High Nature Value farming systems in Spain: experience and future prospects

Specialists are generally unanimous in valuing as positive the effects of the CAP on the Spanish agricultural economy since accession to the EEC in 1986. In spite of the constraints of its physical environment and climate, Spain has become a medium-sized agri-food power in recent decades. The CAP has supported the market-oriented development of those Mediterranean products with higher potential, while at the same time contributing in a significant way to the maintenance of the marginal and fragile inner region's arable cultivation.

The main strategic instrument for rural development in the country during the past century, the Irrigation Policy, has contributed markedly to these results, having received substantial European funds. The resulting expansion of the horticulture, olive oil and wine sectors could be considered inevitable.

Publicly promoted irrigation in inner regions has had an unexpected result beyond its social role in maintaining populations in declining territories. It now supplies intensive agri-husbandry which has developed and consolidated during recent decades, and which competitively delivers pig, sheep and cattle meat for home consumption and export. A 'productivist logic', centred on trying to overcome the structural deficit that had traditionally encumbered Spanish agriculture before EEC accession, has successfully developed to take advantage of CAP regimes in recent years.

However, the main victim of this modernisation process has been the social and environmental value of HNV farming systems. Nevertheless, Spain still holds the greatest share of these systems in a European context, with species and habitats, which are highly valued by European directives, existing well beyond the boundaries of Natura 2000 sites. Following the CAP mid-term review there will be a new rationalisation of agricultural spending that will result in new (perhaps more intensive) productive systems. At the same time there is a requirement to maintain and enhance remaining HNV farming systems. Unless full advantage is taken of the available opportunities, those areas marginalised by the recent modernisation process of Spanish agriculture will be left in a precarious situation (both in social and environmental terms).

My thesis is that in future the most appropriate objective of maintaining incomes for marginal holdings in less intensive areas should not be linked to increasing output but to biodiversity conservation. The challenge is enormous.

What do we have?

Analysis of the current extent and state of HNV farming systems, which in Spain are often characterised by their 'landscape mosaics' at all scales, is severely hindered by the recent drastic changes. The available agricultural statistics are not able to reflect, at adequate scales both in space and time, the necessary management variables (i.e. stocking density or agro-chemicals use). In Spain, a new difficulty is the need to record land use variables that are rapidly changing (i.e. irrigation expansion, fallow reduction, shrub encroachment of pastures or infra-structures and urbanisation developments). Such data collection seems to be of no interest to the authorities (national or regional). Furthermore, spatial information at a national scale on the distribution and trends of the main vertebrate species has only become available since 2003, whilst adequate habitat mapping of the country is only now being developed.

The current state of HNV farming systems in Spain strongly reflects the impact of this recent intensification of Spanish agriculture. Surviving extensive husbandry systems in the Atlantic region, almost dismantled following the introduction of the CAP dairy regime and milk quotas, are in a delicate situation, threatened by widespread abandonment of communal pastures and over-grazing, as well as pollution around farms.

In the Less Favoured Areas in the páramos (upland moors) and inner mountain ranges, rural development initiatives, along with tourism and afforestation, have not managed to stop the accelerating trend for depopulation and the decline in agricultural workers, especially shepherds. As a result, scrub encroachment of pastures and pseudo-steppes provides clear evidence on the ground of the abandonment of traditional livestock rearing.

The fate of dehesas and extensive pasturelands in western Iberia and the Sierra Morena has been somewhat better. Here the less financially marginal and often large estates have benefited from pork-rearing and game management. Regarding olive groves, the simultaneous enjoyment of both the high market competitiveness of olive oil and generous subsidies has almost wiped off the map the traditional low-yield extensive groves. At the same time, this has resulted in the expansion of intensive new plantations along mountain fringes and cereal valley bottoms (the next farm census can be expected to demonstrate the brutal change, for instance in Andalucía).

But probably it is the cereal pseudo-steppes (extensive rotations of cereal and leguminous crops with fallows and pastures, occupying no less than 10 million hectares of the country) that constitutes the most profoundly transformed HNV farming system. This type of environment has almost disappeared in the south-west coastal regions of Almería and Murcia, as a
consequence of the spectacular expansion of semi-industrialised horticulture production. Biodiversity has been ruined by the expansion of irrigation over vast areas of traditional cereal landscapes in the Guadalquivir river valley and the lowlands of the Tagus and Duero rivers. Even without the irrigation impacts, there are few cereal areas in the vast interior regions that have not undergone structural simplification (through land consolidation increasing unit size at the expense of field margins, uncultivated land and river fringes), over-use of production factors (such as machinery and herbicides) or habitat homogenisation (through reduction of leguminous crops and fallow land).

