

# To Safeguard and to Make the Most of the Rural Environment by Means of a “Sustainable Agro-Environmental Systems” Study

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## Abstract

An upheaval of the economy in all parts of the world has recently taken place and has hit all the productive sectors including the agricultural one which is in a very critical state also in fertile areas and not only in poor and marginal ones where a gradual abandon of the land had already taken place years before. Since 1988, the European Union has paid particular attention to this problem, by trying to incentivate an intergrated rural development thinking of a prospective of intersectorial growth with the aim of achieving ways of sustainable agriculture which would lead to valid solutions both for ecology and for the economy.

Today, however, even the agricultural productions thought to be rich, provide smaller and smaller incomes to the point that farmers are obliged to ask themselves at the end of the cultivation if it is worthwhile gathering the products or not. The abandon of the countryside could extend to fertile areas which would bring about a serious degeneration and environmental harm.

A historian of our times Hobsbawm poses this very important question: “What will happen when extensive areas of the rural landscapes will no longer be needed, for an agriculture outdated and inefficient which it had created for long periods? It was the old agriculture which preserved the landscape. Without it what will happen?... replying that we are no longer defending nature, but a nature which is the outcome of an agricultural cultivation man-made”.

It is fundamental in these times to study *sustainable agro-environmental systems* which can create positive economical moves in order to increase traditional incomes to include the classical agricultural ones. The right use of all environmental and anthropical resources organized in a system is the way to transform the poverty of a lot of marginal areas of Apulia, of other Mediterranean countries and in the world into richness because it is this togetherness of resources, activity and initiative in an economical and organized synergy which can, lacking industrial and commercial possibilities and a remunerative agriculture, give way to environmental, economical and social benefits with positive outcomes on the economy and the employment.

In relation to the importance of the environmental issues the Department for the Science of Vegetable Productions of the Faculty of Agriculture of the University of Bari “Aldo Moro” which has carried out in time studies regarding the Territorial agronomy and the Ecology of the rural environment has, in 2008, set up a project called “TESSERE” written and scientifically co-ordinated by Dr. Maurizia Catalano with the aim of making the most of the Apulian territory as a whole, by means of a study of *sustainable agro-environmental systems*.

*Key-words:* sustainable development/environmental safeguard, “sustainable agro-environmental systems”, environmental agriculture, farmers = preservers, disposers, controllers of the rural environment.

An upheaval of the economy in all parts of the world has recently taken place and has hit all the productive sectors including the agricultural one which, today, is in a very critical state also in fertile areas and not any longer, as has been registered, only in poor and marginal lands where for economical reasons and for poor remuneration, had already begun a gradual aban-

don of the land linked to the departure of rural populations, a phenomenon particularly significant in hilly and mountainous areas. Since 1988, the European Union has paid particular attention to this problem, by trying to incentivate an intergrated rural development thinking of a prospective of intersectorial growth aimed at achieving ways of sustainable agriculture and

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an alternative to the traditional ones, leading to valid solutions both for ecology and the economy (Marzi, 2001).

Today, however, even the agricultural productions thought to be rich, provide smaller and smaller incomes to the point that farmers are obliged to ask themselves at the end of the cultivation if it is worthwhile gathering the products or not. The abandon of the countryside which risks to extend also to the fertile areas, causes degeneration and environmental harm with negative repercussions both socially and economically and does not help the environmental landscape preservation, currently extensively promoted also by *Green economy*, proposed and supported by the President of the United States. The economy is more and more linked to ecology and it is given an increasingly value considering it a useful science in order to understand the global finance which according to Haldane, executive chief for the financial stability of the Bank of England can be viewed as a “complex adaptive system” much the same as a “living eco-system”. One of the most well known biologists, Lord May, who deals with financial eco-systems claims: “The more I understand finance the more I am struck by the similarities to ecology” (Cook, 2010).

Due to the fact that the environment and the landscape are issues of great interest to all, therefore, they are debated at a world level and for these issues *treaties and protocols agreed upon internationally* have been made up, as for example the famous protocol of Kyoto, besides they are safeguarded also at a national level, as for example the Italian Constitution quoted in article 9: “The Republic... safeguards the landscape and the historic and the artistic heritage of the Nation”.

The environment, an issue viewed in all contexts is also mentioned by Pope Benedict XVI in the Message for the World Day for Peace 2010 which says: “If you want to look after peace, look after the Creation” and suggests “looking after the environment, entrusted to man because he cares for it and looks after it freely responsible, having as an orientation model the welfare of all”; and the Day to safeguard the creation: “Before it is too late it is necessary to make brave choices which can recreate a strong bond between man and the earth”, a promise which goes back to Saint

Francesco of Assisi. Even the Italian Environmental Fund (FAI) an organisation involved in environmental safeguard, on 4 October 2009 gave way to the revaluation of the landscape from Assisi with a project called “The Land of Francesco” following the words of Saint Francesco “Do what at first is necessary, then what is possible. And suddenly you will surprise yourself by doing the impossible”.

