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# Naturopa

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Symbol for the Council of Europe's  
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# Naturoopa

No. 55 - 1987

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## The Ministerial Conference

An important event awaits us in mid-June in Lisbon, when the Council of Europe will be holding its 5th European Ministerial Conference on the Environment. These summit meetings, the first of which took place in Vienna in 1973, afford an opportunity to assess what is being done, to look to the future and to establish a framework for the planning of our natural environment in Europe. On this occasion, the European Campaign for the Countryside (1987-88) will be officially launched by the Council of Europe in conjunction with the European Community and its European Environment Year (1987). The Documentation and Information Centre for the Environment and Nature will be focussing on the nature aspect with its campaign on the theme of "Farming and wildlife".

In view of the importance of agriculture and of the main theme of the Ministerial Conference, this issue of Naturoopa illustrates

this age-old, honourable and indispensable human activity in the context of the Council of Europe's mandate, which is to ensure that the natural environment does not suffer, or suffers as little as possible.

With Naturoopa 55 the magazine has acquired a new dimension: thanks to the Portuguese authorities, and more especially to the Liga para a Protecção da Natureza, and to the Spanish authorities and notably the Dirección General del Medio Ambiente, Ministerio de Obras Públicas y Urbanismo, this magazine will be published, in addition to its English, French, German and Italian versions, in Portuguese and Spanish.

"Farming and wildlife" will be the theme of Naturoopa 56, which will thus underscore the campaign on this theme. ■

H.H.H.

## Editorial

Throughout the centuries, Portugal has been one of the master artisans of modern Europe, and particularly western Europe, where the values of freedom and democracy are kept alive.

Portugal's geographical position and its people's vocation have allowed it to play a unique part in bringing the continents and civilisations together.

Within Europe itself, Portugal combines, to a greater extent than any other country, the viewpoints of the Mediterranean and Atlantic civilisations.

The traditional lure of the seafaring life, combining such closely-linked activities as discovery, conquest, trade and the spreading of the Gospel, has always led Portugal to concentrate on the development of its seaboard and ports.

The inland population, for its part, has lived on the produce of the land and defended the country against the onslaughts of neighbouring peoples.

In the hills and valleys there originally grew up, as the product of a civilisation heavily marked by Roman and Arab influence, agrarian structures which isolation and the conservative instincts of the great landowners kept intact for centuries. As time went on, however, these autarkic structures evolved into a municipal system and into community-based organisation of the peoples who lived in the hills and tended the flocks.

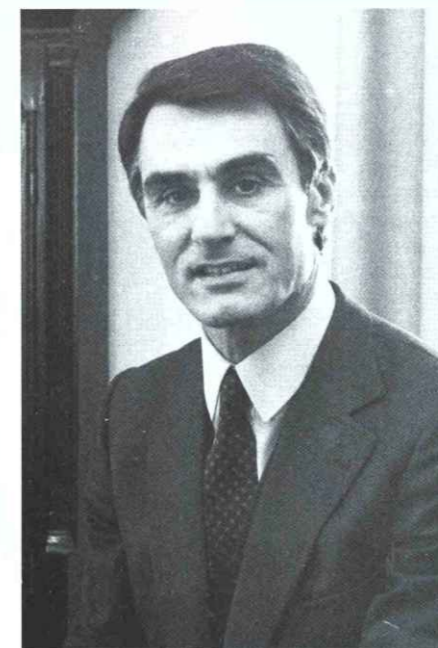
The liberal movement which swept over Europe in the wake of the French Revolution made no changes here. Portugal has traditionally been an emigration country, and its people have sought change outside — in Brazil, the United States, the former Portuguese territories in Africa and, more recently, the countries of the European Community.

As a result, Portugal still has a strong sense of the past, and it has a very rich historical and cultural heritage, which must be

preserved at all costs. Modernisation is needed in the poorer parts of the interior, but it must not interfere with protection of this heritage.

The Council of Europe's approach in defining the objectives for the Campaign for the Countryside is wholly consistent with Portugal's position on this question.

The development process must be implemented in a highly specific manner and tailored to the target areas. Europe enjoys a rich diversity of peoples and landscapes. The levels of progress achieved are also very varied, and the right solution must be found for every situation.



Increased output does not necessarily hold the key to improved living conditions for farming communities. Weighing the very different interests of different countries, the Community institutions are trying to prevent the accumulation of agricultural surpluses. Here again, the Council of Europe's

approach is a thoroughly sound one, with the primary emphasis on solidarity and on a balanced relationship between the countries and regions of democratic Europe.

The Council of Europe was set up to organise co-operation between its member states, but its philosophy and activities are not concerned solely with governments, parliaments and other official institutions. The Council safeguards and defends the rights of individuals, and it pays very special attention to the least privileged. The rural communities, which are largely unorganised, are the guardians of a natural heritage which is coveted and preyed on by interest groups, and these communities undoubtedly embrace the full social spectrum.

In their living and working environment, country-dwellers, who are the first producers of our essential commodities, are exposed to the negative impact of such widely-varying phenomena as urbanisation, the siting of factories and power stations, the expansion of tourism, the development of communications (particularly motorways) and the progressive despoliation of landscape and other natural resources—soil, water and forests.

All of these developments have a negative effect on rural areas, which are an important source of essential supplies and which also serve as a refuge in times of war and revolution.

For all of these reasons, those of us who are responsible for administering public property in the Council of Europe's member states must pay more attention to rural areas and commit ourselves unreservedly to protecting and promoting the interests of rural communities. ■

Anibal António Cavaco Silva  
Prime Minister of the Government  
of Portugal.

# A better life in the countryside



## The Council of Europe and the environment

*Marcelino Oreja*

The establishment of a European network of biogenetic reserves and the award of a European Diploma to sites which are particularly well-protected and of European importance by reason of their fauna, flora and landscape, are other examples of the results achieved by Council of Europe initiatives.

The Environment Ministers of the 21 will be holding their fifth Conference in Lisbon from 11 to 13 June 1987. The Conference will be mainly concerned with conservation and management of the natural heritage of rural areas, but it will also discuss more general matters, such as the problems inherent in a new European strategy for nature conservation.

This Conference is being held at a particularly sensitive time. Firstly, in the wake of recent ecological disasters in western Europe and elsewhere, public opinion in Europe is becoming more aware of the need to protect the environment. Secondly, for the Council of Europe, 1987 is the first year of the third Medium-Term Plan, which will guide its activities for the next five years. This Plan provides for reorientation of the Council of Europe's work in this area.

So far, the Council of Europe's activities have focused on nature conservation. The Berne Convention on the Conservation of European Wildlife and Natural Habitats, which has been ratified by 17 states (and acceded to by the European Community) has been the most strikingly successful product of this policy, which is not restricted to the member states of the Council of Europe.

These results would have been even more striking if the draft European Convention for the Protection of International Watercourses against Pollution had been opened for signing by the member states. This text has been under discussion by the Committee of Ministers for years. It is to be hoped that the serious accidents of the last few months will have a salutary effect on governments and that the latter will rapidly agree to adopt this highly important legal instrument and open it for signature.

While recognising that the policy for sound management of the whole environment must be maintained, the Committee of Ministers conceded, when it adopted the third Medium-Term Plan, that this "should not exclude other initiatives, and the Council should be able as such to tackle problems of environmental management and develop responses to them, including legislative ones. This should be done insofar as it is called for by the continuity of the geographical area formed by its 21 member states, the similarity of their legal systems, and their level of economic development. Such work would fit well into the Council of Europe's special approach, based on the quality of life. Finally, in this context, it should be mentioned that it would be of interest to extend the study of changes in the law of the environment".

This realignment of the Council's work is very important: the aim is no longer solely conservation of nature and natural habitats, but also resolute action to protect and manage the environment.

This new direction implies a new responsibility and presents a genuine challenge: to find, without duplicating the work done by other international organisations already active in this field, an area where the Council of Europe can contribute usefully to preservation of the environment in Europe.

Personally, I think there are three main sectors in which our Organisation can make such a contribution.

First, we must explore the prospects for a European legal framework, embodying a series of principles and instruments and giving Europeans a genuine right to a healthy environment.

Secondly, we must start co-operating effectively with other international organisations, in finding ways of protecting our environ-

ment against pollution and managing our natural resources in a rational manner. Here, I am convinced that the Council of Europe can act as a useful "bridge" between the member states of the Community and the other states of Europe.

Finally, thought must be given to the problems involved in sharing responsibility for environmental damage, with reference to prevention, compensation and repair.

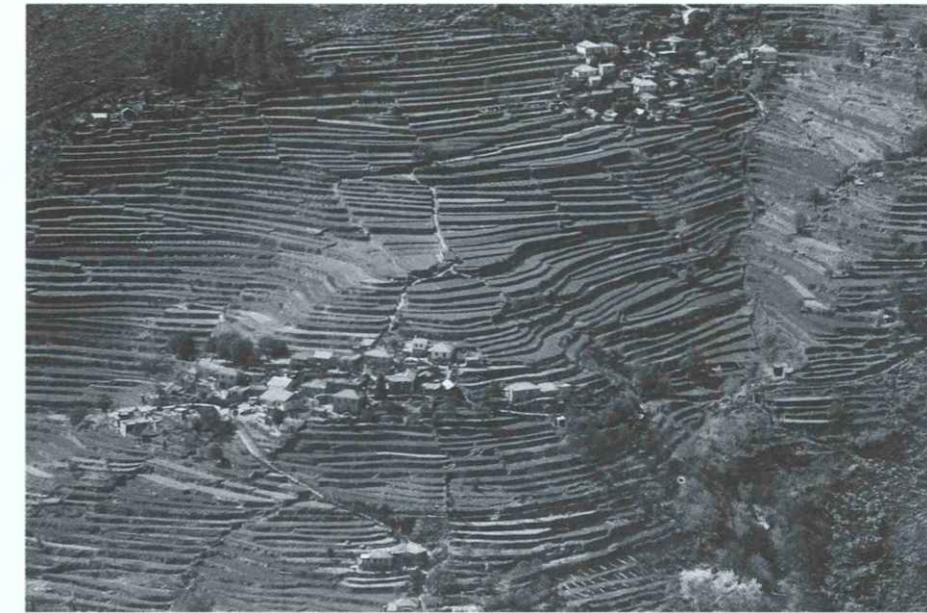
The next few months will be decisive for the development of the Council of Europe's activities in the environmental field. We must devise an action programme for management and protection of the environment—a programme complementing the programmes of the other international organisations—and, once it has been approved by the Committee of Ministers, we must carry it out, finding new and courageous solutions.

Our Organisation will thus be thinking long and hard about this whole question. It is my hope that the Environment Ministers will, at their Conference in Lisbon, help us by giving us the benefit of their ideas and their support.

What we are all trying to do is to make it possible for people in Europe to lead better lives in a human and natural environment which is healthy, pleasant and holds the promise of improved living conditions for present and future generations. ■

Mr. Marcelino Oreja  
Secretary General  
Council of Europe

(Foto G. Lacomme)



(Foto Rui Cunha)

## Lisbon 87- the countryside

*José Correia da Cunha*

pean Council for the Village and Small Town will also be meeting in Lisbon in that same week of June.

These events will come within the period directly following the usual celebrations for World Environment Day on 5 June. The principal meetings will be held in Lisbon, but there will also be a solemn session in Santarem, coinciding with the National Agricultural Fair, and study visits to the Tagus valley and several nature parks and reserves.

The concerns underlying these initiatives clearly converge, and this is why it has been decided to organise them at the same time, without, however, confusing their specific features and aims.

Moreover, the Council of the European Communities has decided to declare 1987 "European Environment Year"—a decision which underlines the Communities' determination to act decisively to prevent the misuse of natural resources and the environmental damage caused by increasing air, water and soil pollution.

Since most of the countries of western Europe favour action of this kind, 1987 is becoming a vital year for the implementation of environmental policies. Forces are being joined, experiences compared and hopeful new paths opened up in this area, which is so important for the future of mankind.

What we have here is a unique opportunity, and widely-varying initiatives have been converging towards it for sometime. Thus OECD's Environment Committee held a Ministerial Conference in June 1985; towards the end of that same year, the Council of Europe decided to launch the European Campaign for the Countryside; in February 1986, the European Parliament adopted a Resolution supporting the organisation of European Environment Year; in April 1986, the Parliamentary Assembly of the Council of Europe organised in Switzerland a conference on European agriculture in the year 2000. The initiatives are treading on one another's heels, but they all have the same objective—balanced, co-operative action to promote development and prevent deterioration of the environment and quality of life. Rural areas are among the most sensitive and have so far been among the hardest hit and this is why the authorities—alarmed at the extent and gravity of the damage which they have suffered in recent decades—are now trying to help them.

Portugal is one of the leaders of this movement. Conscious of the need to build up a positive future, it is again placing its age-old experience at Europe's disposal.

