

PRESPA: AGRICULTURE & ENVIRONMENT

Preliminary actions for labelling of
agricultural products as Prespa Park Products

ONE EUROPE, MORE NATURE PROJECT

JULY 2009



The “One Europe, More Nature” project www.panda.org/europe/oemn

Both in Greece and the rest of Europe, the countryside and the natural environment face an increasing pressure due to the intensification of agriculture, the irrational use of agrochemicals, the depletion of natural resources and other factors. At the same time, an important part of the total population works and lives in these areas, while agriculture is significantly influenced by the new market trends and the European Union policies.

The “One Europe, More Nature” project focussed on areas of high natural value aiming at combining nature protection and the sustainable use of natural resources with local development and improvement of the inhabitants’ standard of living.

The basic principle of the project was that nature and business can co-exist and lead to a new win-win situation. The farmers can overcome modern restrictions through new products and services. The productive activity -that is being practiced with respect to the environment- can increase the competitiveness of the local economy, creating opportunities for new income sources.

The OEMN was funded by WWF Netherlands through the “Global Freshwater Programme” of WWF International. In the Prespa Park area it was implemented by the Society for the protection of Prespa (SPP) from 2005 to June 2009 with the cooperation of the Prespa National Forest Management Body (PNFMB) and WWF Greece. At the same time, the project was also running in:

- Coto Doñana, Spain
- Maramures, Romania
- Tisza Floodplain, Hungary
- Ardennes, Belgium
- Gelderse Poort, the Netherlands
- Sinca Noua, Romania
- Väinameri, Estonia
- Merja Zerga, Morocco

SPP staff in the OEMN project were the following:

- Yiannis Chardaloupas, *agronomist, project coordinator*
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- Anny Anastasiadou, *field agronomist*
- Irene Koutseri, *biologist*
- Yiannis Kazoglou, *agronomist-environmentalist*
- Yiorgos Michalopoulos, *agronomist*

Implementation of the OEMN project in Prespa would not be feasible without the voluntary participation and contribution of many residents of the area to whom special thanks are expressed. The farmers and farm managers who participated in the 2007 and 2008 pilot projects were:

Tasos Anastasiadis, Thomai Anastasiadou, Yiorgos Diakopoulos, Sofia Kakarantza, Tasos Michailidis, Anastasia and Michalis Boutlas, Maria Nalpentidou, Tasos, Yiannis and Stergios Nonas, Nikos and Vasso Papadopoulou, Pantelis and Popi Samsonidou, Theodoros Sidiropoulos, Georgia Tila, Xristos, Apostolos and Leonidas Tsikos, and Thomai Tsikou.

Precious was also the collaboration of Eleni Vrantsi, agronomist of the PNFMB, and Dimitris Kostitsis, agronomist of the Union of Agricultural Cooperatives of Florina, member of the PNFMB’s Board and responsible for overseeing the project on behalf of the PNFMB.



SOCIETY FOR THE PROTECTION OF PRESPA (SPP)

The Society for the Protection of Prespa, a non-profit environmental organization, was founded in 1991 and it was the first coordinated effort of environmental organizations for the protection of the area. The official initiative was taken by the «Friends of Prespa» and WWF International and hence SPP was established with the participation of 10 environmental organizations from Greece, France, Denmark and the United Kingdom. The actions of the Society for the Protection of Prespa aim to wise management, sustainable development, protection of wildlife and public awareness. The organic cultivation of beans in Prespa has been initiated by the Society since 1992, through advice on farming and certification issues. Within the frame of the “One Europe, More Nature” project, SPP initiated an effort for the establishment of a “Prespa Park Product” labelling scheme.



Prespa Park a transboundary area with unique natural and cultural value



The transboundary **Prespa Park** comprises the Lakes Mikri and Megali Prespa and the land surfaces extending from the littoral zone to the mountain ridges that delineate the hydrological basin of Prespa. This is the first transboundary protected area in the Balkans, established by a Joint Declaration of the Prime Ministers of the three neighbouring states (Greece, Albania and the former Yugoslav Republic of Macedonia) in February 2000.

