

# Strategies, Science and Law for the Conservation of the World Soil Resources

International Workshop  
Selfoss, Iceland  
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Soil Conservation And Protection for Europe



Landbúnaðarháskóli Íslands  
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# Combating desertification in Europe: NAPs and new Rural Development Programme

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## Abstract

The sustainable use of natural resources requires an adequate management of the key activities associated to them. Most of the current political strategies that should aim at implementing, in each rural context, these resource conservation principles have been developed without considering the inter-dependency of such principles within the agro-eco-system as a whole. As a result, their implementation is rather unconnected and local policy or management measures are mostly taken as single piece of the puzzle. Land degradation, soil erosion and salinisation, water quality and quantity, as well as conservation of natural habitats, preservation of landscape of farmed semi-natural areas, traditional knowledge and cultural heritage, etc. are single problems addressed in separate EU and national legislation. They are, instead, environmentally interlinked and impact as such on the sustainability of the rural development. Mitigating measures for each of these threats, whether they are strategies defined from within either the Common Agricultural Policy (CAP), the Water Framework Directive (WFD) or the Soil Thematic Strategy, are converging but are still being defined and implemented separately. Many National Action Programs developed by Mediterranean countries in the context of international Conventions (Annex IV of UNCCD) mention among their priorities the necessity to integrate these policies, both as planning and funding measures. In such context seems to play a crucial role the new RDP proposed by the European Commission, to be implemented during the next programming period (2007/2013). In fact the land management-environmental axis provides measures to protect and enhance natural resources and agricultural systems of Europeans rural areas. The paper explores some opportunities on how to implement such measures in an effective manner to combat desertification in Mediterranean context.

**Key words:** *Desertification, Rural Development Program, Policy Integration.*

## 1. Introduction

It is broadly recognized that environmental problems, such as drought and desertification, depend on climatic variables and, particularly in the European Mediterranean, from human activities. The intensive exploitation of the soil and the water resources, deforestation, inappropriate agro-pastoral practices, i.e. the unsustainable use of the natural resources led by policies are the key elements of this process. The crisis of the traditional agriculture, the abandonment of the interior areas led by past dominant development model based on intensive agricultural systems, urbanization patterns, especially along coastal areas, elevated energy consumptions and environmental pollution have deeply conditioned soil degradation. These phenomena have baited desertification processes both in physical and social terms. The international Community is responding promoting actions that encourage the sustainable use of natural resources through a wide range of initiatives. The Conventions on Climate Changes, on Biodiversity and on Desertification represent the first institutional

step dealing with the issues. In the Mediterranean Europe, for instance, according to the UNCCD, have been developed National Action Plans (NAPs) to define specific actions to fight drought and desertification linking them to social, economic, energy, environmental and cultural policies. The EU has promoted specific policies schemes to contrast processes leading to environmental degradation through CAP, Regional and Cohesion Policies. Among them the Rural Development Programme have played a significant and increasing role in the management of natural resources both in terms of approach (integrated and multi-sectoral) and proposed measures.

Dealing with natural resources it is evident that their sustainable use asks for an integrated management of the actions. Although the existing legislation at European level has progressively recognized the interconnection among the different environmental problem, the formulated implementation strategies still remain separate. Soil degradation, erosion and salinization, water quality and quantity, pesticides concentrations, management of natural habitat, landscape and semi-natural areas, traditional techniques and cultural heritage preservation are considered in different and separate community legislative framework, despite they are deeply interconnected originating extensive impact on the sustainability of the rural territories. These links become particularly evident when the European rural development objectives and relative strategies should be implemented.

Analyzing both the new agricultural and rural development legislative frameworks and the strategies to combat drought and desertification foreseen by the European Mediterranean NAPs, the paper try to find feasible linkages between rural development measures and the actions to contrast and mitigate desertification as identified by the NAPs.