### The 5th European Ministerial Conference on the Environment

The organisation of this conference was entrusted to Portugal at the 3rd Conference in Berne 1979.

This decision was confirmed in Athens five years later and was subsequently finalised by the Ministers' Deputies of the Council of Europe.

What was needed for the Lisbon meeting was a subject which would interest the Ministers responsible for environment policy in the 21 member states and would also reflect the concerns which several Standing Committees had been expressing for a long time previously. These were the considerations which determined acceptance of the Portuguese proposals, which was supported by the Secretariat and, from the beginning, by a group of countries including Italy, France, Switzerland, Spain and Greece.

The basic theme is protection and management of the natural heritage in rural areas, and it is to be approached via four regional reports, prepared by Sweden (northern countries), the Federal Republic of Germany (central European countries), Italy (Mediterranean countries) and Switzerland (mountain regions, particularly the Alpine chain).

The essentials of these contributions will then be incorporated in the final report, for which the Portuguese Delegation is responsible.

The other theme proposed was the drawing up of a new European strategy for nature conservation, updating the concepts approved at the Vienna Conference in 1973, which are now regarded as being largely obsolete.

This vitally important subject has also been entrusted to the Portuguese Delegation, which is being assisted by representatives of the Federal Republic of Germany, Great Britain and Norway, and by the relevant departments of the International Union for Conservation of Nature and Natural Resources (IUCN).

### The European Campaign for the Countryside

The decision to launch this campaign was taken by the Council of Europe authorities at the end of 1985.

The Campaign marks the beginning of a process—necessarily a slow and complex process—of reflection on the nature of the threats and challenges which the countryside faces at the end of the present century: the accelerating depopulation of areas whose economic and social viability is declining, the uncontrolled urbanisation of the countryside and, underneath all this, man's growing estrangement from nature.

The essential aim here is to make public opinion aware of the seriousness of the problem and to find solutions through environmental protection and improvement policies and strategies for rural and regional development.

A new look must be taken at current and projected schemes to promote the

economic viability and boost the population of rural areas by developing the foodstuffs sector, tourism, services, handicrafts and new technologies. Concerted action in these areas depends on the provision of transport, communication and housing infrastructures, basic services, educational facilities and other public utilities.

The whole process must be programmed in a way which respects the need to preserve the natural, man-made and cultural heritage, while protecting quality of life and the special features of the countryside.

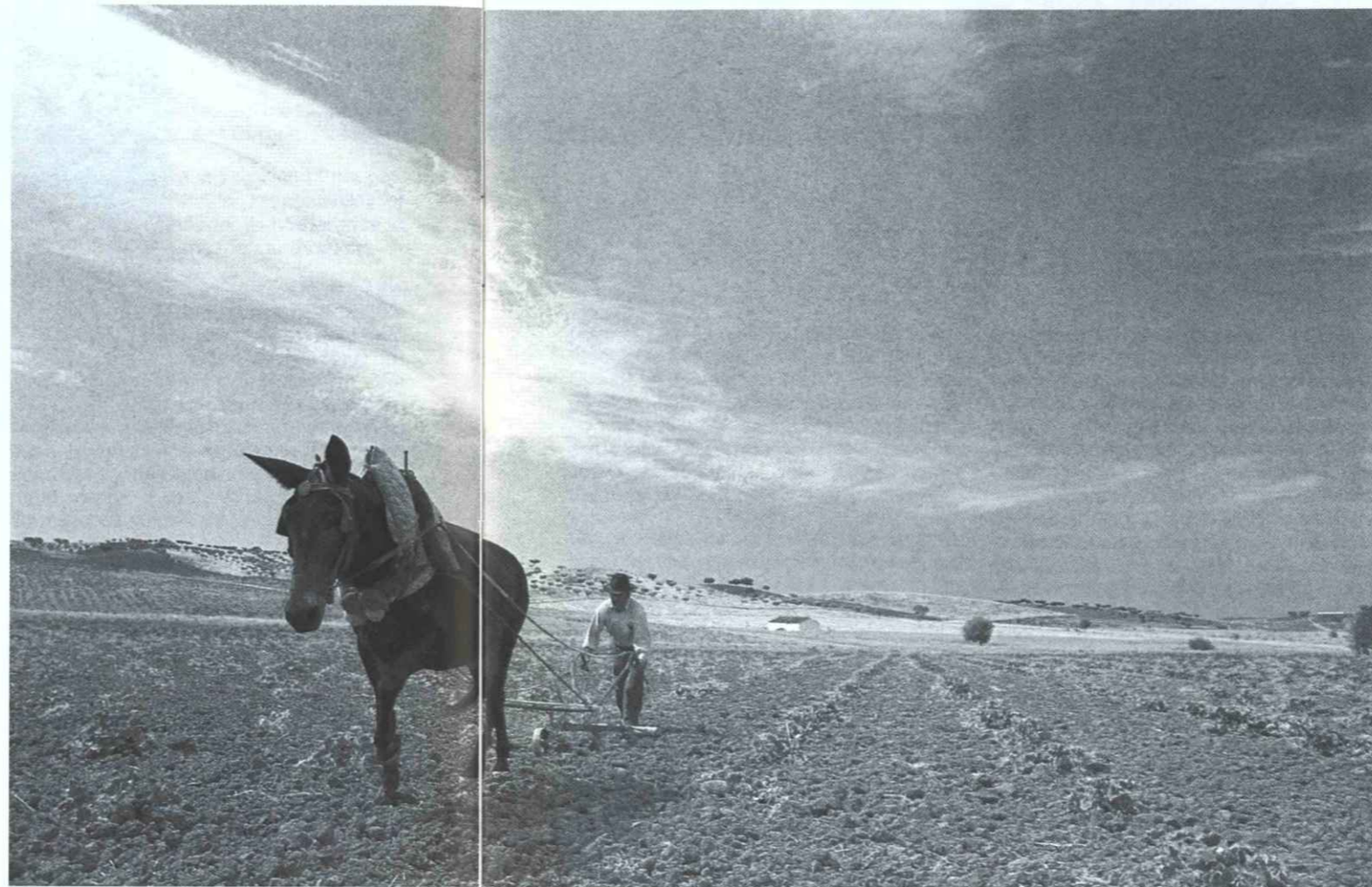
Preparations for the Campaign are already under way, and the Campaign itself will be run at European level by a pluridisciplinary committee of national delegations, consisting of senior civil servants and experts in such widely-varying fields as rural planning and development, the natural and architectural heritage, the situation of women, youth activities and training, the structures and finances of local authorities and rural communities, agriculture and forestry, demography and tourism. The committee has already been set up and will be led, during the Campaign in 1987-88, by a French Chairman, Mr. Edgar Faure, supported by myself.

The Campaign will be officially inaugurated during the 3rd plenary meeting of the international preparatory committee, and the ceremony itself be held on the afternoon of 12 June, at the National Agricultural Fair in Santarem.

Working through their national committees, all the countries involved will try to adapt the aims of the Campaign to their own requirements and interests. Provision has been made, however, for the presentation and study of pilot projects, some of them dealing with situations or problems in frontier regions and thus international in scope.

In addition to mobilising individuals and structures, the Campaign may therefore be regarded as a vast "think-tank" on future prospects for the oldest rural areas. Rapid changes in the relations between the great economic blocs, technology and even the value-systems which have ruled rural communities for centuries are creating a broad need for such an effort.

A very active part will be played in the Campaign by intergovernmental organisations such as FAO, UNESCO, OECD, ILO and the United Nations Economic Commission for Europe, by non-governmental organisations such as the European Confederation of Agriculture (CEA), the Rural Life, Environment and Development Association (RED), the International Union for Conservation of Nature and Natural Resources (IUCN), the International Union of Local Authorities (IULA), the European Confederation of Rural Mayors and many others, with or without consultative status the Council of Europe.



### European Environment Year

Activities connected with the Year are being run, within the Community, by a steering committee drawn from the national committees, chaired by Mr. Stanley Clinton Davies, the European Commissioner for environmental affairs.

The activities launched in this field by the member states and the Commission in 1987 will chiefly be aimed at the peoples within the Community, although some of them will be organised in co-operation with outside states, particularly the member states of EFTA, and with international organisations, such as the United Nations Environment Programme (UNEP) and the Council of Europe, with its Campaign for the Countryside.

In addition to their unilateral transfrontier projects with certain member states, the EFTA countries will play a direct part in certain Community initiatives, such as the twinning of protected sites.

The Community will work with the Council of Europe in implementing some of the projects forming part of the European Campaign for the Countryside. Development and protection of the rural heritage are two areas in which Community support might reinforce the Council of Europe's efforts. The Community will also be represented at the Ministerial Conference in Lisbon on 11 June 1987, which will mark the beginning of the European Campaign.

### Meeting of the National Agencies of the Documentation and Information Centre for the Environment and Nature

This meeting will also be held in Lisbon in 1987, and will contribute a sub-campaign on "Farming and wildlife" to the programme we have described. This initiative forms part of the activities planned for the European Campaign for the Countryside and is primarily aimed at farmers and at school-children in rural areas. ■

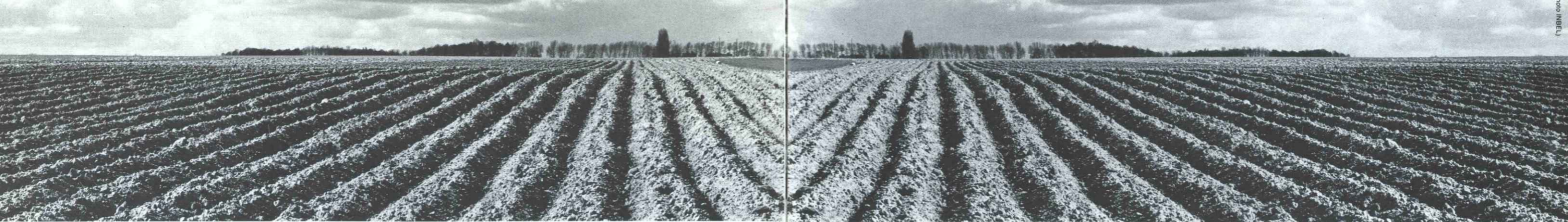
José Correia da Cunha  
European Campaign for the Countryside  
National Coordinator  
Rua Rodrigo da Fonseca 74-1°E  
P-1200 Lisboa

In fact, apart from the organisations directly concerned, the Campaign can count on the active support of all those committed to the promotion of rural tourism, to culture in broadest sense, to recognition of the vital role played by women in supporting traditional societies and providing the economic impetus in rural areas, and to the creation of new jobs, without which young people can scarcely contribute, personally or professionally, to a Campaign of this kind.

Its success will depend to a large extent on the commitment of such natural "leaders" as mayors, heads of associations, entrepreneurs, executives and academics. Specifically academics will have to mobilise the study and research capacity of universities and specialised institutions.

To find solutions to the multiple problems which are holding back the development of rural areas, it is necessary to analyse specific situations which are complex enough to give a fair picture of what is happening in certain regions. Nearly everywhere, the authorities are having to try to find ways of putting a stop to the sometimes uncontrollable damage which progress wrongly so-called is doing the natural and man-made heritage.

Pilot studies, indicating what should or should not be done, may come to play a vital role in the working out of balanced scenarios for the future of these regions.



# Integrated management

The European Conference of Environment Ministers has timed the holding of its 5th session perfectly. Dealing as it does with the protection and management of the natural heritage in rural areas, it is being held at a time when there are new and important elements being introduced into environmental policy, in particular the conciliation between development and nature protection in an integrated approach to environmental management and the replacement of a defensive approach by a preventative approach. The conference provides not only a timely opportunity to bring these new policy elements to the fore, but can also emphasise the importance of European cooperation in this area.

In the 30 years since the creation of the European Community, the environment of vast areas of rural Europe has been subjected to far-reaching changes. "Environment" is used here in the broad sense of the word, referring not just to the effects on nature and wildlife of pollution brought in by rivers, rain and wind from elsewhere or created in the rural areas themselves, but also to changes in rural landscape, the effects on rural areas of the enormous growth of tourist and recreational facilities and both the expansion, by suburbanisation, and decline, by depopulation, of rural communities.

As we in Europe enter the last quarter of the 1980s, there is a general consensus at the European level, that a number of aspects of this transformation of rural areas has to be brought under control, or halted or even reversed, for the good not only of the rural areas themselves, but also of society as a whole.

This can only be achieved, in my opinion, by sound environmental management, coordinated, and wherever necessary implemented at the European level.

Rural areas are influenced by a complexity of interacting social, economic, technological and cultural factors, occurring not only in the rural areas themselves, but also elsewhere in society. If we, at the European level, are to develop an effective environmental management policy in order to achieve an acceptable quality of life in rural areas, then it has to take into account all the factors involved in the evolution of these areas.

