



# Naturopa

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# Naturopa

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Editor responsible:  
Ing. Hayo H. Hoekstra

Conception and editing: Christian Meyer

Special adviser for this issue:  
Dr. Werner Bätzing  
Institute of Geography  
Bern University  
CH-3012 Bern

Production: Argrafica Silva s.r.l.  
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## Tourism and environment

The Bulgarian capital, Sofia, is the venue chosen for the third "Tourism and Environment" Colloquy: it will be held on 5 and 6 October of this year.

In this way the Centre Naturopa will be continuing its series of information meetings on tourism, an activity whose impact on the natural environment is increasing. For its part, the Steering Committee for the Conservation and Management of the Environment and Natural Habitats, the intergovernmental body, is this year embarking on a series of studies on this theme from a technical angle.

Central to the theme of the Sofia Colloquy is tourism in mountain areas: mountains constitute a unique, attractive and extremely varied environment and a place of safety for a large number of representatives of Europe's flora and fauna. That environment is also endangered by the forces of nature itself and, of course, by human activity. Even at high altitudes, the harmonious relationship

between mankind and nature has been broken. People desert the mountains in search of an easier livelihood elsewhere, returning to the same spots for relaxation, sport and recreation. Its concern to help safeguard this rich and attractive component of the natural world and to support the cause of sustainable development and the rational use of these natural resources, is what prompted the Centre Naturopa to organise this colloquy and to devote the current issue of the magazine Naturopa to the mountains of Europe.

A fourth colloquy will be held in Poland in 1994, when the theme will be forests.

The next number of Naturopa will discuss biological diversity, with particular emphasis on the conservation of wild progenitors of cultivated species, a subject which the Council of Europe is currently addressing.

H.H.H.

## Editorial



The Balkans represent a vast mountainous universe with a natural environment very similar to that of the Alps, the Apennines and the Carpathians, but which also has its own special features. The proximity of Asia has enriched its fauna and flora, but it is the species and populations typical of the Balkans alone that make it exceptional. There are more endemic species here than in any other region of Europe.

The Stara planina or the real Balkan, which gave its name to the whole of the peninsula, along with the ancient Rila massif and the Rhodopes, are all situated entirely within the borders of Bulgaria. These two mountains are home to thousands of animal and plant species. The effects of man on nature go back to the prehistoric era and numerous traces of destructive processes from antiquity onwards can still be found there today. In the Bulgarian countryside, nature has been left alone and the ecosystems' natural character has been preserved right to the present day over a large area of the mountainous territory. Nevertheless, however mighty this mountain kingdom may be, it remains acutely vulnerable to human activities. If it is not protected, it will go down in history as another man-made major disaster. How much Europe would lose if we allowed roads, ski lifts and pistes to criss-cross mountain slopes; if buildings sprang up at the foot of summits; if primary forests were replaced by arable land; if bears and wolves were driven away!

The considerable altitude of the Bulgarian mountains means that they are home to the counterparts to a variety of biotopes that are characteristic of different latitudes, ranging from the Mediterranean to the Arctic polar circle. At the foot of the Pirine, for example, there is an oasis of Mediterranean sclerophyllous vegetation that leads into forests of broad-leaved trees typical of the Balkans and central Europe, followed by coniferous forests, an extraordinary mix of species characteristic of the taiga such as the spruce

and species endemic to the Balkans such as the *Pinus peuce*. Coniferous bushes and Siberian junipers grow above the forests, with rocky Alpine meadows dotted with small glaciers at the summits and peaks.

Mountain conservation in Bulgaria dates from the last century. The first reserve was, however, only proclaimed 60 years ago. One year later, in 1934, the Balkans National Park (Vitocha Park) was created and the nature conservation Act was passed in 1936. Despite such beginnings, until 1977 national parks accounted for only 1% of national territory. The network of nature reserves expan-

altitude run to 2,000 m. There are between 1,700 and 1,850 higher plant species and between 170 and 200 species of vertebrates. Out of the 50 protected areas in Bulgaria on the United Nations' list of national parks, 40 are in the mountains.

In 1995, Europe is set to celebrate European Nature Conservation Year. The same year, Bulgaria will host the Conference of Council of Europe Environment Ministers. This prestigious forum obliges me to undertake to achieve significant results in the sphere of wildlife conservation, despite the obstacles. Adopting a law on protected areas, drafting a law to safeguard biological diversity, setting up a national nature conservation agency and ensuring the proper modern management of reserves and national parks, devising the national strategy to protect biological resources, safeguarding threatened species and reintroducing species that have disappeared are just some of the objectives we have set ourselves. We need to pool our efforts to create a large park in the western part of the Rhodopes, which would be a marvellous gift to the nation as well as to united Europe in the year its nature is celebrated. I know that relations between Bulgarian ecologists and the Centre Naturopa go back to the 1960s. News reached Bulgaria thanks to the marvellous Naturopa magazine. I believe its role as an intermediary will continue and will help make Bulgaria's natural heritage dear to all Europeans.