**What has been done in this respect?**

The inertia generated at all levels by this production logic (National and Regional administrations, farmers’ organisations, agro-chemicals lobby, etc.) has effectively marginalized the various Agri-environment initiatives emanating from the CAP in recent decades. The typical argument has been that the demographic equilibrium hangs on the maintenance of farm incomes, and that this in turn rests exclusively on production incentives. As a consequence, the take-up of Second Pillar initiatives has always been low, and even when implemented, their design has always made a priority of evenly distributing the available funds among potential beneficiaries.

The first opportunities to declare Environmentally Sensitive Areas (Regulation EEC 1760/87), and to promote extensification (EEC 1760/87) and set-aside (EEC 1094/88), were totally disregarded, as the authorities saw them as inappropriate for already extensive farming systems. Compensatory allowances in Less Favoured Areas have always been approached in terms of ‘one little cup of coffee for everybody’, without any sound environmental focus in either design or management.

Implementation of the first Agri-environmental package (EEC/2078/92), in spite of its split-level design, horizontal measures for the entire territory (‘broad and shallow’) and zoned measures for specific actions (‘deep and narrow’), was delayed until 1995. Even then, take-up was below 30%, with the ‘lack of budget’ as the repeated official explanation. In spite of its bigger budget, it does not seem that the second package (EC/1257/99) will be able to reverse the trend in most regions, given its radically new and unfocused design and the small percentage of farmers that were involved with the former scheme.

Furthermore, the process of transferring political power from the central administration to the 15 autonomous regions (the celebrated ‘transition to democracy’) has begun to have a strong impact on agricultural policy. The new structure of the Agri-environmental package, offering exclusively horizontal measures that the regions may develop and manage (or not) as they choose, will result in a disruption to HNV farming systems that is both unfocused and variable between regions. This seems ridiculous given that the environmental values do not recognise administrative borders. The National Ministry seems to have abdicated its role of coordination, updating and information interchange, which would be necessary to provide a global view of the situation.

The same is about to happen with the implementation of cross-compliance, where the regions (except Navarra and Aragón) have yet to precisely define (independently of one another, of course) the applicable statutory management requirements.

Indicative of the shared fears related to abandonment threats in marginal areas, options for the partial decoupling of CAP payments have been decided commonly. However, also common to all is the complete lack of interest in scientifically evaluating the effects of these measures on biodiversity (a deficit seriously impeding a learning-from-doing process deemed fundamental for developing Agri-environment policy). As has been the case with other aspects of environmental policy in Spain, it seems that political decentralisation has not been beneficial for HNV farming systems.

**Future prospects**

In the light of all this, future prospects for biodiversity conservation in HNV farming systems might seem pessimistic to the reader. Nevertheless, after the last CAP reform and with the perspectives for future rationalisation of agricultural spending on the table, the potential role of the Agri-environmental approach appears today clearer than ever. In those areas which are sensitive to future reductions in direct payments, support for agricultural activity alone has not managed to prevent depopulation or biodiversity decline in recent years. Therefore, the message for the future should be that the protection of farm income in less intensive areas cannot continue to be based exclusively on production increases, but needs in future to incorporate conservation aims as a parallel objective.

**Changes in agriculture administrations**

Limiting actions to those consistent with a traditional ‘production mentality’ has no future; agriculture administrations (both national and regional) must in future adopt a more broad-minded approach that will take advantage of the new and existing opportunities of the reformed CAP. It makes no sense to wait until an ever-changing CAP reaches a more stable framework, or to excuse inaction with the ‘lack of budget’ argument, expecting more funds without national co-financing. It is a matter of political priority and leadership.

The process of CAP ‘re-nationalisation’ is now on the table at least with respect to rural development. The inaction option poses too many risks in view of the sharp habitat deterioration and biodiversity declines, as well as the social problems of remote rural areas. An approach is needed that will directly involve farmers and their activities, as well as the expertise of agricultural officials.