Such a policy has to involve a broad spectrum of sectoral policies and it has to take into account the spatial interactions responsible for that evolution. There should be an environmental element in all policies aimed at influencing the development of rural areas. At the same time these policies should be aware of the fact that the environment of rural areas is greatly influenced by circumstances and events occurring often some distance away. In other words, we have to follow an *integrated approach* to environmental management.

Integration is not the only key-word in the approach to be followed in environmental management, it should also be preventative. It is no longer sufficient to implement policies as a reaction to developments. Environmental policy-makers have to look ahead, anticipate trends, establish norms and prevent undesirable developments from occurring.

## Community initiatives

In order to underline the importance of cooperation between the European Community and the Council of Europe, I would like to briefly outline initiatives taken by the Community to implement a preventative, integrated approach to the environmental management of rural areas, thereby creating a framework for both the development and the protection of the environment in rural areas.

In terms of political commitment, the recent amendments to the Treaty of Rome—the so-called Single European Act—which have been agreed upon by Community heads of government, are highly significant. The fact that this Act includes explicit provision for a Community environmental policy such that "...environmental protection requirements shall be a component of the Community's other policies..." is therefore also highly significant. In the context of rural development, the provision that environmental actions should take account of "...the economic and social development of the Community as a whole and the balanced development of its regions..." lays the foundation for the integrated approach.

The assessment of environmental implications as an integral component of policy

Stanley Clinton Davis

planning in all fields had already been recognised earlier, in March 1985, by the European Council, which affirmed that environment policy is an "...essential component of the economic, industrial, agricultural and social policies implemented by the Community and by its member states".

These political commitments are, of course, essential to any policy implementation, but how have they been expanded upon in further policy documents of the Community?

The integration of the environmental factor into most of the Community's fields of policy is set out in the 4th Environmental Action Programme 1987-1992. In this very central policy document for the coming five years, the integration of environmental factors in agricultural, industrial, competition, regional, energy, internal market, transport, tourism, social, consumer protection and overseas development policies has been

put forward as a clear policy intention. A long list, but I stress again the range of factors influencing the environment. I am unable to elaborate here on them all. As well as the 4th Environmental Action Programme itself, I can refer also to the Community's State of the Environment Report, which will be published shortly, as a source of further insight into the range of issues involved in integrating environmental with other policies.

As this number of *Naturopa* is dealing specifically with rural areas in the light of the coming 5th Environment Ministers' Conference in Lisbon, I would like, to serve as an illustration, to expand briefly on two areas of Community policy which are of great significance to the evolution of Europe's rural areas and which will play a major role in the integrated approach to environmental management: agricultural and regional policies.

## Agriculture

Agriculture in modern industrialised Europe must include not only the obvious economic and social functions, but also, especially at a time when the Community has to manage its agricultural production in a prudent way, the conservation of the rural environment. The effects of intensive, highly productive farming techniques are causing not only concern to environmentalists but also to the agricultural population themselves whose livelihood is dependent on soil, water and the genetic diversity of plant and animal species.

The environmental factor can be integrated into agricultural policy in two ways:

- "passive" measures; such as:
  - controlled use of pesticides and chemical fertilisers,
  - the imposition of limits on the construction of buildings for intensive livestock production,
  - the creation of plans for spreading animal waste on land and of installations for treating or storing animal waste,
  - the introduction of appropriate planning procedures, including a full environmental impact assessment, for major projects affecting the use of land;

- "active" measures aimed at promoting farming practices which conserve the rural environment and protect specific sites, such as:

- zoning particular areas where nature protection would become an integral part of farming practice, for example by placing very low limits on fertiliser use, the abandonment of drainage works, planting trees, etc.,
- buying out or renting out land by public authorities for the protection of nature or the creation of ecological refuges.

Clearly both the potential for integrating agricultural and environmental policies and the policy intentions to carry it out are present.

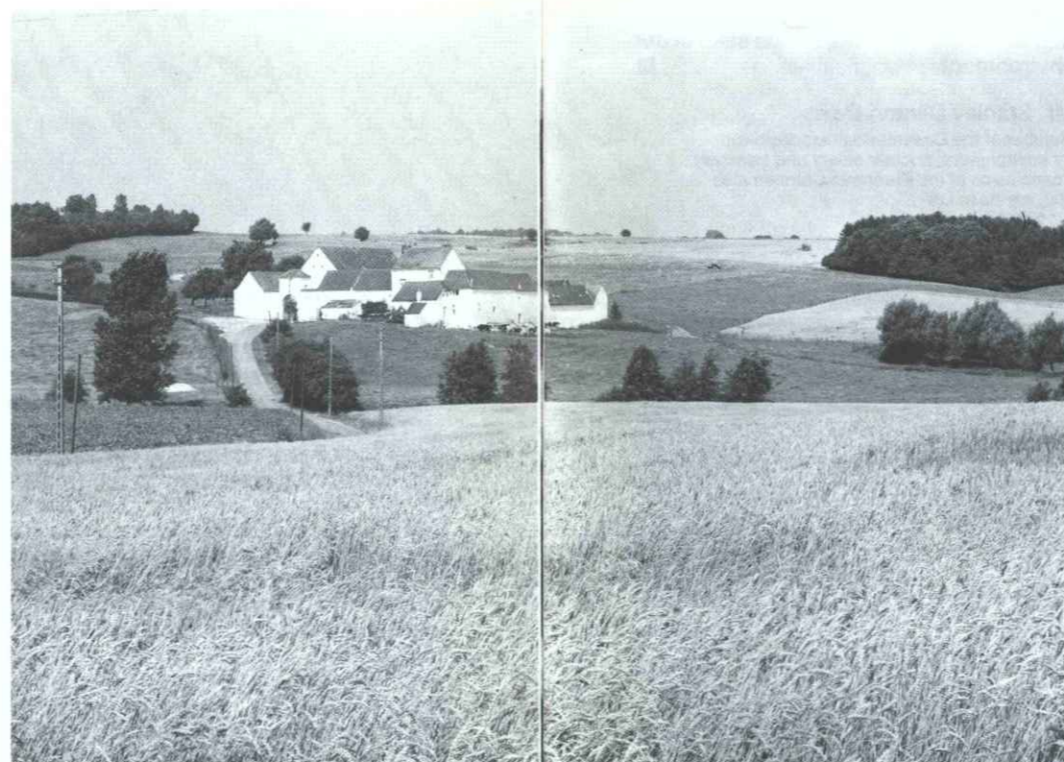
## Regional development

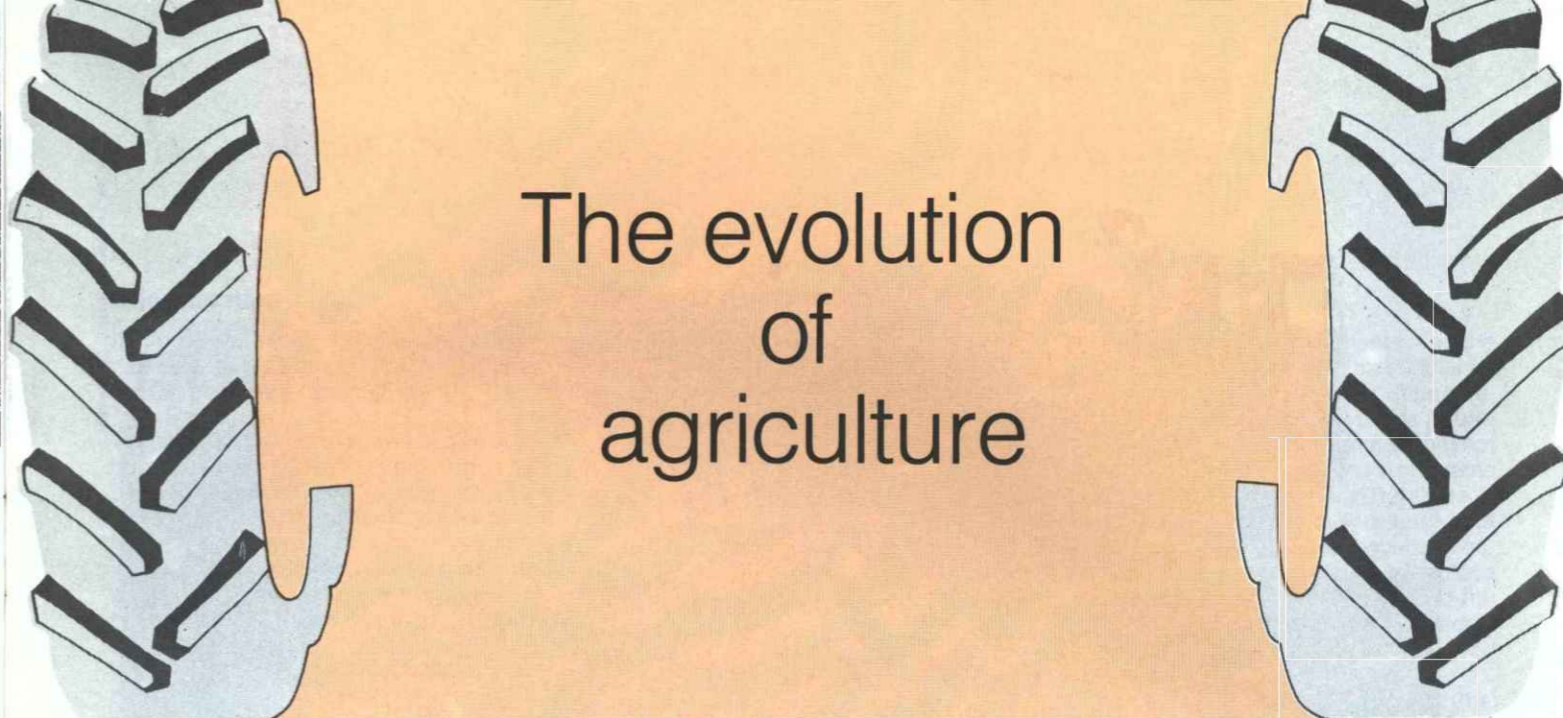
Regional development policy also offers an interesting example of integration potential with environment policy.

From the point of view of environment policy itself, the 4th Environmental Action Programme calls for a programme of demonstration projects to show how environmental actions can stimulate employment. The Commission has just recently brought forward a proposal on these lines which will make particular mention of rural areas.

Another activity concerned with environmental management with a view to increasing emphasis on a preventative approach is the programme of clean technology demonstration projects whereby the Community contributes up to 30% of project cost. Also a series of studies of training requirements in the area of environmental policy and employment is being done.

Regional policy itself uses its most important instrument, the European Regional Development Fund (ERDF), to finance projects in economically disadvantaged regions of the Community in order to stimulate economic growth. Often these projects involve relatively large-scale infrastructure projects in environmentally important or sensitive areas. An important aim of the Commission is to ensure that environmental requirements are built into





# The evolution of agriculture

the processes of assessing and approving ERDF-financed projects. The Directive on Environmental Impact Assessment of 1987 will play an important role in reinforcing the environmental elements of regional policy.

In addition, the Commission is working on a proposal for a Council Regulation intended to ensure a better link between the Community's objectives for the structural development or conversion of regions and the objectives of the Community's environment policy. Preliminary studies have already begun.

Development and environmental protection are therefore becoming a single policy issue of environmental management. It is now fully realised that environmentally insensitive development will diminish an area's attraction for further investment. To illustrate the point, tourist areas have to take account of environmental protection. The sun can shine all day, but no tourist will sit on a dirty beach, breathing air that stinks and go bathing in polluted water enjoying the view of rows of uniform tower blocks along the coastline.

The initiative by the European Conference of Environment Ministers to introduce a European Conservation Strategy for the Year 2000 is in this context an important one. If those new elements of environmental policy which I have mentioned—prevention, integration and European collaboration—are regarded as the essential components of conservation in the strategy, then it has the potential to be a framework of reference for further action.

## Public awareness

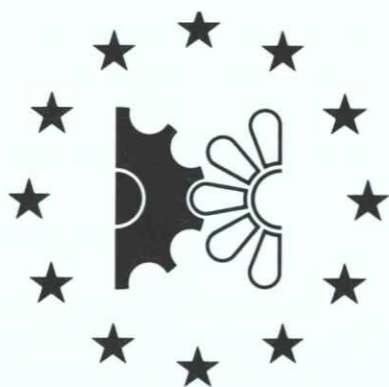
It is, however, not sufficient just to formulate and set about implementing these integrated policies. The general public also has to be aware of their necessity, aware of the fact that development and conservation have to go hand in hand within the framework of an integrated approach to environmental management. After all, such policies can only be implemented if the public supports them and participates in them.

The fact that both the Community's Year of the Environment and the Council of Europe's Campaign for the Countryside are being organised at the same time, is of utmost significance. A good coordination of both instruments of public education and

involvement will ensure a double effectiveness for the future of rural areas.

Having formulated policies and stimulated public awareness and involvement in environmental issues, it will be essential in the future to enable people—policy-makers, researchers, the public at large—to have access to information on the environment. The integrated approach is maybe the only realistic way to effectively manage the environment, but, through its complexity, it provides a problem of how to make all the different data involved in the state of the environment available to the public.