Valentin Bossevski  
Bulgarian Environment Minister



ded rapidly following the creation of a nature conservation committee - subsequently replaced by the present Environment Ministry - and currently covers 3.5% of national territory. The country's two largest protected areas, the central Balkan (73 000 ha) and Rila (108 000 ha) National Parks, were created in 1991 and 1992 respectively. Here, as in the Pirine National Park, variations in





C. Grundsten (3)



▲ In Swedish Lapland  
◀ Triglav National Park (Slovenia)  
▼ Puertos de Beseits (Spain)



## What future for our mountains?

Werner Bätzing

In the more favoured, densely populated regions and the major conurbations of Europe, the environment has been seriously damaged in the 19th and 20th centuries. In the last 30 years or so, mountain areas have taken on a new importance in Europe. Their unspoilt landscapes serve as recreational areas for city-dwellers and their ecological diversity compensates for the impoverishment of urban centres. Without mountain areas, many European conurbations would no longer be viable today. The upheavals in Eastern Europe and the dismantling of the "Iron Curtain" now put the great mountain ranges of the Balkans within reach of the cities of Central and Western Europe and there is already talk of opening up these areas after the civil war and developing them for tourism. Conservationists, however, are calling for strict environmental protection in order to avoid the kind of ecological destruction to which the Alps or the Pyrenees have been subjected.

### The need for a local approach

These two opposite approaches have one thing in common: they both reflect an "urban viewpoint", observing mountain areas from the outside and attaching little importance to

local interests and the local economy. After several decades of "tourist colonisation" of the mountains, there is a great danger of a form of "ecological colonisation", with European centres and governments ordering the protection of mountain areas without consulting those directly concerned.

An environment policy of this kind would be doomed to failure because environmental protection that conflicted with the interests of the local population would be unworkable.

Indeed, there are some major ecological arguments in favour of having the people concerned participate in environmental protection. It is essential, however, to abandon the "urban viewpoint" and to focus on the specific problems of individual mountain areas. It is by no means the case, as the nature conservationists in the cities often think, that man does not always destroy nature in his economic activities, so that the less we interfere with nature, the better it fares.

Europe's mountain areas show us very clearly that man can only live and survive by adapting nature to his needs, ie by turning the vegetation and forests into fields, meadows and pastures. This disruption of ecosystems over the centuries has caused profound

environmental damage, but local associations of farmers have often adopted a "sustainable" approach to the utilisation of natural resources, treating with care the elements on which life and survival depend. Cultivated landscapes have thus appeared over small areas whose diversity is often greater than that of comparable natural landscapes (cf article by P. Messerli).

### The dangers facing landscapes

As Europe's mountains, except for those of northern Scandinavia, have been reshaped to varying degrees by farming and grazing activities and, in many cases, only rocky and glacial areas that are hostile to vegetation have remained in their natural state (cf article by E. Lichtenberger), the landscapes and plant communities most deserving of protection are nearly always cultivated landscapes whose continued existence is due to sustainable management. If, in keeping with traditional nature conservation, all human exploitation of these areas was brought to an end, the characteristic diversity of the vegetation and landscapes would very soon disappear.

In addition to the destruction of these cultivated landscapes through their abandonment,

there is a much greater danger, namely their destruction through the modernisation and intensification of mountain farming, through mass tourism, over-development, the pressure exerted by transport - in short all modern development, in which short-term economic interests preclude all "sustainable" management. Not only is ecological diversity lost, but local life and the local economy are also increasingly dominated and controlled by European centres.

### Combined efforts

Under these conditions, a "grand coalition" between, on the one hand, environmental protection and agriculture, and on the other, a local and regional economy becomes both logical and necessary. To protect the environment, it is important that the traditional sustainable economy should continue because it is the only way of preserving unique cultivated landscapes. Not only mountain farming but also the local and regional economy have everything to gain from sustainable management because, otherwise, the ecological problems in mountain areas become so acute that the very foundations of human life are threatened.

Environmental protection and the local economy can join forces in Europe's mountain areas to build a sustainable economy while opposing destructive, large-scale exploitation by European centres, provided mountain regions show a certain degree of cultural awareness (cf article by H. Haid) and political independence.

The main function of this environmental protection is not to designate national parks and other reserves, but to allow all kinds of land use that are consistent with a sustainable economy. The implications to be drawn from this for agriculture are that both unnecessary fallow and intensive cultivation must be prevented and that sustainable management is closely related to the production of high-quality natural produce. For tourism, which is often a mainstay in mountain areas, the result should be a transformation respecting the environment, which demands great efforts (cf article by A. Gosar). Transport also requires far-reaching changes because the current volume and means of transport are having disastrous effects on the environment.

Only then would it be necessary to protect the environment by designating and maintaining protected zones, which should only cover small mountain areas. The major challenge, therefore, is to form a network of representative, not random, protected zones in mountain regions. Only in the third stage would it be necessary to reintroduce locally extinct or declining animal species, but there is often a danger of such projects being used to divert attention from the failure of the economy to address ecological concerns.

Given the diversity of Europe's mountain areas in terms of their development, there can be no overall environmental protection strategy. Each mountain range and each mountain region calls for a strategy tailored to its particular problems and for close co-operation with all interested parties.

This "new" approach to environmental protection based on a sustainable economy gradually became established in the Alps in the 1980s (eg Cipra 1987: "The grand coalition between mountain agriculture and conservation") and has spread to other mountain ranges (eg Euromontana 1989: "Cestona Declaration"). The Environment Ministers of the seven Alpine states are endeavouring to put this concept into practice on a day-to-day basis in the Alps.

The United Nations Conference on Environment and Development in Rio de Janeiro also subscribed to this fundamental idea. ■

Dr. W. Bätzing  
Institute of Geography  
Bern University  
Hallerstrasse 12  
CH-3012 Bern

## Rio and the mountains

At the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992, a chapter on "Sustainable mountain development" was adopted without great publicity as part of the "Agenda 21" action programme and included among the programme's 11 "priority actions". There were no fundamental disagreements between the industrial and developing countries on the issues involved because the danger of over-exploitation of mountain areas is a worldwide phenomenon. This explains the lack of press coverage. As this text makes some important points and proposals, it is worth considering it briefly.

