapping and confusion within national and regional legal frameworks) with the risk of centralisation and over bureaucratisation
- increase in financial problems linked to the state budget deficit with risk of further reducing the currently very low level of regional and local autonomy (in terms of budget, taxation, decision-making power)
- increase in territorial socio-economic disparity and in unemployment with risk of reduction of human capital and social instability
- depletion of human capacity for defining a shared vision of sustainable development especially in mono-industrial economies (e.g. the former Val di Cornia development pattern) with the risk of a progressive loss of local diversity and capacity to face change and crisis

- increase in standardisation (e.g. industrialised agriculture, mass-tourism, etc.) with risk of hampering local quality production and traditional patterns of consumption (e.g. the Val di Cornia quality goods labelling, gastronomy, etc.)
- depletion of human capacity for monitoring environmental quality, defining and utilising indicators of local sustainable development (e.g. the Val di Cornia problems with respect to the progressive loss of the quality of ecosystems, biodiversity, man-made environment and utilisation of resources)
- decrease in (or lack of) local leadership clearly orientated towards sustainable development with risk of progressive loss of public consensus about innovative programmes and initiatives (e.g. suspicion, resistance and probable rising conflicts from interest groups and traditional businesses in the Val di Cornia)

*The above basic Threats can increase, based on the following current Weaknesses.*

## **WEAKNESSES**

- impact of demographic change and perspective on social cohesion between generations (e.g. decreasing and ageing of the present population)
- environmental impact of traditional patterns of production, transport and services (e.g. in the Val di Cornia, heavy mono-industry, seasonal mass tourism; etc.)
- decrease in the role played by agriculture and industry along with a general difficulty of the SMEs to face the post industrial era (e.g. slow diffusion of innovation)
- loss of some historical cultures (e.g. that of sea-land relationship in the Val di Cornia) with loss of creativity in conceiving innovative activities and development initiatives
- low degrees of: innovative and environmentally orientated entrepreneurial culture; networking and partnership between the existing sustainable development initiatives; diffusion of new projects and courses of action (e.g. the Val di Cornia low capacity for connecting and marketing the locally existing elements, practices and experiences of sustainability)
- low level of decentralisation which up to now characterised the Italian constitutional framework and an unbalance of competences which resulted in continuous conflict between the State, the Region and the local authorities (e.g. administrative boundaries which do not reflect the environmental, cultural, social and historical homogeneity of the Val di Cornia)
- day-by-day administration and management which, combined with an institutionalised strong social networking, can lessen the capacity for sustainable planning and for local active participation (e.g. formal participation of the Val di Cornia citizens and filtering effect of an intensive network of collective intermediaries)

*Nevertheless, the above principal Weaknesses can be overcome by the following emerging Opportunities.*

## **OPPORTUNITIES**

- increase in the awareness of the environmental problems which stimulates the need to improve local knowledge in collaboration with local, regional, European and international experts, centres and agencies for sustainable development (as demonstrated by the Val di Cornia initiatives)
- growth of environmentally friendly production and consumption practices which stimulates the need to improve local research, monitoring and territorial analysis with the selection of a co-ordinated set of basic indicators (as perceived by the Val di Cornia initiatives)

- increment and renewal of territorial common identity which stimulates the need to maintain and enhance environmental resources, biodiversity and the diffused variety of local diversities (e.g. recovery and increase in value of the Val di Cornia historical, natural continuum of sea and land, of coastal, rural and urbanised areas)
- rise of new sources of employment (e.g. the environment, technology, cultural heritage, social services, etc.) which stimulates the need to improve the entrepreneurial culture toward total quality environmental management and sustainable development through training, technical assistance, business services, education, etc. (e.g. the Val di Cornia necessity to promote integrated innovation and diversification of the local productive sector)
- intensification of the involvement of local actors which stimulates the need to improve their knowledge and to update methods for participatory democracy in social and political arenas and in corporate management (as requested by many local key actors in the Val di Cornia enquiry)
- upturn in (national and regional) law making which favour subsidiarity and in (regional) policies which pursue innovative tasks (e.g. spatial planning, technology, the environment, tourism, agriculture, etc.) which stimulates the need to implement them through strong alliances between the regional and the local governments (e.g. those of the Val di Cornia who are aimed at a local sustainable development managed by a new administrative district)
- enhancement of long term open-minded strategic thinking and acting which stimulates the need to create a shared vision of sustainable development (as is emerging in the Val di Cornia) through: integrated programmes, articulated projects and financing sources; collaboration, partnership, networking and alliance at local, regional, national and EU level.

# CHAPTER 14 - THE SINGLE IMAGE STEMMING FROM THE SELECTION AND COMBINATION OF THE CURRENT BEST PRACTICES

## MAIN LESSONS

**From the analysis up to now carried out, some overall basic lessons stem, namely:**

- strategies and initiatives geared towards sustainable development require an extended incubation and have effects in the long term future
- therefore, a long term holistic thinking must be adopted in order to cope with present and future needs
- areas must be identified which are homogenous (from the environmental, historical, socio-cultural points of view) and where sustainable development initiatives can be elaborated and implemented without accepting political and administrative boundaries
- institutional “containers” must be created (through agreements, pacts and covenants between regional and local governments, public and private sectors) where projects can be elaborated within common guidelines of a shared vision of sustainable development and implemented through integrated spatial planning and other courses of action
- co-ordination, integration and collaboration must be pursued between (regional, provincial and local) actors, initiatives and areas by means of horizontal and vertical cohesion and fluidity within comprehensive and flexible organisational systems (e.g. partnerships, networking, etc.)