Undeterred by the complexity of the task, the Community has initiated the so-called CORINE-programme (COOrdination of INformation on the Environment), the aim of which is to set up an information system on the state of the environment. We must not expect miracles. It will be some years before a fully operational and largely complete system is available, providing Community-wide data on such aspects of the environment as soil erosion and pollution, emissions into the air, acid deposition, water quality and biotopes, but the first results of this programme—as yet in an experimental phase—are becoming available.



It is with particular pleasure that I am able to point out that collaboration with the Council of Europe has provided concrete results for CORINE in two areas of particular importance for the rural environment:

- the creation of a data base on biotopes of major importance for nature protection in Europe;

- the co-publication of the map of the natural vegetation of the member states of the Council of Europe, including of course those of the European Community, and its incorporation into the CORINE computer system.

These results of collaboration between the Community and the Council of Europe will be on exhibition during the 5th Environment Ministers' Conference in Lisbon.

I believe that 1987 could signify a turning point in the development of the rural environment in Europe. It is the year in which important new policies aimed at integrated environmental management are being launched by the Community, the Environment Ministers of the Council of Europe member states are providing an important stimulus to progress in this area with their 5th Conference, public awareness of and involvement in environmental issues are being stimulated by two publicity campaigns and a start has been made in the complex task of setting up an information system for environmental data aiding the effective implementation of these policies and adding to public awareness.

Never before have there been so many opportunities to exploit. We must make sure that we do exploit them, for the sake of our environment. ■

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Since the Second World War agriculture in Europe has undergone a rapid development, especially in those parts where the structure of the rural area has changed drastically. The development in the Netherlands may serve as a good example.

## Agriculture since World War II

This development can be divided into four phases.

During the period of reconstruction the first 10 years after the war, the most important items were to repair war damage and to restart food production. A constant effort was made to increase production through better fertilising, pest and disease control and by selection of varieties. The position of the farm labourers and owners of small farms was rather weak as they profited least from the economic recovery.

The period of increasing prosperity until the beginning of the 1970s implied that many farm labourers and owners of small farms found other jobs. The average size of the farms increased rapidly. Through mechanisation, the production per capita rose considerably, hence farmers profited reasonably from the growing prosperity. This change of structure was largely supported by regional projects for the improvement of parcelling, water management and country roads. Agricultural areas were newly planned so that farmers could, by means of exchange, have their land in large fields closer to the farm, thus facilitating the use of machines. Despite the decreasing number of farm labourers, production increased. A market was found by the expansion of export, especially when the European market was open for the EEC countries in 1962. An increased import of cattle feed and extensive use of fertiliser and pesticides contributed to the availability of cheap food products.

The 1970s were a period of declining economic growth. The oil crises showed that economic growth could not continue uninterrupted. Besides, the excrescences of increased prosperity had led to reflection.

Agriculture was criticised by environmentalists, who were rapidly gaining political importance. Modernisation of the rural area continued, but with more attention to non-agricultural objectives and at a slower pace, because of the government's economising.

Many farmers and horticulturists started specialising in order to decrease production costs. Mixed holdings were disappearing and farmers concentrated on milk production, arable farming, fruit growing or poultry etc. Within the sector specialisation continued. Arable farmers grew a few crops only; fruit growers only a few varieties. New holding systems were developed especially where cattle breeding and greenhouse cultivation were concerned. Cows walked freely in the barn and went to the feed container or milk machines. In former days a farmer could milk approximately 8 cows, today 50 or 80.

After about 1980 the economic growth stagnated and unemployment became a social problem. Efforts to decrease costs led to the application of new techniques in agriculture, like the use of computers.

In the greenhouse, crops are grown by artificial nutrition whereby water and nutrition are added by computer. The same computer can also regulate temperature and carbon dioxide content. When using a computer the dates of planting and harvesting can be determined a year in advance. So it is possible to regulate production quantity and quality.

In dairy farming similar developments occurred. The quantity of feed concentrate a cow needs depends on the milk yield.



Manure-spreading

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The cow can get the feed herself from a automatic demand feeder that recognises every single cow by means of a transmitter hidden in a collar. The farmer is able to regulate the quantity of feed for each cow by computer that operates the automatic feeder. The computer gives him a daily output showing how much feed each cow has actually consumed.

These automatic systems require special provisions concerning farm size and layout. A greenhouse area requires plots where square greenhouses, which are more energy efficient, can be situated. Each farm should be situated near a proper road so that products can be delivered quickly.

In order to facilitate more efficient milking a dairy farm should have 60 to 80% of the grassland situated round the farm. A barn should be available where cows can get around and find the feed themselves. Similar developments are underway concerning the production of poultry, laying-hens and breeding pigs which is now based on the concept of agro-industry. Some agricultural producers are able to invest in new systems so that production can be raised (per person, per animal, per plot) to an extent that former generations never dreamed of.

Specialisation continues. At the same time many agricultural holdings close or will close shortly, because they cannot keep up with the pace of development.

### Contrast North-South

It is evident that the above description shows a clear picture of the development in

the Netherlands and is not characteristic for the rest of Europe. Generally speaking there exists a contrast between the North and the South of Europe.

Although there are dissenting situations it could be said that agriculture in the North of Europe is more export-oriented whereas in the South of Europe the regional and local markets are more important. A tendency to aim for efficient production does not come first.

The dynamic development in the North which extended to even the smallest villages did not do so to the same degree in the South. There are areas where the business is carried on in the same way as their parents did. Only small adjustments have been made but essentially little has changed since taking over from ancestors. In the North the agricultural enterprise is modern, so it yields a maximum output and plays an important role in the agro-food industry.

Although this difference between North and South exists it must be ascertained that production increases all over Europe and agriculture is taken up more and more rationally.

### Problems

The success of European farmers evokes again and again new problems. The rapid increase of production is not met by increasing demands in Europe, nor elsewhere in

the world. This higher production in agriculture brings Europe into conflict with the United States of America and the developing countries. It is a question of over-production and non-European governments as well as the European Market do not seem capable of solving this problem.

In areas where the number of cows and chickens has grown considerably more manure is produced than soil and crops can cope with. This is the case in the Netherlands. If too much manure is given it will pollute the surface water and the ground water from which drinking water is obtained. Due to the accumulation of pollutant material in the soil it becomes less fertile and consequently harmful to crop growth. A third problem is that society is criticising the production methods in agriculture. There are citizens demonstrating for the welfare of animals and are of the opinion that, for example, laying hens or fattened calves are not adequately housed. Others object to certain crop pesticides or to the way the soil is decontaminated because according to them this is harmful to the environment. It is accepted that in arable farming or horticulture one crop is grown as mono-culture, but where grassland is concerned the critics find that an interesting herbal vegetation should be maintained and that birds of meadows suffer too much from intensive grassland exploitation. Because of these problems a structural change in agriculture is inevitable. Production must decrease and environmental problems must be dealt with.

### Uncertainties

It can be stated that the present development cannot continue, but stating what should be done is another matter.

Technically a further increase of production is definitely possible. The yield of the crops per unit in arable farming and horticulture can still be raised considerably. It would not have a negative impact on the environment if per unit product less fertiliser and pesticides are used. In cattle farming too, higher production is possible per animal as well as per man. In the near future a robot will be able to milk cows. At that time the cows will be milked more than twice a day and thus the milk production will be increased.

Cattle breeding can also contribute to that higher production and the same applies to pig breeding and poultry farming. Now that the milk production is subject to restriction within the framework of the European Market regulations, farmers should remove the less productive animals and only maintain the more productive ones. Thus milk production becomes cheaper.

Despite this the total production is still too large and the problem becomes worse due to increased productivity resulting from the adoption of new technologies. Agricultural production must be restricted or certain areas should be taken out of production. To take areas with a large yield out of production is most effective, but means a loss of capital and would lead to higher production costs. If less productive areas are taken out of production then larger areas are at stake and that is socially hard to justify. In those areas there are very often few possibilities for regional economy. What sources of non-agricultural income can then be

developed? A problem is that there is no demand for agricultural areas taken out of production. Some of the land is claimed by urbanisation and the construction of roads. However, in order to restrict production, a far larger area should be withdrawn from agriculture. This is only possible by drastic measures taken by the government but it does not appear likely that an agreement will be reached shortly.

Because of the surplus of wheat its cultivation should be restricted. Wheat-growing farmers can then switch over to potatoes and beet. Apart from the problem that because of these products a considerable over-production arises, it should be noted that sugar-substitutes, made from maize, could enter the market. Consequently sugar producers will have a hard time in Europe as well as elsewhere in the world.

Most likely new crops will be developed for arable farming. These crops can be used for chemical industry. This, however, does not offer a solution in the very near future.

It is not clear under which circumstances forestry can become a profitable branch of industry. A considerable drop in land prices seems a necessity. Although because of the present unemployment the reduction of the number of employees in the agricultural sector is slowing down, the number of agricultural holdings will still decrease considerably. In what way the change in structure will take place is not clear as yet. Much depends on the way the European Market and national governments will be able to conduct developments.

It is extremely difficult to slow down production and maintain the income of the farmers on an acceptable level at the same time.

The computer regulates everything in greenhouses



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### Perspectives

Although future developments in the agricultural sector are highly unpredictable, the question remains what will happen to the environmental problems in the future. In the first place it should be noted that not only society is highly interested in problems concerning the environment, but there is also a public concern over nature and environment in all countries. Where considerable changes in structure take place it is the task of the government and the citizens to pay attention to every aspect of the environment.

In the second place it is important that farmers and horticulturists—even those working on the most effectively-run farms—will realise that it is in their interest to have a clean environment. Acid rain and over-manuring can harm the fertility of the soil, thus preventing a lasting and stable system in the agricultural field. Agriculture requires a certain level of environmental inputs which are not the same for nature conservation. But it can serve as a guideline for negotiation concerning priorities on a regional level.

In the third place it should be pointed out that the prices of wood are expected to rise because of the extensive cutting in the most important export countries in the world. This will enable areas where the price of land is low, to develop forestry instead of agriculture. In areas where neither agriculture nor forestry can be made profitable and where agriculture will not be maintained for social reasons, as is the case of mountain farmers, the land will lie fallow and consequently will over-grow through natural process.

In the fourth place it may be noted that outdoor recreation is to a great extent directed to the agricultural problem areas. In some situations it may be of importance to the regional economy in case agriculture will get into difficulties.

In the fifth and last place it can be pointed out that our understanding regarding the connection between non-biotic factors such as soil, climate and water, the biotic factors, namely vegetation and fauna, and the human factor has increased in such a way that we can create landscape and natural scenery. Therefore the countryside of the future need not be ugly or inhospitable. We can form it ourselves. Likewise it is possible by means of development and supervision to direct the biocenose.

The agricultural areas can be organised in such a way that the farmer can adjust his farm to new techniques or new market strategies.

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*No animal or plant species must be allowed to disappear because of man's activities*

(Charter on Invertebrates, Council of Europe)



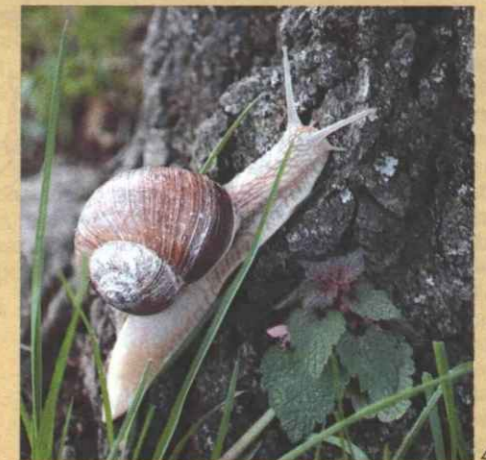
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Edgar Faure

# A harmonious landscape

In many parts of Europe it is glaringly obvious that the landscape is deteriorating. Not only is this deterioration an eyesore: it is a serious threat to the future of our society. It is endangering human health, undermining human resources and proving very expensive. Systematic recourse to artificial processes to replace a variety of commodities, such as drinking water and air, which nature arranged to provide us with free of charge is a waste of the community's resources. Cities suffocate when the countryside stops breathing and, sooner or later, there will be places where men, women and children can no longer live because the countryside is dying.

Although we cannot but acknowledge that our physical surroundings have deteriorated in recent years, there seems to be some confusion as to the actual nature of this deterioration, its causes and, therefore, the remedial measures needed. It would, for instance, be unfortunate if the determination to live in surroundings which form a balanced, well-proportioned, pleasant whole—that is, a harmonious landscape—were based on a static conception of the landscape.

Unlike those in snapshots, real landscapes are well and truly alive. Not only do they harbour a wealth of activity; they also form a complex system based on a multitude of interdependent relationships and natural cycles with very different rhythms, ranging from those connected with seasonal variations to those related to long-term climatic changes, changes in the watercourses and the resulting erosion and alluvial deposits.