Because 10% of the world population lives in mountain regions and another 40% lives in the areas around them and depend on them for water, one can say that nearly half the world population is dependent on mountains - and hence on their ecological changes. As mountain

ecosystems respond quickly and noticeably to any changes in the use made of them and in climate, their sustainable development is of global importance.

As a result of industrialisation, colonialisation and the formation of a world market, mountain areas all over the world declined economically and politically in the 19th and 20th centuries, and the use of their resources is determined increasingly by external forces. This trend has led to great poverty among mountain-dwellers, who have to over-exploit their resources, adopting environmentally unsound practices from which, generally speaking, the local population derive little benefit. Under these circumstances, the knowledge of the sustainable use of natural resources which had been built up over the centuries is gradually disappearing, so much so that increasing environmental damage can now be seen in most mountain regions.

To counteract this disastrous trend, whose effects would be enhanced by global warming, it is essential to reform the moun-

tain economy. For the time being, however, knowledge of the processes affecting mountain ecosystems is insufficient. The traditional know-how of farmers is gradually being forgotten and there are still some major gaps to be filled in the study of ecosystems.

Hence the urgent need for programmes that combine traditional know-how and scientific research to find how current land uses can be rendered sustainable. We therefore need both appropriate political changes and a "sustainable" framework for the development of mountain areas. ■

W. B.



# Managing this vulnerable environment

Paul Messerli

In a Europe without frontiers, mountain regions form obstacles which impede free movement of persons and goods and restrict individual mobility. The European economic area is bisected by a West-East mountain barrier extending from the Atlantic (Pyrenees) to the Black Sea (Balkan mountains), obstructing the integration of the economic zones on either side of this dividing line and accentuating North-South economic disparities. Mountain regions, especially the Alps, are therefore crucial to the development of the European transport and communications network.

These high mountains are also of significance to the entire continent because they perform complementary functions (recreation, nature conservation and storage of resources) benefiting economic centres and key ecological areas alike. This aspect became more pronounced as the ever more extensive colonisation of these interdependent areas for leisure purposes by Europe's urban population acquired the proportions of a mass phenomenon.

Mountain areas occupy a unique position in Europe's postwar development, as is plainly demonstrated by the fact that the leisure-oriented society growing up in the urban industrial centres has become essential to the creation of a new economic basis for many of these areas.

The economic and cultural marginalisation of Europe's mountain areas commenced with the formation of modern states, which placed most of them in border zones or peripheral areas in relation to the economic centres. Industrialisation put paid to the style of agricultural and craft production based on small areas, and depopulation of the mountains began. Only since the 1950s have there been signs of a shift in this trend. The leisure-oriented urban society has taken over certain areas for rest and recreation, with winter tourism as the driving force of this seasonal mass movement. "Active" regions have become more and more firmly integrated into Europe's current division of labour and distribution of functions, serving as transit corridors, rest and recreation areas and nature conservation areas. "Passive", structurally deficient regions, however, have been either still more severely depopulated or given over to holiday homes. This externally induced tendency severely restricts the real range of action available to decision-makers at local and regional level.

## Physical barriers

Environmental development over the past decade, particularly in the Alps which form

the core of Europe's mountainous area, highlights two realities:

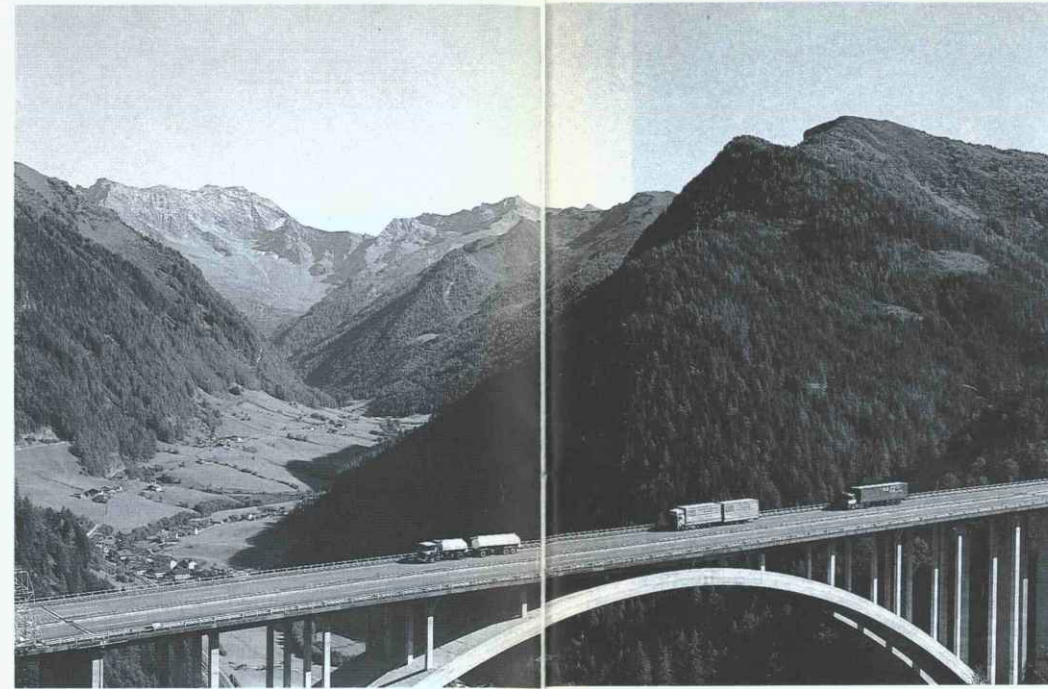
- Natural mechanisms such as floods, mudflows, landslides, erosion and avalanches are not to be controlled solely by technical means. They impose strict limits for settlements, infrastructures and tourist development projects, and they preclude any uncontrolled regression of farming and forestry.