In relation to what has been said it is undeniable to ask oneself: *what landscape is to be preserved and who has preserved it up to now? Does a natural landscape still exist or has it all become rural landscape?*

G. Leopardi at his time wrote “Now in these things, the greatest part of what we call natural, is not, indeed, it is rather artificial, as to say, the cultivated fields, trees and other plants polite and lined properly... do not have that state nor the look they would have naturally”; such shrewdness and important reflection is reported in a historic text for agriculture “History of the countryside landscape” (Sereni, 1982).

Nowadays, also a historian of our times Hobsbawm, emphasizes that “what we call today Nature is no longer Nature but a combination of climate, topography, original environment and the effects of man in the long run. Our landscapes are, by far, an artefact of man. Throughout the developed world, the environment has above all, been transformed by agriculture. But in the future we must consider the effects of urbanisation in a landscape which is gradually less cultivated” (Hobsbawm, 1999). In the recent decades, in fact, a new kind of migration has begun, an inverted one, from urban centres towards the countryside which is by no means a return to agriculture but a gradual and irreversible urbanisation of the countryside, which for various reasons takes place penalizing the fertile lands of the plain and valley bottom. Against this model of “urbanized development” a valid rational agriculture has little chance of survival and not even its landscape, for which the current legislation imposes a very complex preservation of the *status quo*; such considerations have been made recently by the President of the Academy of Georgofili, in a report on “New views of agriculture” held on occasion of the 70 years of the Faculty of Agriculture of the University of Bari (Scaramuzzi, 2009).

Hobsbawm asks himself this extremely im-

portant question: "What will happen when extensive areas of the rural landscape will no longer be necessary for an outdated and now inefficient agriculture which for long periods was a model? Because it was the old agriculture which safeguarded the landscape. Without it what will happen?... replying what we are already no longer protecting Nature, but a nature which is the result of an agricultural cultivation organized by man" (Hobsbawm, 1999).

Such questions emphasize the importance of agriculture regardless of production (agricultural, zoo technical, etc.) and of the rural environment which has, therefore, a great value on its own and must be given due attention by all, also because currently it shares lots of other economical activities based upon environmental benefits. Besides, in time, a metamorphosis of the said agricultural concept has "gradually emerged, with a tendency to consider its biological, environmental, naturalistic, landscape, etc., a priority, rather than economically productive" (Scaramuzzi, 2009).

Therefore, the rural territory must be in favour of the "primary sector" Agriculture even when it deals with *Environmental Agriculture* using a term already suggested in the 90s by the European Community and farmers must go on beyond their role of *producers*, to one of being a *preserver, maintainer and controller* of the rural area. By the *set aside*, the European Community has already introduced the principal, according to which *farmers can be paid not only for what they produce but also for their fundamental role in the maintenance of the territorial environmental state*. The concept of multiusage of agriculture, basically pursued in time (for example for the water flow to safeguard the erosion of lands from floods, from hydrogeological ruin, et al.) has always been underestimated and often mistaken with the multi-sectors which concern the agricultural farms also involved in their fields different from the primary ones.

It is time, therefore, to re-consider the real role of the farmers who in addition take on and indirectly and without costs play the role of presiding over the territory, leading the whole Society to a very important reflection, that is, that it would be useful and positive for the community to pay farmers for maintenance and preservation works of the rural environment, a condition which, on the whole, would lead to an in-

crease of agricultural incomes which have become so little. In fact, in some areas of Italy (Trentino Alto Adige, Veneto) as well as in other evolved countries farmers have already been paid for work which is not only productive but aimed at the environmental preservation.

If, in fact, sufficient incomes are not guaranteed how can farmers remain in the countryside? It is right to ask a single to sacrifice himself for the community? What should a farmer do, not eat for the benefit of all concerned?

What has been described emphasizes that in this historic time it is fundamental to study *sustainable agro-environmental systems* which are able to create positive economical moves in order to increase, therefore, traditional incomes from agricultural productions finding alternative incomes to add to the classical agricultural ones. *To pinpoint alternative agro-environmental systems, both compatible and sustainable and to define guidelines for the right management of the territory able to guarantee a balance among anthropical, sustainable development and environmental safeguard*, is an obligatory direction.

Besides, the current tendencies of the Community Directives aim to, in any case, reduce the agricultural productions, privileging the cultivation of more fertile areas, and the diversification and the re-conversion of the marginal ones. This means that in the less fertile and poorer ones it would be better not to try to however obtain agricultural productions, perhaps scarce and worthless but to produce only products typical of these areas, which have, however, their market and to try to find on these farms other possible incomes not necessarily agricultural, "cultivating the rural environment in all its options", thus achieving an *Environmental agriculture* which foresees the usage and the entire employment of all the possible resources of a territory properly examined. Nor are all the zones, however, reserved for *Environmental Agriculture*, it is necessary a number of elements indicated by UEC as: "a) a pleasant countryside or at least characteristic; b) rural and meaningful architecture even if basic and poor; c) a landscape validity; d) cultivations or particular ones and/or traditional ones; e) typical cooking linked to the exploitation of the local agricultural product; f) a pleasant climate; g) ethnological and cultural traditions; h) archaeological, historic, etc. even if modest resources; i)

possible vicinity to centres of natural and cultural importance; j) a human, suitable or could be suitable environment” (Catalano et al., 1999).