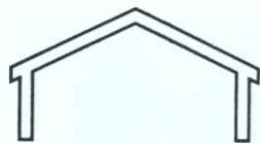
In addition to the alterations resulting from these major natural cycles, there are those wrought by human activity. Human beings have been at work virtually everywhere, and there is hardly a landscape in our part of the world that is untouched by human hand. The only distinction, therefore, is between landscapes which are, to a greater or lesser extent, natural and those which are artificial. The landscape is the result of the slow colonisation of nature through the ages by the human species. During this colonisation, its natural components (water, air, the soil, fauna and flora) have often been treated as ordinary, inexhaustible consumer goods. On the other hand, many of the landscapes by which we set great store today would never have existed without the patient perseverance of human beings.



Man



Nature



Home

Although the landscape has always borne the hallmark of human activity, the fact is that it changed quickly and radically with the advent of industrialisation. Technical progress, together with population growth, led to a sharp increase in traffic, industry, tourism and, as a result, building.

Tourism both threatens and safeguards our landscape. The attraction of the landscape has always been one of the foundations of tourism, but many areas popular with tourists, particularly on the coast and in the mountains, have now been destroyed by large-scale tourism. The advantage is that people are coming to realise that tourism is liable to destroy its own raison d'être. In the long term, therefore, it will be profitable, from the point of view of the tourist industry, to protect or restore the landscape. Lastly, there are still many parts of our countryside where the landscape is intact and there is therefore a fair chance that tourism will expand off the beaten track.

The combined natural assets of the landscape have been damaged by urban development, which is often poorly controlled, if at all. The industrialisation of agriculture, which has entailed the reparation of land, single-crop farming and intensive farming and forestry methods often ill-suited to the environment, is destroying delicate ecological balances. Industrial development policies which take no account of the landscape, and the technically and economically based management of firms too avid for short-term profits have frequently disfigured our landscape and polluted its components, often seriously and sometimes irreversibly. Yet we need to wake up to the fact that our towns will suffocate if we stop letting the countryside breathe.

Before the age of industrialisation, human activity tended to be shaped by the rural environment (its landscapes, heritage and traditions) rather than the other way round. In recent decades, however, the rural environment has deteriorated markedly, often with unfortunate effects on the landscape. As a result of the growing damage to the rural environment in the broad sense

## The importance of the landscape

The importance of the landscape is beginning to be appreciated. Many countries subsidise farmers who continue to use farming methods which are uneconomic in today's world but are the only means of safeguarding traditional landscapes which we have come to appreciate and whose specific features ensure the survival of many plant and animal species. This is particularly true of certain hill meadows and wetlands.

of the term, there is, however, a substantial lobby campaigning for the integrated development of rural areas with a view to ensuring continuity and preserving the assets of these areas for future generations.

## Let's make the most of our countryside

The European Campaign for the Countryside, which the Council of Europe is preparing for 1987 and 1988 under the slogan "Let's make the most of our countryside", is part of this widespread trend in public opinion, which is in favour of studies and action designed to enhance the countryside. The international committee responsible for organising and co-ordinating the campaign has already established the broad lines of its work.

The cultural and human facet of the campaign is overwhelmingly important. If we are to have a living countryside where people want to live—whether permanently or, in the case of town-dwellers, for fixed periods—we need to enhance the cultural and natural heritage of the countryside and the lifestyles and working conditions of its inhabitants. The importance of these assets must be recognised not only by politicians and town-dwellers but also, and in particular, by rural communities themselves. Living in the country is part of living in Europe, and it is necessary to create conditions such that those who live and work there can be proud of being country-dwellers.

We must also be realistic, however. The reason the population has continued to increase in cities and large towns, at the expense of rural areas, is that people have failed to find the living and working conditions they are looking for in villages and towns in rural areas. In order to give new life to our countryside, we need to improve not only the cultural amenities but also the economic and social attractions of rural villages and towns. This means stepping up efforts to create skilled jobs in rural areas and giving more serious thought to ways of reducing the discrepancies between cities and rural areas in terms of access to public and private services. The role of the new technologies should, to this end, be exploited fully and with imagination.

Lastly, the countryside is a patchwork of highly varied landscapes which need to be protected. Protection is particularly necessary in the case of landscapes and sites notable for their beauty or cultural or environmental importance. This aspect of the Campaign to preserve the landscape and the rural environment in general is not, it should be stressed, a reason for prohibiting all development projects in rural areas. It is, however, worthwhile systematically studying the environmental implications of medium and large-scale projects. Systematic evaluation of the landscape during or prior to studies of this kind is desirable. Some member states have begun to devise evaluation methods. Our Campaign will help to preserve the variety of our continent's landscape by encouraging

ing Europeans in positions of responsibility to exchange views on the evaluation of the landscape and, if possible, establish standard criteria for this purpose.

In regional planning account must also be taken of the possibility of correcting past errors, even though it is much cheaper to prevent the errors in the first place. For instance, we know that 3,000 shrubs with a foliage crown of 1 m<sup>3</sup> are needed to replace a single mature tree with a crown of 3,000 m<sup>3</sup>.

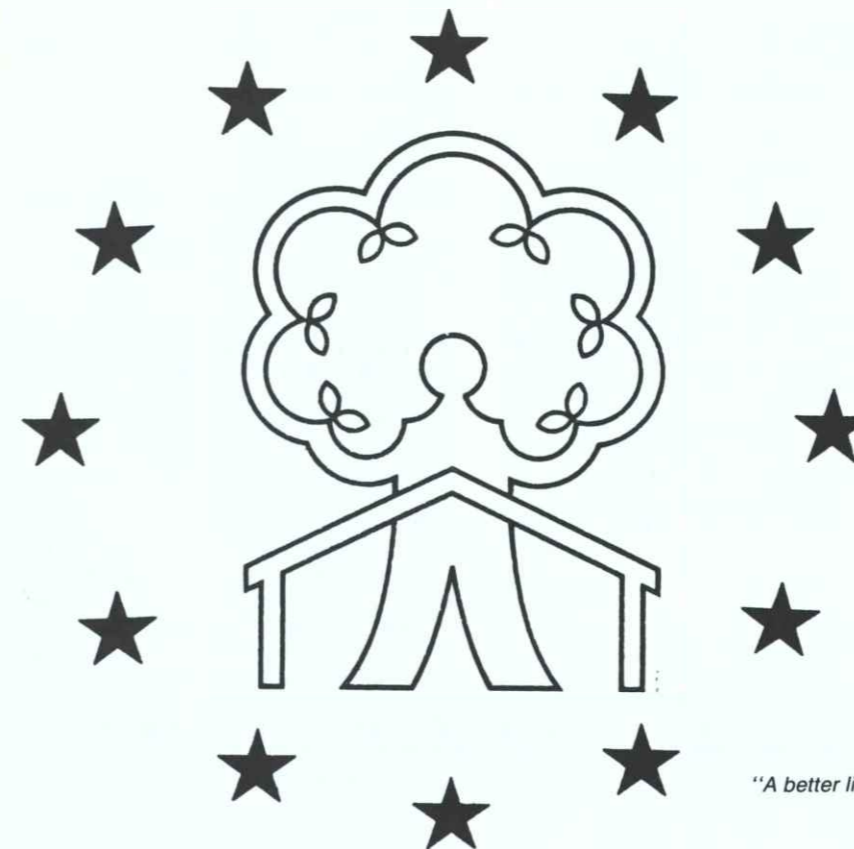
## Something must be done before it is too late

Something needs to be done before it is too late. Attractive landscapes are increasingly rare, and the variety of landscapes is decreasing. During the European Campaign for the Countryside, two ministerial conferences will make a contribution to this debate: the 5th European Ministerial Conference on the Environment, on the theme "Protection and management of the natural heritage in rural areas", and the 8th European Conference of Ministers responsible for Regional Planning, on the theme "Rational use of land—basis and limiting factor of our development".

The European Campaign for the Countryside should make for the introduction of appropriate national and international legislation and lead to the preparation of a manifest on the countryside. It could help to promote new inter-disciplinary Council of Europe activities benefiting the countryside, which would be carried out by the various sections of the organisations.

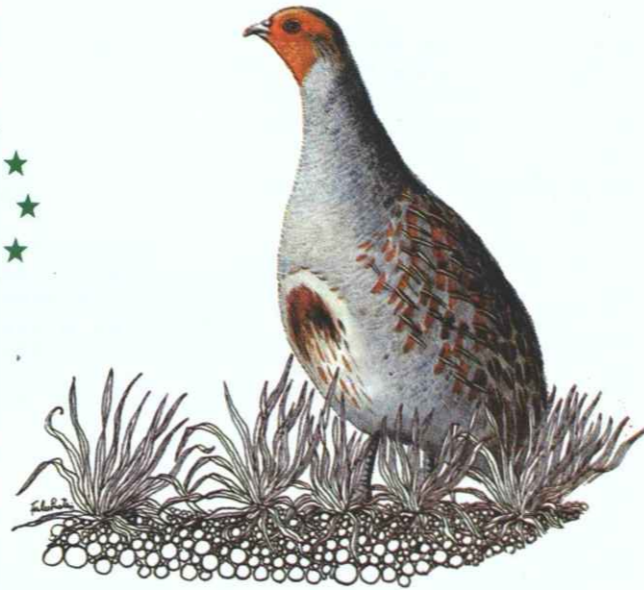
The main yardstick for the success of the Campaign, however, will be its capacity to increase awareness among politicians and public of a number of guidelines needed to ensure that, when the countryside is developed, its inherent assets are preserved. Europe needs its countryside, and every effort must be made to ensure its harmonious development. ■

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"A better life in the countryside"

# Farming and wildlife



N.W. Sotherton

## Three basic methods to lessen the impact of pesticides

Over the last few years, there has been increased controversy concerning the problems associated with the intensification of farming practices and the needs of farmland wildlife in the European Community. It was therefore encouraging to discover that the Documentation and Information Centre for the Environment and Nature's sixth campaign was on the topic of "Farming & Wildlife". This is because the interactions between agriculture and wildlife have long been among the major research interests of The Game Conservancy, the United Kingdom's independent and voluntary funded game research station at Fordingbridge. In 1983, as a result of the long sustained pressure to resolve the apparent problems of intensive farming and disappearing stocks of wild partridges, the Cereals and Gamebirds Research Project was set up to find new methods of farming profitably but in ways that were also sympathetic to the needs of farmland game and wildlife. Some of the methods proposed by the project to alleviate the impact of modern farming embraced accepted principles of integrated insect pest management, but their adaptation for the benefit of farmland wildlife was unprecedented.

We believe there are three basic methods which can be employed to lessen the impact of pesticides on the environment. Firstly, farmers and growers should be encouraged to use pesticides only when they are necessary, a practice which is self-evident, but very difficult to achieve. A great deal of work still needs to be done by Government Research Stations and Extension Services to provide information that will convince farmers that the levels of insect pests, weeds and diseases observed in their crops are not actually causing sufficient damage to justify, on economic grounds alone, control with chemicals. This first method, involving the development of an understanding of pest thresholds and yield responses is not the remit of our ecologically based research project, but an understanding of the need to avoid unnecessary or prophylactic spraying is important if our aims are to be achieved.

The research remit of the Cereals and Gamebirds Research Project is therefore to develop the remaining two methods by which we hope to alleviate the effects of pesticides on farmland wildlife. Once farmers have made the decision to use a pesticide, which one should be chosen?

Until recently, the only criteria affecting the choice have been the cost and efficacy of the chemical. Very little information has been available regarding the spectrum of activity of the chemical in terms of what other species besides the target pest organisms are killed. The Project has begun a programme of screening pesticides in the laboratory and in large-scale field trials to discover their action on non-target organisms. Our work with insecticides provides an obvious example. An abundance of insects in cereal fields in June is the most important factor ensuring the survival of wild partridge and pheasant chicks. Using insecticides to control cereal aphids that kill not only the aphids but also many of the insects that are preferred food items of the chicks seriously reduces levels of chick survival. At the other end of the spectrum, using an aphicide that will give the required aphid control but kill fewer chick food insects will be environmentally more acceptable. What we must ask is, at which end of the spectrum do the insecticides used by farmers belong?

In the early years of the project, our work concentrated on screening the foliar fungicides used in cereal fields for insecticidal activities. The use of fungicides has increased substantially over the last ten years with the result that wheat fields now receive many applications of fungicides in a season. There was growing evidence that these compounds could have insecticidal properties and indeed we have discovered one such compound (pyrazophos), which is being sold as a control agent for diseases in wheat and barley, but which also killed significant numbers of both chick food insects and natural predatory insects.

Lastly, we have begun small field plot screening to investigate the range of plants removed by various herbicides. Many chick

food insects feed on broadleaved weeds found in cereal fields. These insects are also removed by herbicide use, not following direct poisoning but by the removal of their host plants.