- It has become plain that crucial resources such as winter snowfall, on which for two-thirds of the tourist industry's turnover depends, are to be regarded not as constants but as variables. Likewise, the rapid growth of forest destruction since the mid-1980s has demonstrated the extreme fragility of the Alps as a residential, recreational and economic zone, considering that engineering works to replace the protective functions of barrier forests would severely overburden national economies.

Mountain areas, chiefly owing to their topography and related dynamics, are far more ecologically sensitive than lowland and upland areas. Sediment from weathering, carried by water, snow and ice, continually gravitates towards the valleys. Increasing altitude shortens the life cycle of plants, so that the consolidation of the topsoil by vegetation diminishes accordingly, as do soil depth and soil formation. As a result, regeneration usually takes longer when plant cover and soil are removed or destroyed. In other words, improper uses generally trigger dangerous processes with immediate and direct repercussions on development potential.

Agriculture and forestry are therefore crucially important to natural regulation in mountains, as is confirmed by reliable research conducted in the 1980s under the MAB inter-governmental programme ("Man and the Biosphere", a Unesco long-term interdisciplinary project) in Alpine countries (France, Austria, Switzerland and Germany). The regulation of agriculture and forestry according to exploitation requirements principally entails keeping soil and plant cover as compact and stable as possible, preventing the onset of erosion and thus enhancing moisture conservation. Wooded areas remain stable and flourishing through nature-conscious management.

The environmental dynamics of high mountain areas are largely determined by prospective climatic change. Mountains form sensitive antennae projecting into the zone where wind circulation occurs. This process is subject to alteration under the influence of global warming (greenhouse effect) and causes anticipated but not easily predictable fluctuations in regional patterns of temperature and rainfall distribution. Research is in progress concerning the effects on the perma-



Geiersperger/Pluriciel

"Mountain regions, especially the Alps, are therefore crucial to the development of the European transport and communications network." Can they take this?

frost (possible mobilisation of large alluvial deposits which are ice-bound at present), the vegetation and the moisture balance of mountain ecosystems, but is fraught with considerable uncertainties.

Without reading too much into recent environmental history, the aforementioned processes go to show that climate changes, especially in mountain areas, may cause marked divergences from the normal weather pattern, bringing storms and torrential rainfall which have the effect of intensifying natural processes such as mudflows and flooding.

Having regard to the present and future exploitation constraints affecting mountain areas, the sole reasonable solution presently available to meet these challenges is no doubt a style of environmental management in accordance with natural conditions which vary within small areas.

## Future approaches

The approach to this type of management of natural resources and environment, and the structures to be relied upon, are again indicated by a significant finding of the aforementioned MAB research project in the Alpine area concerning the impact of human exploitation on mountain ecosystems. Traditional man-made landscapes, like the fields developed through the terracing of mountainsides at successive levels by a process of trial and error spanning many generations, form an enduring reference which can guide modern management of resources and environment. These landscapes bearing a human imprint have been described as "cultural products" of the agrarian society because they constitute what could be termed a "sustainable" form of development and exploitation of nature. Modern scientific studies have proved that these agricultural landscapes are ecologically stable, lastingly productive and endowed with natural variety and beauty. Furthermore, modern forms of exploitation are based on these four chief qualities of mountain scenery. No tourist operation would be possible

without ecological stability and scenic attraction. Such wealth of animal and plant life would never have come into being without the locally varied but lasting patterns of land-use applied to permanent pastures and meadows originating from varied biotopes. Productivity can be guaranteed only as long as extensive landscape maintenance work is performed. It is therefore a matter of priority to give these valuable man-made landscapes the protection which they deserve and require because they form a vital economic basis and painstakingly demarcated limits for the exploitation of nature, which proved effective even at periods of harsh climatic conditions (during the Little Ice Age from 1500 and 1850).

The reproduction of these landscapes requires a fund of experience which varies from place to place according to the farming method inherited and handed down. However, this precious knowledge is lost when the rural population leaves the land and ceases farming. It took the collapse of the agricultural structures and landscapes of certain structurally deficient regions in the Alps, the Pyrenees and the Apennines to impress upon us that the landscape fashioned by agriculture, formerly a by-product of rural labour, has become a virtual main product as a result of recreational use and is now valued ever more highly as a public asset in short supply. Therefore, this true and tried method should guide modern management of resources and the environment, which must be small-scale and flexible having regard to the uncertainty of climatic and environmental development. In addition, it can rely on farming and forestry structures still in existence which, according to the latest research, may represent the most economically viable form of nature and landscape conservation. This is why the decline of mountain agriculture and forestry is neither economically nor ecologically justifiable.

## Contradictions and conflicts

The contradictions and conflicts of externally controlled development are made strikingly

apparent in Europe's mountain regions by the incompatibility of traditional, spatially limited economic and residential structures with the integral modern structures of tourism and industry. In point of fact, effective environmental management depends on the survival of these decentralised, small-scale structures. Indeed, the present-day economy capitalises on the past achievements of highland agriculture in terms of scenery, guaranteed living space and seasonal labour supply. However, expenditure on residential decentralisation and land development has to be covered more and more by public funds. This amounts to interest-free use of the capital by the tourist economy which, being unconcerned about perpetuating its own ecological foundations and the essential scenic features, cannot be considered "sustainable".

