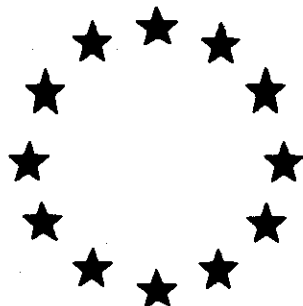


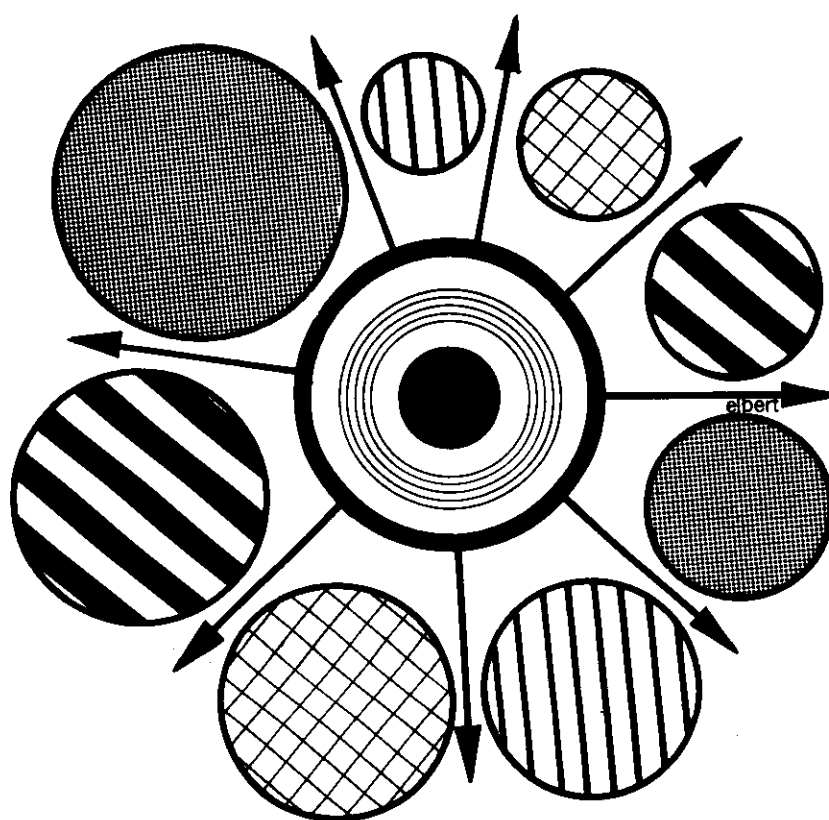
COUNCIL
OF EUROPE



CONSEIL
DE L'EUROPE

EUROPEAN REGIONAL PLANNING
STUDY SERIES

35



**MOUNTAIN REGIONS
OF THE EUROPEAN MEDITERRANEAN COUNTRIES**
Planning problems and policies

STRASBOURG
1981

EUROPEAN REGIONAL PLANNING

STUDY SERIES

Study No. 35

MOUNTAIN REGIONS OF THE EUROPEAN MEDITERRANEAN COUNTRIES

- Planning problems and policies -

Study prepared by
Thymio Papayannis and Associates
(Athens)

Strasbourg
1981

PRELIMINARY NOTE

This study has been drawn up at the request of the Council of Europe by Thymio Papayannis and Associates - Architects Planners Engineers (Athens).

This study has been conducted in 1979-80 as part of Activity 17.50.2 "regional and investment planning in European non-Alpine areas" of the Council of Europe's intergovernmental activities programme.

The author is responsible for the opinions expressed in the text; they do not necessarily reflect the views of the Council of Europe.

For further information on this or related activities of the Council of Europe apply to:

Division for Regional Planning
Monuments and Sites
Council of Europe
F - 67006 STRASBOURG CEDEX.

TABLE OF CONTENTS

	page
PRELIMINARY NOTE	i
0. Summary	1
1. Introduction	2
1.1 Short history of the study	2
1.2 Problems and limitations of the study	3
1.3 Further promising work	4
1.4 Acknowledgements	5
2. The mountain areas of individual countries	6
2.1 Cyprus	6
2.2 (Southern) France	11
2.3 Greece	15
2.4 Italy	18
2.5 Portugal	23
2.6 Spain	28
3. Common problems and policies	32
3.1 Patterns and problems	32
3.2 Policies	33
3.3 Conclusions and recommendations	34
Appendix I : Maps and tables	37
Appendix II : Bibliography	61

STUDY ON:
Mountain regions of the European Mediterranean
Planning problems and policies

0. SUMMARY

The aim of the study is to examine planning problems in the mountain regions of European countries along the Mediterranean and of its large islands and to review government policies concerning the preservation and development of these areas.

Based on replies to a questionnaire prepared by the consultants (Cyprus, Spain) and on local visits (Portugal, France, Italy and Greece), the situation in these countries is summarily presented as regards geography, demographic trends, economic activities, infrastructure and social service availability, problems and policies, all concerning mountain regions.

On the basis of this examination, common problems and government policies are noted and recommendations are proposed concerning decentralised decision-making and implementation framework, based on a voluntary grouping of mountain communities, the importance of flexible planning, the careful preservation of a hierarchy of settlements, the diversification of economic activities and the breaking of the isolation of the mountain inhabitant, through better communications and the provision of polyvalent local public service units.

Finally, the challenge presented by the balance of local needs, outside demands on resources and the preservation of the natural and cultural environment is noted as the most important aim of future efforts.

1. INTRODUCTION

1.1 Short history of the study

After the successful conclusion of its study of the Alpine mountainous regions of Europe, the Council of Europe decided to examine the problems of similar areas along the Northern part of the Mediterranean; these are non-Alpine mountain areas, many of them with proximity to the sea, that have similar problems, and some very specific ones.

In September 1978, the Division for Regional Planning, Monuments and Sites of the Secretariat General of the Council of Europe requested Thymio Papayannis, of the consulting firm Thymio Papayannis and Associates, Architects-Planners-Engineers, of Athens, to undertake such a study on the planning problems and policies of the non-Alpine mountain areas of the "South-eastern Mediterranean". This last geographical term was later clarified to include finally Portugal, Spain, Southern France, Italy, Greece, Yugoslavia, Turkey, Cyprus and Malta.

The tasks of the consultant were defined as follows :

"The tasks of the consultant are:

To examine the problems of planning in the mountainous areas in the Southeastern Mediterranean focusing particularly, but not exclusively, on the large Mediterranean islands.

In particular, this should cover an examination of current social, economic, cultural and demographic patterns in the areas in question;

To examine the impact of tourism in the areas in question;

To analyse the physical settlement pattern and communication network in order to define what, if any, are the problems and shortcomings;

To examine the industrial, commercial, manufacturing and trade patterns of the area in terms of their suitability in taking up the pool of labour;

To explore the extent to which rural depopulation takes place and the extent to which this poses a problem;

The second part of the report should be concerned with policy options and should look at the appropriateness or otherwise of existing policies and should explore alternative policies that might be devised and which might usefully be applied."

./.

At that time it was decided that the consultant would concentrate his efforts on Greece and that he would incorporate subsequently in the study information gathered for the other countries, through a detailed questionnaire procedure to be conducted by the Council of Europe.

The questionnaire was prepared by the consultant (1) in March of 1979, was translated into French and was mailed by the Secretariat General to all the countries concerned in June of the same year.

Response, however, was poor. By the end of 1979, when an interim report on Greece was submitted by the consultant (2), Yugoslavia had indicated that it could not participate in the programme due to limited time and resources; Spain had sent a short qualitative reply; Turkey mentioned informally that a report had been prepared. No reply was received from the other countries. Although the questionnaire was sent for a second time in the summer of 1980, only one answer was obtained, a very detailed reply from Cyprus, received on 23 December 1980.

The reason for this lack of replies was perhaps that the information asked for in the questionnaire did not readily exist and that its compilation would require a lot of time, effort and resources on the part of each country, that were not at the time available.

This eventuality was discussed in Strasbourg in December 1979 and it was decided to allow the consultant to visit some of the countries and to collect the necessary information himself. This provision was incorporated in the contract for the 1980 work.

In the second half of 1980, when it became evident that no more replies to the questionnaire would be forthcoming, of the consultant team, T Papayannis visited France and M Seferi Portugal and Italy to obtain data and information through the administration in person of a structured interview previously prepared.

1.2 Problems and limitations of the study

The major problem faced in the preparation of the study (and the reason for its main limitation) is the difficulty of obtaining quantitative and comparable data from each country. This stems from two main reasons.

On the one hand, some countries have done a lot of planning work for their mountain regions (eg France, Italy) and some very little (Spain, Greece). From the first group, there is the availability of extensive detailed data (all in the local language), which proved difficult to assimilate within the time and resources of the present study. From the second, the problem was the reverse: trying to draw conclusions from scarce and fragmented data.

./.

1. The team that compiled the questionnaire was composed of T Papayannis, P Coutretsi and I Nanopoulou.
2. Written by T Papayannis and R Cloutsinioti.

On the other hand, the administrative structure of each country plays a determining role in the availability of information. In some of the countries, the mountain areas are included administratively in wider rural areas (Portugal, Cyprus); in these cases very little specific information exists. In France, each mountain range is treated individually (Pyrenees, Massif Central, Alps), but it is difficult to isolate the non-Alpine, coastal areas from the inland, Alpine ones. In Italy, as there has been a considerable planning effort for many years, there is detailed data available for many specific mountain areas.

As quantitative comparisons were not possible (nor would they have been meaningful), the study limits its conclusions to two broad areas: the similarities and dissimilarities of problems encountered in the mountain areas along the Mediterranean; and the variety of policies used by the respective governments in improving living conditions in these areas.

The combination of problems and policies from country to country resulted in some general remarks that might be of use to the people responsible for mountain policy formulation. If they are indeed useful, then the considerable effort expended in the present study would be justified.

1.3 Further promising work

The study, however, does not provide up to now an evaluation of actual experiences with programmes and policies aimed at the improvement of conditions in the mountain areas. It would be very useful, therefore, as an important complement to this study, for the Council of Europe to compile a series of case studies, analysing and evaluating specific programmes or projects from each country. Such an analysis of case studies would allow an understanding of the different conditions that facilitate or hinder the implementation of policies and the success of programmes in the development of mountain areas.

Such case studies should be compiled by small teams, composed of consultants and local officials, that would include persons familiar with the specific situation of each country as to administration, the economy, planning and other related aspects.

The case studies could then be presented and discussed by representatives from all the participating countries; perhaps in a seminar to be organised by the Council of Europe and to be hosted by one of the Mediterranean countries. The results would be an exchange of information and experience and possibly a successful attempt at a synthesis for a co-ordinated international policy for the mountain regions along the Mediterranean.

1.4 Acknowledgements

The present part of the study would not have been possible without the invaluable help of certain individuals and officials from the participating countries. We feel we have to mention specially:

- From Cyprus: George Phethonos
Senior Planning Officer
Department of Town Planning and Housing
Ministry of the Interior
- From France: Hubert de Pellet
Responsible for the Mountain Regions
Délégation à l'Aménagement du Territoire et
à l'Action Régionale
- From Greece: John Loukidis
Scientific Adviser
Ministry of Co-ordination
- From Italy: Salvatore Cafiero
(SVIMEZ) Associazione per lo sviluppo dell'
industria nel Mezzogiorno
- Ms. Bisceglie
(UNCEM) Unione Nazionale Comuni Comunità
Enti Montani
- Franco Fiorelli
Architect
Coordinateur pour l'Aménagement du Territoire
Istituto di Studi per la Programmazione Economica
- From Portugal: Ricardo de Figueiredo
Architect

for their invaluable assistance in obtaining data from the different countries.

The report was written by planner-psychologist Mania Seferi, Ph.D., and by architect-planner Thymio Papayannis. The presentation of the texts was the responsibility of Ann Kissonas.

2. THE MOUNTAIN AREAS OF INDIVIDUAL COUNTRIES

In the chapter that follows, the situation of the mountain regions of six countries along the northern part of the Mediterranean is presented. These are Portugal, Spain, the South of France, Italy, Greece and Cyprus. Information for Portugal, France, Italy and Greece was gathered by the consultants on the spot, while for Spain and Cyprus they had to rely on written data.

The situation in each country has been presented - as far as possible - in a uniform way so that understanding and comparisons can be facilitated.

2.1 CYPRUS

2.1.1. Geography

The island of Cyprus, with an area of 3572 sq miles (925,150 hectares) has two mountain ranges, the Troodos Massif rising to 1951 meters and covering roughly one third of the island, and the Kyrenia Range, running parallel to the northern coastline, rising over 1000 meters in elevation. It is to be expected, then, that a number of mountain regions present serious development problems, mainly under-employment and lack of opportunities, backward economy and low standards of living, deficiencies in the provision of social services, a deficient transportation network and environmental problems.

More specifically, the mountain regions cover 21% of the island, while 51% is flat. The remaining 23% is semi-mountainous areas.

In the whole country, there are 630 settlements, of which 624 are rural; of these 56 are in the mountain regions. The average density is 70 inhabitants per km². This drops to 40 in the rural areas. Although no figures are available for the mountain regions, it is estimated that densities do not exceed 20 people/km².

The following data on the mountain communities of Cyprus are of interest:

a. <u>Location</u>	<u>Altitude in meters</u>					<u>Total</u>
	<u>0-200</u>	<u>200-400</u>	<u>400-800</u>	<u>800-1400</u>	<u>above 1400</u>	
Number of rural communities	288	148	132	55	1	606
Percentage	46	23	21	8	(0.16)	100

./.

b. Size

<u>Inhabitants per community</u>	<u>Number of mountain communities</u>	<u>Total population</u>
less than 50	2	61
50-200	13	2137
200-500	26	8744
500-1000	11	8100
more than 1000	4	7000
Total	56	26042

Changes of urban and architectural character have taken place in several of the traditional settlements, with unpleasant results.

A more serious matter is the disastrous effect on the environment due to open cast mining (asbestos). Several square kilometers of Alpine forest have been turned into desolate hills of bare rock and dust, thus polluting the water courses, affecting the ecology, etc. Mining has been the most disastrous single development to affect so widely the central mountainous region of the island.

Land deterioration due to landslides and rockfalls has seriously affected six mountain communes (total population about 2500) which have been resettled in safe locations within the same region. Erosion mainly due to deforestation resulted in barren and uncultivable hillsides which now at great cost are being replanted gradually (forest trees along artificial terraces).

2.1.2. Population

There is a distinct loss of population from the mountain settlements, due mainly to their distance from the urban centres, to poor agricultural yield, to insufficiency of technical and social infrastructure caused by the small size of the communities and also due to the lack of diverse employment opportunities. (The same, but to a lesser extent, holds true of communities in the foothills and the lowland rural regions.) (1)

Population losses are particularly severe amongst the younger age groups (18-30 years), mainly because there are no old people left who wish to emigrate. In general, emigration is due primarily to lack of employment opportunities and to a lesser extent, to social, cultural, life style, etc, reasons.

./.

-
1. Between 1946 and 1960 the total population of the country increased by 28.3%, while the rural population by 17.6%. Between 1960 and 1972 these figures were 10.7% and 9.7%. In the same period the population of the mountain regions declined by 11%.

An improvement of the existing living conditions (physical living conditions are generally satisfactory) in the social/cultural sense will only moderately affect population losses. The provision of diverse and interesting employment opportunities will substantially reduce population losses in the mountainous regions.