Pesticide use has been a contributory factor in the decline of wild gamebirds by causing, either directly or indirectly, the removal of the vital insect food of the chicks. Our third approach alleviating the adverse impact of pesticides has been to experiment with small areas of cereal crops selectively left unsprayed. This has involved the exclusion of certain pesticides that we have shown to be either very damaging to non-target species or actually to have insecticidal properties that were not otherwise obvious to the farmer. The idea of "unsprayed" areas may not always be acceptable to farmers when today's cereal varieties require pesticides to achieve their yield potentials. Therefore our concept of selectively unsprayed areas needed them to be as small as possible in order to cause minimum economic loss to the farmer. This concept, known as "conservation" or "unsprayed" headlands has involved manipulating herbicide use on the outermost 6 metres around the crop edge in such a way as to remove the most damaging weeds while retaining the broadleaved species that are the host plants of many of the non-target species of phytophagous insects. Also insecticidal compounds are not used in these areas.

In 1983, experiments were carried out on

520 ha of cereals on a 1200 ha farm in southern England. On three blocks of cereal fields each field was fully sprayed following normal farming practice whilst the outermost 6 metres of the cereal fields on another three blocks of fields had no pesticides applied from January until harvest. In 1984, the treatments on the blocks were reversed so that headlands fully sprayed in 1983 were "unsprayed" in 1984. The absence of herbicides predictably encouraged the weed flora in these crop margins but also significantly increased the numbers of preferred chick food insects. As a result, gamebird production has shown significant short-term increases not only in the autumn stock but also an increase in the spring pairs per km<sup>2</sup> from about four pairs in the early 1980s to around eleven in 1986.

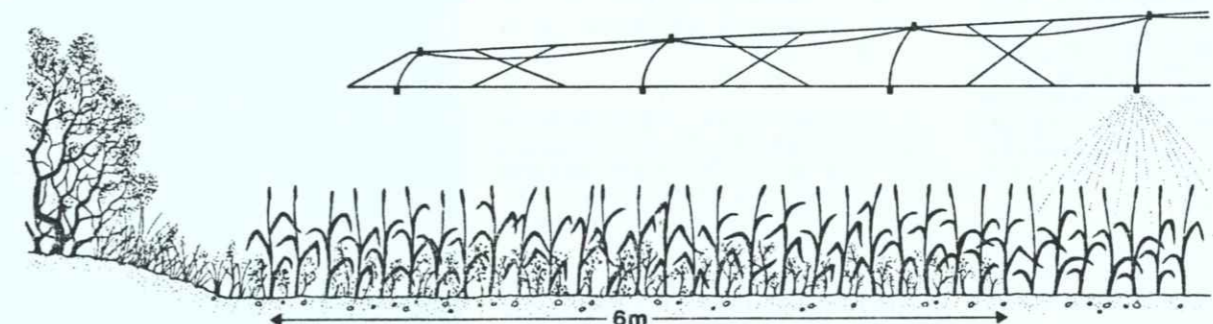
Our work has now expanded to quantify the benefits of pesticide manipulation not only for gamebirds but also other forms of farmland wildlife. Currently, projects are underway to study the interactions of butterflies, small mammals and wild flowers with the resources found within unsprayed headlands relative to other areas of farmland. For example, butterfly census transects carried out on equivalent areas of fully sprayed and selectively sprayed cereal field headlands has over the past two years produced observed threefold increases in the numbers of many species of farmland butterfly in these "conservation headlands".

## Towards a judicious use of pesticides

The Cereals and Gamebirds Research Project is funded by U.K. cereal farmers and is scheduled to run for another two years. Our hope is that in this time a complete management package on the judicious use of pesticides will have been fully researched and developed. This will at least provide farmers with options. At present, many questions concerning the applicability or farmer acceptability of these techniques remain unanswered. However, we firmly believe that our approach of providing sound research data is the best way to advance the cause of conservation on farmland, and that this is best achieved by promoting low cost or indeed no-cost management techniques. Only when farming is profitable will there be excess cash to spend on conservation. This approach together with the increasing success and organisational expertise of the campaigns of the Centre leads us to believe that farming and wildlife have a chance to co-exist successfully and that in fact, if this approach is not used, the impact of modern farming may damage the European countryside still further. ■

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The absence of pesticide spraying on a border of 6 metres around fields encourages the development of wildlife



# Land consolidation

J. Priemé

In Denmark we use the term land redistribution to designate a series of simultaneous exchanges of land, resulting from a preceding redistribution planning within a defined geographical area.

The first Danish schemes of land redistribution were carried through at the end of the 18th century in connection with the major agrarian reforms at that time. Already then it was endeavoured—in connection with the removing of farm buildings from the villages into the open country—to gather the lands into a maximum of three plots for each agricultural holding and to place the farm buildings as near the plots as possible.

Schemes of land redistribution have also since then been carried through to further an appropriate structural development of agriculture.

In recent years other considerations have been taken into account.

A land redistribution project can be undertaken both at the request of the owners of the holdings in the area in question, and in order to alleviate any negative effects of various public works, as for instance roads.

## The Farm Land Redistribution Act of 1955 and the system of redistribution under this Act.

Today most land redistribution projects are carried through on the basis of the said Act.

Under the Act the Directorate of Agriculture is in charge of the elaboration of the land redistribution plans. In practice the planning is often assigned to a local, practising chartered surveyor.

Before the planning is initiated the local Agricultural Commission in question arranges a public meeting of the owners of land in the area. At this meeting the owners are given information on the project in question and a committee (3-5 persons) of plot owners is elected by the owners present to represent the owners during the subsequent planning. This committee shall also assist the surveyor in the negotiations with the owners and in the elaboration of the land redistribution plan.

The Act warrants—to a limited extent—the compulsory participation of an owner in the land redistribution project. In practice this

possibility is normally not used. For this reason it is not always possible to carry through a land redistribution plan comprising all the land in the area. The principle of voluntarism is, however, an essential element in the Danish land redistribution system. In our opinion more and better results are obtained on this basis than on the basis of a system of compulsory participation.

When the land redistribution plan is completed, it is put before the local Agricultural Commission—with a judge as chairman—for approval. This commission has within its field a competence corresponding to that of a court of law, and its decision (preliminary at this stage) cannot be appealed to other administrative authorities. There are 12 Agricultural Commissions. When the parcelling out and amalgamation of plots comprised by the plan has been carried through and all legal and economic issues have been solved, the plan is submitted to the same commission for approval by a final decision.

Participation in a land redistribution project is free of charge for the owners, as the Government covers all expenses and there are exemptions from a number of state dues otherwise accruing in connection with the sale and purchase of real property.

In the period 1955-85, 800 land redistribution projects have been carried through, comprising the redistribution of 91,500 hectares and the participation of 25,000 farmers.

## Relations to other legislation

The land redistribution projects are carried through within the frames fixed in a number of other Acts concerning the use and ownership of land in the rural areas.

By far the greater part of the land in the rural area is covered by the provisions in the Agricultural Holdings Act. This Act is one of the primary means of control in Danish agricultural policies, and contains a large number of rules on the access to the purchase of agricultural holdings an agricultural land, and on the use of agricultural real property.

The use of land in the rural areas is also regulated by the Urban and Rural Zone Act. The Conservation of Nature Act, the Forest Act and the Environmental Protection Act have, too, provisions regulating the use of land in the rural areas.

It should be mentioned, too, that a general physical planning system has been built up

(H. Lørd)

during the last 15 years, designating in advance specific areas for different future uses.

The land redistribution planning must comply with the provisions in all these Acts, before a land redistribution project can be approved by the Agricultural Commission. The Farm Land Redistribution Act is only one of several means to further the considerations mentioned in the rules on the general regulation of the use of land in the rural areas.

## Consideration for nature and environment, marginal lands

For a long time Denmark has made an effort to bring about the largest possible agricultural production for export. This has also influenced the land redistribution work.

In recent years, however, social changes in the Danish community have—together with the increasing surplus production of agricultural produce and reduced marketing possibilities—affected the agricultural production in the opposite direction. And the increasing public awareness of environment matters has at the same time caused the present production methods in agriculture to be called into question.

This is perceptible also in the land redistribution work. It is now, for instance, a firm practice to invite advisers from the Wildlife Administration and advisers on shelter planting to the above-mentioned informative meeting with the plot owners. At this meeting the said advisers give, i.a., information about the possibilities of financial support for the preservation and establishment of small biotopes for the sake of wildlife and about the possibilities of financial support for shelter planting.

The change in production methods and conditions of agriculture have had the effect that some lands are now cultivated less intensively than earlier. It is to be expected that this development will continue, so that some land will in future either not be cultivated at all or at any rate only in a very extensive way.

In some cases public authorities are interested in buying or reserving these marginal lands for various purposes of common community interest:

- the establishment or extension of nature areas and recreational areas;
- the re-establishment of wet areas;

- the establishment of fallow areas;
- the establishment of areas for afforestation; and
- the establishment of protective borders for lakes and watercourses.

Land redistribution projects are a very appropriate means of buying up or gathering such marginal lands, which often belong under many different holdings. The advantages for the buyer are especially the facts that the lands in question can be bought by voluntary agreement at the lower, agricultural value and without any accruing costs. This entails both a reduction of expenses and an elimination of any dissatisfaction of the participating farmers, who will thus be more contented, future neighbours to the lands in question. For the selling farmers the advantage will mainly be the fact that compensatory land can be provided through the land redistribution project, and that the land thus received is better suited for agricultural production and is better situated in relation to the buildings of the agricultural holdings.

The said co-operation with the environment authorities has not yet been formalised, but it can be mentioned that co-operation is already taking place in connection with some recent land redistribution projects. In the projects have been gathered lands under both private and public ownership, which are now offered for sale to the environment authorities as part of the redistribution projects. The lands in question are intended to be used partly for the establishment of a bird sanctuary in connection with an existing Ramsar-area, partly for the establishment of protection borders in order to reduce ochre pollution from a river in the area.

For the time being a major elucidation work concerning the general question of the future use of such marginal lands is in progress. If this work results in a recommendation that public authorities shall to a wider extent regulate the use of these lands or buy the lands, or if it recommends the access for private associations with nature preserving objects to become owners of such lands, the Directorate of Agriculture expects a rather substantial increase in land redistribution activities in Denmark. Such an increase would be of benefit to both agricultural production, nature and environment in Denmark. ■

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# Computers helping farmers

The handling of complex information has been aided, and in many cases is only possible, by use of computer-based data systems. At an EEC-wide level the CORINE project is designed to record sites of major environmental designation and concern throughout the Community. Not all flora and fauna interest is confined to formal sites however, and the UK Biological Records Centre exists to collect, collate and analyse information on the existence and spread of wildlife. Atlases also exist showing the distribution of a great range of wildlife from birds to slime-moulds (myxomycetes).

## Measuring and recording change

One of the first needs is to monitor accurately the type and direction of environmental change. Aerial photography has been used extensively to collect and compare such change, and the employment of such "remote sensing" was encouraged by the House of Lords in Britain. A 10-volume report on Monitoring Landscape Change was delivered recently to the Department of Environment and Countryside Commission. This major contribution followed a survey design originally developed by the Forestry Commission to carry out a census of trees lying outside woodlands. In all some 707 sites in England and Wales were studied, including at least 10 sites in each county, but environmentally stratified by using soil types.

Although it did not prove possible to utilise data from the satellite Landsat for the whole study, its Thematic Mapper images of Britain were used to calculate the overall extent of major landscape features, for example, the dramatic changes in sizes of fields and reduction in semi-natural habitats. Although rural change is a matter of popular observation and comment, it is important to have careful quantified work giving precise measures in order to guide policy.

Most of Britain, perhaps even more than the rest of Europe, comprises man-made habitat. Many of the types most threatened by agricultural intensification or unsympathetic "blanket" afforestation actually depend on specific traditional husbandry practices; sheep grazed downland, hay meadows and moorland are examples. Thus information on the rural population and human land use is vital in its own right, and as an influence on nature. The recent establishment of a Rural Data Archive, based at Essex University and supported by the Economic and Social Research Council is a major step. With its proposed regional sub-centres this aids planners and others to avoid wasteful duplication of effort and brings together many aspects of countryside information in an available, computer readable format. So often useful and expensive information is lost if it is not deposited because no such archive exists.

Collecting information which describes accurately, and with quantification, the state of rural Europe is important. Providing that data in a way which helps appraise the possible future trends is, arguably, an even more urgent necessity. One of the most notable bases for modelling is the land classification system developed by the Institute of Terrestrial Ecology. In recent years ITE have constructed a sampling system dividing Britain into 32 land classes based on underlying environmental characteristics.

In 1978 and then again in 1984, ITE undertook a ground survey on the same 1 km square areas of land. There is a point at which no amount of remote sensing can replace the skilled field surveyor: ITE's surveyors recorded a mass of land use and ecological detail. These details could then be compared with the position six years before. Because the areas used were a carefully stratified sample of the land surface the aggregated results provided a picture of change over these years; for example, the detailed investigation of loss of rough grazing habitat in six years revealed that some 3% of the national total was "improved", mainly for agricultural use.