In designing the new framework, collaboration with others involved in agri-environmental issues (environment administrations, NGOs and scientists) is imperative, given the lack of knowledge and training on biodiversity issues which currently hamper agricultural bodies. In this sense, little can be expected at present from the National Ministry.

But it is not all bad news. Recent initiatives in some regions show some promising signs. For instance, in Castilla-León the environment administration has successfully managed to implement some Agri-environmental measures and LIFE funds in HNV farming systems. In Aragón agriculture and environment bodies have jointly opened a wide process of reflection, with participation of a wide array of experts, for the design of the future Agri-environmental programme. These types of initiatives need wide dissemination so that other regions can follow their lead. Cross-compliance design and inspection and the setting up of farm advisory services are clear fields for further cooperation. In this regard, the National Ministry should not continue to neglect its constitutionally assigned tasks of coordinating and disseminating the actions of regional governments.

**Change in environment administration**

The development of environment administrations since 1986 has been spectacular in Spain. Their main fields of activity have been industrial pollution control, environmental impact assessment, management of protected areas, forest fire prevention and environmental education. However, the need for clearer and more effective actions. Indeed, it is questionable whether environment administrations are capable of assuming such competences at the moment. New human and economic resources would
Spanish meseta landscape in Toledo, with low intensity cereal, pasture, permanent crops and field margins. This is typical habitat of the threatened Little Bustard (Tetrax tetrax).

probably be needed before they could carry out successfully the new role expected of them.

The idiosyncrasies of farmers and farming activities suggest a need for establishing a mixed agriculture-environment body, to which both existing administrations should contribute with officials, infrastructure and budget. Probably, the contribution to these new services would be greater for agriculture administrations, since they actually hold the greater share of resources and have more experience in dealing with farmers.

Addressing the biology of farmland needs a holistic approach, as agri-environment issues cannot be solved with standardised rules and sanctions. A multi-disciplinary approach is needed to assess local realities (past and present) and to design and implement efficient instruments for the future. This means that new measures should be developed that target areas where biodiversity resources need protecting, as well as where these may need to be restored in order to link existing HNV areas.

Knowledge and transparency

Several issues require further attention. The mapping of HNV farming systems at the national scale is a complicated task. Up to now, pastures, natural grasslands and agro-forestry areas have proven easier to map, as their identification relies mainly on the habitat/biotope perspective. More difficult to map are the pseudo-steppe environments, where nature value is linked more to species than habitat. Here there is still a lack of adequate data, as well as knowledge of the factors affecting habitat selection by most species. In both cases, however, the influence of rapidly changing management regimes on the environmental quality and biodiversity of these systems significantly reduces the usefulness of existing map data.

An alternative (and probably unavoidable) approach would be to work at the scale of the region or sub-region. Currently available are the SCI and SPA delineations, which, together with BirdLife's IBAs, are the most complete environmental information sets available. In Spain, however, they firstly need to be updated in terms of present habitats (both semi-natural and farmed) and the spatial and temporal trends of key species.

Secondly, access to the socio-economic and agricultural reality developing inside these areas is needed. CAP subsidies databases should be used for the purpose of characterising the pressures on and state of the system. However, farm level registers also need to be complemented with information on management variables (something which is currently not available). Wide use should be made of satellite imagery, cadastral maps and GIS to combine all these data, and to make them available in a user-friendly format. Again, it is clear that collaborative efforts between both agriculture and environment administrations are needed.

There is a clear need for monitoring and evaluating the effectiveness of the applied instruments on both biodiversity and farm income. As to the former, the most effective and reliable approach would be to integrate evaluation studies into the programmes from the very start, in order to avoid lack of base-line data. Both pressure and state indicators are clearly needed and at different spatial scales. However, up until now the only two known evaluations in Spain are on programmes that have already been running for several years. As for farm incomes, mathematical programming methods should be employed to simulate and assess the economic consequences of desirable alternative farming patterns. Recent research has shown that the implementation of a biodiversity-targeted agri-environmental programme could efficiently reduce the risk of abandonment in Spanish pseudo-steppe systems.

Finally, there needs to be a public participation process. It is important to disseminate the values of these systems to the wider society, as well as the goals, difficulties and outcomes of the new approach.

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