These basic issues loom larger as European integration promotes concentration of the services economy in areas favouring a leisure-based ecology and along the main transport routes, with the result that agrarian and regional policies are incapable of maintaining and fostering quality rural production within ecologically suitable structures. This imperils the local development potential and local features whereby mountain regions can be integrated with the European scheme of labour division and functional organisation, or which might form a basis for "alternative" dwelling spaces and economic areas supporting a new rural population.

## Putting local requirements first

For the reasons given above, and in view of the unpredictable climatic and environmental trends, a radical reappraisal of the functions and significance of European mountain areas is gaining ground. This is necessarily based on the principle that the claims of the permanent local population to residential and economic space for their own purposes must outweigh the demands of an urban holiday population, because adequate settlement is essential to the maintenance of scenic infrastructure and a high standard of tourism.

These dual demands of exploitation - internal and external - presuppose a flexible, locally differentiated approach to management of the environment and natural resources relying on local environmental experience, because the man-made landscapes of mountain areas cannot simply revert to the natural state. That is why the rural population must stay put and, whichever schemes of development may apply in future, be the mainspring of social and cultural progress.

Under what strategy, then, are mountain regions to participate in European development? Since economic survival is impossible without a share in the European markets, a dual strategy is indispensable:

- market openings solely for quality products (goods and services) whose substantial cost is warranted by their distinctiveness and which generate high added value locally;

- exploitation of sectoral interactive potential should promote flexible structures based on small-scale enterprise. The intensified contact and communication needed for this purpose is also an important prerequisite for creating innovative regional structures.

This dual approach calls for a political framework which will enhance self-determination and direct responsibility, and thus provide scope for initiatives and solutions over limited areas. Any such initiatives must be supported from above and from outside in both the national and the European context. ■

Prof. P. Messerli  
Director  
Institute of Geography  
Bern University  
Hallerstrasse 12  
CH-3012 Bern





J. Danchev

## The Rhodope Mountains, jewel of Bulgaria

Jordan Danchev

Almost in the centre of the Balkan peninsula on the border between Bulgaria and Greece lie the Rhodope Mountains. Indian schools of meditation believe them to be one of the most holy of mountain ranges in the world. While the question surrounding the holiness of the Rhodope Mountains is mystical in character, its soft undulating formations, which lend the mountains a peculiar charming tranquillity and create habitats for a multitude of valuable plant and animal forms, can be appreciated by everyone who has had the opportunity to visit them.

The Rhodope Mountains are spread over a territory of approximately 18,000 sq km, of which 14,737 are in Bulgaria and the remainder in Greece. The highest point, the summit of Perelik (2,191 m), is in Bulgaria, near to the border with Greece. The climatic influence of the Mediterranean Sea, coupled with the fact that the mountains are the oldest area of dry land in the Balkans, which was not frozen during the pleistocene period are the main factors which make them a botanical paradise in this part of Europe. They are home to 60% of the flora of Europe, with a strong presence of endemic and relict forms. They are refuge to 211 rare and threatened varieties registered in the Red Data Book of Bulgaria. Fifteen of these are tertiary and glacial relicts, 42 are Bulgarian endemics, and 40 are Balkan endemics. Fifteen of the Bulgarian endemics do not flower anywhere in the world apart from the Rhodope Mountains.

### Natural and cultural treasures

The Rhodopes are a paradise for the capercaillie, the griffon vulture, the bear, the wolf, the chamois goat, etc. It is also a Bulgarian paradise for spruce and other coniferous varieties.

The Rhodope Mountains hide the beauty of the Trigradski and Buinovski gorges, the Erkyupiya and several interesting caves - the Devil's Throat, Snezhanka, Yagodinska cave, Lednitsata, Ultsata, which provide shelter to a rich cave fauna.

In order to conserve the characteristics, the typical ecosystems of the Rhodope Mountains and the plant and animal genetic fund contained therein, 20 reserves and many other protected areas, four of the reserves (Chervena stena, Mantaritsa, Kupena and Dupkata) have been approved as biospheres and have been included in the Unesco list.

The favourable climatic conditions and the rich natural resources are the main reasons why the entire mountain range has been inhabited since ancient times. This is also the reason why apart from the significant natural wealth of the mountains there is also a rich cultural heritage. Archaeologists have for a long time been searching for the temple of the Thracian god Dionysus, the discovery of which would be the most significant archaeological event on the territory of the Balkans and the Old Continent. The well



S. Cordier

preserved ethnographic heritage is also a great treasure, as well as the local Rhodope dialects and folklore. In 1977 a Rhodope song was sent into space with the American spacecraft Voyager-1 and Voyager-2 as an earthly message to the Universe.

### Worldwide problems

Unfortunately, the ecological problems of the world at large are not foreign to the Rhodopes. The spider's web of underground galleries is ever increasing and has almost spread to every corner of the mountains where there is a gramme of lead. From 1946 to the present day, the Rhodope Mountains have been the arena for the construction of the largest flight of dams in the Bulgarian mountains.

Eroded mountain paths and deforestation as a result of commercial over-felling and illegal felling can be observed everywhere in the Rhodopes. In addition, the double-edged sword of tourism has also left its mark.

Unfortunately, similar things are rumoured to be happening on the Greek side of the mountains.

At the same time, the Rhodope Mountains is the only Bulgarian mountain range not to have a national park, to protect the natural and cultural wealth of the mountains in an integrated manner.