Of the mountain communities that retain their population, most depend on employment in mines, quarries, military camps, small scale and cottage industry. Tourism also plays an important role, in association with various cultural events (festivals and fairs). Proximity to major road axes seems to be important. The emigrants from the mountain regions usually maintain close relations with their communities of origin. This takes the following forms:

- a. Family bonds: often brothers and sisters join the emigrants, occasionally parents. This pattern does not seem to have any relevance to the emigrants' occupation and income.
- b. Economic relations: overseas emigrants regularly assist their families and occasionally their villages. Emigrants often maintain their local assets and increase them by purchases. Usually their properties are rented for agricultural purposes until they are developed for housing or tourism.
- c. Cultural and social bonds: emigrants maintain very strong cultural and social bonds, especially those that are in the urban areas; from these, emigrants return home, as a rule, for their summer holidays. Emigrants that are overseas return less often and share their stay in their home village with their stay in other parts of the island.

2.1.3 Economic and productive structure

As we have seen previously, the main sectors of the economy of the mountain regions of Cyprus are the exploitation of mineral wealth, tourism, small scale industry and agriculture and livestock, (to a small degree also forestry).

There are no specific economic data available for these regions, except for employment figures, which are of considerable interest. More than half of the active population (1) of the mountain settlements (52.5%) is occupied with the primary sector (agriculture, livestock, forestry etc). Only 4.2% with industry, 3.5% with mining and 1% with handicrafts. Of the remaining 38.8%, fully 20.9% commute for employment to the surrounding towns and the rest are employed in various services.

It should be noted in this context that the primary sector in Cyprus dropped between 1967 and 1978 from 21.9% of the GDP to 12.0% while manufacturing increased from 11.1% to 17.3%. Mining has dropped from 6.2% to only 1.9%, while construction rose from 6.7% to 11.0%. The tertiary sector (trade, banking, public administration and services) has remained practically constant with small increases (2).

./.

-
1. The active population is 48% of the total for the island.
 2. The figures are respectively 14.7 and 16.2, 4.4 and 5.8, 3.4 and 6.9, 9.0 and 10.7.

2.1.4 Infrastructure and social services

As the island of Cyprus is not very large, distances are limited. Therefore infrastructure of its mountain regions, although far from perfect, is reasonable and the accessibility of social services almost adequate. All communes in Cyprus enjoy certain minimum comforts such as a water and electricity supply at home, daily bus connections to towns and other areas, telephone links, the existence of at least one provision store supplying basic goods, cafes, a religious building and a post office. Of course, many improvements are possible and desirable, and serious government efforts to alleviate unfavourable conditions are being carried out within existing possibilities.

2.1.5 Problems of mountain areas in Cyprus

To summarise some of our previous observations, main problems are:

- a. Natural environment deterioration, due to economic development such as open-cast mining. This has detrimentally affected and polluted a large area of the island. Also, excessive exploitation of natural resources in the form of destruction of forests has affected, fortunately, only sparsely populated mountain areas.
- b. Loss of vitality in some mountain settlements, due to drastic decrease in population and activities.
- c. Excessive growth in some other communities, with loss of architectural character, abrupt increases in the cost of property and deterioration of the environment; all these mainly through the effect of tourism.

2.1.6 Policies

Government intervention has been forthcoming mainly since the establishment of the Republic of Cyprus in 1960. Rural integrated and comprehensive development projects, irrigation and land consolidation schemes and the development of tourism and recreation were the basic effort by the government during this period for the development of the mountain regions.

The improvement of the living conditions and the alleviation of the acute problems of the mountainous regions of Cyprus fall primarily within the general programmes for rural areas; the aims and objectives for the long term development apply equally to lowland rural areas and to upland and mountainous rural areas. Thus, the planning objectives are the full utilisation of the agricultural and tourist potential, the checking of depopulation, the achievement of an efficient transportation network and the development of an efficient system of service centres throughout the island.

However, within the context of these general policies adopted for the raising of the standard of living in rural areas, a number of specific government policies have been adopted for parts of the mountain regions. The Pitsilia Integrated Rural Development Project with specific policies and measures and the policy for the development of the Troodos Massif for recreation, for which a recreational plan was prepared in 1977, are two such schemes.

Pitsilia is a mountainous area, situated east of the Troodos Massif core, and the project itself consists of 49 villages with a total population of 20,162 (1973) and covers an area of 61,200 hectares of which 30% is waste land given to forestry. The Pitsilia region lies at an elevation ranging between 500 and 1600 metres above sea level and comprises mostly rugged topography.

The area covered by the Troodos recreational plan is a comparatively large mountainous country and includes the highest peaks of the Massif - Mount Olympus (1951 metres), Madari (1602 metres) and Papoutsia (1554 metres). The aims of the plan are the optimum development of the area based on its natural resources, the creation of employment opportunities and consequently raising the standard of living and the stabilisation of the local population.

During 1980-81, a number of other rural development programmes are being implemented. These relate to three mountain regions of the Troodos Massif, namely the Solia rural development programme, the Orini rural development project, and the Tylliria rural development project. All three regions are highland areas with most of their economically active population engaged in agriculture. Orini and Tylliria are among the poorest areas of Cyprus, with very low per capita incomes and suffering from relative isolation from the main population centres.

The policies adopted are as a rule long-term, incorporated in comprehensive programmes such as those outlined above. For instance, the creation of employment opportunities through the development of recreation and tourism, or the setting up of rural industries in the rural services centres, or the improvement of the road network, are all part of the long term policies adopted. Where there are pressing problems such as the improvement of a particular rural road connecting settlements or the provision of water supply, government intervention is prompt.

Specific comprehensive policies exist only for particular mountain regions, such as Pitsilia or Troodos. Many other upland or mountainous regions such as the Paphos mountainous region, the Limassol uplands and the Marathasa region do not have specific policies, but are covered by the general government policy relating to all rural areas. The basic long term goals include the raising of the standard of living to comparable levels to that of the urban areas, the improvement of accessibility and the protection of the environment.

The government policy for the mountainous regions is implemented through both integrated development programmes and other programmes such as agricultural development, primarily through irrigation schemes as well as infrastructural works such as facility provision (water supply, road improvement, electricity etc). Integrated rural development starts with agricultural development but goes far beyond it and aims at changing and improving the whole rural environment. Integrated rural development, broadly conceived, means rural transformation through increased production and productivity, better income distribution and improved social infrastructure. The Pitsilia integrated rural development project is the first project of its kind to reach the implementation stage in Cyprus. Its primary objective may be said to be the improvement of the living conditions of the people of the Pitsilia region by developing the productive resources of the area.

Infrastructure works such as road improvements, dam construction for irrigation purposes and afforestation are other types of development programmes implemented.

All development programmes are financed through the government budget, administered by the Planning Bureau, an independent economic planning agency, and executed by other appropriate government bodies. Two types of government annual budget exist:

- i. the regular annual budget
- ii. the development budget, which is wholly devoted to development projects.

The sources of financing may be the government itself or international bodies such as the UN or the World Bank. For instance the Pitsilia project was financed by the World Bank with the assistance of FAO in 1976, and its implementation was initiated in 1976.

The involvement of local administrative units - in Cyprus these include the Village Improvement Boards in large villages and Village Committees in smaller villages - as well as the District Administration for each district, plays a vital role in the implementation and administration of programmes. The District Office Administration normally undertakes the improvement of rural roads and co-ordinates activities in most fields of development, except where a particular project is being implemented by an appropriate government agency, eg the construction of a dam by the Water Development Department. Also in co-operation with the local village authorities, this is responsible for water provision and other minor works.

As a conclusion, one should mention that in order to achieve a balanced development of the mountain regions, development projects have to be implemented in all of them, based on comprehensive regional policy. In Cyprus the development effort has not reached that stage yet; investment up to now has been directed to some mountainous areas, notably the Troodos peak for tourism and recreation, the Pitsilia for agricultural development and parts of the Paphos District mountainous region for outdoor recreation and timber production. In the future, however, the long term aims of government policy are balanced development of all regions of the island, especially mountainous regions, based on the resource availability of each region.

2.2. FRANCE

2.2.1. Geography

Four areas of France can be considered as non-Alpine mountainous regions belonging to the Mediterranean system (figure 3).

Perhaps the most important is the Massif Central, which stands south of the centre of the country. Its average heights are at about 1000 metres, although towards the south-east it rises to more than 1600 metres. The region is studded with irregular volcanic cones - the "puys" - some rounded and some pointed; the highest, Monte Dore, reaches 1887 metres. The shape of the Massif is rounded with gentle slopes, except in the south-east; there along the Mediterranean, is a long mountain ridge, the Cevennes.

To the south of the Massif Central, separated by a narrow gap - the Carcassone - lies the Pyrenees range, which separates France from Spain. These are tall mountains, with many peaks rising about 3000 metres, separated by deep gorges and ravines. There are few passes towards the south and thus they block effectively easy movement towards Spain.

On the other hand, the southern part of the Alps, the Alpes Maritimes, leave a coastal zone towards the Mediterranean, the Côte d'Azur, which permits easier movement eastward towards Italy. This is perhaps one of the reasons for the different development of the east and west areas of the French Mediterranean coast.

Finally, the island of Corsica, lying 270 km off this coast, is covered with mountains, except for small areas in the north-east. Its highest peak in the west is Monte Cinto with 2710 metres.

2.2.2. Population

The mountainous regions of France (1), most of them located in the south-east of the country, cover an area of 10 million hectares (18% of the total) and include 3.5 million inhabitants (or 6.6% of the total) in 5400 communities, belonging to 43 departments.

The mountainous regions have a very spare population of about 25 people/km². However, there are areas of still lower densities. For example, the southern Alps are at only 13.88 people/km². Large differences exist between communities and rural and urban areas. (Density of the rural areas of the southern Alps is 7 people/km².) This is also shown in the following table:

	<u>Massif Central</u>	<u>Southern Alps</u>
Communities with densities less than 20 people/km ²	30%	80%
Communities with densities less than 10 people/km ²	8%	55%

Another aspect to be noted in the mountainous regions is the ageing of the population, with growth only in the old age sector (above 65 years). This is complemented by a majority of men over women (52% to 48%), which increases in the rural areas (55% to 45%).

Recently, due to diligent government efforts, about 10,000 young people were persuaded to move from the cities to the mountain regions, and the proportion of farmers of less than 35 years increased from 6.9% in 1967 to 8.8% in 1977, more than the national average which is 7.9%. This is indeed a small but hopeful sign.

./.

(1) As no data are available specifically for the mountainous areas along the Mediterranean, and because French policies face every mountain region in a unified way, we shall refer to general figures only.

2.2.3 Economic and productive structure (1)

The economy of the mountainous regions relies mostly on agriculture. Employment in industrial activities is low, as they represent only 14%, which is half the national average.

The mountain regions use 3.6 million hectares of agricultural land, (compared to 30 million for the total country, or 12.2%), which account for only 6.8% of the agricultural product of France.

The useful grazing areas are about 3 million hectares and they are used to 60% of their capacity, for:

- 1,310,000 cows
- 1,940,000 sheep
- 200,000 pigs

with a considerable production of milk, and of meat (240,000 tons yearly).

Other local products are honey (6,000 tons yearly), chestnuts (45,000 tons) and lavender (90 tons).

Forestry also plays an important role in the economy of the mountainous regions. Especially, the Massif Central covers a large portion of the forestry production in France.

Tourism plays an important role in the economy of the mountainous regions, especially along the Côte d'Azur, and recently in the upper regions (for winter sports), with heavy government backing (2). Tourism, however, tends to become the unique economic activity in certain areas, creating thus serious distortions in their social fabric.

2.2.4. Infrastructure and social services

The infrastructure of the mountainous regions of France is not satisfactory, although better than in other Mediterranean countries. This is due to various factors. The most important are the low density of the population, making necessary more extensive networks per inhabitant, and the form of the terrain, which renders both construction and maintenance of infrastructure facilities costly. This is further accentuated by the fact that mountain communities are in general poor and cannot cover the needed costs.

It becomes necessary therefore for the government to invest heavily in these areas, so that the imbalance that exists with other parts of the country can be redressed. Already about 40% of the national budget on the environment is channelled to the mountain regions.

./.

(1) 1979 figures

(2) Between 1977 and 1979, the government invested 35 million francs in tourism of the mountainous regions, or 41.5% of its overall investment in that sector.

The emphasis should be on public transport, better electrification, improved telecommunications and TV coverage, integrated and multipurpose social, cultural and administrative units, well-located to serve the widely spread population.

2.2.5 Problems of the mountain regions in France

In the mountain regions, demographic erosion has been followed by land erosion. The gradual abandonment of cultivation tends to ruin more than a century of government and local efforts to maintain the fertile soil on the sloping profile of these regions. It has also increased greatly the dangers of natural catastrophes (landslides, floods, avalanches).

To stop the loss of population, certain problems have to be faced that are related to the nature of mountain communities. These are mainly:

- Life and work under harsher climatic conditions.
- Hardships involved in mountain agricultural activities.
- Human isolation, due to the spread of the population.
- Insufficient technical and social infrastructure, difficulty of access to certain social, education and leisure opportunities.

A general problem that needs careful study and action is the balance between maintaining and improving the natural environment on the one hand, and on the other, encouraging productive activities that use land (agriculture, industry, tourism, etc), changing its natural characteristics.

2.2.6. Policies and measures

France is one of the European countries with the oldest tradition in mountain policies. The law on reforestation of the mountains dates from 1860, while that on the improvement and restoration of mountain lands came into effect in 1882. Already in 1913 the French Society of Alpine Economy was formed, which became in 1967 the French Federation of Mountain Economy.

Current government policies were established in 1977 (1) as a co-ordinated and coherent whole. Their implementation is co-ordinated by "Commissaires des Montagnes" who are appointed by the "Délégation à l'Aménagement du Territoire et à l'Action Régionale", a planning group directly related to the Prime Minister. The Commissaires work closely with local government and elected officials (prefects, municipal councillors, "conseillers") and also with the representatives of various productive and social groups. Their purpose is not so much to administer the mountain programmes, but to develop them through consensus, to co-ordinate them and to act as a catalyst for their implementation, using also specially allocated funds.

./.

(1) They were presented in a speech of the President of the Republic, Mr Giscard d'Estaing, in Vallouise on 23 August 1977.

The main points of the present government policy are:

- Encouragement of the installation of young people in the mountain areas, through information dissemination, training, reception centres, economic backing to help them start productive activities.
- Development of secondary activities, to supplement employment in agriculture, and thus increase the farmers' income, through training and preferential financing.
- Modernisation of the productive activities in the mountain regions, especially agriculture and husbandry.
- Development of the other mountain resources and as a first priority, forestry.
- Changing the aims of tourist development, so that it becomes integrated in the other activities and results in the maximum benefit to the local population; consequently, shifting from the large mono-activity tourist centres to the small facilities, within the context of existing communities.
- Government aid to the communities, so that they can supply the necessary services.
- Improvement of the quality of life, through polyvalent public services, integrated public transport, better communications, improved educational, social and leisure opportunities.
- Protection of the mountain landscape, through the creation of national (1), regional and local parks, the careful planning of the mountain area, the operation of control and improvement procedures.

2.3 GREECE

2.3.1. Geography

Greece is a country of about 9 million people (2), living in an area of 13,198,980 hectares. 58% of the total area of Greece is mountainous (3), and in this area lives 18% of the population.

./.