The area holds two of the oldest lakes in Europe and a wealth of biodiversity-rich ecosystems that intermingle in a unique way from the altitude of 850 metres up to 2400 metres above sea level and host populations of endangered and endemic species, such as the Dalmatian pelican, the pygmy cormorant, the brown bear, the wolf, the barbel, the bleak and the trout of Prespa.

The first impression of the **Prespa Park** that one takes in is indisputably defined by its stunning landscape. Inside the Park, the Lakes with their islands, the littoral wetlands, the riverine forests, the shrub formations that gradually lead up to the oak, beech and beech-fir forests coexist, while above the forest limit various types of pseudo-alpine meadows are predominant. Within all these elements of the natural landscape, the presence of people is integrated, with their scattered settlements and farming plots, as well as the monuments from past times, rich in history. This combination of the human element with the wild is the overarching feature of Prespa and attaches far greater value to the protected area.

In the geographical ambit of the **Prespa Park**, one encounters the following –nationally- designated protected areas:

- The **Prespa National Forest** and the **NATURA 2000** site “**Varnountas Mountains**” covering the totality of the catchment basin on the Greek side and forming the **Prespa National Park**, under the jurisdiction of the **Prespa National Forest Management Body**.
- The **Prespa National Park** on the Albanian side covering the totality of the western sector of the catchment basin of the transboundary Park, under the jurisdiction of the Korcha Forestry Directorate.
- Parts of the **National Parks Pelister** and **Galicica** on the former Yugoslav Republic of Macedonia’s side, and the protected wetlands of Ezerani on the northern coast of Megali Prespa, under the jurisdiction of pertinent management bodies.
- Lake Mikri Prespa in Greece and Megali Prespa in the Former Yugoslav Republic of Macedonia, designated Wetlands of International Importance under the international Ramsar Convention.



Promotion of the necessary trilateral cooperation in the framework of the transboundary protected area is premised on the operation of the ten-member Prespa Park Coordination Committee (PPCC), which is composed by representatives of the Ministries of Environment, Local Self-Governments and Non-Governmental Organisations from the three countries, with a permanent observer from the Ramsar Convention Bureau. PPCC holds regular meetings and the collaboration of all the above stakeholders -and many others that have demonstrated a special interest for the area since 2000- to date has led to the implementation of significant programmes and projects around the lakes.

Agriculture, the main activity in the transboundary Prespa Park



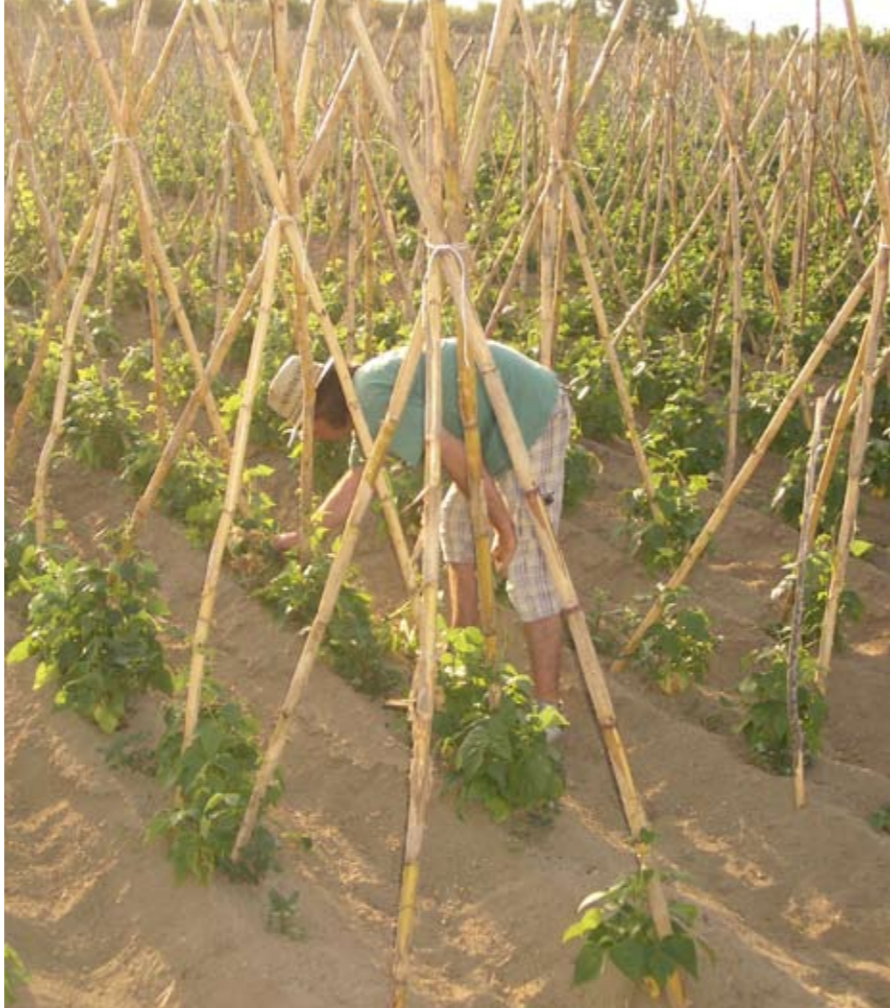
Agriculture is one of the major occupations of the Prespa Park inhabitants, while the primary sector overall supports to a great extent the local economies on the three sides of Prespa. Stock-breeding, fishery and forestry provide complementary, in most cases, income. During the last period, the tertiary sector is rising dynamically mainly by means of tourism service enterprises. The secondary sector is relatively developed in the former Yugoslav Republic of Macedonia (mainly in apple processing), whereas on the Greek side a bean packaging unit is in operation since 2007.