It would be of great ecological value to create a broad area of protection in the Rhodope Mountains, which by means of protected boundaries in the area of the Mursalitsa elevation, the Perelik massif, the Trigradski and Yagodinski karsts would unify the Rhodope biosphere reserves on the Bulgarian side of the mountains with the Belles/Kerini region and the Karadere/Zagređenija/Haidou peaks on the Greek side in one cross-border national park.

The capercaillies, bears and wolves are not Greek or Bulgarian: they are all Rhodope. ■

J. Danchev  
President of the Bulgarian Society  
for the Conservation of the  
Rhodope Mountains  
2 Gagarin Street  
BG-1113 Sofia

## Mountainous perspectives Lessons from history

Elisabeth Lichtenberger

High mountain areas do not yet form a special category in European Community regional planning policy. This is understandable as the media pay little attention to the problems encountered by their inhabitants. They are generally only ever discussed by people who ordinarily live outside the mountains in densely populated areas and thus apply their own yardsticks and value judgements. Efforts to preserve the man-made landscape in the mountains are prompted not so much by "ecological" considerations as by economic concerns about the monetary value of the landscape to the tourism industry, the implication being that the earth's treasures are only of any value when they are scarce.

Slogans about Europe's "roof garden" or "water tower" along with media coverage of the transport agreements by focusing exclusively on the Alps, have emphasised the development of mountains for the benefit of urban leisure-seekers. This underestimates the variety of ecological and social parameters that differentiate Europe's mountainous regions and even in what we call our common European home call for very different solutions for redeveloping high mountain regions for the benefit of society.

### Ecological and socio-historical differences

If we draw a comparison with the mountain ranges of North America, we learn to appreciate the protective function of the folds stretching across Europe from east to west sheltering southern Europe from the cold north winds.

The contrast between the north and south in Europe is embodied in the high mountain areas. The division into high mountains with a Mediterranean climate and those with a temperate climate is fundamental to an understanding of the past and an assessment of future prospects. The Etruscan city civilisation grew up in the basins of the Appenines and the Greek city-states sprang up in the narrow confines of the Hellenic basins and mountains. The Mediterranean region has never experienced the contrast between town and countryside which is central to high mountain areas on medium latitudes. Town-dwellers owned the land in a long-established, extremely complex pattern of ownership of the factors of production. Separation between ownership and rights of disposal over land, livestock, woods, water and labour was the rule, leading to specific forms of farming, loans and tenancy which very early on conditioned types of farming such as

extensive single-crop grain farming, year-round remote grazing (ovine transhumance) and the mixed farming of smallholdings. The Mediterranean mountains, ie the Appenines in Italy, the Sierra Nevada in Spain, the southern slopes of the Pyrenees and the Alps as well as the Greek mountains, therefore did not develop any specific "mountain" social system of their own. The variety of produce, once an advantage in relation to local markets (chestnuts, olive oil, goat's cheese, pork sausage, wool, wine, vegetables and fruit in the Cevennes, for example) has become extremely impractical for farming in the wake of market internationalisation. The result has been steady decline, caused in part by the breakdown of transhumance. The demise of agriculture in the Mediterranean mountains is irreversible. It affects the old hilltop settlements as well as labour-intensive terrace farming. Agricultural improvements and reforms have only benefitted low-lying areas. The advent of the leisure era, as in the Alps, is either not on the cards or is limited to mountain holidays at medium altitudes in the vicinity of large towns.

An Alpine point of view is not sufficient to explain current problems in the Dinaric Alps. These are due not only to the unique (in Europe) phenomena of extensive karst landscapes with dolines, dry valleys and basin-shaped poljés, but also to a typical agrosocial pattern. In the Zadruga, the nomadic life of shepherds and joint households persist to this day, although they have been reduced by state socialism and by the immigration of foreign labour, without any notable shifts towards urbanisation or urban lifestyles. As far as farming is concerned, the wintry mountains of south-eastern Europe are a special case because of the maize growing introduced in the 19th century. Combined with hoe-farming on steep slopes, this formed the basis of several subsistence farms and secondary occupations, even after the war.

Whilst the forest in the Mediterranean mountains has been steadily destroyed in historical times, it has survived in south-eastern Europe thanks to the summer rains. Nevertheless, these mountain areas lack the clear distinction between forest, grazing and arable land which characterises the German-speaking world, including much of the Alps. Woodland grazing, coppicing, the lopping of broad-leaved trees for fodder and the absence of regulated forestry are just some of the traditional and typical features of the man-made landscape.

The only place the forest has actually gained ground since the 18th century is on the territory of the former Habsburg monarchy,

*Transhumance is an established fact in the mountains, and also a pleasure to see.*



S. Cordier



in the Carpathians and the Slovenian Alps, partly in the wake of the mining and iron industries and as a result of forest regulations.

High mountain areas are also a feature of northern Europe. Here, however, the Ice Age was followed by folding and the elevation of the primary platform characterised by impressive waterfalls and by imposing faults in the high plateaus which gave rise to fjord landscapes. Across them runs a broken line, dating from the Middle Ages, of human settlements pressing hard up against the uninhabited area in the north of the continent, forming a dual periphery. Clearings in the Nordic belt of the European forests are the work of woodcutters, miners and fishermen. Agriculture has only ever played a subsidiary role.

This is how the circle of high mountains around the Alps closes. The Alps themselves have a special position not only in Europe but in comparison to other high mountain areas in the rest of the world. This originality also applies to the geological development of the earth and includes the relics of immense glaciation which constitute remarkable attractions, notably the Alpine lakes in the south and the north which took the place of glacial tongues.