**And they embody the following practices which are distinguished between the ten principles of the INSURED paradigm of sustainable regional development**

## SECTORIAL DIMENSIONS

### Environment

- stimulating and supporting local initiatives through the promotion and diffusion of environmental regional policies, schemes, laws and a network of qualified agencies
- co-ordinating and concentrating the responsibilities for environmental matters through visible organisational and procedural arrangements which are points of reference for every policy field and to act in transversal way
- elaborating and performing programmes which include protection measures and minimise the environmental impact while recovering, improving and increasing the value of natural resources
- researching indicators of life quality, environmental quality, biodiversity and local ecosystems quality
- researching easy-to-manage methods of pollution control, monitoring and forecasting current and future resources utilisation
- determining tangible and realisable environmental aims and objectives, timing their tasks and underlying the achievements of previous actions
- experimenting and diffusing new methods and entrepreneurial examples which give visible results and empirical demonstration of productive and organisational systems with respect to the materials and resources savings and recycling, the reduction of environmentally damaging techniques and substances, the wise utilisation and maintenance of renewable sources, the protection of local environmental potentials
- promoting alliance with environmentalist and naturalistic associations

- developing relationships with local experiences in other regions (Italian and abroad), universities, researchers, academics, etc., promoting the European outlook of environmental initiatives and policies

### **Economy**

- promoting, co-ordinating and supporting integrated economic diversification, creativity, research and innovation (both of products and processes; both technological and environmental) through the collaboration between regional, provincial and local authorities, and with the involvement of businesses, research bodies, universities, etc.
- elaborating and implementing development strategies and active labour policies by means of: regional laws, provincial and local schemes; agreements (“pacts”) between governments (regional, provincial and local), economic and social parties; employment instruments and services (equal opportunities strategies, vocational guidance and training, placement, incubators for new business start-up, businesses innovation centres and other local development agencies, venture capitals, social, financial and technical assistance, etc.)
- developing local employment initiatives (job and enterprise creation, self-employment, socially useful temporary works) also in the so-called new sources of employment (e.g. the environment, culture, social sector, agriculture, organic farming, tourism, craftsmanship, technology, etc.)
- promoting and supporting projects which: are feasibly based on the synergetic utilisation of endogenous resources (financial, human, natural); have flexible, re-convertible, adaptable objectives with clear business vision and missions; improve entrepreneurial culture in small and medium sized businesses; provide technical assistance, marketing, training, capitalisation of previous lessons, exchange of know-how and experiences; develop streamlined and nimble organisational systems
- affirming equal attention to all the local resources with a shift from a marginal to a strategic role assigned to the environment
- aiming at a sound management and utilisation of the complete resources’ life-span (savings, recycling, reducing damaging substances and materials, etc.) as a feasible eco-profitable way to save money, to reduce production costs, to reach more and better products’ flexibility (both in quantitative and qualitative terms), to cope with market and public behaviour
- determining economic conveniences (e.g. public financial support) and limitations (e.g. fines, fares and taxation), as well as underlying opportunities and threats which follow from modifications in the current situation
- promoting the utilisation of financing provided by European, national and regional schemes and laws as well as self financing from all local actors involved

### **Socio – culture**

- improving environmental education and information through a regional network of local centres, environmental education in schools, professional training courses, etc.
- learning from other experiences through a continuous flow of scientific knowledge, exchange of information, know-how and professional skills, networks and contacts at local, regional, European and international levels
- disseminating and transferring knowledge in close relationship with universities, scientific sectors, etc., and by means of meetings, conferences, school visits, lessons, information technologies, media, etc.
- developing research in relevant topics (biodiversity, ecosystem, new environmentally friendly techniques and methods, etc.) and diffusing findings in collaboration with scientific and university bodies (e.g. workshops, meetings, training courses, etc.)

- developing innovative experiments as well as technical and organisational assistance (innovation and demonstrative centres, show-areas, meetings, courses, conferences, audio-visual media, etc.)
- giving environmental scientific value and validation to programme and projects
- improving culture, knowledge and know-how: to maintain and to hand down historical, cultural, labour and environmental values; to foster diversification and integration of human activities; to combine continuity with change, utilising the past as a starting point for new and alternative ways of thinking and acting
- refusing ideological simplifications and improving the capacity for: anticipating change; finding options and opportunities; utilising new theories and methodologies on complexity, relationships, interdependencies, uncertainty, chaos, etc.
- promoting environmental awareness, knowledge and know-how towards sustainable development also by means of incentives to adopt technologies, methods and techniques which are aimed at changing the current practices, attitudes, styles and patterns of life, production, consumption and utilisation of resources
- promoting the cultural change through: less ideological and more pragmatic methods which are easy accessible to citizens; techniques which facilitate individual and collective reflection on social behaviour and quality of life; strong alliance with sensible local key actors, political and cultural organisations; positive examples and results which demonstrate the feasibility of sustainable development and are based on the synergetic utilisation of the endogenous resources
- stimulating, through the above instruments and methods, a new entrepreneurial culture more orientated towards sustainability and eco-compatible re-addressing of production processes and products
- determining a clear vision (the reconciliation of humanity and nature) also in business terms and adopting a coherent and ethical behaviour (sense of the mission)
- increasing entrepreneurial creativity and flexibility in problem solving, risk taking, conceiving and implementing of alternatives and innovative courses of action