In the Albanian Prespa there are approximately 1 450 agricultural holdings, all of them mixed crop and livestock, with 2 185 hectares of land, from which only 1 60 are irrigated (7,3% of the total), and a low percentage of mechanization. The main crops are cereals, corn, vegetables, alfalfa, and vines, destined mainly for covering household needs with very limited access to the organized market.

On the former Yugoslav Republic of Macedonia's side, there are approximately 4500 agricultural crop holdings. These form the majority of holdings, since the number of only stock-breeding or mixed farms is very low or with a low number of animals respectively. The total area of agricultural land reaches 1 1 000 hectares, 80% of which is serviced by some source of irrigation, although almost half of the land remains fallow. The cultivation of fruit trees, mainly apples (3000 ha.), is the most significant in the area. The level of mechanization appears high, but, in general, machinery is old and of low horsepower. The disintegration of the market system in the former Yugoslavia in the '90s has created serious problems in the marketing and absorption of the production –in Prespa as well- which have not been worked out yet.

In the Greek Prespa, the largest percentage of the approximately 370 agricultural holdings are occupied –totally or partially- with the cultivation of the famous white-seed dry "beans of Prespa", in an area of around 1 000 ha. of irrigated land near the two Lakes. Another 150 ha. or so are planted with other irrigative crops (corn, alfalfa), while the totality of dry crops in the area represents the remaining 50% of the total agricultural land. Although many agricultural practices for the production of beans are mechanized, the needs in labour remain high significantly raising the cost of production. The cultivation of Prespa beans bears great economic significance for the area, since there is usually a high demand for the production leaving a satisfactory income for the inhabitants and keeping them in their birthplace.



Agriculture, the most significant productive activity in the transboundary Prespa Park, has a smaller or greater impact on the natural environment depending on how it is practiced, an issue that has justifiably attracted the attention of producers, scientists and other bodies. The impacts of agricultural activity on the environment may be –depending on the case- negative or positive. The negative effects of agricultural activity in the whole territory of the transboundary Prespa Park mostly relate to the management of water resources, which ranges from deficient to poor, obsolete irrigation systems and irrational use of agrochemicals in a large part of the agricultural land. They can be summarized as follows:

- Soil erosion and sedimentation of drainage canals, streams and the Lakes;
- Abstraction of greater than needed quantities of water in a large part of the farmland and shortage of water in other parts;
- Flushing of the soils and loading of the waters with nutrients;
- Increased consumption of electricity for pumping resulting in raised production costs;
- Exhaustion of underground aquifers;
- Use of agrochemicals (often non-approved) without prior seeking of specialized agronomist support;
- Uncontrolled disposal of agricultural products (unsuitable for consumption) and agrochemical packaging; and
- Reduction of agro-biodiversity.