Knowing not just the nature of change, but where it was occurring gives the ITE data an added advantage; it can form a base for predictive modelling. The groundwork was laid when a number of institutes came together to appraise the land available for wood energy production, whether by coppicing or by more conventional forestry. In general, the introduction of such woodland into the largely agricultural landscape would be of environmental advantage. Inevitably there would be places nonetheless where a change from traditional land practices would be disadvantageous, and the modelling process allowed for such areas to be excluded from the allocation and the calculation amended appropriately. Defined sites of special scientific interest, nature reserves, important areas of national park and so forth were noted and left out.

## Modelling the future

Added advantage is to be found if such information systems can be merged with separate models carrying related information. A major step involved ITE's model being utilised recently in conjunction with a carefully calibrated model of the behaviour of the Common Agricultural Policy. Agricultural economists at Newcastle University have set up a series of equations which replaced the trading and consumption patterns of the CAP. But what might happen to the countryside if Ministers of the 12 CAP nations began seriously to come to grips with the problem of food surpluses; might it be advantageous or not for conservation interests?

The Newcastle approach worked only at a national level, but combining it with ITE's cadastral base could give a picture of potential change across the country as a whole. If the national exercise predicted 30% less wheat would be grown, should cereal quotas be imposed, where would this be, and what conservation implications might it have? By utilising modern computer systems it was possible to merge the two sets of information and relate CAP change to farmland use.

Under the umbrella of the Centre of Agricultural Strategy at Reading University a model was thus set up which identified the amount and location of land under threat from lowered farm prices or quotas on produce. This could be land made available for new farm woodland, or perhaps for conservation—sensitive farming under the EEC's new rules allowing farmers to be paid to maintain traditional low-intensity practices. In all some 1.3 to 1.9 million ha. of land were isolated in England and Wales as likely to provide a low margin of return to their farmers. Some 30 to 50,000 rural jobs could be lost. An assessment of the environmental consequences concluded that such an agricultural depression might be marginally better overall for conservation than a continuing policy of intensification. The balance was close, however, and the results pointed to a need to manage the rural estate to achieve more positive benefits at a local scale.

## Future management of the rural estate

At this level too, up-to-date means of handling rural information have an important role to play. At one end of Britain the Highland Regional Council is the largest local authority in Western Europe covering 9,805 sq miles. Much of it is of supreme beauty and conservation importance. The Council's planning department have introduced a computer-based information system using a more detailed specification of ITE's grid sampling framework. Through this capability they have been able to sample their large and sparsely populated area quickly and efficiently. A survey of amenity woodland helped in the identification of policies to conserve semi-natural broadleaf woods and individual trees which were found to have a poor age and size structure, using habitat codings. By basing it on the same digitised map base the Council can readily overlay different information to identify areas of potential conflict: for example between defined Sites of Special Scientific Interest and accessible deposits of peat which may be vital to the local economy.

At the other end of Britain the Dartington Institute have been working to identify the options facing the often small, pressured farms on difficult soils of the Culm Measures. The existence of many small,



(Min. van Landbouw en Visserij - Directorate VEB)

Alan Hearne and Malcolm Bell

The crisis of Common Agricultural Policy is suggesting a greatly changed rural future for the European Community. Continuing over-production of major crops and a surge of technological improvements in the pipeline raise a host of problems—but also significant opportunities—for conservation in the countryside. How this potentially dramatic future helps or harms conservation may depend on the ability to think ahead and plan ahead. A developing use of modern information systems, allied to sound research, can contribute to this at a national and international level.

broadleaf conservation-rich woodlands is a feature of the area. Again using a rigorous map base and computer techniques for handling the data developed by ITE they modelled the options for those farms to calculate the possible economic benefit from either planting new woods on marginal land, or utilising the existing timber more effectively. Too often important features are lost through ignorance and the systems described seek to avoid that.

In recognition of the need for better integration of social and ecological factors in the future Britain's Natural Environment and Economic and Social Research Councils established a first joint fellowship to assist in combining socio-economic and environmental information. Thus there is now the national capability to undertake

predictive modelling of the future taking account of important policy designations such as national parks, agriculturally less favoured areas and most recently the defined environmentally sensitive areas.

Arguably the most exciting national development at present is a major contract from the Department of Environment to enable ITE to develop what are known as "expert systems" in the field of land use change. An expert system allows a computer to be interrogated by those facing land use dilemmas, to draw upon the best existing knowledge of the effects of the development in mind. Following logical pathways in a question and answer format the computer can guide those making decisions to do so in ways which minimise the effects on the environment, or even help nature conservation interest.

### Systems for farmers

There is a general perception that farmers ought to use micro-computers and information systems to improve their management. In consequence there is now a plethora of such systems for farmers. Most of these, however, are of little use other than in strict budgeting and accounting procedures and assist largely in the management of money rather than farms. An exception to this is the Farmplanner Acornsoft system developed by Rural Planning Services. This system is based upon the premise that farmers increasingly need to examine a sophisticated range of business options and so can display instantly the effect, for example, of set aside policies and changes in price structure. It is a simple matter to use this system to examine the direct and indirect costs of using land for environmental purposes and growing the alternative crops which are being much promoted at the moment.

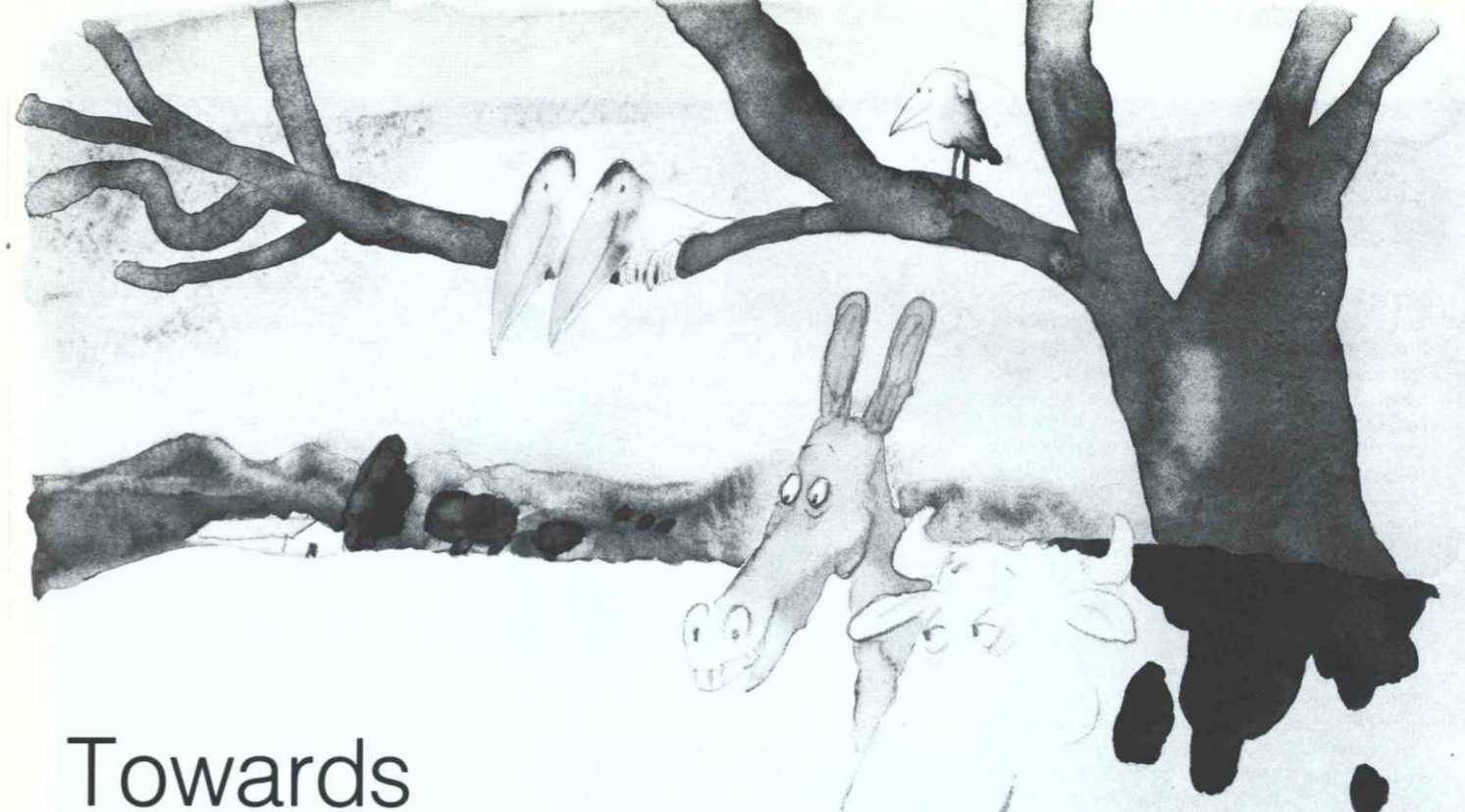
Our final thought on this neo-natal subject is that much of the work is carried on in isolation without a general thrust or overall plan even within individual states, let alone on a supra-national basis. There is an urgent need for better information about rural information systems and development of a coherent research strategy. ■

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## Towards a viable countryside

Willy Straub

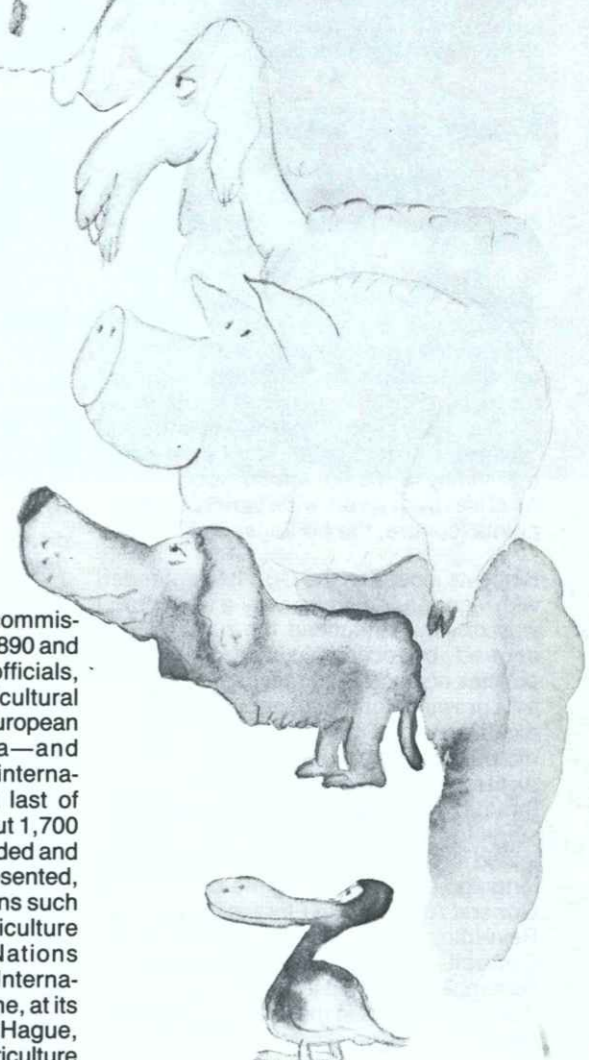
The European Confederation of Agriculture (CEA) replaced the International Confederation of Agriculture (CIA) in 1948 through an amendment to the latter's rules.

### Objectives

The origins of the CIA date back to the first International Congress of Agriculture, which took place from 5 to 11 July 1889 in Paris, at the Palais Bourbon, under the chairmanship of Mr Jules Méline, then speaker of the French parliament. About 1,450 people attended. The purpose assigned by Mr Méline to the congress was "to seek out the causes and effects of the major economic revolution" happening at that time (in 1889!) and to "save from ruin the immense masses who lived from working the soil".

The congress decided to create a commission; this materialised on 1-2 July 1890 and comprised some 40 high-ranking officials, agronomists and managers of agricultural companies or institutions from 17 European countries—including Russia—and Canada. The commission held 18 international congresses. The 18th and last of these met in Dresden in 1939: about 1,700 participants from 56 countries attended and numerous governments were represented, as well as international organisations such as the International Institute of Agriculture in Rome, the League of Nations (predecessor of the UN) and the International Labour Office. In the meantime, at its 17th International Congress in The Hague, the International Commission of Agriculture had adopted the more appropriate name of International Confederation of Agriculture (CIA).

With the beginning of World War II in 1939, this widespread unifying movement of agricultural forces vanished. When the storm was over, Europe was devastated and its political map in disarray. The change from CIA to CEA happened after the second



world war (in 1948) at a time when governments, but also the farming community in some countries, were urging that the agricultural problems be tackled at world level. The CEA very sensibly limited itself to Europe, a part of the world which in 1948 did not seem to have a very promising future. The development of Europe since that time has proved the CEA's founders right. European farming has now become a major factor in agriculture worldwide, both in the production and processing of plant and animal products and in international trade.