The conditions above mentioned are to be often found in Apulia as in other hot and drought areas of the planet, zones which have similar environmental conditions in common, in which for ages the term *to make a virtue of necessity*, in the sense that there has always been a teeming of secondary activities of agriculture from which agricultural and natural products or sub-products have generated in time thanks to a *creative labour*, craftsman products which have in a significant and creative way characterized these territories, that today thanks to this inheritance sent down “by the peasants who in the last thirty years, against all odds, have accomplished remarkable works in which everything is measure, proportion, ease and peace” (Fiore, 1978) have become a great attraction for tourism.

However, currently in the rural world not only biodiversity but also “bioactivity” has been reduced and the latter which originated in the good habit of reusing and recycling everything to produce in the meantime products of various kinds “thus achieving in a natural and perhaps unawaring way the fundamental principles of ecology. In time, many of these hard working ants, which have, for example, dug and lined up so many stones of the arid and rocky Apulian Moors to turn it into cultivation something which would have frightened even a population of giants” (Fiore, 1978) have abandoned the rural environments and such activities, to rush towards a job. But now that the famous “position” is no longer, what’s there to do, especially in the poor agricultural zones? To cry without remedy or make up something? Why not take this opportunity for a change of mentality and for an “ecological conversion” already suggested by *Pope John Paul II*, picked up by the current Pope and emphasized also in the study meeting organized by the *National Science Academy said of XL* last September 2009 in Assisi, on the day for the safeguard of the creation.

The right usage of all the environmental and anthropical resources organized in a system is the way to take, to transform the poverty of many marginal zones of Apulia and other Mediterranean Countries and of the world into richness, because it is just this togetherness of

resources, activities and initiatives linked to an organized and economical synergy which can, lacking industrial, commercial and remunerative agriculture, determine environmental, economical and social benefits with positive effects on the economy and the employment (Catalano et al., 1999). It would be worthwhile and useful to look differently at the marginal land resources of the poor countries of the world, which are often considered only “working hands’ supply” or “energy producers”, because, these countries express through their variety and colours their craftsman products full of imagination, young, free and creative, a potential element of growth and development which could be the future richness of the world.

To achieve this, it is vital to study and to know the true and genuine characteristics of the territories examined, to have the possibility to safeguard them and at the same time use them in a productive way inside a *sustainable agro-environmental system*. Therefore, it is important to incentivate all kinds of productions such as: *agricultural and zootechnical products both basic and transformed; craftsman products made from natural raw materials; all the possible environmental exploitations; farmhouse tourism, horse back tourism, cycling tourism, recreational and cultural activities, preservation activities, maintenance and control of the rural space; disposal and purifications of lands and quarries* and whatever. However, agriculture is an important element of the “system” and it must be acknowledged that besides the role of producers the farmers are the *preservers, disposers, and controllers* of the rural environment.

The resources of a territory (natural and anthropical) “together” represent the “elements of production” of the rural environment and they all are to be “cultivated”, equal to a classical agricultural cultivation, generating in such a way, real synergy between ecology and emphasizing the agro-sylvan-pastoral uniqueness and the total complexive potentiality of the entire sector following the updated definition and proposed by the Academy of the Georgofili, of the term “Agriculture” considering it as “a complex of activities undertaken to manage and rationally safeguard productive, renewable resources of the biosphere”.

*Agriculture has so far, safeguarded the landscape and environment but now there could be*

*an inversion and the landscape and the environment could preserve agriculture.*

To sum up, the study of *sustainable agro-environmental systems* supplies for the areas examined knowledge – about the natural and anthropical resources, – about sustainable productive activities, – about their usage integrated in *system* and is the *data-base necessary to plan and manage the territory on scientific-based* knowledge and not coincidental, in order to develop new *eco-nomy* compatible with the environment but at the same time *able to produce income and employment*. Eco-culture to live and to extend itself needs to also create profit.

The concept of system, besides, provides multiple benefits: incentivates all kinds of production and lateral activities to agriculture which can meaningfully characterize environments making them *more attractive for every kind of exploitation*; – promotes and favours communication between different private and public subjects who work on the territory obtaining a management economy of human and financial resources; – it contributes to make the same *agro-environmental systems* more evident to extend the diffusion also in other contexts, in order to promote productive opportunities.

Regarding the importance of environmental issues dealt with by the Department of Science for the Vegetable Productions of the Faculty of Agriculture of the University of Bari, which has been carrying out studies regarding the *Agronomy of the Territory and the Ecology of the rural environment*, set up a project called “T’ESSERE” in 2008 in order to exploit the

Apulian territory in its entirety, by means of a study of *sustainable agro-environmental systems*, aimed at the re-qualification of the rural environment in particular the poor agricultural zones but rich in alternative resources.

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