On the other hand, the rational practice of agriculture has proven positive effects on the natural environment because it enhances biodiversity and diversity of habitat types in an area, thus providing food not only to people but also to rare species of mammals and invertebrates. Farmlands host, among others, a great number of insect species necessary for the support of the food chain and of the health of ecosystems in a site. In the wider area of Prespa there are several examples of good agricultural practices that should be supported, as well as negative ones, for which there is much scope for improvement.



Agriculture in Greek Prespa today



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The construction of the irrigation network in the Greek Prespa (from the '60s to the '80s) signalled a turn of the local economy from an era of autonomy and self-sufficiency, based on the parallel occupation with stock-breeding, agriculture, fishery and the exchange of products, to an era of dynamic and intensive agriculture. Since the mid '80s, the cultivation of beans provides the main source of income to the inhabitants and is the epicentre of life in the region.

When exactly the bean cultivation was introduced in Prespa is not exactly known. Historical sources report that beans under the name "plakí" or "plaké" were imported in the area in the 1920s and were systematically cultivated in valleys and cool micro-climates. Later on and after the irrigation network was put in operation and the cultivations were moved to the littoral zone, it appears that other varieties were imported (by individual producers or merchants).





Today, the varieties “Plaké Megalosperma Prespon” and “Gigantes Elefantes Prespon”, designated as products of “Protected Geographical Indication” (PGI), compose the main bulk of production of the area with around 2500 tons yearly yield. Other cultivated varieties are the coloured “gigantes”, “barbounia”, “handres”, and, in much smaller scales, various old varieties of “runner” beans (without supports), such as “boboni”, “papouda” and “fix”. The Prespa beans are famous for their taste, the fact that they are good cookers and other quality features that keep their demand on the rise.

The bean cultivation occupies over 80% of the irrigated land, with the majority of it lying beyond the eastern and south-eastern shore of Mikri and Megali Prespa respectively. Irrigation relies on the waters of Mikri Prespa (approximately 1050 ha. / “lower zone”) and of the Agios Germanos stream (100 ha. / “higher zone”) and is exercised mainly through flooding and ditches. This old-fashioned irrigation method erodes soils and washes away their nutrients, thus contributing to increased needs of chemical fertilization. The cultivation is especially demanding in inputs and mechanical work, but many practices, such as caning, hoeing, weeding, watering, preparation for harvesting and other chores, still rely exclusively on manual labour. Labour needs are covered mostly by seasonal workers.

During recent years, market demand for safer agricultural products and the ecological value and importance of Prespa prompted many producers of the area towards cultivation systems focussing on the alleviation of the negative impacts of agriculture on the natural environment. Organic agriculture is practiced in the area since the beginning of the ‘90s and currently occupies 45 ha. farmed by 15 producers. Moreover, the largest part of the current cultivation belongs to the quality system of Integrated Production Management (IPM). This system promotes the rational use of all inputs (water, fertilizers, crop protection products), the observance of legal requirements and the monitoring and control of all phases of production. Its aim is environmental and consumer protection, as well as the production of high-profile, high-quality, safe and competitive products.

The most important results of the IPM in bean cultivation are the increasing use of appropriate agrochemicals in appropriate quantities (fertilization and crop protection applications are now based on soil and foliar analyses and on the advice of site-agronomists), and also the occupation of more and more agronomists with the particular cultivation. The Union of Agricultural Cooperatives of Florina (UACF) and the newly established Agricultural Cooperative of the Prespa National Forest “O Pelekanos” are active in the application of the IPM. The latter owns a bean packaging unit for retail packs, while UACF is planning a similar endeavour. The on-site standardization and packaging of beans is an indispensable prerequisite to ensure the traceability of Prespa beans and deter the malicious use of their name in the market.