-
- (1) Already in the last 20 years five national parks have been created with a central zone of 345,300 hectares and a peripheral area of 914,000 hectares.
 - (2) This is a 1978 estimate of the planning consultants. The last census was in 1971 and at that point Greece had 8,768,600 people.
 - (3) Greece considers an area or a community to be mountainous if one of the following criteria is met: (i) 80% of the area is 800 m or higher; (ii) 80% of the area has inclines of 20% or more; (iii) 80% of the area presents a combination of 16% incline and 600 m + of altitude (iv) any communities of which 80% of their area is a combination of the first three conditions; and (v) areas found in the mountain zones whose economy is affected by the proximity (Decision of Minister of Agriculture, 12 May 1980).

The mountain axis of the country runs from north to south and includes the mostly mountainous regions of Epiros, Central and Western Macedonia, the western part of Thessaly, Central Greece and Central and Southern Peloponnese. In addition there are mountain areas in Eastern Macedonia, Thrace, Evoia and most of the Aegean islands (figure 4).

Mountain areas of Greece are characterised by difficulty of access, high altitudes and inclines, poor quality land, limited or seasonal water resources and short growing periods. Only 16.6% of Greece's mountain areas are cultivated. 30% are covered by forests and about 47% are used for grazing, a good part of it of low quality (table 1).

2.3.2. Population

In the decade 1961-71, Greece, like other Mediterranean countries, experienced a reduction of its rural population and a great surge of urbanisation concentrated mainly in the area of Athens and to a lesser extent Thessaloniki (table 2). Mountain areas were hit harder than other rural areas, losing about 20% of their population during that period (table 3) as compared to 16% for other rural areas. The people that left were younger thus leaving the areas with an older population (figure 5).

Population density is very low in mountain areas. The average size of a mountain community in 1971 was 485 persons, and it may have further eroded since that time.

If one looks at the general picture of settlements in the country, we see that 56% have less than 200 residents with an average size of 80 persons. 370 have no road access and about 1000 are without electricity. Even though these figures refer to the country as a whole, if we look closer we see that they describe conditions in mountain settlements (1).

2.3.3. Economic and productive structure

In the last 15 years the population involved in agriculture has decreased by about 1 million persons, and by 1977 only 28% of the economically active population was involved in agriculture (2). Yet in the Greek mountain areas the primary sector predominates. Agriculture is characterised by low yield, practically no mechanisation and small plots of land. In the last 15 years there has been an abandonment of some of the already limited cultivable land.

An important activity of Greek mountain areas is grazing of small animals (primarily sheep and goats), an activity consonant with the natural resources of the areas that include more than 50% of the country's grazing land and 65% of the forests (3). Unfortunately most of the grazing is not of very high quality.

./.

(1) National Statistical Service, 1971 Census of Settlements.

(2) Ministry of Agriculture, Agriculture in Greece 1958-78, p 8

(3) Estimates of the National Statistical Service.

Another important activity of Greek mountain areas is fishing, since a good number of mountain communities are found on islands and in coastal areas.

In addition to primary sector activities, some mountain areas have developed small cottage industries of handicrafts. There is also tourism and some commerce (1).

A phenomenon encountered in some of the island mountain communities is a seasonal dependence on tourism which predominates over other activities. It is not uncommon for the resident population of an island to double or triple during the summer months, with locals returning to run seasonal tourist enterprises and returning to the urban centres in the autumn. This type of activity tends to tax the natural environment, and provides no long term benefits to the socio-economic development of the locality.

Despite the difficult conditions encountered in the primary sector, most of the mountain areas depend on agriculture as the foremost area of economic activity.

If we look at the gross agricultural product of the mountain areas (table 4), we see that it constitutes 22% of the total for 58% of the land.

2.3.4. Infrastructure and social services

Infrastructure and social services are greatly lacking in Greek mountain settlements. During the 1971 survey of non-urban settlements, communities lacking in road connections, public transportation access, water and sewer networks and electricity tended to be mountainous ones. These communities were also deficient in terms of schools, medical care and housing.

A reverse indication of the need for infrastructure is a table prepared by the Ministry of Agriculture describing proposed infrastructure projects for the mountain areas. 36% of the mountain communities are planned to get some road connections between settlements, and 95% will get some rural roads. 20% are planned to get electricity and 56% water. The number of communities planned to get sewer treatment facilities (14%) may be misleading as an indication of need, since it is limited to communities with active tourist trade (table 5).

In terms of social services, schools tend to be located in larger regional centres and the same holds true for hospitals and other health care facilities.

./.

(1) Ministry of Agriculture report on "Development policies of Mountain Areas", 1978.

2.3.5. Problems of the mountain regions of Greece

Greek mountain areas tend to reflect extreme cases of problems encountered in the Greek rural areas. Their situation is worsened by adverse climatic and agricultural conditions, poverty of natural resources and isolation. When tourism is developed against the backdrop of these problems, it tends to tax the natural environment, disturb the ecological balance and create disparities between traditional and economically based values.

2.3.6. Policies and measures

There is no special policy formulated for the mountain areas of Greece. Mountain areas have fallen within the jurisdiction of programmes of regional development, which have mainly included small scale public works funded from the central government. There is some centralised planning, in terms of five-year development plans produced by KEPE (Centre for Economic Planning of Greece), which seem to have little correlation with actions. Also the Ministry of Agriculture has some programmes for mountain agriculture.

Lately, the government has been preparing a special law giving powerful incentives to the mountain communities; also, with EEC assistance, the problem is being studied in an overall way. However, no concrete results are available at present.

2.4. ITALY

2.4.1. Geography

Italy is a country of about 56 million people living in an area of 301,262 km². About half (52%) of the Italian territory is mountainous, and about 20% of the population live in it (table 6). There are two major mountain regions, characterised by the Alps in the north and the chain of the Apennines that is like a dorsal fin extending from the pre-Alps all the way south to Sicily (figure 6).

Italy has had legislation classifying areas as mountainous municipalities and signaling them for special treatment since 1952. According to this legislation, a municipality is considered mountainous if 80% of its surface is over 600 metres (1).

The most mountainous area of Italy is the south with 56% of the territory and the least is the centre with 48%. A quarter of the population of the south lives in mountainous municipalities (Table 6).

Since Italy has had legislation and policies with regard to its mountain regions for a long time, there is a tremendous amount of information on the subject, much more than a study of this nature could even begin to summarise. Yet the data on the problems of the Italian mountain regions seem to follow the pattern found in other countries, ie that mountain areas tend to be extreme examples of the problems and disparities found in the rural regions of which they are part, and hence merit special treatment.

./.

(1) See bibl. 4.1, p 27

It should be pointed out that mountain areas across regions tend to share a number of adverse conditions (such as climate, short growing period, difficult communications, higher costs because of adverse geomorphology, a sensitive ecosystem, etc), but the extent to which these conditions become problematic seems to be determined by the general socio-economic and political condition of the rural region in which they are found. Italy provides a good example on this point, with the mountain areas located in the prosperous north and those located in the underdeveloped Mezzogiorno. But since the mountain areas of northern Italy are Alpine, we will attempt to illustrate this point (albeit not so dramatically) by presenting data on two mountain communities, one located in the Emilia-Romagna region near Bologna, in the centre of Italy, and the other located in the region of Basilicata in the Mezzogiorno or southern Italy.

2.4.2. Population

The mountain municipalities of Italy lost on average about 7% of their population between 1969 and 1971 (table 7), but the percentage varies widely among regions. In general, the mountainous regions of the north lost on average less than 0.5% of their mountain population, with some regions showing a population increase of 11%. On the other hand, regions of the centre and south of the country lost about 13% of their population on average.

If we look on an even finer scale at the level of specific mountain communities (1), we see that the mountain community "Appennino Bolognese No. 1" in the centre of Italy, made up of 20 municipalities, lost on average 18% of its population between 1961 and 1971 and a total of 37% in the 20-year period between 1951 and 1971. These average figures imply that some mountain municipalities lost over half of their population in a twenty year period (table 8). Studying closely this case, we see that the mountain community is losing population at a faster rate than the rural lowlands of the region. The population loss is due to migration, which also cancels out the natural population increase that characterises the area (table 9). At the same time, the mountain community even more than other rural areas seems to be losing its younger residents (table 10). On the other hand, the nearby urban centre of Bologna is growing by immigration of younger persons (tables 8, 9 and 10). Situations similar to the case example of the "Appennino Bolognese No. 1" mountain community are found in most mountain communities of central and southern Italy.

The population density of the Italian mountain regions is quite low (0.59 persons/Ha on average (2)). Mountain municipalities have on average about 2,300 residents and communities are made up of an average of 11 municipalities and have a total population average of 26,637 people (table 11).

./.

(1) The Italian law on Mountain Communities (3.12.71 n. 1102) provides for the association of mountain municipalities into mountain communities.

(2) 5.9 persons/km².

2.4.3. Economic and productive structure

In general the economically active population of the mountain regions has substantially decreased from 1951 to 1971. The agricultural sector sustained the greatest losses, with the industrial sector decreasing less and the tertiary sector generally showing some growth.

In the two case examples, in the mountain community of Appennino Bolognese No. 1 there was a 25% decrease in the economically active population in the ten years between 1961 and 1971. In the same time period, the population active in agriculture decreased by 58% and in industry by 14% whereas the population active in the tertiary sector increased by 18% (1).

The mountain community of Lagonegrese lost 28% of its economically active population between 1951 and 1971. In the ten year period between 1961 and 1971 the agricultural sector lost 45% of its economically active population, whereas the tertiary sector gained 18% (table 12).

Italian mountain regions face similar types of problems in terms of economic and productive structure. These can be summarised as follows:

- decrease and ageing of the economically active population;
- abandonment of agricultural land and activities;
- despite a decrease in the agricultural sector, a continued dependence on agriculture and traditional cottage-type industries;
- lower incomes and reduced earning ability.

The different mountain regions vary in terms of the availability of natural resources and specific socio-economic regional characteristics, which either tend to facilitate or make harder the possibilities for balanced development. The mountain communities of Appennino Bolognese No. 1 and of Lagonegrese are good cases in point. In the first case the area has the potential for agricultural activities to be the base of socio-economic vitality, with additional development potential in the areas of artisan work, tourism, planning and protection of the natural environment through the creation of parks and protected areas, to supplement and stabilise the agricultural income (2).

In the case of Lagonegrese, poverty of natural resources in terms of infertile land, (15 kg of grain/Ha and most of the land of III, IV and V quality categories), is accentuated by high altitudes and inclines, and is further complicated by a highly segmented and dispersed land ownership system (3). Industrial development has tended to concentrate in the traditional low-yield cottage and artisan industries.

(1) See bibl. 4.3, p 18.

(2) See bibl. 4.3, p 10.

(3) For 190 Ha of land, 500 owners, of whom 26 had more than 1 Ha. 25% of the land parcels had 4-5 owners. Bibl. 4.4.

2.4.4. Infrastructure and social services

Infrastructure of the mountain regions is not very well developed as compared to other areas of the country. This in some cases is due to the prevailing national policies and in other cases to the initially backward conditions of certain regions. In the first case, transportation provides a good example. Transportation in mountain areas is not easy because of geomorphic reasons, but this condition has been exacerbated by national policies favouring the creation of highways connecting areas of the country to the developed and industrialised north, thus making migration easier. Local road networks and public transportation within regions has not received high priority. In the case of the Mezzogiorno, substantial public investment in infrastructure for the last 25 years and improvement of the situation in absolute terms has not sufficed to equalise and upgrade the situation of the area compared to the central-northern region of the country (1).

The area of social, health and educational services suffers partially because of the dispersed nature and small size of mountain communities, but also because of access to good up-to-date services in some regions.

2.4.5 Problems of the mountain areas of Italy

Problems of mountain areas in Italy can be summarised in five points:

- drastic decrease and ageing of the economically active population;
- abandonment of land and agricultural activities;
- continued dependence on the primary sector for a livelihood;
- harder work and life conditions accentuated by deficits in infrastructure and social services;
- lower earning potential.

Within the framework of these problems there are additional local and regional conditions which in some cases worsen the difficult situation shared by mountain areas. These additional conditions include:

- poverty of natural resources and land productivity;
- highly segmented land ownership;
- overall underdevelopment of the region in which the mountain areas are found.

./.

(1) See bibl. 4.3, p 167.

2.4.6. Policies and measures

Italy has had legislation classifying mountain areas since 1952, but it was not until the legislation of 1971 (no. 1102) that a comprehensive framework was adopted for the development and special aid to Italian mountain communities.

The goals of the law are, within the framework of national and regional economic planning, to eliminate the social and economic disequilibria that exist between the mountain zone and the rest of the national territory; to protect the land and the natural environment.

To achieve these goals a number of public interventions are planned, which are:

- To endow the mountain regions with the infrastructure and social services necessary to improve living conditions and set the base for economic development.
- Through the use of incentives and within the framework of an integrated mountain economy, to support economic initiatives aiming at the improvement of actual and potential resources.
- To help and support mountain residents, recognising the special hardships under which they live because of the mountain environment.
- To promote and assist in the professional and cultural training of mountain residents (1).

For mountain municipalities to participate, they have to associate among themselves and form Mountain Communities. Criteria for associating have been geographic propinquity, similarity of problems and sometimes political affiliation. Presently Italy has 355 Mountain Communities representing a total of 4079 municipalities. The average number of mountain municipalities associated in a Mountain Communities is about 12 (tables 11 and 13).

Each region of the country has to promulgate regional laws for the mountain areas which specifically apply and amplify the state law. Special funds are made available by both the state and the regions to the mountain communities. The funds are divided among the communities according to population and surface size.

Each Mountain Community is run by a council of elected representatives from each municipality it includes. Each community should prepare five-year socio-economic development plans and an annual plan of actions and projects to be undertaken. For the formation and approval of the plans, extensive citizen participation is mandated starting from the level of individual neighbourhoods and moving up. So individual projects are decided on the level of the municipality, and their co-ordination, implementation and financing is managed by the Community Council.

./.

(1) Law 1102 p 18.

The Mountain Communities have formed a national union UNCEM (Unione Nazionale Comuni Comunità Enti Montani), which is a lobbying group for mountain interests and which also provides technical assistance and information to its members.

Two major sets of problems are presently being faced in the implementation of the law.

- The relatively small amounts of money made available by the state for projects in the Mountain Communities. For the years 1979, 1980 and 1981, the amount is 3 billion lire for all 355 Mountain Communities. The financial tightness tends to accentuate disparities among richer and poorer regions, since individual regions supplement the state allocations with their own funds.
- Lack of long-term socio-economic development plans. Only 30% of the Mountain Communities have made such plans. The situation is worse in Mezzogiorno, where only 10% of the communities have plans.

Despite the problems, the Italian law for the development of Mountain Communities represents a substantial and well thought-out effort.

2.5 PORTUGAL

2.5.1. Geography

Continental Portugal is a country divided between the northern region of mountains and high plateaux, and the south, which is mostly flat with a few mountains reaching over 700 metres in height (figure 7). The traditional dividing line between the north and the south has been the river Tejo.

Continental Portugal has a surface area of 88,500 km² of which 11.6% has elevations higher than 700 metres, 28.3% is between 200 and 400 metres and 43.1% is lower than 200 metres. North of the river Tejo 19.7% of the territory is above 700 metres, whereas south of the Tejo only 0.2% is higher. In addition there is an east-west division in the country, with high elevations in the interior (east) and low elevations along the coast (west). The north is characterised by a combination of mountains separated by deep valleys with a terrain terraced from the interior to the coast, and by high mountain plateaux, like the Tras-os-Montes (1).

The Cordilheira Central is the spinal cord of the Iberian peninsula, and in Portugal it has elevations running from north-east to south-west culminating in the Serra da Estrela at 1991 metres. The Cordilheira is also considered as a divider between the north and south of the country.