## **2. The Common Agricultural Policy today**

Agriculture remains by far the largest land users, shaping the rural environment and landscape and so the agricultural policy. The importance and the relevance of the rural development and CAP as a whole have increased with the recent enlargement of the European Union. In line with the progressive change in the EU agriculture interventions, the reform of the Common Agricultural Policy in the context of Agenda 2000, building on measures introduced in the 1992 Mac Sharry reform, established the importance of rural development policies as the second pillar of the CAP and, within the market pillar of the CAP, introduced new environmental protection requirements including support in return for agro-environmental commitments, general mandatory environmental requirements or specific environmental requirements constituting condition for direct payments. Member States decide on penalties for non-respect of environmental requirements, which may include a reduction or the cancellation of the market support. A number of measures within the individual market regimes offer opportunities for soil protection. These include set-aside in the arable sector, the extensification premium in the beef sector and the possibilities within national envelopes in the dairy, beef and sheep sector.

An increased level of integration of environmental concerns into the CAP, following the sustainable development strategy defined during the Göteborg Summit and confirmed in the Lisbon strategy conclusions in Thessaloniki in June 2003, has been introduced by the Mid-term Review (MTR) of EU Common Agricultural Policy leading to a further shift of resources to rural development that provides new opportunities for agricultural techniques protecting soils.

Main elements of the agreement reached by the EU ministers on 26 June 2003 are:



- a single farm payment system which will no longer be linked to the volume of production<sup>1</sup>, allowing the farmers to have their incomes ensured and steering their production towards the needs of the market and the demands of the consumers.
- Payments will only be paid in full if the cross compliance provisions are respected. The subsidies will be linked to the respect of environmental, food safety and animal welfare standards (cross-compliance);
- a strengthened rural development policy with more EU money;
- reduction in direct payments (modulation) for bigger farms to finance the new rural development policy;
- several other modifications of the market policies of the CAP in the areas of milk, cereals, rice, durum wheat, nuts, starch potatoes and dried fodder.

The MTR aims at shifting money from the First (Common Market Organization) to the Second Pillar and thus, making it available for Rural Development. The savings within the First Pillar are based on two main principles: Modulation, Capping and Cross-Compliance. **Modulation** covers the decrease of direct payments per farm by a certain rate. This mechanism consists of two components. First, dynamic Modulation is a regular cut of direct payments by an annual rate of 3% leading to a total cut of 20% at the intended final stage. As second component, Capping, would be implemented as an additional cut when direct payments exceed the maximum level of 300,000 per farm per year. In contrast to dynamic Modulation the saved money from Capping, as well as from not respecting cross-compliance, would be kept directly in national accounts for Rural Development measures. Modulation has been introduced by Agenda 2000 on a voluntary basis but would now become a compulsory principle. **Cross-Compliance** is one of the new key elements in the CAP reform, which makes the single farm payments dependant on the farmers respecting public health, animal health, environmental and animal welfare, EU norms and good agricultural practices. The Agenda 2000 CAP reform introduced the requirement for Member States to take the environmental measures they consider appropriate in view of the situation of the agricultural land used or the production concerned. This requirement was incorporated in the "Horizontal Regulation" (No 1259/1999), which provides the common rules in relation to all payments granted directly to farmers.

Member States had three options for fulfilling this obligation: giving support for agri-environmental commitments, fixing general mandatory environmental requirements (based on environmental legislation), and setting out specific environmental standards. Where farmers do not respect the environmental requirements, appropriate sanctions are to be applied, which may include the reduction or even the withdrawal of direct aids. Examples of environmental conditions are adherence to maximum stocking rates for cattle or sheep, compliance with specific conditions for the cultivation of sloping land, respect of maximum permitted volumes of fertilizers per hectare, and compliance with specific rules concerning the use of plant protection products. From 2005, all farmers receiving direct payments will be subject to **compulsory cross-compliance** (Council Regulation No 1782/2003) and Commission Regulation No 796/2004. 19 legislative acts applying directly at the farm level in the fields of environment, public, animal and plant health and animal welfare have been established and farmers will be sanctioned in case of non-compliance (partial or entire reduction of direct support). Beneficiaries of direct payments will also be obliged to keep land in good agricultural and environmental conditions. These conditions will be defined by Member States, and should include standards

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<sup>1</sup> Member States can maintain a limited link between subsidy and production only under well defined conditions;

related to soil protection, maintenance of soil organic matter and soil structure, and maintenance of habitats and landscape, including the protection of permanent pasture. In addition, Member States must also ensure that there is no significant decrease in their total permanent pasture area, if necessary by prohibiting its conversion to arable land.