The initial task of "saving from ruin the immense masses who lived from working the soil" certainly underlay two of the CEA's main objectives, namely "to maintain in Europe an active and prosperous rural population" and "to improve living conditions throughout the whole countryside and to enhance mutual understanding among all sectors of the population".

#### A viable rural environment

Not surprising then that the organisation in 1987-88 by the Council of Europe of a European Campaign for the Countryside under the heading "Let's make the most of our countryside", and a special campaign entitled "Farming and Wildlife" which stresses the farmer's almost vital responsibility, attracted keen interest on the part of the European Confederation of Agriculture, which represents about 12 million family-type farms in 20 countries of Western Europe. There can be no doubt that family farms are the backbone of the rural life, from a very wide variety of standpoints (culture, the heritage, etc).

Since its inception the CEA has defended with vigour and perspicacity a viable rural way of life, denounced the rural exodus spurred by economic and agricultural policies nowadays increasingly contested by a growing number of people worried by the deteriorating quality of life, and also promoted the development of disadvantaged rural regions and drawn public attention to threats to the environment. At a very early stage the Council of Europe and the CEA joined forces in favour of the rural world: as long ago as 1970, during the CEA's 22nd General Assembly in Florence, Mr Olivier Reverdin, at that time President of the Council of Europe's Consultative Assembly, explained the initiatives taken by that organisation in the field of nature conservation and social protection of farmers.

The CEA has spoken out indefatigably to warn politicians against developments harmful to the future of the rural world; one example is the following extract from the "Salzburg Manifesto" of 20 September 1968 which called for "vigorous action to adapt rural regions to the challenge of modern life and to support the efforts made by farmers and their families to improve

structures and farm management"; or, again, for "real possibilities, mainly through incentives to intellectual investment in the interest of general technical and higher education for rural youth enabling them to choose a career, be it in agriculture or outside, with the best prospects of success whatever that choice"—a demand for nothing less than equal opportunities and prospects for the rural population.

Political leaders more or less ignored the message—as they did the appeal, also part of the "Salzburg Manifesto", for "land management which, by selective measures, ensures harmonious development of the different regions. Agriculture and forestry must continue to play their indispensable role in preserving and promoting all kinds of economic activities and safeguarding the biological balance necessary to the whole population". And when the CEA called for "special measures to be taken for mountainous and other disadvantaged regions, bearing in mind their limited ability to contribute financially, in view of the particular difficulties they have to face", society's reaction was equally apathetic.

The foregoing serves to demonstrate the CEA's constant concern, ever since its beginnings nearly 100 years ago, to promote agriculture with a human face, on a human scale, in keeping with a healthy and viable environment, offering a good quality of life to the rural population. But the power of the ballot-box has meant that decision-making on agricultural policy has moved more and more away from the countryside. And agricultural producers have been forced, in increasing measure, into the thankless role of executives of agricultural policies. The result is the present dead-end of agricultural production, world-wide, and the insecurity and profound anxiety of the rural population as they look to the future.

#### The Council of Europe campaign

The CEA, identifying itself wholeheartedly with the objectives of the Council of Europe's Campaign for the Countryside welcomes this felicitous and vital initiative

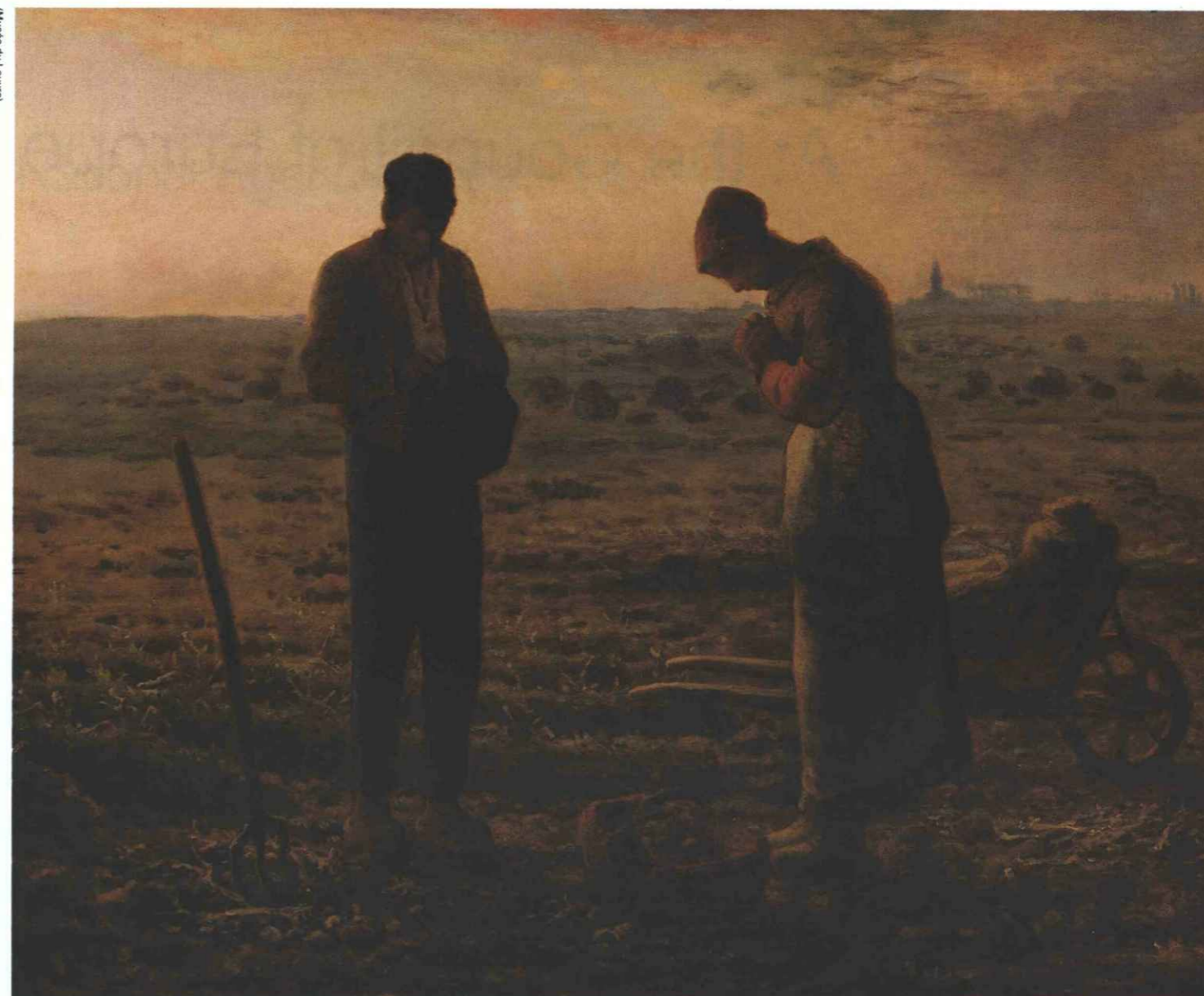
on the part of the unique moral authority that the Council of Europe represents. The aims are:

- to draw attention to disadvantaged regions threatened with depopulation (if not already empty of people), economic decline and a sharply diminishing quality of life;
- to protect rapidly developing regions exposed to uncontrolled agricultural or industrial development and alterations to the landscape, the cultural heritage and lifestyles. They must be protected from overflowing, unviable conurbations and sources of pernicious social developments;
- to favour and promote the development of environmentally sensitive regions affected by pollution, tourism or natural phenomena. Recent nuclear and chemical disasters have had the effect of a stern warning in this regard.

Bearing the work of the Council of Europe in mind, the CEA has chosen "Agriculture and environment" as the general theme for its annual meeting in 1987, which will take place in Rome. This will also be the leitmotif for the work to be done in 1987-88 by the CEA member organisations.

The European agricultural organisations, whether professional or economic in nature, will support the European Campaign for the Countryside in the framework of the various national committees. Furthermore, the CEA "Public Relations" working party will make a special effort to promote the campaign's goals and generate public awareness in both town and country. Other CEA working parties such as "Rural Youth" and "Rural Women" will also do their utmost to ensure that the campaign is successful.

(Musée du Louvre)



J.-F. Millet - «L'Angelus»

#### Action in the countryside

The efforts of the CEA will be guided by, among other things, the resolution "Village renewal as a task and opportunity for the rural population", unanimously passed by the 36th CEA General Assembly in 1984 in Avignon. That text in particular criticises the disadvantages suffered by villages as compared to towns and cities, and recommends the following corrective measures:

- village renewal as a cultural, social and economic stabiliser in rural areas;
- village renewal as the key to a new sense of belonging and to a feeling of togetherness uniting the inhabitants of a village;
- village renewal as strengthening the backbone of agriculture and forestry

and securing new outlets for long-established trades and crafts.

A vigorous rural life is vital to the countryside, which needs the total support of the politicians in both urban and rural regions as well as of the authorities. They must ensure that an infrastructure conducive to the development of rural areas is maintained. But, what is really indispensable for the success of any measure is the involvement of the population directly concerned.

Accordingly, the CEA asks its member organisations to back up the European Campaign for the Countryside and to seek the closest relations with all the institutions representing other components of the rural community, in order to stimulate governmental moves in the direction desired by the above-mentioned resolution.

Because it appreciates the need for a "united voice for rural Europe", the CEA commends the Council of Europe's initiative. ■

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# At the Council of Europe

## To our readers

From now on *Naturopa* will give brief news of Council of Europe environmental protection and nature conservation work.

So far the Council has mainly concentrated on nature conservation, to no small effect.

Following the adoption of the Third Medium-Term Plan, covering the 1987-91 period, the Committee of Ministers has decided to broaden the Council's action to include protection and management of the environment. A new steering committee has been created and a new activity programme will be drawn up.

We think you will find it useful being kept up-to-date on the Council's activities so that you can contact the relevant Council of Europe department if interested in more detailed information.

Dr. Ferdinando Albanese  
Director  
Environment and Local Authorities

## I. Parliamentary Assembly

### a. Pollution of the Rhine

The Parliamentary Assembly is well acquainted with the problems of this river, which is Europe's busiest waterway, but also serves as a gigantic sewer. As early as 1971, a Recommendation on the pollution of the Rhine valley water-table [Rec. 629 (1971)], then, in 1979, the Recommendation on water pollution in the Rhine river basin [Rec. 882 (1979)] brought these facts to the attention of the Committee of Ministers. Disturbed by the accident in November 1986 at the Sandoz pharmaceutical plant in Basle and alarmed by the many recent dumpings and accidental spillages of chemicals into the Rhine, the Assembly adopted at its January session Recommendation 1052 (1987) on pollution of the Rhine which, among other things, asks the Committee of Ministers to consider the drafting of a European convention laying down strict rules to establish the right to a healthy environment and stressing the "polluter pays" principle.

### b. Agriculture

At its January session the Assembly also adopted two recommendations relating to agriculture:

- Recommendation 1048 (1987) on the consequences for agriculture of current soil degradation, which recommends the drawing up—preferably as part of the European Campaign for the Countryside—of a convention for the protection of the soil, building on previous work in this field, such as the 1972 European Soil Charter and the Assembly's Recommendation 1049 (1987) on European Agriculture 2000, which asks for the balance between supply and demand in surplus commodities to be restored as a matter of urgency on the basis of international co-ordination. It also calls for the preservation of family farming as the dominant feature in European agriculture because it is vital for the maintenance of thriving rural communities and protection of the environment.

## II. Standing Conference of Local and Regional Authorities of Europe Environment—Development

At the 21st session of the Standing Conference of Local and Regional Authorities of Europe (CPLAE), held in October 1986, three resolutions relating to the environment were adopted:

- Resolution 170 on "Transport planning: how to strike a balance between economics and ecology", which stresses that greater international co-operation is urgently needed if transport systems are to become compatible with the environment (eg in the form of a European outline convention);
- Resolution 171 on "Regions, environment and participation", which calls for a charter embodying the right to the environment, the environment being society's collective property which we must preserve, particularly through information and citizen participation in decision-making processes;
- Resolution 172 on "Tourism and environment", which stresses that tourism is a means of enhancing the quality of the environment, particularly in rural areas, and proposes the establishment of a code of conduct for tourists.

## III. Intergovernmental activities CE-CEA Seminar

In October 1986, European experts from 16 countries took part in a seminar on environmental training in agricultural circles organised jointly by the Council of Europe and the European Confederation of Agriculture. After discussions on the reallocation of land and the pollution of groundwater by nitrates and heavy metals, the participants agreed unanimously on a number of questions raised by current agricultural policies, which seem unfavourable to the preservation of natural resources (both plants and animals). They recommended a fundamental re-orientation of these policies as a matter of urgency. ■

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*Badger*



(Foto W. Lapinski)

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