## **EQUITY DIMENSIONS**

### **Social equity**

- fostering (by means of regional laws and schemes, provincial and local initiatives, programmes and organisation): cultural, social and health services; support and help to family, people at risk of social marginalisation, immigrants and other weaker categories (through local employment and equal opportunity initiatives); the voluntary sector, organisations and self-help groups
- taking always into account local needs in order to conceive courses of actions which are geared towards the ongoing improvement in the quality of life
- promoting environmentally friendly and high quality activities in order to combat social degeneration which has characterised rural areas
- fostering environmentally sound methods and technology through programmes and initiatives to save, recycle and diversify the resource utilisation (water, energy, soil, land, etc.) which have social effects (e.g. improving earnings, working and living conditions, etc.) (social equity through the integration of various and articulated saving measures)
- managing work organisation according to the principles of solidarity, mutual confidence, co-operative motivation and competition

- utilising the environment as a key-point to stimulate the start up of sustainable activities in order to give a pragmatic answer to the social need of the local population and to cope with change and industrial employment crisis

#### **Inter-regional equity**

- promoting combination, co-ordination and integration of the various initiatives within local homogeneous areas and with specific attention to spatial planning, water management, energy saving, parks and other natural resources
- giving equal opportunities to the different socio-cultural, environmental, economic and employment diversity of the local area concerned
- fostering solidarity between local communities in order to promote common opportunities to standards of living and employment
- stimulating the perception and the awareness of the interrelationships between individual and local behaviour within a wide global dimension of environmental issues
- promoting fair and sustainable trade between local areas and developing international contacts with developing countries

#### **Inter-temporal equity**

- strengthening strategic long term thinking in which an alliance can be entered into between present and future generations, starting from current projects and initiatives which are aimed at transferring: historical, cultural, environmental and economic resources; innovative environmentally friendly methods, technology and practices; eco-compatible styles of life, education, knowledge, professional and entrepreneurial know-how.

### **SYSTEMIC DIMENSIONS**

#### **Diversity**

- taking into account, utilising and increasing the value of the wide diversity of historical, natural and cultural heritage, values, behaviours and practices within common regional and local identities which stimulate economic and social cohesion through inter-local and inter-regional co-operation
- maintaining and re-discovering the diversity of the natural and man-made environment in order to utilise it as opportunity of new local development
- diversifying local economic patterns and businesses to cope with change and crisis
- providing incentives to finalised experiments, innovative technology and methods which improve local identity, variety, bio-diversity, quality of the ecosystems, maintenance of natural resources and utilisation of renewable resources
- strengthening the diversity of local development, the promotion of local identity and cohesion as a means to improve the quality production
- developing local capacity, human capital and entrepreneurial culture through a coherent learning system based on the leadership of change agents which continuously stimulate innovation, creativity, problem solving and risk taking by means of new projects, alternatives, options, anticipation of future scenarios
- finalising initiatives to specific disadvantaged target-groups in order to recognise the potentials of human diversity through socialisation and community re-insertion

#### **Subsidiarity**

- empowering regional, provincial and local authorities according to the principle of subsidiarity and cohesion by means of ongoing negotiation between all levels of government;

- strengthening institutional subsidiarity through a process which increases the responsibility and autonomy of the lowest levels of government in order to make them more capable to deal with local issues and development
- strengthening social (functional) subsidiarity as a participatory which involves local actors, associations and interest groups in the decision - making
- strengthening a close co-operation between the Region, the associations of the Provinces, the Mountain Communities and the local authorities (municipalities) to combine both top-down and bottom-up approaches
- strengthening socio-cultural, economic and environmental cohesion to reduce differences and unbalances between local contexts and supporting
- strengthening institutional cohesion to support the above process through an efficient framework (of procedures, rules and organisations) which is flexible in order to meet the local identities and, as far as possible, to overcome administrative boundaries
- strengthening the capacity for programming and managing regional and local affairs by means of a multiplicity of options and solutions that consider the diversity of the local contexts
- concentrating the role of the Region in the co-ordination and integration of policies to give social and economic cohesion to the regional territory, starting from the definition of the main objectives and programming guidelines; attributing similar role at the sub-regional level to the Province with respect to the municipal level; enhancing the responsibilities of the provinces and the local authorities in the administrative activities and the management of programmes, schemes and projects with the involvement of the local actors, both social and economic
- strengthening organisational subsidiarity which is based on innovative theories concerning corporate vision, mission, motivation and participation (“open door” management; clients and final users’ involvement; from control to responsible autonomy; from supervisors to coaching and tutoring; from hierarchical to flat decision making; from individual tasks to team work; etc.)
- improving continuously knowledge and capacity of local authorities for: recognising local problems and needs, resources and solutions; having and declaring clear rationales, vision, missions, tasks and objectives; being accessible to the citizens
- improving the capacity of mayors and local elected administrators in long term strategic thinking in order to anticipate and promote change, stimulate the social and political arena, as well as the local entrepreneurship and culture