### ***The new rural development programme***

In 2000, also, a new rural development plans, considered as the key tool for the restructuring of the agricultural sector and to encourage diversification and innovation in rural areas, were approved. For the first time they include a definition of Good Farming Practice (GFP), based on verifiable standards where soil protection received considerable attention. GFP constitutes a core element of the new rural development policy: the granting of compensatory allowances in less favoured areas is conditional on the respect of GFP and agri-environmental measures provide compensation for undertakings going beyond this baseline. Good Farming Practice is defined as the standard of farming which a reasonable farmer would follow in the region concerned. It entails in any case compliance with general mandatory requirements including environmental legislation but Member States may establish additional requirements associated with good practice. Within the rural development plans, some Member States facing erosion risks included practices such as tillage following contour lines, while some with low soil organic matter have banned the burning of cereal stubble. Maximum livestock carrying capacities have been defined by several Member States to avoid soil degradation through overgrazing. Agri-environmental measures aimed at soil protection range from overall farm management systems such as organic farming (including maximum stocking rates) and integrated crop management (ICM) to specific measures such as no-tillage or conservation practices, grassland strips, winter covers, use of compost and the maintenance of terraces. Measures aiming at a reduced use of pesticides, such as integrated pest management (IPM) or promoting balanced rotations can also contribute to improve the condition of agricultural soils.

According to the route traced by the Agenda 2000 Reform, but with much more emphasis, RDP have been re-lunched for the new programming phase 2007-2013 with a own Fund. The main features of this new proposal that reflects the November 2003 Salzburg conference conclusions and the outcomes of the Lisbon and Goteborg European Councils<sup>2</sup>, are:

- the establishment of a special fund, the European Agricultural Fund for Rural Development (EAFRD), separate from the normal CAP mechanisms, with simpler financial rules, and which includes EAGGF Guidance;
- three priority axes for spending (improving the competitiveness of the agricultural and forestry sector; land management (including animal welfare); and diversification of the rural economy and the quality of life in rural areas), with detailed measures under each axis;
- a requirement that a minimum of 25% of community support for each rural development programme is spent on axis II (land management), and that a minimum of 15% is committed to each of the other two axes;
- a mechanism for revising the designation of Less Favoured Areas (LFAs) based on handicaps wider than the physical one.

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<sup>2</sup> Increasing the competitiveness of agricultural and forestry by means of support for restructuring; enhancing the environment and countryside by means of support for land management (including rural development actions related to Natura 2000 sites); and enhancing the quality of life in rural areas and promoting diversification of economic activities through measures targeting the farm sector and other rural factors.

Community strategic guidelines for RD proposed for the final Council decision in July 2005, set the priorities that Member States should stress when preparing their national strategic guidelines.

For Axis I, **improving the competitiveness of the agricultural and forestry sector**, the Commission proposes that the restructuring strategy would be built on measures relating to human and physical capital and to quality aspects, based on knowledge transferring and innovation in the food chain.

The axis II, **improving the environment and countryside**, gives priorities to three EU main areas: biodiversity and preservation of high nature value farming and forestry systems, water and climate change.

Axis 3, **improving the quality of life in rural areas and encouraging diversification**, is devoted to the overarching priorities of the creation of employment opportunities, promoting capacity building, skills acquisition and organization for local strategy development.

To protect and enhance the EU's natural resources and landscapes in rural areas, the axis 2 appears the most directly related with the actions proposed to combat desertification on Europe. The measures available under axis 2 should, in fact, be used to integrate environmental objectives and contribute to the implementation of the agricultural and forestry Natura 2000 network, to the Göteborg commitment to reverse biodiversity decline by 2010, to the Water Framework Directive objectives and to the Kyoto Protocol targets for climate change mitigation. In order to meet these priorities, the actions defined by member states should focus on:

- promoting environmental services and animal friendly farming practices;
- preserving the farmed landscape;
- combating climate change;
- consolidating the contribution of organic farming;
- encouraging environmental/economic win-win initiatives;
- promoting territorial balance.