./.

(1) See bibl. 5.2. All data not otherwise referenced come from this source.

The mountainous north has lower temperatures and variable humidity and rain, whereas the flat south tends to be warmer and very dry (figure 8, figure 9). The north is less homogeneous than the south. As we move inland, the mild Atlantic climate of the north, which is warmer and more humid, becomes colder and dryer, almost continental, and by the time we reach Tras-os-Montes it is characterised by harshness and extreme conditions. Agriculture, being influenced by climatic conditions, changes as we move inland from arable to non-arable cultures such as rye and seed potatoes.

Administrative divisions do not correspond with the geo-climatic homogeneities of the country. For administrative purposes Portugal is divided into districts, municipalities and parishes. Most of the data we have collected are on the district level. The district boundaries do not correspond exactly with the mountainous areas, but as it can be seen from figure 10, four districts are primarily mountainous (Vila Real, Bragança, Guarda and Viseu) and two more to a lesser extent (Castelo Branco and Coimbra). Table A presents the area of each mountain district, together with our percentage estimate of areas at different elevations. As it can be seen, elevations of the mountain areas in Portugal are not very high. The highest mountain approaches 1800 metres, whereas most others are between 1000 and 1500 metres.

Table A

Portuguese Mountain Districts

District	Area/km ²	% above 400 m	% above 700 m
Vila Real	4,239.10	100%	60%
Bragança	6,545.45	90%	50%
Guarda	5,496.16	90%	50%
Viseu	5,018.80	80%	40%
Castelo Branco	6,703.68	40%	10%
Coimbra	3,955.86	20%	15%

Since Portugal has no particular planning or administrative division pertaining to its mountainous areas, for the purposes of this study we will consider the characteristics of the four mostly mountainous districts and the way in which they differ from the rest of the country.

2.5.2. Population

Coastal plain districts, especially those close to the major urban centres of Lisbon and Porto, have consistently increased in population. All other districts have declined in population, particularly since 1960 (1). The mountain districts lost on average about 20% of their population between 1960-70, whereas all other districts lost on average about 14% of their population.

./.

(1) See table 14 Appendix I

In general the population concentration is sparse in the interior districts and in the south, in terms of both numbers and densities (1). In the four mountain districts the population living in urban centres is less than 5% and only one of these centres has a population of 16,140, whereas the others all have less than 10,000 inhabitants.

All four mountain districts have higher birth than death rates, which is countered by some of the highest infant mortality rates in the country,

Two of the mountain districts have the lowest percentage of active population in the country (31%), while the other two follow with the next lowest.

Primary education characterises the majority of the economically active population in the four mountain districts, as it also does in most of the interior.

Since 1955 there has been a steady stream of emigration from Portugal, primarily to South American countries. Emigration starts dramatically increasing in 1963 with the country of destination being France, changes to illegal emigration to France in 1968, and last till the early 1970s with Germany also added to the picture. With the European economic crisis of the early seventies, migration to the European industrial nations drops abruptly, and whatever migration continues is now to the countries of North and South America.

2.5.3. Economic and productive structure

The economic structure of the country is heterogeneous, although in the majority of the districts most of the population is still employed in the primary sector (2). Overall, the participation of the population in the primary sector has decreased; by 1970 almost equal segments of the active population were employed in all three sectors. But the increase of industrial activities has concentrated almost exclusively in the districts of Porto, Braga, Aveiro and Setubal, whereas the increase in the tertiary sector has mostly come from Lisbon.

The north/south and the coastal and inland dimensions are useful because they define two distinct areas of agricultural characteristics: the coastal north and centre, as opposed to the interior north and centre and the south. The first area has better quality agricultural land and mostly arable cultures, whereas the interior is characterised by poor quality land and mostly non-arable cultures. The entire north is characterised by small agricultural properties, whereas the south is characterised by larger ones. Focusing on the mountain areas across the two dimensions, we can describe them as districts with poor quality land and small individual farms.

./.

(1) See figure 11.

(2) See bibl. 5.5, p 197.

The statistical information we have collected concentrates in the area north of the river Duro. The area is divided into two distinct sub-regions: one coastal and one inland. The two mountainous districts of Vila Real and Bragança, known as Tras-os-Montes, make up the inland sub-region. We feel, given the general information presented thus far, that the other two mostly mountainous districts follow a similar pattern to the one that is described below.

Agriculture in the Tras-os-Montes occupies 68% of the active population, whereas in the coastal sub-region only 28% are similarly occupied.

The entire region's GDP (Gross Domestic Product) is 35.4 million contos, which represents 26% of the country's GDP. Of the region's GDP, 55% comes from industry, which is concentrated in the coastal area, and 19% comes from agriculture (47% in the inland sub-region).

The region is relatively poor, with a per capita GDP of 45.6 contos as compared with 59.7 contos which is the national average.

There is low productivity in all sectors of the economy, which is reflected by the fact that the region produces 26% of the country's GDP and has 34% of the labour force. The excess labour force is a problem both in agriculture, where the structure of land ownership makes mechanisation difficult, and in industry, where the labour-intensive textile sector predominates.

The average GAP (Gross Agricultural Product) per capita is 24.3 contos, which is considerably less than the average per capita product of the other two sectors (52.3 contos for industry and 72.5 contos for services). Most of the agricultural production (80%) of the mountainous inland sub-region is for self-consumption. Most of the farms (97%) are run by the owners, whose average age is 52 years (47% are over 55 years old), and they are either illiterate (43%) or can just read and write (55%).

All these factors seem to influence the prevailing attitudes of the farmer, which are "shut off from the outside world, very reluctant to accept the introduction of innovation and not very interested in the market" (1).

2.5.4. Infrastructure and social services

In terms of hydroelectric production, three of the mountain districts have the highest production in the country, but in terms of consumption they have the lowest.

In the Tras-os-Montes only 4% of the farms are supplied with electricity and most of them function using animal (37%) or some combination of animal and mechanical energy (39%). In the same region, although 74% of the farms are irrigated, they cover only 11% of the existing farm land, and the existing means of irrigation are primitive, ie wells and fountains.

A very small proportion of the population of the mountain districts had running water at home in 1970 - a characteristic shared with other inland districts. Since that time, 1980 estimates show a markedly improved situation in the south, with very little improvement in the north in general, and the mountain areas in particular. The places mostly affected are those with a population less than 2,000 people.

./.

(1) See bibl. 5.3, p. 5

1980 estimates indicate that 58.9% of the population of continental Portugal live in places not served by a sewage system (1). Again, persons living in places with less than 2,000 inhabitants and in the north tend to be served the least.

39.5% of the population of Portugal was served by garbage collection services in 1970. Of the provinces with 1976 estimates, the mountain districts show little or no improvement, whereas the coastal and southern industrialised areas show marked improvements.

The road network is rather poor particularly in the north and central inland areas, while there exists communication by rail for the central points of these districts.

In summary, it seems that in terms of infrastructure the entire country (maybe with the exception of Lisbon) suffers. The mountain districts tend to be at the low end of the continuum, and where improvements have been made they have tended to concentrate in the coastal areas or the industrial developing areas of the south.

In terms of health care, most of the large general hospitals are found in the two major cities of Portugal, Lisbon and Porto. Each district then has at least one or more regional hospitals, and there are a large number of sub-regional hospitals (80% of all hospitals) more or less equally distributed across the districts.

If we look at the number of doctors and the number of hospital beds per 10,000 persons, we see that with the exception of the urban and coastal districts they are rather low, and the mountain districts fall in the lowest or next to lowest category.

Inland districts have the fewest students, and most of them at the primary level. Student/teacher ratios are close to or better than the national average for primary education, higher for secondary, and non-existent for higher education. Similarly, illiteracy is concentrated in the inland section of the country, with the mountain districts having more than one third of their population illiterate.

2.5.5. Problems of the mountain areas of Portugal

The mountain areas of Portugal are faced with a combination of problems not encountered elsewhere in the country. Starting with harsh climatic conditions, the resident population is weakened by migration, and what remains is middle aged of low economic activity, mostly dependent on agriculture. People live dispersed in areas of low agricultural productivity, a situation aggravated by a land ownership structure that makes mechanisation and collective exploitation difficult. Communications with the rest of the country are not well developed. The area has some of the worst conditions in Portugal as to infrastructure and social services which tend to be much better in the urban, coastal or industrial development areas of the south.

./.

(1) See bibl. 5.6.

Most of the problems relating to the north-south, east-inland disequilibrium in Portugal seem to concentrate on the mountain areas. Investment and development priorities, as well as quality of life and infrastructure improvements, have thus far focused on the two large urban centres, the districts surrounding them and along the coast.

2.5.6. Policies and measures

There are no specific policies in terms of the improvement of conditions in the mountain areas of Portugal. What is encouraging is that the new democratic Constitution of 1976 establishes the principles of substantive administrative decentralisation with the creation of administrative regions, which correspond to regional planning entities, each with their own elected representatives. One of the purposes of the administrative regions is the development and implementation of regional plans, the co-ordination of action among municipalities and the direction of public services in the area.

In the recent reorganisation of the Ministry of Internal Administration, five Regional Co-ordinating Committees (Comissoes de Coordenação Regional - CCR) were created, and Technical Assistance Units (Gabinetes de Apoio Técnico - GAT) at the level of the municipality. One of the important functions of the five CCRs - Norte, Centro, Lisboa e Vale do Tejo, Alentejo and Algarve - is to bring together representatives of central, regional and local municipal government and to co-ordinate the actions of the GAT teams.

The regional divisions represented by the five CCRs are not the final administrative divisions of the country. They represent a provisional working arrangement which may later change. But according to this arrangement, the two mountainous areas of Portugal, the Tras-os-Montes and the area around the Cordilheira Central, are found in two different CCRs. In addition to the administrative decentralisation, there is legislation which provides for the increase of municipal revenues and hence greater autonomy of local power.

There is no question that since the new Constitution Portugal has been decentralising and moving to a regionally based system, sensitive to the needs of the population at the level of the municipality and the parish.

This as a first step is very crucial for the correct approach to the problems faced by the mountain communities. Still, what is needed is the organisation of a regional and municipal planning and implementation system that would be responsive to the problems of each area of the country, and especially the mountain regions.

2.6 SPAIN

2.6.1. Geography

The largest part of the Iberian peninsula comprises a plateau, the "Meseta" or "table", which has an average elevation of 600-700 metres and is higher towards the east. The highest mountain ranges are the Pyrenees in the north-east and the Granada in the south, where the Sierra Nevada is the highest peak, exceeding 3500 metres.

The surface of the "Meseta" is broken by a number of smaller mountain ranges with a general east-west direction. They include the Cantabrian mountains in the north and the Sierra Morena in the south. Approximately in the centre of the plateau, the Central Sierras divide it into a southerly basin, from which flow the Tagus and the Guadiana, and a northern one, drained by the Duero and its tributaries.

In the north-east, the plateau rises towards the Iberian mountains, which are succeeded by the large basin of the Ebro valley. Similarly, in the south the Sierra Morena falls steeply to the wide basin of the Guadalquivir in Andalusia.

Along the coast, the low areas are generally narrow, except for the plains of Valencia and Murcia on the east coast and the exist of the Guadalquivir on the Gulf of Cadiz. Spain's Mediterranean shores are mostly broken into a number of gulfs and bays.

The climate of the country is Mediterranean, except for the north and north-west areas, with limited rainfall (23-50 cm yearly). The east coast is affected by a local warm and oppressive wind from the Sahara, the "lleveche", which blows in spring and autumn.

Forests of oaks, pines and beech exist only in the wetter parts of Spain. The other mountains are covered mostly by scrub vegetation - "mattoral" - patches of grass, dwarf bushes, esparto grass, and few trees (evergreen oak, Aleppo pine, ilex, olive trees).

2.6.2. Population

The phenomenon of exodus from the mountain settlements of Spain towards the cities and abroad started mainly in the 1950s but it was accentuated after 1960.

The main reason for this demographic trend was a government policy oriented towards industrial development, coupled with a complete neglect of agriculture and livestock production. This last factor had a decisive effect on the mountain regions, because the harshness of climate, the topography and the lack of infrastructure rendered primary production non-profitable.

A very secondary factor has been the insufficiency of communication with the urban centres, and the lack of health, education and trade facilities in the mountain communities.

Therefore, stopping of the population loss would necessitate both a revitalisation of the local economy and the drastic improvement of local conditions.

2.6.3. Economic and productive structure

The mountain settlements of Spain can be divided into two large categories: the traditionally rich areas like the "corniche" of Cantabria, and those of meagre resources which have experienced the highest loss of population.

Some of these localities have known their greatest development before the Industrial Revolution, due to forestry and livestock. Other areas, specialised at the beginning of the century in some form of extractive industry - like the Sierra de Avacena in the province of Huelva - had a limited development because of the poorness of the environment.

Of these communities, most have retained their past economic activities, but at a very reduced level, due to lack of manpower and inadequate commercialisation of their products; in some cases, local resources, like agriculture derived industry (cheese, meat products etc) livestock, have been altogether abandoned. In some special cases, this was due to reforestation by the government, which resulted in the limitation of grazing lands.

Of the mountain communities that have retained their population, most show similar characteristics: mainly:

- a diversified economy, based on viable agriculture and livestock exploitation;
- proximity to urban centres, which permits to a part of the population seasonal employment in industry to supplement the family income;
- existence of adequate social services.

Tourist development has taken two forms: either winter sports resorts (ski stations have been built in the Pyrenees and the Sierra Nevada); or extensive secondary-residence construction (mainly in the Sierras of Novocerrada and of Guadarrama).

In very few cases (mainly in Jaca and the Pyrenees of Aragon), did this tourist development benefit the local population, through increased employment and income, that could result in retention of the population and improvement of the settlements. Usually, tourist development created independent activities and installations, with little relation to the existing communities: in many cases, tourist facilities proved even antagonistic to the existing settlements, both commercially and through the importation of completely foreign forms of architecture and the excessive use (and abuse) of the natural environment.

2.6.4. Infrastructure and social services

The quality of technical infrastructure and of social services provision varies greatly from area to area. In general, however, the situation in the mountain regions is worse than in other rural areas and much lower than acceptable levels. This is due to the fact that the government under the Franco dictatorship had other priorities, and that the present democratic government cannot solve all of the problems in a short time.

2.6.5 Problems of the mountain areas of Spain

Tourist activities in the form of secondary resort housing, have created the following problems in the mountain regions of Spain:

- change of the urban and architectural character of the traditional settlements;
- very high increase in property prices;
- incompatibility with the local economic base (agriculture, livestock, forestry), with a resulting deterioration of these activities and lowering of incomes;
- disastrous impact on the environment of the large tourist installations and the zoning of extensive forest areas for resort housing, and especially complete change of the character of the landscape, destruction of the original ecosystem and heavy pollution of water, air, etc.

A more limited problem has been created by the replacing of the autochthonous trees in the forests with new, imported species that have caused imbalances in the ecosystem.

These elements, joined to the abandonment of cultivation and livestock production resulting from the demographic exodus, have resulted, especially along the Mediterranean coast, in serious phenomena of erosion and desertification with unknown future consequences.

2.6.6. Policies and measures

Very little emphasis has been placed in Spain on balancing the inequities of life in the mountain regions and in their orderly development.

Spain has a very hierarchical system of planning, with the National Plan, co-ordinating Territorial Directive Plans, followed by General and Special Plans and Planning Norms. This system has had mixed results in its implementation. And in any case, it lacks the flexibility to cope with the diverse problems of the mountain areas.