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Organic producers -like conventional farmers- often face plant nutrition and protection problems, which they are called upon to tackle under a series of restrictions as regards the possible solutions stemming from the standards of organic agriculture. This is why organic producers, together with organic agriculture consultants, constantly investigate issues of organic fertilization and disease treatment, which are based, to a large extent, on the use of mild natural substances and beneficial insects competitive to the harmful ones. Such solutions could be promoted also in the context of the Integrated Production Management and could ultimately result in an extensive environmentally-friendly turn of agricultural practices.



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Why a “Prespa Park (protected area) Product”?



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The project aimed at investigating and setting the basis for the creation and operation of a new system -the first in Greece- that would provide an environmental label to the products of a Protected Area, and in our case to the agricultural products of Prespa. The labelling should be connected with the special ecological needs of the area and ensure that the agricultural practices are environmentally friendly, as well as the traceability of the final product, i.e. that it is produced and comes from Prespa.

The rationale of the action is based on encouraging the farmers to protect the environment and use as a unique opportunity the fact that they live in an area of high nature value. This “environmental asset”, awarded with a special label (“Prespa Park Product”), can help them improve their market position through the unique designation and increasing product ability of being recognized by the consumers. In that way, the agricultural activity and nature can co-exist in harmony in a relationship that, on one hand, contributes to the protection of the natural resources and, on the other, creates a competitive edge for the farmers.

Characterized by an environmental, economic and social dimension, the label “Prespa Park protected area Product” substantially reflects the Prespa Park’s core aim, which is to protect the area’s precious natural environment by promoting forms of development that conserve and do not exhaust the natural resources and lead to sustainability. Beyond agriculture, the environmental product labelling of Prespa could also be applied at a later stage with other products, e.g. stock-breeding, forestry or even tourist services.

Guided by the environmental characteristics of Prespa, the project aimed at specifying at the local level based on existing and well-recognized schemes of environmentally friendly and rational agriculture (e.g. Organic agriculture, Integrated Production Management). To this effect, it mainly focused on a) formulating specific cultivation rules for the area, b) taking advantage of its famous name and connecting it with the product, and c) developing a framework feasible to be implemented by the farmers.



Prespa Park Product the project's development step by step



The project began in 2005 passing from theory into practice:

- Initially, a basic agricultural research took place in the three countries of the Prespa Park with the aim of documenting the current status of the primary sector. In parallel, the existence of similar initiatives in Greece and the rest of the world was examined, as well as the interest of the Greek market in this innovative idea;

- At the same period, the method of the action's implementation was investigated, its trial on the Greek side was chosen and the drafts of the "Prespa beans cultivation Protocol" and "Operational Regulation" were formulated for its pilot implementation in the field;

1. The "Prespa beans cultivation Protocol" concerns specific production rules for the product, from sowing to harvesting. It was developed as a pilot phase for beans, the main crop in Greek Prespa, taking into consideration protection of the area's environmental characteristics as well as the farmers' needs.

2. The "Operational Regulation for a farmers' group" includes the rules, which govern farmers' participation in the pilot labeling scheme, their rights and obligations.





- In the end of 2006 the draft Protocol was put into consultation on a small scale originally with scientists who have worked in Prespa, and later at a wider level in Greece and abroad. Almost simultaneously a discussion was initiated locally with farmers on the Operational Regulation and the cultivation rules so that these could be developed taking into account the views of all interested parties;

- In spring 2007, following SPP's proposal and a relevant decision by the Prespa National Forest Management Body (PNFMB), the pilot implementation of the action began in the Greek Prespa under the auspices of the PNFMB with the voluntary participation of bean farmers. The pilot labelling project lasted for two cultivation periods until autumn 2008.

- Soon after, the final consultation of the beans cultivation Protocol was completed at a national level with academics and public bodies, certification organizations, farmers' and market unions and environmental NGOs. This procedure had a good participation and a high degree of agreement to the Protocol's rules and the project targets. Same was also the result of the discussion with the farmers on the Operational Regulation and the cultivation rules;

- Important was also the technical support that the project provided to the farmers of the pilot implementation in order to approach the modern quality specifications and finally achieve cooperation with a big food market that had expressed interest from early on in the project.