#### Agricultural society and the leisure society

Vertical ecological and socio-economic stratification in the Alps is remarkable for its superimposition of the leisure society on the local farming communities. Nowhere except in the Alps has agrarian settlement been overlaid with a first-class winter-sports infrastructure which attracts labour and tourists from a market extending beyond the region. The high levels of capital invested in the basic technical equipment have a multiplying effect on the winter-sports industry at an altitude below the snow line. The separation of locals and tourists is deliberate. Winter-sports regions are marketed along the lines of "commercial product management". An increase in internationalisation - from the European conurbations - is to be expected.

The higher reaches of the mountain economy offer a climate and environment that are favourable to two annual tourist seasons. Nevertheless, for this to happen peasant life and tourism need to be integrated, which is extensively the case only in the Austrian Alps. Summer tourism is closely linked to the quality of accommodation and man-made landscape. Wherever "mountain blight", ie the decline of settlements and the countryside becomes too great, it cannot flourish. This applies to the lower reaches of mountain farming at medium altitudes. In many parts of the Alps, except in Austria, they have become a vast area of landscape decline where, in some cases, settlements are being revived to some extent by the second-home phenomenon.

#### West-east innovation: liberalisation and decline

The largely irreversible decline of the historical landscape does not stem solely from ecological parameters in the vertical stratification of high mountain areas, but is determined by the effects of state policies in mountain regions, compounded by liberalisation. Let us not forget that throughout Europe's turbulent history high mountain areas have always served as a refuge for groups that wanted to preserve their cultural (and religious) identities, and their political independence and were therefore prepared to endure even extremely harsh living conditions. This is why the oldest linguistic enclaves are to be found high up in the mountains, from the Basques in the Western Pyrenees to the Rhaeto-Romans, the Ladins and the Friulians in the Alps and the Albanians in south-east Europe.

It was only at the dawn of the liberal era that mountains lost the advantage they had had over the lowlands down the centuries. Economic marginalisation was no longer acceptable for the sake of political freedom.

This liberalisation was a process of innovation, which took similar forms in all the mountains, spreading from west to east. The first effect of liberalisation was even population growth and agricultural expansion until the transformation and disappearance of traditional farming practices in the mountains began, growing depopulation initially led to more extensive farming and finally to ghost towns. In European political life, feudalism was not supplanted by liberalism everywhere at the same time, but spread from west to east. The French Revolution of 1789 was the first on European soil. That is why the decline of mountain settlements first set in in France, in the French Alps, on the northern slopes of the Pyrenees and in the Massif Central from the beginning of the 19th century. It was to reach a degree unparalleled in Europe, as a comparison between the French and Swiss Alps convincingly shows. The revolutions of 1848 in the German-speaking world and in Italy took place two generations later. The Dinaric mountains were the last to be affected by the gradual retreat of the Ottoman Empire in southern Europe as Bosnia and Herzegovina only broke free in 1878 and Albania in 1912. At the same time, whilst the first ghost towns had come into being in the French Alps in the course of the last third of the 19th century, Serbia, Montenegro and Bosnia, delivered from Ottoman rule, experienced a huge growth of mountain settlements. Later still, after the First World War, the same development took place in Albania with a considerable expansion of farming areas.

Furthermore, after the war the Dinaric region found itself in an unusual situation as a result of the influx of foreign workers and their investments in technical infrastructure and construction. One million dwellings were built. It is a part of the tragedy of current

events in Yugoslavia that much of this investment is now being destroyed by civil war.

#### Political models and prospects

Different degrees of importance are attached to the farming policy of European states. It is worthy of mention that in all the belligerent states of the two world wars, depopulation and decline were brought to a halt. In the German Reich, massive assistance was provided to intensify mountain farming, benefiting both individual farms and whole areas. In Italy and Spain, farming reforms and state colonisation were able - in the interwar period - to halt depopulation of the mountains, but only for a short time. The difference is too great between the unresolved problem in southern Europe of the separation of the means of production - capital, land and labour - and the dependence of farm policy in states that seek to foster family farming (for example Austria, Switzerland and Germany) on urban injections of capital. But here the problem of preserving mountain farming has shifted into one of preserving the mountain landscape as a recreational area for Europe's city-dwellers. The post-war collectivisation of agriculture in the countries of Eastern Europe did not settle the problem of the economic marginality of the mountains but frequently made it worse. In places where ownership was not changed in the mountains, in the Carpathians in Poland and partly in Romania for example, as well as in former Yugoslavia, mountain subsistence farms were abandoned to their fates. Only Bulgaria and former Czechoslovakia determined to implement land collectivisation in the vast mountain areas, particularly affecting national minorities.

