

The rural policy as a tool for the natural resource management

D. Franco

Ministero dell'Ambiente e della Tutela del Territorio e del Mare, C. Colombo 44, 00147
Roma, Italy. e-mail: daniel.franco@tfambiente.it

Introduction

The European rural regions (OECD criteria) represent the 92% of EU25 landscape, producing the 45% of the Gross Value Added and providing of the 53% of the employment. Agricultural and forestry sectors account for the 8.3% of the employment and the 4.4% of the GDP, covering the 77% of the land use, which is for the 12-13% designated as Natura 2000 and for the 10-30% designated as High Nature Value Farming Systems. Rural regions had undergone a critical period in the last decades, bringing to a re-definition of the rural system role in the EU context by the re-thinking of its general functions through a new analytical and assessing set. The underlining approach adopted for rural areas is the sustainable development, that is the engine of the EU policies on the basis of the Göteborg - Lisbon strategies for a "European model" of development, where the employment and development growth capacity has to be triggered by a best knowledge, which should bring together to a sustainable use of natural resources. The application of these strategies throughout multi-annual policies undergoes to a monitoring and evaluation process that should allow an on-going comparison between policies expectations, results and innovative knowledge. This framework should generate an adaptive process, in which the interaction between knowledge and policy re-launch the sustainable and general development of the EU system.

The adaptive process to fit the expectations and the results: does it works?

In general the rural development policy (related to the compulsory integration and subsidiarity with other EU, National and regional policies) appears to be a good strategic approach in achieving a sustainable development. Policy programming tools seem actually to cope with competitiveness, employment and natural resources sustainable management, giving to the "externalities" a new marketable perspective and transforming the environment in a competitive boost. The related economic instruments (schemes of measures) seem to be progressively able to ensure the strategies aims, mostly coupled with a (annually!) review system that should optimise the local fit to the policy. All these from the economic, administrative and financial point of view; but two elements appear to limit this effectiveness.

The first is the bureaucratic viscosity in the strategies sharing and application at the management level (in between EU and rural communities' awareness); the LEADER axis in the 2007-13 Rural Dev. Fund should contribute to correct this problem encouraging the bottom up approach.

The second, and more general, is the lack of information feedback of the best knowledge to the policy input, a central principle of the "European model" of sustainability that waken the policy adaptive process implementation. This could be linked to the difficulties of science to inform policy and management, to the difficulties of the knowledge "branch" to interact each other to jointly inform the policy and management decision, and to the delay in the upgrade of policy and management output. These information feedback difficulties, (very human) are coupled to: (i) the complexity of the rural landscape, that intrinsically brings uncertainty that has to be communicated to the policy makers and managers, to allow them to progressively adjust the solutions adopted; (ii) the fact that disturbance (human and not), openness and heterogeneity are intrinsic features of rural landscape, and that composition, structure and functions of a single rural ecosystem are contingent on its history and spatial context. Then

the complexity and uncertainty of this system is coupled with the complexity of the policy measures used to implement the rural sustainable development.

Research and feedback needs

To account for this weakness, a long-term, structured and multiscalar survey approach is needed to define probable output and to fulfil the lack of feedback between knowledge and effects. Monitoring the environmental effect of policies and management solutions is essential to cope with the high variability of rural systems, and on ground data are necessary to verify expectation and to cope with uncertainty: this awareness is actually unclear in the ongoing monitoring schemes. The actual lack of science-policy-management feedback and its consequence has been already pointed out in the assessment of agro-environmental measures effects on the environmental policy objectives: uptake figures do not give factual information about the environmental results of their implementation, and do not give efficient information to review the schemes to cope with the policy objectives. On the landscape preservation (non productive measures) and structural transformation (afforestation, agro-forestation measures) side, similar consideration may be drawn: natural resources' policy strategies and programs decoupled with spatial planning are not necessarily correspondent to the policy objectives (e.g. Madsen, 2002). Considering that uncertainty is a core concept of the nowadays non-equilibrium ecology, and most ecological knowledge comes from managed systems far from a human free equilibrium climax, a first solution could be to enforce the information feedback between theory and application by means of a direct engagement of the scientific world with society, to promote *upgraded awareness* in the policy makers to correctly drive the bureaucratic engine. Examples exist to feed this exchange, which account for the intrinsic characteristic of the system and/or the embedded social values, by means of participatory processes or considering the valuation of shared societal values (e.g. Nassauer & Corry, 2004; Hughes, 2005; Bastian et al. 2006).

Conclusions

Some key points can be considered in the future landscape ecology contribution to the process: 1) scientific bodies should encourage the participative approach with the local actors and stakeholders before and during the programmes implementation; 2) the best knowledge available should contribute to a clearer definition of environmental objectives at the landscape scale pursued by single and mix of measures in each program; 3) a long term scientific on the ground evaluation of environmental measures impacts has urgently to be embedded in the programming structure, and a better evaluation at the landscape scale would be possible by geo-referencing the measures application, allowing synergies with risk assessment and natural resources management and planning; 4) environmental services can represent a new market for rural enterprises' income, but local research it is urgent to bid them inside the schemes as shared public benefits (climate change, biodiversity, hydro-geologic risk, landscape amenities), linking them to other emerging markets (e.g. privileging bioenergies for their implication on climate change carbon market and on renewable energy policies).

References

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