### **Partnership and networking**

- animating, motivating people also through networks and partnerships between local teams
- stimulating and publicising excellent managerial examples of partnership and networking amongst local organisational systems (both private and public bodies)
- fostering partnership and networking between: SMEs, co-operatives, craftsmen, local authorities, etc.; local industries and abroad
- fostering the capacity of local authorities to co-ordinate local initiatives which integrate socio-cultural, spatial planning, land use and environmental policies and initiatives which respect and combine local diversity and identity within homogeneous territorial areas
- developing co-operative decision-making between local authorities and social, economic and cultural interest groups and associations
- improving co-operation between public and private sectors, agencies and local key actors to stimulate economic diversification, to perform integrated project with large scope for

environmental matters (water, land, soil, energy, air, parks, etc.) as well as individual initiatives

- creating flexible and streamlined management systems which involve both the public and private sectors
- promoting network and partnership based on the growing awareness and knowledge of new alternatives to the conventional development patterns
- developing collaboration and co-operation with Universities, research centres, development agencies, business associations and their experts
- promoting and developing relationships with other experiences of local development
- developing close relationships with environmentalist associations, environmentally orientated key actors (entrepreneurs, mayors, politicians, elected representatives, etc), scientific and research organisations
- strengthening local social networking based on mutual help, where individual deficits are compensated by the resources and efforts of others

### **Participation**

- informing, involving and mobilising local citizens, actors and their associations in order to: improve their sensibility and awareness on environmental issues; create common understanding and knowledge; stimulate a climate which favours the identification of a shared vision of local sustainable development
- maintaining and developing a style of “open-door” governance from local authorities to citizens, giving to the latter real possibility to control the activities of the former
- never taking for granted the knowledge of problems but discovering and identifying them with the participants in order to have more options, alternatives and opportunities to choose
- combining research with democratic diffusion of scientific information and knowledge
- involving end-users and clients to take active part in local initiatives and projects, in direct experimentation and management of new technology and methods, as well as promoting clients’ rights charters and monitoring clients’ satisfaction
- innovating instruments and methods of participation, namely: public meetings, publicity in the media; real time electronic information; thematic working groups; environmental training and education initiatives; campaigns of consultation, negotiation and co-decision in order to gain consensus; general public conferences; coherent activity of monitoring, accountability, reporting in order to evaluate current situation, findings, results and performances, forecasts, alternative scenarios, adaptation of initiatives over time, elaboration of new courses of action to meet new needs, etc.

### **INTERDEPENDENCIES BETWEEN THE PRACTICES**

The selection of the current best practices has been made to reveal those which were most orientated towards sustainability; now, a further attempt is made to discover if and how a web of interdependencies exists between them. The web exists and is prevalently demonstrated by implicit interdependencies. However explicit relevant interdependencies emerge between the current practices, revealing that each set of dimensions (sectorial, systemic, equity):

- is constituted by self-contained and centripetal interdependencies between its components (core interrelations)
- is interested by, and influences the other two sets by means of interdependencies which are centrifugal and connect individual components each other (transversal interrelations)
- is a combination of top-down and bottom-up approaches (vertical interrelations)

## CORE INTERRELATIONS

In the **sectoral** dimensions, the core interrelations are made visible by an intensive flow of correlated practices which propel each other in the direction of:

- *the inclusion and incorporation of the environment in the regional and local economic policies and courses of action, supported by the improvement of the human capital potentials (socio-culture).*

There is a loop which is nurtured by the necessity of changing and of giving perspective to answer to social and economic crisis and weaknesses<sup>47</sup>. To this end:

- the economic dimension is characterised by the search for new opportunity of development through an approach which is basically endogenous and finalised at promoting local resources through feasible and new profitable businesses and initiatives;
- the environmental dimension is characterised by the necessity of determining new indicators which favour the phase of planning (both of individual business and of more large and complex projects), implementation, monitoring, verification and adaptation;
- the socio-cultural dimension is characterised by the necessity to improve and diffuse knowledge, know-how and professional skill which can nourish innovation and creativity in order to open new development options and perspectives.

In the **equity** dimensions, the core interrelations are made visible by practices which are orientated towards:

- *the development of social solidarity among citizens and local communities.*

Practices are intensively articulated in the “social and gender equity” (which is characterised by multi-sectorial courses of action aimed at improving the quality of life) and in the “interregional equity” (which is characterised by integration and co-operation between local and provincial communities). Less diffused, elaborated and performed are practices concerning the “intertemporal equity”. This dimension is characterised as a general principle which is taken for granted, even though the awareness of the necessity to qualify and quantify objectives is increasing and some experiments are carried out.