- Coming to its end, in June 2009 the project results were delivered to the PNFMB for further research and development;

- Throughout these years, through extensive discussions, presentations and provision of information in the frame of the transboundary Prespa Park, the idea raised the interest of competent stakeholders in Albania and the former Yugoslav Republic of Macedonia. The international multiannual UNDP/GEF project on "Integrated ecosystem management in the Prespa Park", which is being implemented in the neighbouring countries, carries out a series of training, technical support and information activities for the farmers concerning environmentally friendly agriculture. This activity creates the conditions for a future expansion of the action to the whole basin.



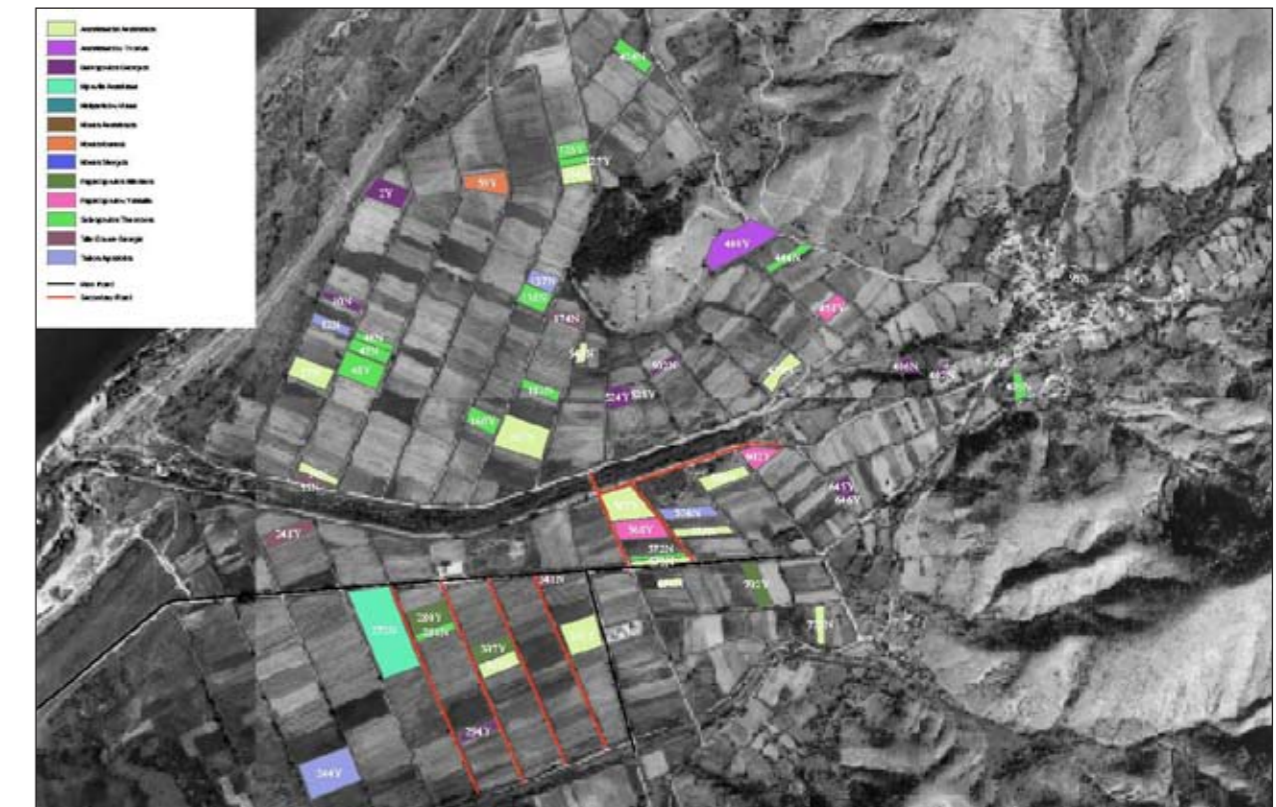
Pilot labelling scheme; What were its results?