Their use becomes even more limited, if they are studied within the present economic context (scarcity of state funds), and the political realities (tendency towards greater autonomy).

Although our information on Spain is limited, one has the impression that very little has been done up to now for the mountain communities; and that in the future the tendency will be towards decentralised planning on the local level and towards the backing of flexible, small-scale, local-initiative projects.

./.

3. COMMON PROBLEMS AND POLICIES

Looking at the problems of the mountainous regions along the European side of the Mediterranean and the government policies addressed to them one can discern - through the national specificities - certain common trends. The extent to which these trends are recognised in each country varies; this is also true of the importance and priority given to them. These variations constitute the determining factors of the real policy in each case.

3.1 Patterns and problems

Although not in the same degree of seriousness, the following problems are common to all the countries studied:

- demographic imbalance of the mountain communities, created by sizeable loss of population and the ageing of the remaining part;
- deterioration of the natural environment, in most cases (France, Spain) from the abandonment of cultivation, due to lack of manpower. In other cases, from the over-exploitation of resources like mining (Cyprus, Greece), forestry (Cyprus) and tourist potential (Spain, Italy). The results are desertification, landslides, erosion and, in general, conditions almost impossible to redress. Fire has also been an important factor in the devastation of forests;
- destruction of the cultural heritage, in the form of urban patterns, local architecture, traditional customs and arts, either from abandonment of the communities (Portugal, Greece) or from over-development, especially of tourism (Spain, Italy, Greece);
- difficulty of providing the mountain regions with adequate technical infrastructure and social services, due to the thinness of the population, the geomorphology of the mountain areas and the high costs involved, which cannot be borne by the local communities. In spite of positive government intervention in most cases (especially Italy, France), the funds allocated do not seem sufficient, and the disparities between wealthy lowland areas and poor mountain ones seem to increase.

These are problems found in all mountain areas; however, the areas differ along certain parameters that hinder or facilitate the solution of the problems and that create specific situations. Such parameters are:

- the availability of local resources. Especially, the existence in the mountain zone of suitable lands for cultivation and grazing and water. Other resources are mineral wealth, forests, tourism potential;
- the form of land ownership. Traditionally inhabited mountain areas have usually a pattern of small land-ownership which makes agricultural modernisation almost impossible. In other cases though the existence of extensive public lands permits a more rational and collective exploitation;

- the density and population distribution. Although policies vary from country to country, the existence of a large number of extremely small communities (1) is a negative factor in the development of the mountain area. On the other hand, the concentration of the mountain population in a number of large villages and towns tends to facilitate the provision of services and infrastructure and to favour the growth of economic activities;
- the structure of the wider region and of the country in which the mountain area is included. Thus, the existence of a hierarchy of urban centres, the balanced spread of the population, the proximity of important towns, transportation axes, industrial or tourist poles, are all positive elements for the mountain areas. On the other hand, urban imbalances and the existence of only one or two large cities in the country (as in the case of Greece), tends to create attraction forces that cause an even more rapid erosion of the mountain population; naturally extreme urbanisation on few centres of most of the productive, administrative and social resources of a region or country (Portugal, Greece, the Mezzogiorno in Italy) will result invariably in a serious weakening of the rural areas and the abandonment of the mountain regions.

In Greece, the danger is that, if current regional development policies do not recognise and address the special problems of the mountain areas, they may limit over-concentration in Athens and Thessaloniki, but may create new disparities between the new rapid-development urban centres selected and the mountain areas. This does not seem to be a problem in Portugal, since their system of alleviating regional inequities is very decentralised on the fiscal, administrative and planning levels.

3.2 Policies

Government policies that concern mountain areas differ considerably from country to country, along certain major axes. These are:

- importance placed on mountain development. Some countries have recognised the conditions prevailing in these areas as especially problematic, as well as the need for increased assistance (France, Italy). Other countries have general policies aiming at regional development and the elimination of regional disparities, but not specifically for the mountain regions (Portugal, Greece, Cyprus). Italy is a special case since it has both a policy for the mountain communities and one for eliminating regional disparities between the Mezzogiorno and the north-centre of the country. This approach seems very valid, as we have found that the problems of the mountain areas are further aggravated by regional inequities.

./.

(1) Cyprus, for example, considers every community with a potential of more than 50-60 households as viable.

- measures for the retention of the population. In all countries with specific mountain policies, retention (even growth) of the population is the main aim. The methods that have been used in this respect vary, and their efficacy has not been tested, except in France, where moderate success has been noted. The main approach seems to be the redressing of the economy of the mountain regions through the creation of more and multiple employment opportunities and the increase of local family income. Improving communications and providing technical infrastructure and socio-cultural services is a secondary, but important, approach.
- protecting the physical environment of the mountain. Some countries (Greece, Spain, Cyprus) have neglected this aspect in the past and the results have been catastrophic. Other countries have concrete programmes of natural environment protection and improvement, through the creation of national and regional parks (France), careful zoning (Cyprus) and control of activities, reforestation, terracing and other measures. However, the following statement that refers to one of the countries (Cyprus) seems to apply to most of the others: "... there is considerable legal provision for the protection of the environment, nevertheless it is insufficiently applied and responsibility is fragmented. In addition there is no legal provision regarding landscape protection and aesthetic considerations. Although government is aware of the existing problems relating to environmental conservation, it has so far taken no effective action." (1)
- protecting the cultural heritage. Even less has been done in this field. In a few of the countries, moderate protection exists for the architecture of mountain communities that can be declared legally as "preserved" (Greece). However, little or no care is taken for the other traditional elements, like fairs and festivals, arts and handicrafts, customs, dances, etc.

3.3 Conclusions and recommendations

Although very little data exist for the careful evaluation of programmes and policies concerning the mountain regions of the Mediterranean, certain qualitative conclusions can be drawn from the experience and information available, which perhaps can be useful recommendations for future action in this field. These are mainly the following:

- provision of a decentralised and implementation framework which would allow mountain communities to associate in terms of similarities; produce long- and short-term socio-economic development plans to be implemented locally with maximum citizen participation; provide technical assistance and training; allocate funds according to the seriousness of needs and problems faced; co-ordinate local planning with wider regional and national programmes. The best way to provide such a framework is through the voluntary association of the small mountain communities into larger self-government elected units, with full responsibilities for planning and implementation.

(1) See bibl. 1.3.

- in this context, the importance of flexible and decentralised plans and solutions addressing the specific problems of the mountain communities has to be stressed, as against central government, uniform, widely extensive programmes that prove difficult and costly to implement.
- careful preservation of a hierarchy of settlements in each country. From the large metropolitan urban centre down to the smallest mountain community, the existence of a network of settlements of varying sizes and roles, each properly equipped with the necessary social and technical infrastructure, is absolutely necessary for maintaining a demographic and economic balance. If this network is broken, and some of the larger centres develop abnormally to the expense of the others, then the resulting conditions in the periphery of the country and especially in the mountain regions will be disastrous.
- importance of diversified economic activities and occupation. The tendency should be to develop in a balanced way all the sectors of the mountain economy, and not to allow one activity to grow to the detriment of the others. As development should be primarily to the benefit of the inhabitants of the mountain communities (both present and future), the available local resources should not be over-exploited, especially for economic activities that channel most of the profits outside of the mountain regions, creating at the same time a permanent deterioration of the environment. This is eminently true in respect to tourism and mining, which should both be very carefully controlled.
- breaking of the isolation of the mountain inhabitant and providing accessibility to education, health and care, leisure and culture opportunities. This can be achieved through a combination of better communication facilities (eg organised multi-purpose public transport, television, telecommunications) between the mountain settlements and the neighbouring towns and the creation in the mountain villages of polyvalent public service units, capable of responding flexibly to local needs.

The greatest challenge in the years to come concerning the mountain regions of the Northern Mediterranean and of its major islands will probably be the maintenance of a careful balance among three major elements:

- the rights of local inhabitants to an active and satisfactory life;
- the outside demands on the resources of these regions for a wide variety of people and groups (for tourism, secondary homes, forest products, minerals, etc);
- the conservation of the natural and cultural environment and the reparation of damage already inflicted.

This is a difficult and important challenge that requires sensitisation, study and the mobilisation of both national and international resources. Above all it requires the expression of the people's will.

A P P E N D I X I

MAPS AND TABLES

LIST OF FIGURES AND TABLES

FIGURES

- Fig. 1: Mediterranean
- Fig. 2: France - Mountain areas
- Fig. 3: France - Administrative divisions
- Fig. 4: Greece - Mountain areas
- Fig. 5: Greece - The erosion of the rural population between 1955 and 1975
- Fig. 6: Italy - Mountain areas
- Fig. 7: Portugal - Mountain elevations
- Fig. 8: Portugal - Temperature distribution
- Fig. 9: Portugal - Rain
- Fig. 10: Portugal - Districts
- Fig. 11: Portugal - Population density by municipality, 1970
- Fig. 12: Spain - Mountain areas

TABLES

- Table 1: Greece - Land use of mountain areas
- Table 2: Greece - Significant population data
- Table 3: Greece - Population change and density in mountain areas
- Table 4: Greece - Gross agricultural product (GAP)
- Table 5: Greece - Proposed infrastructure works for mountain areas
- Table 6: Italy - Mountain territory and population
- Table 7: Italy - Mountain (Application of law 3.12.71 No. 1102)
- Table 8: Italy - Population changes 1951-74
- Table 9: Italy - Natural and migratory population movement 1961-71
- Table 10: Italy - Population aged over 60 years per 100 inhabitants below 14 years
- Table 11: Italy - Average number of persons living in mountain municipalities and communities
- Table 12: Italy - Economically active population by sector, mountain community of Lagonegrese
- Table 13: Italy - Mountain communities
- Table 14: Portugal - Population variation 1960-70



Fig. 1

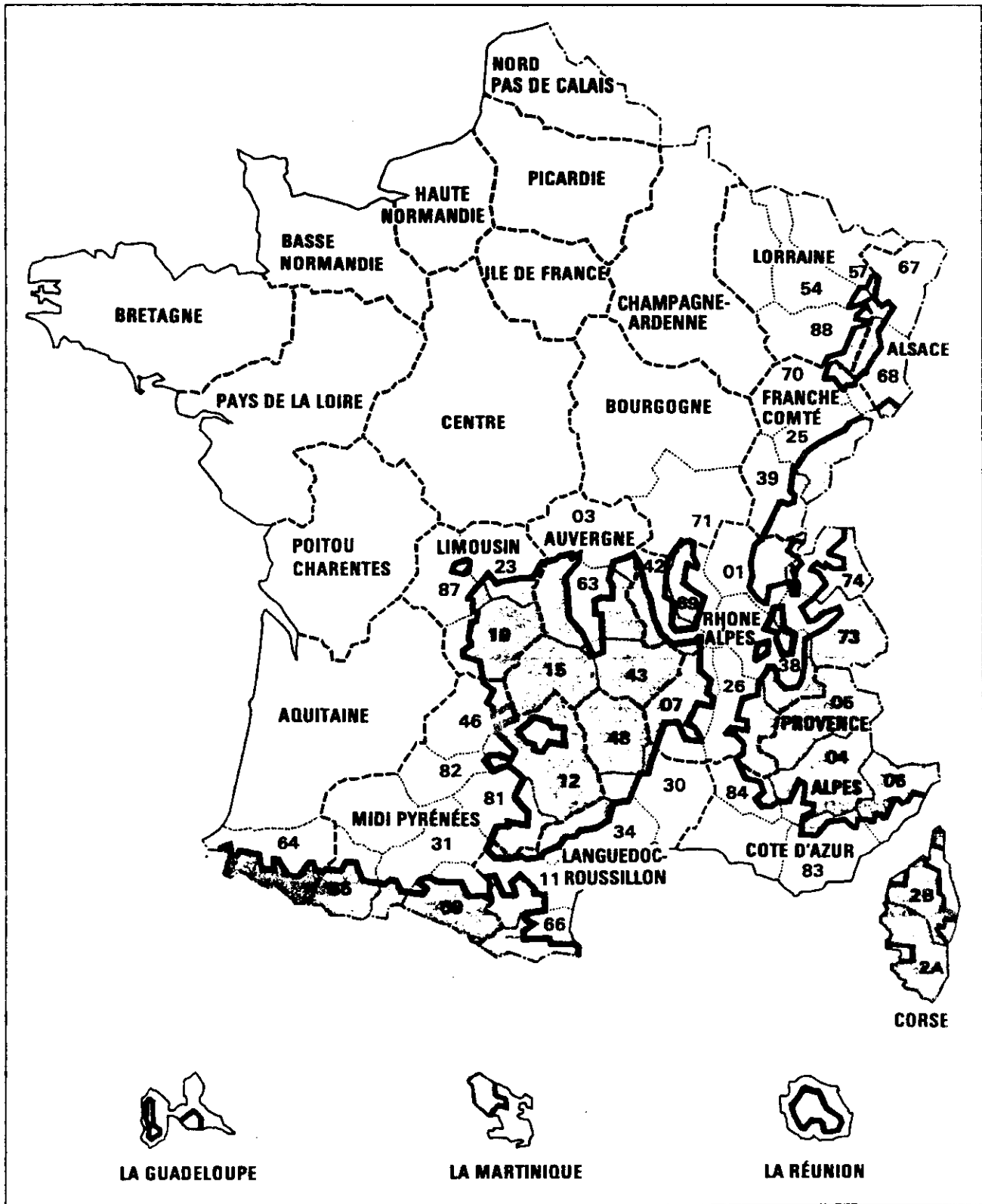
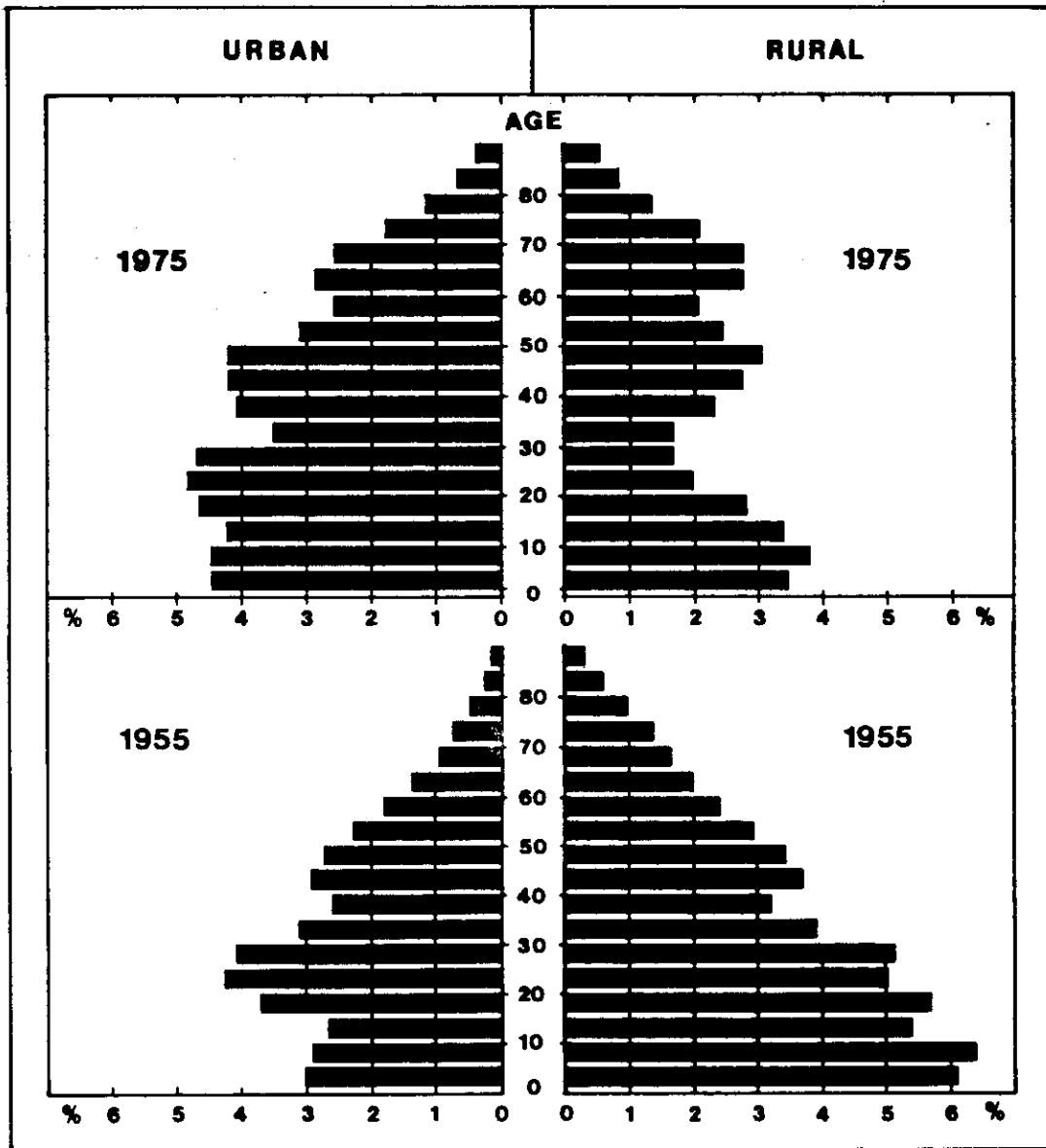


Fig. 3 FRANCE



Fig. 4 GREECE



GREECE

FIG. 5 THE EROSION OF THE RURAL POPULATION BETWEEN 1955 AND 1975

./.