In the **systemic** dimensions, the core interrelations are made visible by an intensive flow of correlated practices which converge in:

- *the enforcement of subsidiarity as a leading concept in the regional and local economic policies and courses of action, supported by legal, institutional and organisational frameworks, including diversity, partnership and networking, participation.*

Subsidiarity assumes a central role, it is a reference-container for the other dimensions and is nurtured by the necessity of assuring flexibility and adaptability of a “multilevel governance” (Attanasio R. M. et al. 1997). Furthermore it improves the current “rules of the game” and sustains a process where institutions and populations are fully involved in mediating differences, rights, obligations and interests. Distinctive practices implement the Tuscan concept of subsidiarity which consists in connecting institutional, functional and social matters with institutional and socio-economic cohesion (Siliani S., 1996).

As already mentioned (see Part I – Chapter 4) these principles anticipated those enforced by the national law (n. 59/1997 – the first “Bassanini” law) and which lead the top-down delegation of power and functions between the different levels of government (i.e. completeness, efficacy and efficiency, co-operation between State – Regions - Local Authorities, responsibility, homogeneity, adequacy, differentiation, autonomy, and financial backing). To this end, all the systemic dimensions are relevant:

<sup>47</sup>

More than ten years ago, Tuscany's economic structure was discovered to be at a stage of “early maturity” in the conventional modernisation process; this phase implies many weaknesses and risks and, thus, the necessity of re-inventing development (Bianchi G. 1986)

- the “diversity” dimension as the way of focussing policies, programmes, schemes and other courses of action on the local identities, potentials and resources (human, cultural, social, economic, environmental, political, etc.);
- the “subsidiarity” dimension as the way to develop the capacity (both administrative and managerial, both normative and organisational) of all government levels for general and sectorial programming, law-procedure-rules making, transparent co-decision-making, involvement of social communities in deciding and performing courses of action;
- the “partnership and networking” dimension as the way of enhancing the capability of regional and local actors to act combining “diversity” and “subsidiarity”;
- the “participation” dimension as the necessary channel which links all the above dimensions; a link which must never be missed or slackened.

### TRANSVERSAL INTERRELATIONS

There is an intensive flow of learned patterns which connects the three sets of principles of the INSURED paradigm regarding sustainable regional development. All the practices up to now analysed and actually performed demonstrate that the internal coherence of each set of principles exists only to the extent that similar coherence is present in the other two and there is a connection between all them. The internal coherence is principally realised if:

- within the **sectoral** dimensions, a pro-active socio-culture combines environmental and economic issues and if local resources and potentials are utilised in a synergetic way;
- within the **equity** dimensions, a pro-active solidarity culture enhances social cohesion involving different societal aspects and territorial areas and taking into strong consideration the future generations;
- within the **systemic** dimensions, a pro-active style of governance fosters participatory democracy in order to discover opportunities and to unlock local resources, stimulating animation, negotiation and agreements.

The transversal coherence is therefore realised by a pro-active culture which connects the environment with and within entrepreneurship, management, participatory governance and solidarity. In this ambit, the selected practices reveal that direct transversal interrelations (both implicit and explicit) exist between the ten individual components of the sustainable regional development dimensions, but those which emerge as the most relevant are as follows:

- *the environment* which is represented in the others as the leading path to change in the current development patterns;
- *social equity* which concerns all the past, present and future innovative human attempts to determine development patterns;
- *diversity* which is a key word for the sectorial dimensions (without it, there is not possibility for economic diversification, environmental and socio-cultural renaissance), for the systemic dimensions (without it, there is not subsidiarity; opportunities for partnership and networking, as well for participation, cannot exist if everything is standardised), for the equity dimensions (solidarity is based on respecting differences and individual identities);
- *participation* which is at the basis of innovation, creativity, cultural improvement, governance reformation, elaboration and implementation of all the courses of action (without participation, results of good initiatives cannot be actually effective).

### VERTICAL INTERRELATIONS

In all the selected practices a combination can be noted between top-down approaches (e.g. supporting measures, regional laws, financing, agencies, etc.) and bottom-up approaches (local innovative actions). Moreover, this combination can be discovered within the relationships between local actors; for example, local authorities, mayors and agencies which support

individual local business especially “negotiating” and favouring public consensus or reducing public diffidence and rigidity.

In other words, the selected practices reveal a general tendency based on the co-operation and commitment through partnerships, networking and participation between individuals, businesses, public institutions and other agencies.

New types of relationships between public and private sectors arise which require cultural and organisational change in all the actors involved. For example:

- decentralisation is intended as a key factor to empower communities and individuals by means of stable, clear and transparent regulatory framework which connects horizontal and vertical directions (e.g. the allocation of powers and responsibilities to the lowest levels of public and private organisational systems);
- the concentration of the responsibilities (e.g. those for environmental issues) is intended as a way of creating nuclei of horizontal and vertical co-ordination;
- diversification is intended as a way to combine local resources (environmental, human, technological, etc.) and not-local resources (e.g. knowledge, know-how, technology, financing coming from other contexts, local, regional, national, European, etc.).

