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Regaining

Ground

CRISTINA NARBONA describes a developed country's experience of desertification and the measures it has taken to combat the problem

As a developed country affected by desertification, Spain has been at the forefront of the struggle against it for well over a hundred years. It started restoring degraded land areas in the second half of the nineteenth century. Since then a tenth of the country – some five million hectares of land – are estimated to have been reforested to protect soils and regulate the water cycle.

Spain was the first industrialised country to act on the recommendations of the 1977 Nairobi Conference on Desertification, drawing up the Programme of Action for the Mediterranean Shore the following year. Three years later it started implementing the United Nations Action Plan to Combat Desertification through its LUCDEME Project, which still continues. It then took an active part in negotiating the Convention to Combat Desertification (UNCCD) and its annex on implementing it in the Northern Mediterranean.

It made a detailed diagnosis of desertification in the country through its National Action Programme

on Desertification (NAPD), analysing interactions with strategic planning structures. This demonstrated the coherence between the principles and actions proposed in the NAPD and such sectoral plans as: the Spanish Forestry Plan and regional forestry planning; the National Water Plan and Water Basin Plans; the programmes of regional and rural development; and the National Irrigation Plan. The Convention's principles have also been integrated into agro-environmental requirements for receiving aid under the Common Agrarian Policy, a new Law on Mountains, planning orders to rehabilitate overexploited aquifers, plans for drought management, and other broader areas, such as rural development policy.

Strategic planning

The diagnosis showed that much had been done in the past, but that policies and actions had been dispersed because issues of soil and water resources affect many sectors. This underlines the importance of coordinating policies under the NAPD, essential if harmonized solutions are to be found, and harmful land-use conflicts avoided.

A wide range of diverse measures have been taken in farmland, forests and water resource management, covering research and development, monitoring and evaluation, and awareness raising.

Eco-friendly regulations have integrated environmental considerations into farm policy on prices and markets, with a range of preventative requirements and practices against unrestrained desertification. The programme of agro-environmental measures – which obliges all farmers to follow a code of good practices – has been consolidated and has proved to be a useful instrument in combating desertification. And there have been positive results from another programme which offers incentives for reforestation, especially in marginal areas.

The Spanish Forestry Plan – whose objectives, priorities and action guidelines are integrated with regional plans and strategies – aims to protect soils against erosion and desertification, regulate water sources and supply, and undertake dynamic planning of water basins, focused on sustainable management of resources.

These activities are co-financed by the European Union, while the Department of Biodiversity will invest some 80 million euros in the Plan in 2005–2008: this year 10 million euros will be spent on urgently restoring areas affected by forest fires. Each of the planning instruments used – the “National Soils Erosion Inventory”, the “Forestry Map”, and the “Planned priority activities for water-forestry restoration, erosion control and defence against desertification” – sets out a basic range of activities, defines priority areas, puts forward proposals and appraises possible actions.

Among other measures in this field, a Plan of Control of Forest Resources will provide sustainable forest management. Over 16 million euros will be invested to improve facilities for preventing, observing and extinguishing forest fires, and for providing preventive sylviculture and awareness campaigns. And work will ►

be done to defend and protect mountain areas against pests, diseases and damage arising from drought and other adverse climatic conditions.

Water policy

Water policy combats desertification by mitigating the effects of drought, and managing groundwater and the salinization of soils by irrigation systems. River basin authorities have prepared special action plans for emergencies and possible drought, and a global system of water resources indicators. The Ministries of Environment and Agriculture, Fisheries and Food, have established a National Drought Observatory as a centre of knowledge to forecast, mitigate and monitor its effects. The Agrarian Administration provides drought insurance cover for the main arid area crops.

Managing and protecting groundwater is to be incorporated into water resource planning, while a Groundwater Action Plan should be prepared for each river basin to facilitate sustainable use. Under the Water Act, every basin plan must contain planning for water, forestry and soil conservation, and should include protective action for catchment areas and for regulating the water cycle. The National Water Plan incorporates this, while the National Irrigation Plan contains environmental criteria for land and water management to prevent land degradation, restore aquifers and reduce the processes of desertification. There is also a programme for environmental monitoring of irrigation, to track the changes in its effects and possible remedial measures.

Research and development

Spain has a large and varied research community studying desertification. The main studies were first undertaken in the 1970s: many were part of the LUCDEME Project while others were carried out by universities and the Higher Council of Scientific Research. Since 1986, all these efforts have been incorporated into the National Research and Development Plan. Autonomous communities and the European Union also devote attention to these matters.

Various instruments for assessing, monitoring and making inventories of areas affected by desertification are outlined in the working document of the National Action Plan. The Department of Biodiversity is responsible for:

- The soils maps of the LUCDEME Project, which help plan restoration or rehabilitation in areas affected by desertification, and are essential for preparing maps showing the capacity of use and vulnerability of any given territory. They have been drawn up since 1985 in collaboration between the universities and the Higher Council for Scientific Research. 142 maps now cover 13.93 per cent of the country and will be expanded in the medium term to cover all affected provinces. More than 450,000 euros will be spent on mapping and digitalization in 2006–2007.

- The network of experimental monitoring and assessment of erosion and desertification (of the LUCDEME Project) has 46 experimental stations,

managed by universities and research centres under agreements with the Department of Biodiversity. It was established in 1995 to coordinate and better use studies by various research since the 1980s, and provides 'in situ', continuous and detailed monitoring of the essential mechanisms of desertification. One and a half million euros will be allocated to its maintenance in 2006–2008.

- Assessment of action to combat desertification, demonstrating useful techniques to apply to affected areas, and disseminating available strategies and restoration methods in Spain and other member countries of Annex IV of UNFCCC. Its allocation will be 380,000 euros.

- The National Soils Erosion Inventory, which updates the map of the state of erosion in the entire country drawn up between 1986 and 2002. Maps of 13 provinces have been published, six more are being prepared, and work is about to begin on a further four provinces. The allocation will be 3 million euros.

- Establishing a system of indicators of desertification in Spain. Once their selection and definitions are completed, they will be applied to specific cases.

A register and database describing all the sectors linked to combating desertification is being prepared and meetings and workshops arranged to promote their assimilation and technological improvement. Materials are being published, and exhibitions held. A network of demonstration projects is being set up to cover restoration and sustainable management of the affected areas: this identifies, formulates and develops a group of projects, and shows the technical, environmental and economic feasibility of proposals for managing, using and/or restoring land involved in combating desertification.

Spain is to hold two major meetings to study all aspects of desertification in greater depth. The Second International Symposium on Desertification and Migrations will be held in Almeria from 25 to 27 October 2006, marking the International Year of Deserts and Desertification. And in autumn 2007 we will host the UNCCD's eighth Conference of the Parties ■

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