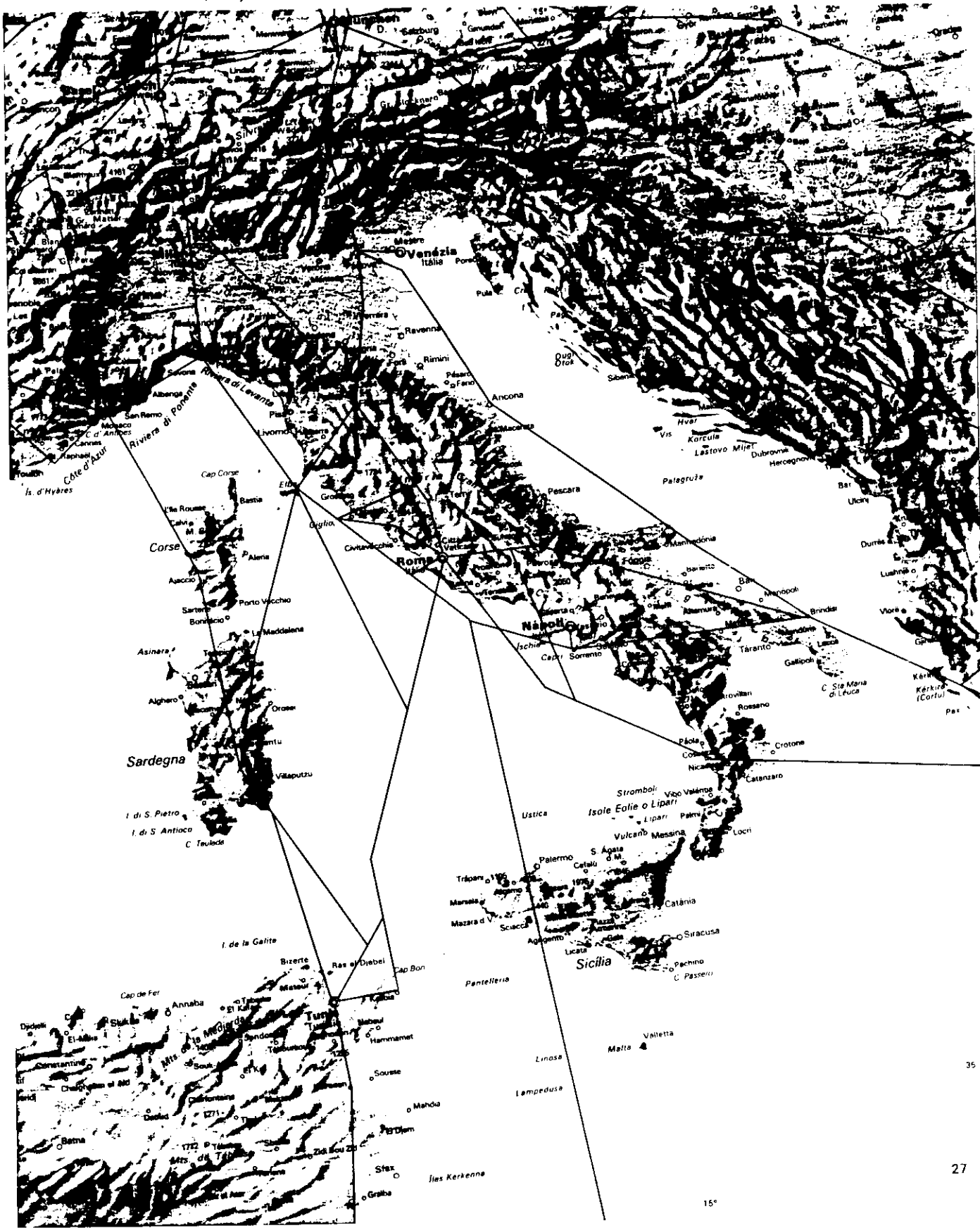


Fig. 6 ITALY

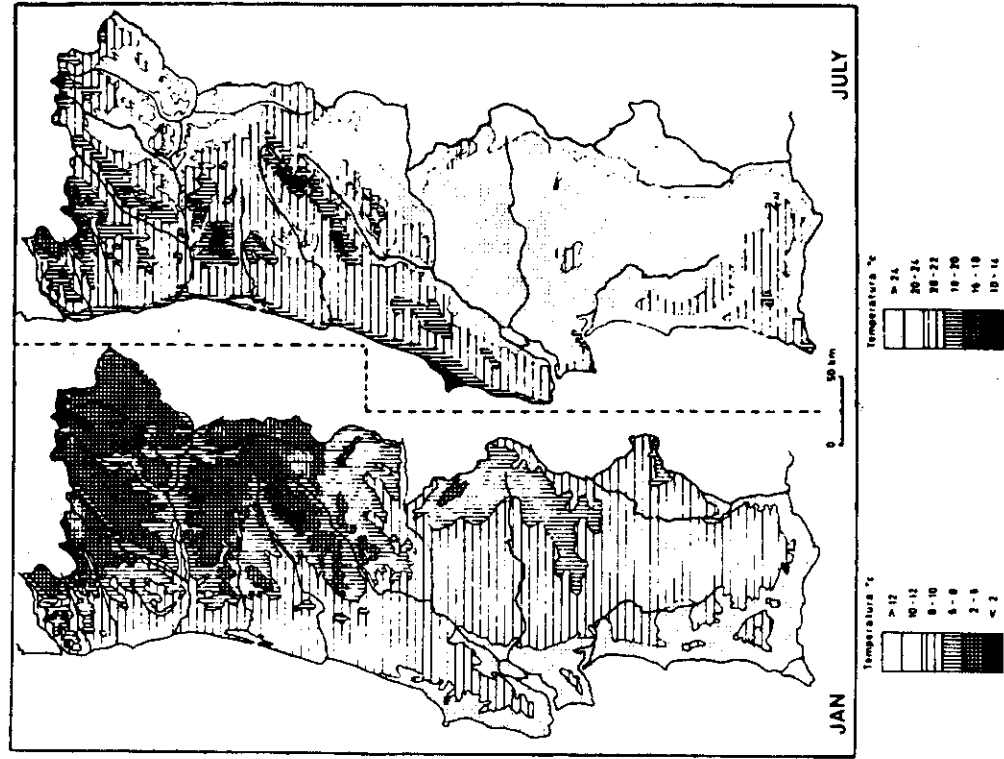


Fig. 8 PORTUGAL, TEMPERATURE DISTRIBUTION

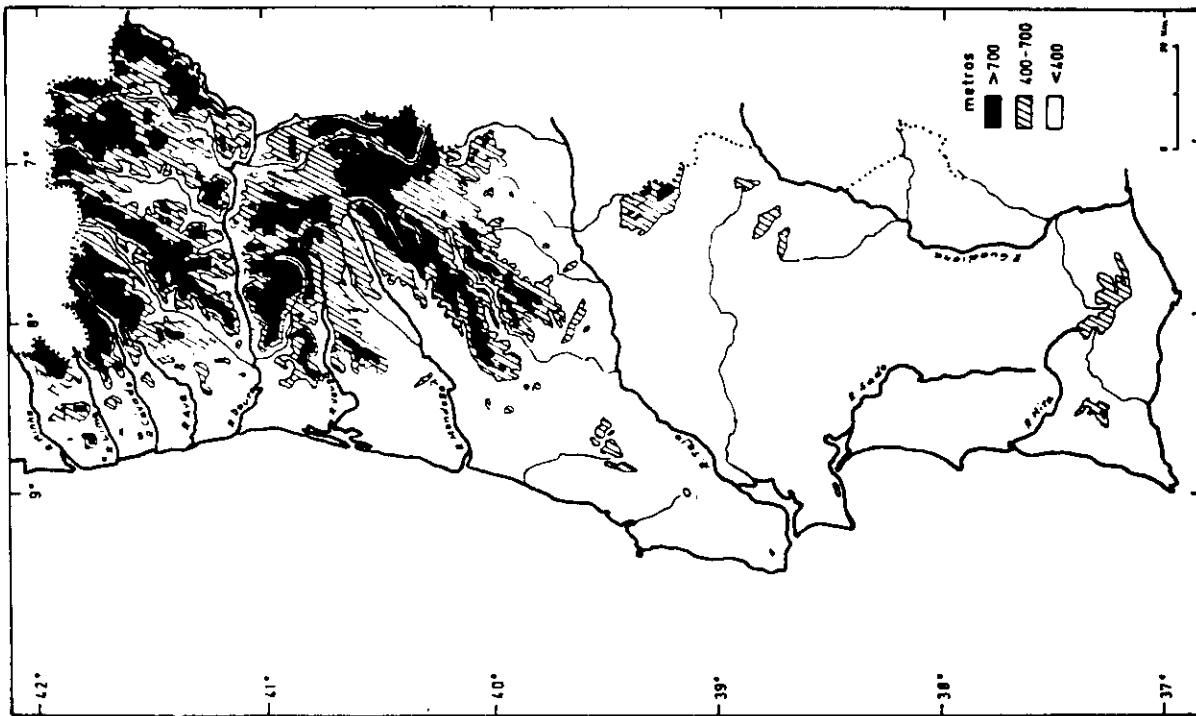


Fig. 7 PORTUGAL, MOUNTAIN ELEVATIONS

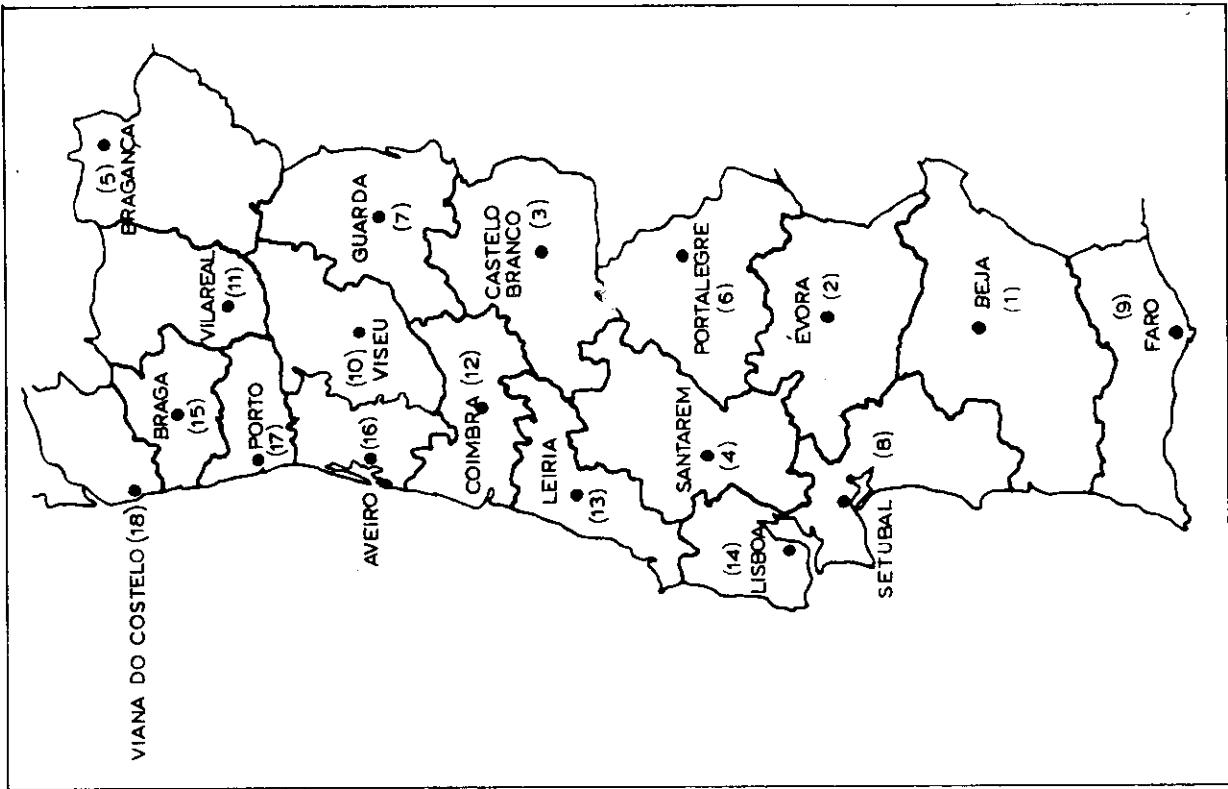


Fig. 10 PORTUGAL. DISTRICTS

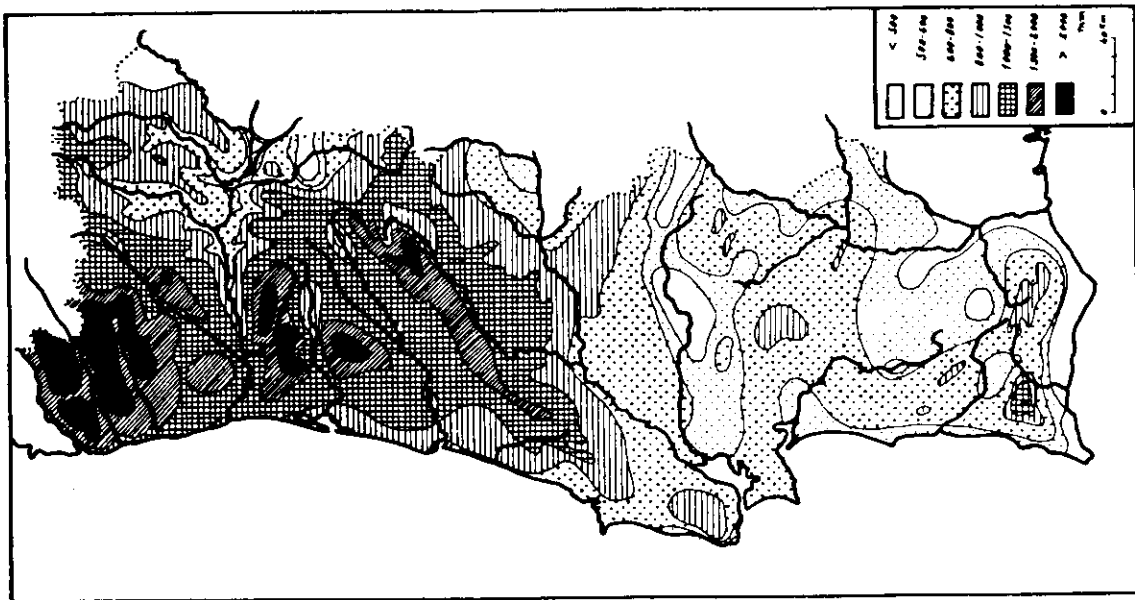
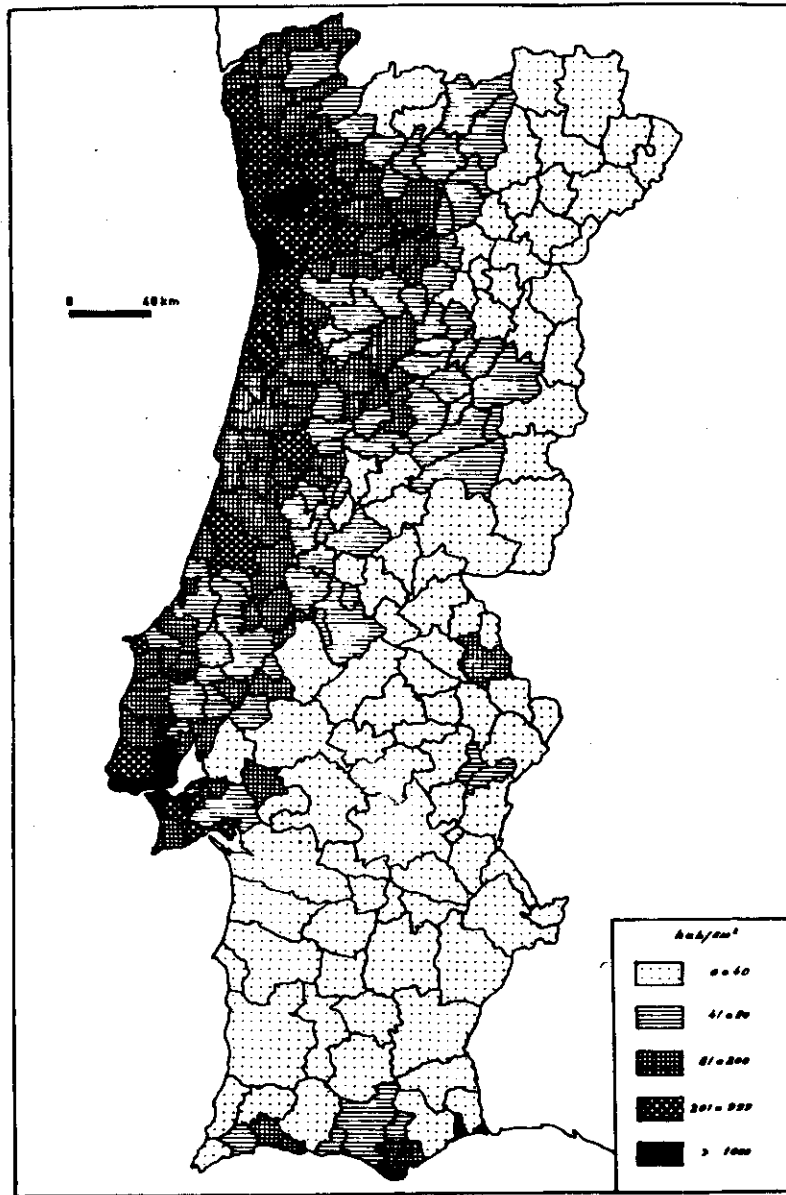


Fig. 9 PORTUGAL. RAIN



**Fig.11 PORTUGAL
POPULATION DENSITY BY MUNICIPALITY, 1970**

./.

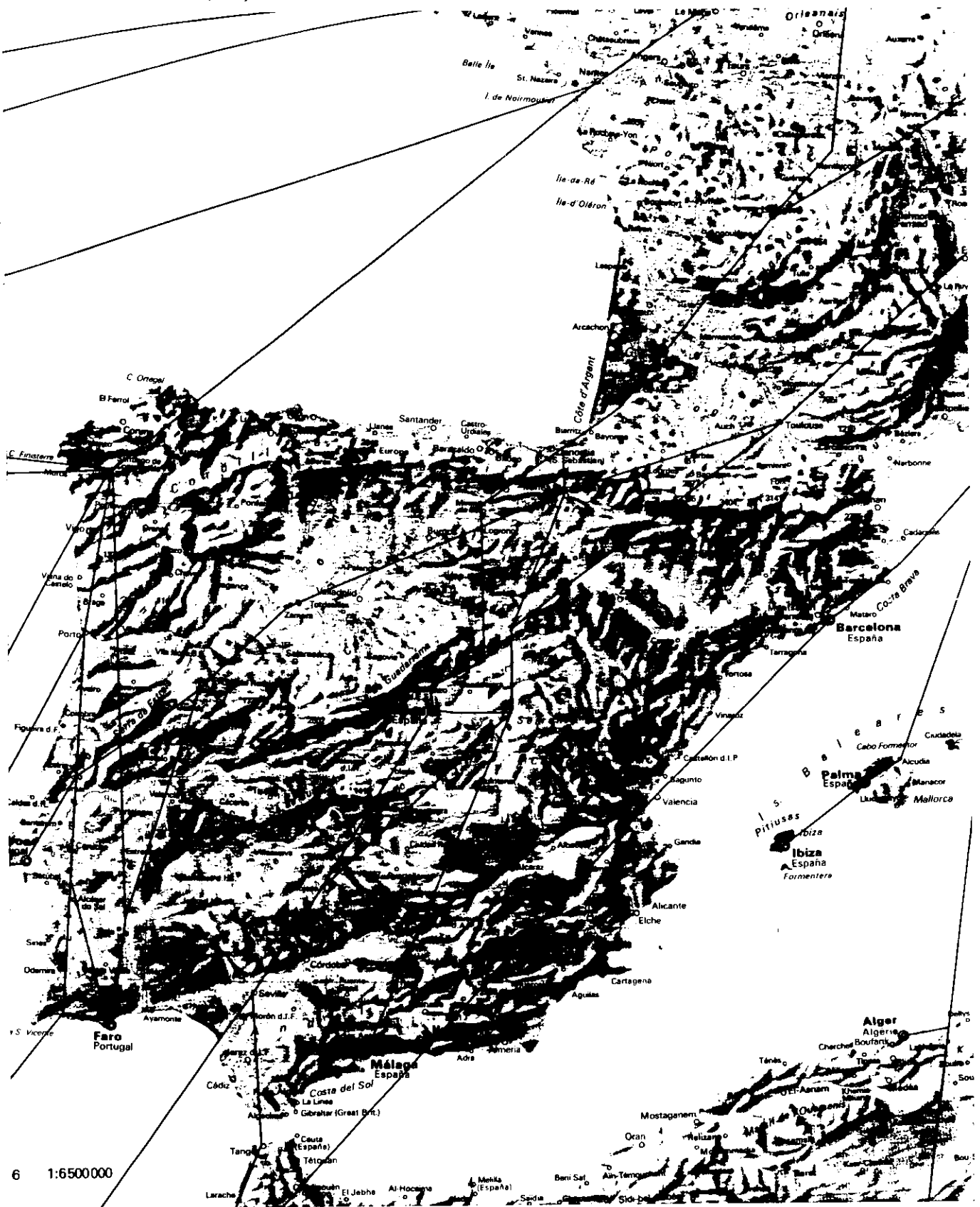


Fig. 12 SPAIN

TABLE 1 : LAND USE OF GREEK MOUNTAIN AREAS

	Total area (Ha)	Cultivated area (Ha)	Grazing area (Ha)	Wooded area (Ha)
East Macedonia and Thrace	842,900	70,100	326,900	405,800
Central and Western Macedonia	1,261,400	193,400	505,100	493,500
Ipiros	801,900	93,900	402,400	245,400
Central Greece	1,093,400	156,300	473,100	392,700
Peloponese and Western Sterea	1,739,000	350,600	830,400	463,700
Attica and Islands	1,357,900	233,900	698,900	302,400
Creete	592,400	178,000	350,100	38,200
<u>Total for mountain areas</u>	7,688,500 (58,3%)	1,276,100 (16,6%)	3,587,000 (46,7%)	2,341,800 (30,5%)
<u>Country total</u>	13,198,980 (100%)	30%	39,9%	22,5%

TABLE 2 : SIGNIFICANT POPULATION DATA - GREECE

	C e n s u s f i g u r e s 1/			Planning estimates 19782/	According to trends 20004/	Gover. policy 20005/	Probable 20006/
	Year	1961	1971				
1. Total of Greece	7,632,801 (100%)	8,388,553 (100%)	8,768,641 (100%)	9,100,000 (100%)	11,500,000 (100%)	11,500,000 (100%)	11,000,000 (100%)
2. Urban 3/	2,879,994 (37.7%)	3,628,105 (43.2%)	4,667,489 (53.2%)				
3. Rural 3/	4,752,807 (62.3%)	4,760,448 (56.8%)	4,101,152 (46.8%)				
4. Athens	1,378,576 (18%)	1,852,709 (22.1%)	2,540,000 (30%)	3,357,726 (36.9%)	6,500,000 (56.5%)	4,300,000 (37.4%)	5,000,000 (45.5%)
5. Thessaloniki	302,635 (4%)	380,640 (4.5%)	557,360 (6.3%)	720,000 (7.9%)	2,000,000 (17.4%)	1,100,000 (9.6%)	1,500,000 (13.6%)
6. Other rapid development centers (RDC) 7/	370,355 (4.8%)	446,927 (5.3%)	515,937 (5.9%)	610,000 (6.7%)	930,000 (8.1%)	1,750,000 (15.2%)	1,510,000 (13.7%)
7. Total of Athens Thessaloniki and RDC	2,051,576 (26.8%)	2,680,284 (31.9%)	3,613,538 (41.2%)	4,687,726 (51.5%)	9,430,000 (82%)	7,150,000 (62.2%)	8,010,000 (72.2%)
8. Rest of Country	5,581,225 (73.2%)	5,708,269 (68.1%)	5,155,103 (58.8%)	4,412,274 (48.5%)	2,070,000 (18%)	4,350,000 (27.8%)	2,990,000 (27.2%)

N O T E S : 1/ Official Greek Census every decade

2/ Estimated by planning consultants

3/ Standard Census definitions

4/ These are Gover. estimates, if no planning measured are taken

5/ According to Gover. policy, established in March 1979

6/ Our own estimates, based on probable Gover. interventions

7/ Cavala, Yannena, Kozani - Ptolemais, Volos - Larissa, Patras - Aighion, Heraclion

TABLE 3 : POPULATION CHANGE AND DENSITY IN GREEK MOUNTAIN AREAS.

	1960	1970	Change (%)	1960-1970	Number of mountain communities	Average No of persons by mountain community