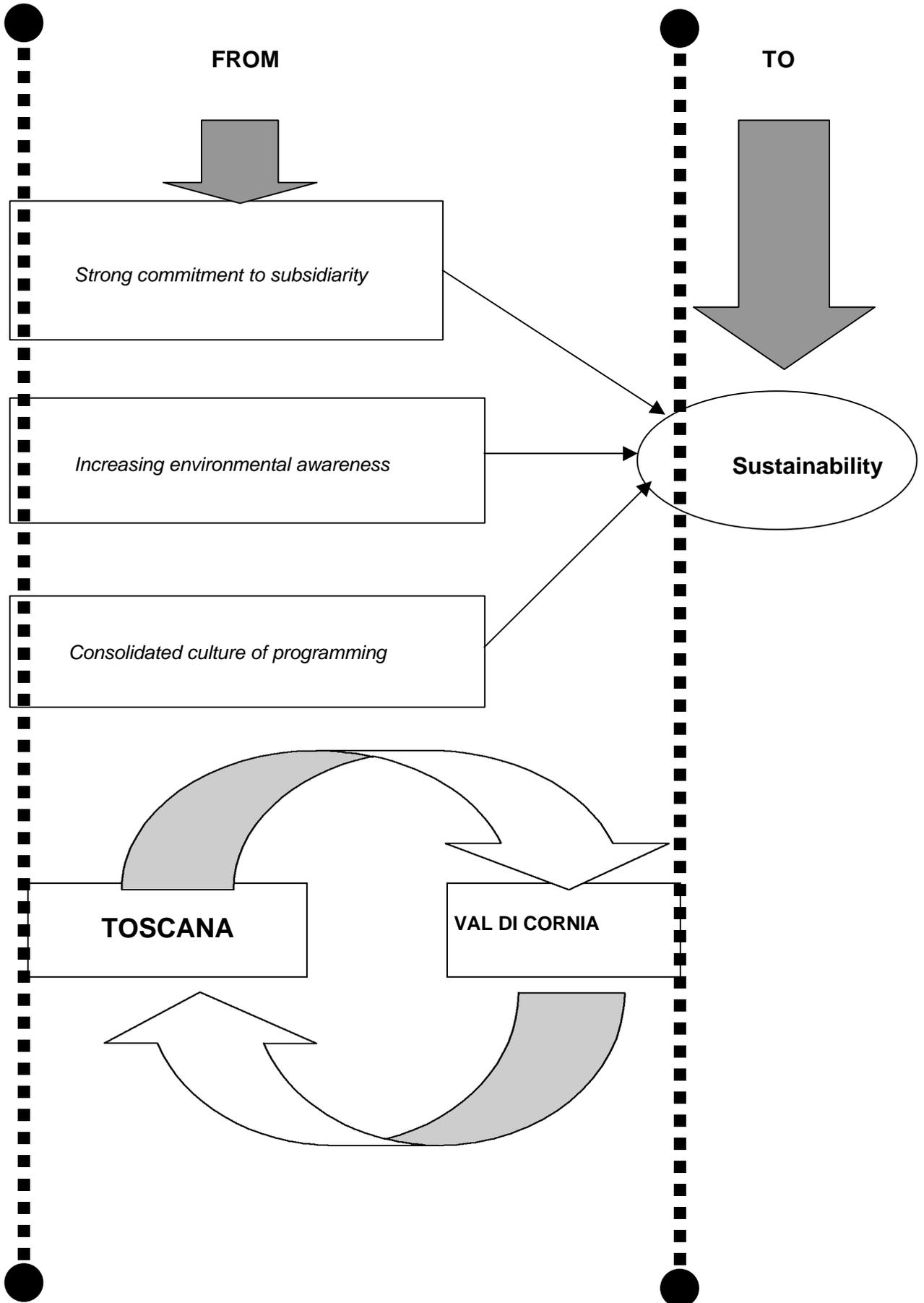
In conclusion, top-down can foster bottom-up processes and vice versa towards sustainable development, if its basic principles are included in the style of governance, in management and organisational behaviour and systems. This research demonstrated that this path is possible: the Committee of Territorial Coordination (created in 1993) between the Val di Cornia local authorities (see box n. 4) represents the best practice discovered along this path.

## **TOWARDS A SINGLE IMAGE**

In Tuscany there are many reasons to affirm that the path towards sustainability is open in many initiatives and courses of action. Those analysed in the Val di Cornia demonstrate a closer realisation of the ten principles of the INSURED paradigm than those up to now present in the regional government’s policies.

As already analysed significant interrelationships exist between the local and the regional contexts. They give the following conclusively single image.

# THE PATH



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## **Appendix: Summary of the INSURED project**

### **Organisational framework**

The INSURED project was funded by the European Commission – DG XII – within the Programme 'Environment and Climate 1994 – 1998'. Co-funding came from the Federal Government of Austria, the Government of Hessen / Germany and several local governments in Central Hessen, the Federal Government of Switzerland and the Region of Tuscany. The project began in April 1996 and ended in April 1998.

The project partners were: EURES, Freiburg, Germany (Ruggero Schleicher- Tappeser), co-ordinator of the European research team; ÖAR, Vienna, Austria (Robert Lukesch); SIASR, St. Gallen, Switzerland (Alain Thierstein); SICA, Dublin, Ireland (Gerry Sweeney); SRS, Florence, Italy (Filippo Strati). Associated with SICA was the Dublin Institute of Technology (Consultancy and Research Unit for the Built Environment) and St. Patrick's College Maynooth (Centre for Local and Regional Development, CLRD, Co. Kildare). Associated with SRS was the Department of Chemistry of the University of Siena (professors Enzo Tiezzi, Riccardo Basosi and Claudio Rossi).