The pilot action was implemented under the auspices of the PNFMB with the voluntary participation of 21 farmers in total with 56 and 72 hectares of land in the 2007 and 2008 cultivation periods respectively. The Management Body's decision was based on national law which enables the management bodies of protected areas to award environmental labels to products and services in their area of jurisdiction.

The main targets of the pilot project's implementation were a) to estimate the "distance" between a "Prespa Park Product" environmentally-friendly agriculture and the cultivation practices established in the area; b) to enrich the theoretical cultivation rules (Prespa beans cultivation Protocol) with the farmers' practical experience and precious knowledge; and c) to detect the most crucial issues for the action's proper development and make relevant suggestions. The above were achieved through continual monitoring of the farmers and their cultivations by the project agronomists and recording numerous details for all agricultural activities of each farmer and field.

The fields of the pilot project in the farmland of Lemos bearing a different color for each farmer.





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As the pilot implementation revealed, the daily work of the agronomists with the farmers is a prerequisite for practicing agriculture that is friendly and adjusted to the environment of Prespa. The whole cultivation zone requires a continual and effective agronomist support to satisfy the rules of the cultivation Protocol of the Prespa Park Product. That is one of the most vital issues for the action's future and relates both to its technical and operational aspects.

The discussion locally with the farmers and the consultation process with the experts concurred solidly on the importance and the environmental but also economic benefit of the Prespa products' labelling, and was characterized by a high concordance of views on the cultivation rules (Protocol) and the labelling scheme operation (Regulation). The consultation also emphasized the great need of providing specialized agronomist help to the farmers for the action's viability and identified issues of absolute priority, which are beyond the farmers' control and require concrete state interest as a starting point (e.g. for the replacement of the irrigation network).

During the pilot implementation of the project, the collection of information also aimed at fully informing the farmers in order to be aware of the economic and environmental side of their agricultural practices, compare them to other friendlier ones in Prespa (e.g. practiced by organic farmers) and thus acquire a full view on the advantages and disadvantages of each choice.

The pilot project also ensured product traceability. The protection of the production's uniqueness is a matter of foremost importance for the farmers, as the quality of the Prespa beans has been recognized for some time now (as a product of Protected Geographical Indication). The project provided continual information on the marketing and absorption of the production. As a result of the technical support the farmers managed to meet the requirements of a big food chain, which had demonstrated high interest from the initiative's first steps.

This process offered to all a precious knowledge on the market and its modern quality specifications. Organisation of the farmers, e.g. in the form of a Group, can contribute to better ensuring the product uniqueness and achieving more favourable terms of cooperation with the market. It can, moreover, additionally help in securing agronomist services and facilitating fund raising for product certification (e.g. through the 2007-2013 national Rural Development Programme).

It is finally noteworthy that the pilot implementation provided an opportunity for the cooperation of scientists, at a local, national and international level, regarding agriculture in Prespa. The existing initiatives for a friendly to the environment and mild agriculture, as well as the recent infrastructure for bean packaging, have created favourable conditions for the product and the area. In combination with the "Prespa Park Product" and the knowledge obtained from the project, the potentials for producing agricultural products in Prespa with respect to the environment and assurance of their traceability are enhanced.



Sustainable and profitable agriculture in Prespa: How will it be achieved?



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The formulation of technical suggestions on an environmentally friendly and, at the same time, profitable agriculture in a protected area with the significance of Prespa is not an easy matter. Nevertheless, during the last years, important data and information were collected and useful conclusions were drawn both through the OEMN project activities and from the opportunities offered for technical discussions and exchange of ideas, as well as from the market's and consumers' overall demand for safe agricultural products. Therefore, some relevant suggestions can be briefly made here, aiming at the reduction of the impacts of agricultural practices on the environment and concerning actions and initiatives that should be undertaken by local bodies and farmers.