East Macedonia and Thrace	152	117	-23	131	893	
Central and Western Macedonia	254	205	-19	367	559	
Ipiros	234	180	-23	524	344	
Central Greece	245	194	-21	393	494	
Peloponese and Western Sterea	453	350	-23	986	355	
Attica and Islands	433	376	-13	509	739	
Creete	198	165	-17	363	455	
TOTAL	1970	1587	-19	3273		

TABLE 4 : GROSS AGRICULTURAL PRODUCT (GAP) - GREECE

	Mountain areas (in billion drs.)	Number of mountain communities
East Macedonia and Thrace	2,072	131
Central and Western Macedonia	4,917	367
Ipiros	3,383	524
Central Greece	4,327	393
Peloponese and Western Sterea	10,464	986
Attica and Islands	6,043	509
Crete	7,713	363
TOTAL	38,919	3,273
	22%	54%
Country total (G.D.P)	173,5	606,1

TABLE 5 : PROPOSED INFRASTRUCTURE WORKS FOR GREEK MOUNTAIN AREAS

Type of work	Number of communities affected	% of total mountain communities affected
Roads connecting settlements	1,174	36
Rural roads	3,103	95
Electrification	666	20
Water systems	1,837	56
Sewer systems	461	14
Improvement of grazinglands	1,982	61
Drainage	1,697	52
Agro-tourism	637	19
Total No of mountain communities	3,273	

TABLE 6 : ITALIAN MOUNTAIN TERRITORY AND POPULATION

	Surface (Ha)			Population (1961)		
	Total	Mountain	%	Total	Mountain	%
North	11,984,482	6,149,363	51%	22,660,717	3,528,849	16%
Center	5,894,073	2,776,399	48%	9,387,351	1,682,656	18%
South	7,324,171	4,082,103	56%	12,435,638	3,114,185	25%
Islands	4,979,719	2,648,766	53%	6,140,363	1,314,308	21%
Total	30,122,445	15,656,631		50,624,069	9,639,998	
		51.98%			19.04%	

TABLE 7 : THE ITALIAN MOUNTAIN (APPLICATION OF LAW 3.12.71 No 1102)

Region	Mountain Municipalities No	Mountain Communities No	Mountain Surfaces Ha	Mountain Popu- lation 1971	Mountain Popu- lation 1961	Variation	%
Piemonte	484	44	1,231,314	609,473	601,561	+ 7,912	+ 1.31
Valle d'Aosta	74	7	325,555	75,856	73,976	+ 1,880	+ 2.74
Liguria	182	19	433,522	328,053	333,426	- 5,373	- 1.61
Lombardia	504	27	979,985	856,685	824,123	+32,562	+ 3.95
Trentino- Aldo Adige	340	16	1,354,510	690,827	620,297	+70,530	+11.37
Veneto	158	18	591,297	397,374	421,175	-23,801	- 5.65
Friuli- Venezia Giulia	101	7	440,355	187,033	213,509	-26,476	-12.40
Emilia-Romagna	123	14	853,319	355,949	440,782	-84,833	-19.25
Toscana	157	24	1,084,211	547,410	630,134	-82,724	-13.13
Marche	118	12	524,534	263,744	304,970	-41,226	-13.52
Umbria	62	9	469,101	193,014	215,671	-22,657	-10.51
Lazio	234	17	703,341	488,845	531,881	-43,036	- 8.09
Abruzzi	211	14	789,310	428,946	472,198	-43,252	- 9.16
Molise	123	10	348,485	209,888	250,398	-40,510	-16.18
Campania	291	20	762,540	717,142	793,562	-76,420	- 9.63
Puglia	60	5	484,492	249,199	307,901	-58,702	-19.06
Basilicata	114	13	713,460	421,375	454,359	-32,984	- 7.26
Calabria	284	24	990,690	742,001	835,767	-93,766	-11.22
Sicilia	178	16	918,650	564,756	620,878	-56,122	- 9.04
Sardegna	210	15	1,731,698	678,810	693,430	-14,620	- 2.11

Totals:

Regions	20
Mountain Municipalities (No)	4,008
Mountain Communities (No)	331
Mountain Surfaces (Ha)	15,730,569
Mountain Population (1971)	9,006,380
Mountain Population (1961)	9,639,998
Variation	- 663,618
%	- 6.57

TABLE 8 : POPULATION CHANGES 1951 - 1974 - ITALY

	1951	1961	1971	1974	Percent change			
					1951-61	1961-71	1951-71	1971-74
Mountain Community No. 1	100,378	77,690	63,284	63,524	-22.6	-18.5	-37.0	+0.4
PIC Bologna	466,683	575,798	668,909	682,839	+23.4	+16.2	+43.3	+2.1
PIC Imola	68,962	7,497	74,236	75,677	+4.1	+3.8	+7.6	+1.9
Lowlands	127,884	116,489	112,415	113,395	-8.9	-3.5	-12.1	+0.9
Total	763,907	841,474	918,844	935,435	+10.2	+9.2	+20.3	+1.8

TABLE 9 : NATURAL AND MIGRATORY POPULATION MOVEMENT 1961 - 1971 - ITALY

	Natural Movement			Migratory Movement	Average difference per 1000 inhab.	
	Births	Deaths	Natural Increase		Natural Movement	Migratory Movement
Mountains	12,847	8,639	+ 4,208	- 26,896	+ 4.7	-30.2
PIC Bologna	57,400	49,698	+ 7,702	+ 101,413	+ 1.5	+19.5
PIC Imola	8,819	6,926	+ 1,893	+ 642	+ 2.7	+ 0.9
Lowlands	15,698	11,497	+ 4,201	- 15,596	+ 3.4	-12.8
Total	94,764	76,760	+ 18,004	+ 59,563	+ 2.2	+ 7.4

TABLE 10: POPULATION AGED OVER 60 YEARS PER 100 INHABITANTS BELOW 14 YEARS - ITALY

	1951	1961	1971
Mountains	54.2	85.6	137.4
PIC Bologna	84.2	105.6	109.1
PIC Imola	71.1	100.2	117.1
Lowlands	63.3	88.5	114.0
Total	74.1	100.3	112.2

TABLE 11 : AVERAGE NUMBER OF PERSONS LIVING IN MOUNTAIN MUNICIPALITIES AND COMMUNITIES - ITALY

	Average size of Mountain Municipality	Average size of Mountain Community	Average No. of Municipalities per Mountain Community	Population Density People/Ha
Piemonte	1,287	15,192	11.8	
Valle d'Aosta	1,025	10,836	10.6	
Liguria	1,785	17,285	9.7	
Lombardia	1,857	35,146	18.9	
Trentino-Alto Adige	2,483	46,771	18.8	
Veneto	2,521	22,131	8.8	
Friuli-Venezia Giulia	1,866	19,597	10.0	
Emilia Romagna	2,870	27,380	9.5	
Toscana	3,509	23,798	6.8	
Marche	2,345	24,448	10.0	
Umbria	3,113	21,449	6.8	
Lazio	2,085	28,830	13.8	
Abruzzo	1,991	23,159	11.6	
Molise	1,992	24,505	12.3	
Campania	2,453	30,254	12.3	
Puglia	4,115	50,206	12.2	
Basilicata	3,378	29,881	8.8	
Calabria	2,640	29,883	11.3	
Sicilia	3,125	38,124	12.2	
Sardegna	3,158	28,421	9.0	
Total	2,318	26,637	11.5	0.59

TABLE 12 : ECONOMICALLY ACTIVE POPULATION BY SECTOR-- MOUNTAIN
COMMUNITY OF LAGONEGRESE - ITALY

Sector	1951		1961		1971		% Change 1961-71
	No.	%	No.	%	No.	%	
Agriculture	15,083	66	8,130	42	4,476	27	- 45%
Industry	4,704	21	7,909	40	7,759	47	- 2%
Tertiary	2,938	13	3,485	18	4,250	26	+ 18%
Total	22,725	100	19,524	100	16,485	100	- 16%

Source: Italian Statistical Service ISTAT (General Population
Censuses Nos. IX - X - XI)

TABLE 13 : ITALIAN MOUNTAIN COMMUNITIES

Region	Mountain Communities No.	Mountain Municipalities No.	Mountain Surface Area Ha.	Mountain Population No.
Piemonte	45	531	1,315,886	683,633
Valle d'Aosta	7	74	325,555	75,856
Liguria	19	184	435,470	328,421
Lombardia	28	530	1,009,180	984,114
Trentino- Alto Adige	18	339	1,362,349	841,886
Veneto	18	158	591,297	398,363
Friuli- Venezia Giulia	10	105	447,886	195,969
Emilia Romagna	13	124	853,232	335,940
Toscana	23	156	1,086,835	547,363
Marche	12	120	542,039	281,380
Umbria	9	62	469,101	193,038
Lazio	17	235	703,683	490,115
Abruzzo	19	221	803,666	440,017
Molise	10	123	349,151	245,053
Campania	24	296	765,354	726,033
Puglia	5	61	474,809	251,032
Basilicata	13	115	713,460	388,454
Calabria	25	283	991,020	747,086
Sicilia	15	183	928,791	571,867
Sardegna	25	225	1,791,579	710,517
Total	355	4,079	15,961,077	9,456,197

TABLE 14 : POPULATION VARIATION 1960 - 1970 - PORTUGAL

	Population	Variation	
	1970	No	%
Continental Portugal	7,921,895	-114,284	- 1
Aveiro	546,457	- 24,442	- 5
Beja	202,193	- 66,718	-25
Braga	617,063	23,476	4
Bragança	176,660	- 53,600	-23
Castelo Branco	251,851	- 58,894	-19
Coimbra	396,329	- 37,247	- 9
Evora	176,044	- 39,142	-18
Faro	266,621	- 44,681	-14
Guarda	212,191	- 64,279	-22
Leiria	382,631	- 17,530	- 4
Lisboa	1,611,887	223,525	16
Portalegre	145,242	- 38,599	-21
Porto	1,314,794	123,476	10
Santarém	435,344	- 26,777	- 6
Setúbal	464,218	89,156	24
Viana do Castelo	250,233	- 25, 030	- 9
Vila Real	264,503	- 58,141	-18
Viseu	409,753	- 67,715	-14
Islands	525,895		
Graciosa	6,970	- 1,699	-20
S. Jorge	12,540	- 3,355	-21
Terceira	63,950	- 7,660	-11
Corvo	445	- 236	-35
Faial	16,035	- 4,246	-21
Flores	5,495	- 1,088	-17
Pico	17,625	- 4,212	-19
Sao Miguel	146,345	- 22,346	-13
Santa Maria	9,380	- 3,853	-29
Madeira	243,580	- 21,852	- 8
Porto Santo	3,730	225	6
Portugal	8,447,790		

A P P E N D I X I I

BIBLIOGRAPHY

Below are given the data on the most important books and reports used as sources for the chapters on the mountain areas of individual countries. They were supplemented by other general works on the geography, the economy, the social characteristics of the European Mediterranean countries.

1. CYPRUS

- 1.1 "Development of mountain resorts", Department of Town Planning and Housing, Nicosia 1977 (in Greek).
- 1.2 "Régions rurales de Chypre posant des problèmes", a report of the Cypriot delegation to the European Conference of Ministers responsible for Regional Planning, Strasbourg, 21 March 1978.
- 1.3 "Reply to the questionnaire on non-Alpine Regions of the Mediterranean", Department of Town Planning and Housing, Ministry of the Interior, Nicosia, December 1980.

2. FRANCE

- 2.1 "Schéma d'orientation et d'aménagement du massif des Alpes du Sud", Commissaire à l'Aménagement de la Montagne: Alpes - Jura - Vosges, Délégation à l'Aménagement du Territoire et à l'Action Régionale, France, March 1977.
- 2.2 "Une Politique pour la Montagne", Premier Ministre, Service d'Information et de Diffusion, Paris, May 1980.
- 2.3 "Tableau synoptique de la politique de la Montagne", M P Rambeaud, Grenoble, May 1980.

3. GREECE

- 3.1 "Géographie humaine de la Grèce", Bernard Kayser, Presses Universitaires de France, Paris, 1964.
- 3.2 "Economic and Social Atlas of Greece", D Kayser and K Thompson, National Statistical Service of Greece etc, Athens, 1964 (in Greek, English, French).
- 3.3 "Regional Development", vol 10 and "Regional Development Policies", vol 15 of the 1975-80 Development Plan, Centre of Planning and Economic Studies (KEPE), Athens, 1976 (in Greek).
- 3.4 "Statistical Yearbook of Greece, 1979", National Statistical Service of Greece, Athens, 1980 (in Greek).
- 3.5 "Greek Agriculture 1958-78", Ministry of Agriculture, Athens, 1980.

3.6 "The population of Greece in the second half of the 20th century", Prof. Valaoras, National Statistical Service of Greece, Athens, 1980 (in Greek, English summary).

3.7 "Greece, urban growth in the '80s", a report for OECD Thymio Papayannis, Athens, 1980.

4. ITALY

4.1 "La Comunità Montana", the new law on the development of the mountain areas (law 3.12.71 No. 1102), UNCEM, Rome, December, 1971 (in Italian).

4.2 "Le zone particolarmente depresse nella politica per il Mezzogiorno", SVIMEZ (Associazione per lo sviluppo dell' industria nel Mezzogiorno), Salvatore Cafiero, Rome, 1973 (in Italian).

4.3 "Le comunità Montane", Unione Nazionale Comuni Comunità Enti Montani, Rome, 1977.

4.4 "Comunità montana Apennino Bolognese No. 1. Piano polienale di sviluppo economico sociale 1976-80" UNCEM, Unione Nazionale Comuni Comunità Enti Montani, Rome, 1977 (in Italian).

4.5 "Comunità montana del Lagonegrese, Piano di sviluppo economico e sociale", UNCEM, Rome, 1978 (in Italian).

4.6 "Twenty-five years of special action for the development of Southern Italy", by Gisèle Podbielski, SVIMEZ, Rome, 1978.

5. PORTUGAL

5.1 "Actions d'aménagement du territoire Portugais envisageant la sauvegarde des valeurs rurales", A V de Lima, A H Gonçalves and F de Azevedo, for the Council of Europe, Grenada, 1977.

5.2 "Portugal en mapas e números", Jorge Gispar, Livros Horizonte, Lisbon, 1978 (in Portuguese).

5.3 "Agriculture in the northern region of Portugal", Ministry of Internal Administration, Portugal, March 1978.

5.4 "Indice dos trabalhos elaborados", Ministry of Internal Administration, Porto, December 1979 (in Portuguese).

5.5 "Le développement du Portugal", a report for the European Communities, 1979.

5.6 "Portugal, urban growth in the '80s", a report for OECD by Jorge Gispar, unpublished, December 1979.

6. SPAIN

6.1 "Réponses au questionnaire de l'étude des régions montagneuses non-Alpines de l'Europe Méditerranéenne", Service de l'Urbanisme, Madrid, December 1979.

DOCUMENTS PUBLISHED IN THE STUDY SERIES
"EUROPEAN REGIONAL PLANNING"
1976-1980

Study n°

1. Co-ordination of planning in frontier regions -
- A case study,
prepared by Martine ARNOLD (1977)
2. Theories and methods of forecasting,
prepared by Claude LACOUR and Colette DURAND (1977)
3. Outline of a concept of European regional policy - Pilot study,
prepared by Klaus R. KUNZMANN (1977)
4. Reconciliation of regional planning and transport planning in a
European policy,
prepared by M. ROTACH (1977)
5. Terminology of regional planning - Pilot study,
prepared by J.S. WOODFORD (1977)
6. Possibilities of using automated cartography,
prepared by H. BERNATH (1977)
7. The objectives of european planning,
prepared by ERIPLAN (1977)
8. Harmonisation of regional plans in frontier regions,
prepared by Viktor Frhr. von MALCHUS (1977)
9. Renewing Europe's inner cities,
prepared by Graeme SHANKLAND (1978)
10. The effect of increased tertiarisation of central urban areas and
policies to control it,
prepared by N. LICHFIELD (1978)
11. Seminar on "Territorial planning and long-range forecasting in Europe
(Report of the Seminar 28-29 November 1977) (1978)
12. The effect of changing demographic patterns and structures on urban
and regional planning,
prepared by Paul DREWE (1978)
13. The effect of transport on regional planning in Europe
(Report of the Seminar 21-23 November 1977) (1978)
14. The use of long-range forecasting techniques and projections for the
definition of a European regional planning policy,
prepared by the "Association Internationale Futuribles" (1978)

15. Communication axes and balanced regional development,
prepared by Etienne JULLIARD (1978)
16. Long-range forecasting and regional disparities in Europe,
prepared by Jacques ROBERT (1978)
17. The scope for using automated cartography in regional planning,
prepared by Sylvie RIMBERT (1978)
18. The place of the peripheral regions in a European concept of
regional planning,
prepared by Georges PIERRET (1978)
19. Bilingual glossary of terms related to urban and regional planning,
prepared by Jacques ROBERT (RESEAU) (1978)
20. The function of alpine regions in European regional planning,
prepared by W. DANZ (1978)
21. The supply and production of energy in frontier areas within the
countries of the Council of Europe,
prepared by Jul DIEDRICH (1979)
22. Balanced regional development,
prepared by M. AHRENS (in preparation)
23. Definition and measurement of the factors that cause urban
expansion and their influence on each other (1st part - 2nd part, see n° 30)
prepared by Aldo CUZZER (1979)
24. European urban renewal in action,
prepared by Graeme SHANKLAND (1979)
25. The impact of international economic change on development trends in
Europe's regions,
prepared by Annette ROBERT-MULLER and Jacques ROBERT (1979)
26. Interrelations of systems analysis, long-range forecasting and regional
development with special reference to the Mediterranean area,
prepared by Bruno GRASSETTI (in preparation)
27. Towards the geo-economic recognition of a second Europe,
prepared by Jacques BUY (1979)
28. European Prognoses on regional development - Tendencies of population
and employment development (1974-1990) in the countries of the European
Conference of Ministers responsible for regional planning,
prepared by PROGNOZ (1979)
29. Reviving Rural Europe,
prepared by Graham MOSS (1980)
30. Definition and measurement of the factors that cause urban expansion
and their influence on each other (2nd part),
prepared by Aldo CUZZER and Paolo AVARELLO (1979)
31. The Pyrenees ; their role in European integration and the requirements
of transfrontier co-operation,
prepared by Jacques ROBERT (1980)

32. Round Table : European Regional Planning concept,
(Report of the 1st Round Table, Strasbourg, 17-18 December 1979)
(1980)
33. Towards a European Regional Planning Concept,
prepared by the "Association Internationale Futuribles",
(Jean-Louis CEPPE, Hugues de JOUVENEL and Carole MEDRINAL) (in preparation)
34. Transport policies and new regional planning requirements,
prepared by A. LAUDENBACH
35. Mountain regions of the European mediterranean countries -
planning problems and policies,
prepared by T. PAPAYANNIS
36. Rural regions in Scandinavia,
prepared by M. HAMMARBERG
37. Long-range forecasting and regional planning : methodological criteria,
European and Mediterranean scenarios,
prepared by F. FIORELLI (1981) (in preparation)
38. Preparation of a European Regional Planning concept -
Analysis and description of guidelines for a European regional planning concept ;
prepared by Klaus KUNZMANN/Gerd ROJAHN
(1981)

N.B. These studies are published in limited numbers and distributed
subject to availability at :

COUNCIL OF EUROPE
Division for Regional Planning,
Monuments and Sites
F - 67006 STRASBOURG