The project was largely based on case studies in five European regions: Central Hessen – Germany; Lower Styria – Austria; Midwest – Ireland; Tuscany – Italy; St. Gallen /Appenzell – Switzerland. In each of these regions an advisory regional group was created with local experts and representatives of public and private agencies in order to support the research group through discussions and suggestions on the basic aims, orientations, methodologies and findings of the INSURED project.

### **INSURED objectives and main results**

The original objectives of the INSURED project were:

- To develop a common evaluation framework for regional development policies and strategies in terms of sustainability using a set of qualitative indicators
- To draw on the experience gained from successful approaches to sustainable regional development in a variety of European countries
- To identify some "key factors of sustainability" including legal, institutional, cultural, financial and management aspects
- To work out a set of suitable policy tools for the promotion of sustainable regional development policies
- To make Recommendations for the different policy levels with regard to policy tools including improved instruments, appropriate institutions and effective implementation procedures.

The main results of the project include:

- a conceptual framework for sustainable regional development which has proven useful for the regions themselves and in developing a European wide dialogue
- case studies from five European regions which aid in the understanding of the dynamics of SRD and which contain interesting examples of best practice
- a differentiated framework for the evaluation and monitoring of situations, actions and programmes as well as for the development of strategies, called a framework for quality management of SRD

- a series of examples of instruments, *i.e.* of options for action and support which comprise the most interesting lessons from the case studies
- a set of recommendations.

Comparing the results with the original objectives, most objectives have been met. A management framework has been developed which allows the assessment and the development of suitable policy tools adapted to specific situations. The results of this project are not easy-to-use checklists and simple recipes. The results form a conceptual framework for a challenging issue, the description of interesting experiences using a common 'language', and a management framework which should facilitate the work of actors, politicians and administrators at all levels.

These results will be explained in more detail in the following sections.

### **The course of research**

The research basically proceeded in the following steps:

- elaboration of a provisional theoretical framework
- comparative description of the five European regions
- empirical analysis of experiences in the five European regions
- comparison of the experiences, revision of the framework, elaboration of a common practical integrated approach and formulation of recommendations.

The overall methodology was explorative and sufficiently flexible to discover new perspectives and to find new paths through uncharted territory, rather than being strictly oriented towards the verification or falsification of well-defined hypotheses.

Confronting different disciplines and cultures, experimenting with slightly differing approaches, feeding back results to local actors with very different backgrounds, were essential but not always easy elements of the approach.

### ***Elaboration of a provisional theoretical framework***

To develop a conceptual framework for this difficult issue, which would be practical and useful in a European context, was a task which needed intuitive creativity combined with a systematic approach. The elaboration of a provisional theoretical framework proved to be more difficult than was expected by most partners. The discussions of the last decades concerning sustainable development (SD) and regional development (RD) have been reviewed and brought together in a first outline of a common concept of sustainable regional development (SRD).

The original hope of agreeing on a rather short list of rather concrete criteria and indicators was not fulfilled. Instead, sustainability proved to be a very broad and fundamental concept which can be structured in several components which in turn must be interpreted in relation to the specific circumstances.

Confronted with different approaches, different interpretations and different emphases and perceptions across Europe, an effort was made to develop a broad framework - a common language that would facilitate mutual understanding and discussion. The formal result was a set of ten components of sustainability designed for a qualitative evaluation of programmes and actions in regional development (see table below). Most helpful in the later stages of the work was the inclusion of four "systemic principles": diversity, subsidiarity, networking and partnership, participation.

### ***Comparative description of the five European regions***

The first approach to the regions was a general description using a common framework which allowed for comparison. The ten components of sustainability were not yet used in this context. The description was quite extensive, following a structural model and combining sectoral with territorial approaches as well as analytical with holistic views. The 'snapshot' of the region was made more dynamic by considering the recent past and future trends as well as the relationships with the outside world. Each partner developed

- an appraisal of the state of the human, the man-made and the natural capital
- a collection of interesting innovative actions (bottom up) and supporting missions (top down)
- a regional SWOT analysis.

### ***Empirical analysis of experiences in five European regions***

The empirical analysis of regional experiences regarding Sustainable Development was designed as a twofold investigation: a top-down analysis examining selected policies, institutions and instruments provided by European, national and regional levels, and a bottom-up view looking at individual projects and development schemes in the regions analysed.

This two-fold approach was seen to be necessary in order to understand the interactions between policies, instruments and local actions.

The top-down analysis of the supporting missions was based on quite a broad methodological framework. The policy fields to be covered were

- structural and labour market policy
- agricultural and rural development policy
- one supplementary field where appropriate.

The individual policy programmes to be analysed were chosen by the individual research teams, often in collaboration with their regional advisory groups.

The top-down analysis showed very strong differences between the regions and presented difficulties in the direct comparison of policies. Therefore, the methodology was revised following this phase, shifting more towards an analysis of the interrelationships between supporting missions and innovative actions and an investigation of patterns of communication and cooperation. It was only in these areas that meaningful generalisations seemed possible.