### **3. The National Action Plans (NAP's) to combat desertification in Mediterranean Europe**

The National Action Plans (NAP's) to combat desertification in Mediterranean Europe have been elaborated according to the UNCCD, each of them stressing the main desertification problems perceived by the national responsible authorities. Their elaboration have mostly coincided in time with the formulation of the past Regional programming phase for CAP and Rural Development Programme (RDP). This coincidence is considered as the main cause of not including any reference to any action proposed by the NAP's as possible beneficiary of funds available within the Rural Development Programmes set up by the local administration (Regions, province, etc). However, many NAP's have referred to the RDP's as founder for many actions proposed. In fact, looking trough the NAP's general objectives it is possible to identify many interesting links with the specific objectives and subsequent measures (line of funds) of the RDP.

Following are reported in a schematic manner, the main objectives of the Italian, Greek, Spanish and Portuguese NAP's (Dis4Me, Desertlinks project).

#### ***Italian NAP objectives:***

The support necessary for Italian regions and watershed authorities to identify "areas vulnerable to desertification".

The adoption of standards and methods better suited to understanding, preventing and alleviating desertification phenomena in "vulnerable areas".

The preparation of the Italian contribution to the Northern Mediterranean Regional Action Programme aimed at ensuring adequate participation in the coordination works with the Annex IV partners.

The gathering of uniform soil data for all of Italy based on the activities of the National Soil Monitoring Centre, the regional Soil Services and other offices with similar duties, in close working relationship with the European Soil Office.

***Greek NAP objectives:***

Determination of the threatened areas and their extent. Estimation of the effectiveness of the applied policy and of the measures taken. More effective application and use of the existing structures and institutions. Elaboration of additional political, institutional, economical, social, and technical measures, and proposals on mechanisms required for their specification and implementation. Formulation of a national strategy, to prevent and mitigate desertification, and to promote sustainable land and water use, and to secure biodiversity, while minimising social conflicts concerning land use. Promotion of public awareness and encouraging active participation of affected populations and of their local agencies to the formulation and implementation of local and specialised measures. Selection and formulation of priorities and pilot - actions. Demographic and socio-economic rehabilitation of areas facing desertification. Establishment of a network for early diagnosis and warning. Co-operation with respective National Programs from other countries and linking to corresponding international networks.

***Spanish NAP Objectives:***

To contribute to the sustainable development of the arid, semi-arid and dry sub-humid areas by the prevention or reduction of land degradation, the rehabilitation of partly degraded land and the recovery of desertified land. The identification of the main factors and mechanisms of desertification in Spain and the definition of the practical measures to combat desertification. The integration in the National Policy of Sustainable Development. Promotion of the institutional co-ordination and the development and design of the policies needed for the various sector-oriented action plans. Definition of the Programme's role as a catalyst of the measures related to Desertification control. Promotion of the participatory process of all the involved sectors of society.

***Portuguese NAP Objectives:***

Soil and water conservation. To fix working-age population in rural areas. Recovery of affected areas Campaigns to raise public awareness of the issue of desertification. Making the fight against desertification an integral part of general and sectorial policy.

**4. Linking NAPs and RDP**

It is widely recognised that the new CAP promoted by the EU is moving towards environmental requirements, both market pillar and RDP containing measures or requirements able to contrast soil and territorial degradation. Looking at new RDP proposed by the EU to be implemented by the sub-national administration for the new programming phase 2007-2013, promoting a sustainable development in the rural areas of the EU, it can be an important tool to directly sustain actions to combat desertification.

As mentioned above, the new RDP foresees a set of measures distributed in 3 axis. Many of them could be implemented in a such manner as to both deal with the RD priorities and that foreseen by the NAP's to combat desertification

and drought in the specific context. Table 1 combine the single RD measures distributed by axis, with the actions proposed by the NAP's for four Mediterranean countries. The table reports only the specific measures directly linked with actions proposed, however, most of the measures can be considered horizontally influencing many actions proposed by the NAP's. For example, sustaining the adding value for agricultural traditional products, produced with traditional knowledge/technologies, give opportunities to a large part of Mediterranean territories, to avoid land abandonment/degradation. Perhaps this kind of measures, difficult to link to a single action, may have a stronger impact on combating desertification.