At a transboundary level, the promotion of environmental labelling for Prespa Park Products will provide an added value to the local productions, yet the process will certainly be a long-term one. Issues in need of immediate attention and of potential multiple benefits for the ecological integrity but also the development of the Prespa Park area are:

- Preparation of integrated agricultural development plans in all three countries with emphasis on the area's potential, on the environmental value of Prespa and the European Union's and market requirements. The environmentally-friendly planning and modernization of infrastructure are also imperative, with special weight on the replacement of the old irrigation network on the Greek side with a drip one, as well as the improvement of relevant infrastructure in the former Yugoslav republic of Macedonia and Albania, with a thorough examination of the environmental impacts both at the stage of planning and implementation of the required works;
- Promotion and application of milder practices in larger areas of the existing agricultural land, according to the standards of the Integrated Production and Organic agriculture;
- Promotion of low-input cultivations in all three countries, and their parallel promotion to the market;
- Effective management (and removal) of the empty packaging of agrochemicals, especially from the streams and lakes;
- Immediate termination of the dumping of unsold agricultural products in inappropriate locations, as, e.g., forest lands, streams and lakes;

- Enhancement of environmentally friendly practices in agriculture in the frame of specific programmes and policies of the European Union (agro-environmental programmes).

Implementation of the above measures is expected to have important results such as: wise use of water resources; soil, ground and surface water protection; agro-biodiversity conservation; reduction of the production cost; increase of crop yields; reduction of point source pollution and of the organic load in the lakes.

At a national level, and especially concerning the bean cultivation, the actions that should be implemented in the short run are:

- Completion of a study on the replacement of the existing irrigation network with a drip irrigation system and provision of funds for the required works for the eastern part of the irrigated land of Prespa. The operation of the drip irrigation network in Pyli, since 2000-2, has resulted in better management of the water and soil resources, reduction of production costs and increase in yields;

- Support of mechanisms for a daily presence and provision of agronomist services to the farmers and implementation of training activities for the latter;

- Application of plant nutrition treatments per field according to soil maps and analyses and the application of crop protection ones in a selective way, when necessary, and not preventively and in the whole plot;

- Systematic application of organic fertilizers (manure, special organic-humus products, incorporation of plant residues, 'green' fertilization, compost) in the whole of the cultivated land;

- Continuous population monitoring of the beneficial to the crops insects and implementation of measures for their protection;

- Investigation and implementation of plans for a systematic crop rotation (succession of crops within the same field) with a proper-for-beans sequence of crops, an issue up to now neglected by the farmers due to practical but mainly economic reasons;

- Initiation of a systematic seed production by local and scientific bodies.

The expected results from the implementation of these actions can be summarized

as follows: water savings and wise water management; improvement of soil structure, natural composition and fertility; creation of appropriate conditions for more effective use of soil nutrients by the crops; increase of the soil's ability to retain water; successful treatment of problems during production; protection of agro-biodiversity; improvement of crop protection conditions; soil protection from erosion and run off; more effective treatment of weeds, diseases, vegetable and animal parasites; increase of yields; reduction of production costs; differentiation of the production; conservation of the endemic and adjusted to the local conditions genetic material and of the special features of Prespa beans.

In the medium-term, in combination with the above, and in view of the fact that the bean cultivation seems likely to continue playing the most important role in the area's economy, actions such as the following should be promoted:

- Research on and management of drainage canals as habitats for wildlife and populations of beneficial insects;

- Creation of hedgerows between neighbouring large fields aiming at the establishment of refuges for the beneficial species of wild fauna;

- Promotion of agro-forest systems, namely the co-cultivation of herbaceous plants with fructiferous and forest trees with a density of 30-100 trees per hectare. These systems produce multiple benefits for the crops and biodiversity, increase the farmers' income up to 20-50%, and can be implemented even in cases of rented lands;

- Conversion of conventional cultivations to organic ones, in areas where the conditions for organic agriculture are ideal;

- Tackling the issue of high rents and short tenancies of the agricultural land, which leads many farmers to seek high yields in a short period of time resulting in increasing use of agrochemicals and depletion of soil resources. The resolution of this issue will lead to the reduction of production costs and wiser soil management;

- Investigation and pilot cultivation of bean varieties more resistant to dry conditions;

- Encouragement of and provision of funds to more specialized research on the cultivation in cooperation with research institutes.

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