The selection of innovative actions was also made by the individual research teams in cooperation with their regional advisory groups. The selection therefore reflects cultural backgrounds, the composition of the regional advisory groups and personal preferences of the researchers. This approach has the advantage of including different interpretations of what is most important and innovative, and corresponds to the explorative character of the INSURED project. On the other hand systematic comparisons of details will be difficult since the samples were not chosen on the basis of well-defined criteria. Similarly, the methodology used for the case studies has been only broadly defined in repeated and intensive discussions. Considerable leeway has been given in detail for exploring new approaches that eventually led to a further refinement of the original framework. The result of the analysis of the local projects confirmed that programmes and actions are highly dependent upon the specific context.

### ***Comparison of the experiences and enlargement of the framework***

The common analysis framework for the empirical case studies was based on the ten sustainability components developed in the provisional theoretical framework complemented by some further categories and questions. This framework has proved to be useful for assessing the orientation towards sustainability and for raising the main issues about the key factors for success and the dynamics of change. However, a series of tentative additional concepts have been necessary for describing in detail the social dynamics that increasingly attracted our interest. It seemed desirable to systematically expand the framework.

Having concluded the empirical case studies, the project partners identified approximately 60 key factors for successful sustainable development in a joint 'brainstorming' session. Later, these were reworked, regrouped and systematised into 16 factors capable of expressing the „regional social potential“. The 16 "key regional factors“ represent qualities of a regional context which favour sustainable regional development; they are simultaneously *common*, *diverse* and *original*. *Common*, because they are relevant in each local context examined; *diverse*, because they act in different ways depending on the specific context; *original*, because they are combined in different ways by the local actors.

This means that there is no standardised way or model for using them, but that a creative mix of them is dependent upon the capacity for innovation expressed by the social capital of local and regional communities. Therefore, any actor planning a support programme or a local action would have to consider to which extent these potentials are present, on which elements he can rely and which ones would most urgently need to be developed. Behind the concept of "regional potential“ lies the idea that some degree of "self-governance“ in a territory is necessary in order to move towards sustainable regional development. Many of the key regional factors point in this direction.

Good strategies start off from a broad view but concentrate on a few key issues. During the case studies it emerged that it was not only necessary to look at static "preconditions“ for successful SRD but also to consider the dynamics of transformation which often occurred in several phases. Looking at the basic strategies which can be adopted (and combined) in this context one is left with a quite small number. After long discussions the research partners identified six basic "transformation levers“.

### **The INSURED framework for quality management of SRD**

The original theoretical framework of ten components of sustainability which essentially represented the ORIENTATION towards sustainability was expanded by adding 16 factors expressing the regional social POTENTIAL and 6 levers (basic strategy elements) which bring about transformation DYNAMICS.

Altogether these three main elements of the INSURED framework contain 32 quite different aspects of Sustainable Regional Development. Within this integrated framework it seems to be possible to structure all kinds of discussions and actions related to SRD.

Instead of developing a specific set of instruments for sustainable development, the INSURED project has thus developed a framework for the Quality Management of Sustainable Regional Development.

Quality is something that is difficult to grasp. It should improve, but for every product different aspects are important in differing combinations, different companies and different customers would not share the same interpretation and even minimum standards will change over time. The approach of quality management therefore starts at a meta-level and does not prescribe fixed standards. It only deals with the methods and procedures with which set quality targets

can be met or exceeded. The task is to ensure optimal and transparent management in the fulfilment of very complex objectives. Setting the objectives is something that can be supported and structured with the help of a differentiated management tool. The decisions themselves, however, are political or strategic ones.

This framework can be used for assessing and developing an endless series of instruments which are adequate to specific situations. Some interesting instruments emerged from the case studies, using this framework, but they are not a complete set for all circumstances. They can only be considered as interesting examples.

Detailed objectives for Sustainable Regional Development will have to be set in a political process based on the sustainability principle. At the European level consensus may grow on some minimum requirements. Nations, regions and local communities will need to specify their own more specific goals. The INSURED framework may be helpful in this context. The INSURED framework is not limited to the perspective of one kind of actor, it can be interpreted from very different points of view. Moreover, the fact that the framework allows for different interpretations is not only useful in the sense that it can be applied in different situations. It also encourages the viewing of an issue from different angles. It offers the opportunity of understanding the different roles and positions of different actors in one situation – an essential condition for good negotiations and “sustainable” solutions. Furthermore the INSURED framework should help different kinds and levels of actors in performance of the following tasks:

1. to assess situations
2. to develop strategies
3. to assess programmes, measures and actions *ex ante*
4. to monitor and to support programmes and actions
5. to evaluate programmes and actions *ex post*
6. to transfer experiences from one context to another

The ORIENTATION and the POTENTIAL part can be used for analysing a situation and for monitoring and evaluating the impact of actions or programmes. The TRANSFORMATION levers in conjunction with a preceding analysis can be used for designing strategies. And the whole combination can be used for assessing the most varied instruments. Local actors involved in a specific project should be able to make use of this tool as well as administrators at the EU level planning a support programme.