Table 1: Actions proposed by NAP's and new EU RD measures

| <b>RDP Axis<sup>3</sup> -&gt;</b>  | <b>1</b>   | <b>2</b>   | <b>3</b>  |
|--|--|--|---|
| <b>NAP's Measures in Italy, Greece, Spain and Portugal<sup>4</sup></b>   | <b>Improving the competitiveness of agricultural and forestry sector</b> | <b>Improving the environment and countryside</b> | <b>Improving the quality of life in rural areas and encouraging diversification</b> |
| <b>Italy</b>   |  |  |   |
| Soil protection, including forest management, slope protection and flood control.  |  | B6   |   |
| Sustainable management of water resources, identification of water requirements and control of water demand.   |  | A3   |   |
| Reduction of the impact of productive activities; prevention of physical, chemical and biological damage to the soil; production and use of compost. |  | A4   |   |
| Territorial rebalance, including reclamation and re-naturalisation; re-evaluation of traditional knowledge; integrated planning policies             | B5, C1   | A1, A2, B1, B2, B3, B3                           | A1, A2, A3, A4, B1, D   |
| <b>Greece</b>  |  |  |   |
| Codes of good agricultural practice.   |  | A4   |   |
| Subsidies for sustainable or biological agriculture.   |  | A4   |   |
| Recovery and reconstruction of terraces.   | B5   |  |   |
| Reduction of groundwater pollution.  |  | A3, A4   |   |
| Regulation of livestock production to avoid over grazing.  |  | A4   |   |
| Clarification of forest-land ownership.  |  |  |   |
| Improved forest management, to reduce fire damage, etc.  | B5   | B1, B2, B6                                       |   |
| Institutional and legal measures for sustainable management of water resources.  |  | A3   |   |
| Repairing and renovation of irrigation networks.   |  |  |   |
| More dams to store water and combat drought  |  |  |   |

<sup>3</sup> See EU COM (2004) 490 final, Bruxelles 14. 7. 2004 and Memo/05/215 del 21/06/2005

<sup>4</sup> As reported by Dis4Me, Desertlinks project.

|  |    |                |               |
|--|----|----------------|---------------|
| <b>Spain</b>   |    |                |               |
| Fostering of sustainable agricultural practices for soil conservation.   |    | A4             |               |
| Management of the extensive cattle-raising in the arid and semiarid areas.   |    | A4             |               |
| Fostering of sustainable management of the forests.  | B2 | B1, B2, B3, B6 |               |
| Basins management and restoration in arid and semi-arid degraded areas.  |    |                |               |
| Prevention and combat of forest fires.   |    | B6             |               |
| Sustainable management of the water resources  |    | A3             |               |
| Assessment and monitoring of the desertification.  |    |                |               |
| Analysis, dissemination and usage of the results of the programmes of I+D+I on desertification. Promotion of Projects and Surveys. |    |                |               |
| Incorporation of the social sectors affected by NAP development.   |    |                |               |
| Net of demonstrative Projects of restoration and sustainable management.   |    |                |               |
| <b>Portugal</b>  |    |                |               |
| Soil and water conservation.   |    | A3, A4         |               |
| Keeping the population in rural areas.   |    | A1, A2         | A1, A2, B1, D |
| Recovery of areas most threatened by desertification.  | B5 | B1, B2, B3, B6 |               |
| Research, experimentation and diffusion.   |    |                |               |
| Ensuring that desertification is included in development policy.   |    |                |               |

The new RDP is going to be funded with a large and increasing amount of money, nevertheless to be efficacy, at least for the directly involved measures, it is essential to give priorities to such as territory where the desertification phenomenon are more critical. The identification of such areas and priorities should be defined by the local administrations, in a very clear way trough all the available study and tools produced in many years of research activities on the field, when they elaborate the Regional (Local) Rural Development implementation plans.

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