#### Conclusion

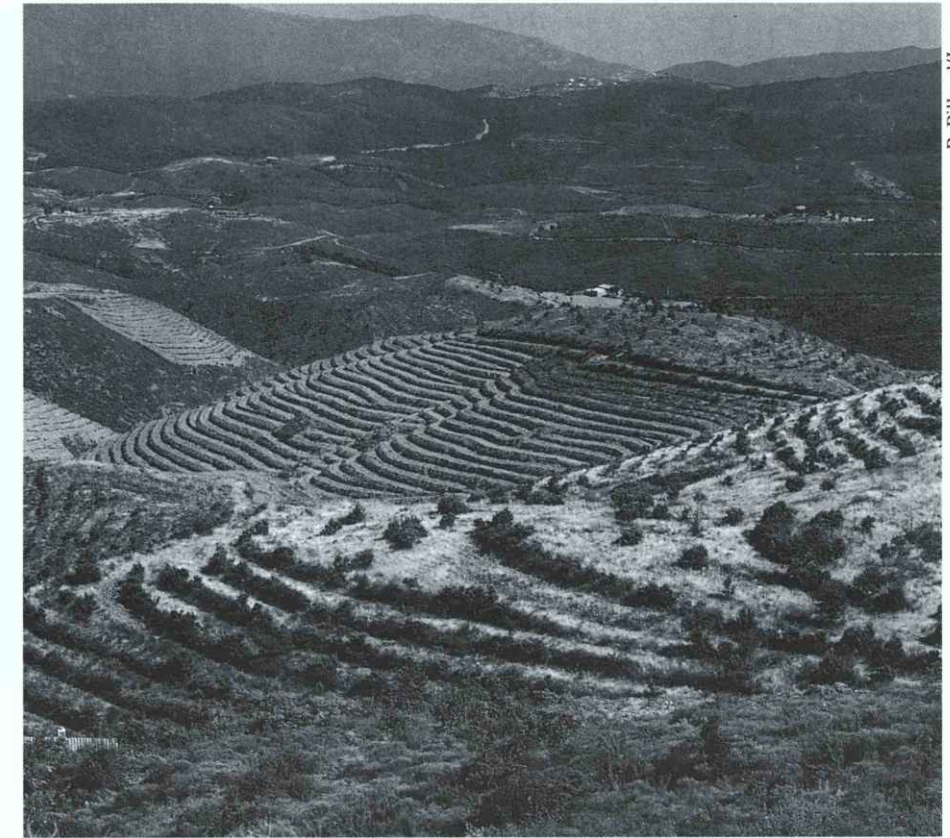
Far from representing the prototype of Europe's high mountain areas, the Alps are in a special situation. The opportunity that vast mountain areas in former Yugoslavia, might have had namely to follow the example of Europe's "roof garden" in exploiting this natural resource under an ex-communist regime, has been dashed by the civil war, probably for a long time. The wooded mountains of the Carpathians can offer the rival attraction of their landscapes only in very limited areas.

In all the high-mountain regions of Europe where the farming economy is deteriorating, where there is a lack of demand from leisure seekers and where the decay of human settlements and farming is irreversible, there are only three possible courses of action:

- reforestation where ecologically possible;
- turning interesting historical landscapes into reserves;
- where agriculture has already become extensive and settlements abandoned, establish unused tracts as land reserves for the future.

This task falls, because of their knowledge of local circumstances, to the regions of the European Community and the member States, whilst the European Community itself will have to provide financial and legal means in the medium term. ■

Prof. E. Lichtenberger  
Institute of Geography  
University of Vienna  
Universitätsstraße 7  
A-1010 Vienna



Summer tourism is closely linked to landscape quality.

## An ecological approach

Peter Stoll

With its 120,000 members, the Schwäbischer Albverein is the largest German hiking club. Its area of activity takes in the varied and attractive landscapes of the low mountain ranges situated between Lake Constance and Hohenlohe (Baden-Württemberg), and in particular the Swabian Jura and the Stuttgart region. The club's primary aims are to encourage a love of nature among its members, perpetuate local traditions and, above all, promote the pleasures of hiking. To this end it organises a series of activities, aided on a voluntary basis by its members: signposting of some 20,000 km of footpaths, building and maintenance of 22 refuges, management of 24 vantage points and four museums, performances of folk dancing and folk music, choirs, an extensive programme of lectures and classes, production of information material and publication of the club magazine.

Founded over a century ago, the club set out first of all to promote a better knowledge of the region and an appreciation of its beauty. Very soon, it also turned its attention to nature and landscape conservation. These are activities which have taken on an increasing importance as a result of the growing threats to the environment. Conservation of flora and fauna, monitoring of protected areas and energetic resistance to the environmental damage caused by industrial facilities and pollution are some of its major concerns. The club is a founder member of the Baden-Württemberg Nature Conservation Association. Within the 575 local groups, some 1,050 people have special responsibility for environmental monitoring. The major activity of these local groups is the upkeep of such biotopes as juniper heaths, hedgerows, semi-arid grasslands, sections of streams, the edges of fields and paths, and the orchard meadows which are a distinctive feature of Baden-Württemberg.

Each year, the club organises some 6,000 patrols for reconnaissance and observa-

tion purposes. In this way, its members help to preserve the quality of our environment.

In its work, the Schwäbischer Albverein endeavours to adopt an all-embracing approach to the environment in which people also have a place. Owing to its non-sectarian attitude and large membership, it is able to command the attention of political decision-makers and thus wields considerable influence. ■

P. Stoll  
Chairman of the Schwäbischer Albverein e.V.  
Mühlrain 62  
D-7000 Stuttgart 1



# Living nature

Paul Ozenda

Ever since publications on mountain plants and animals, often splendidly illustrated, have been appearing regularly, there has seemed to be nothing more for naturalists to say on these subjects. Knowledge concerning them has nevertheless advanced very significantly and new avenues of research have opened up in recent years.

## Inventories

Alpine flora was already thoroughly surveyed, inventoried and described at the beginning of this century, but for a long time texts and illustrations basically served to establish the nomenclature of species. A biogeographical approach followed with the introduction of maps showing distribution, altitude limits and links with the geological substratum, as for example in the many successive editions of Merxmüller's Alpine flora compendium. Since 1979 there has been an inventory of all European high-altitude and sub-Arctic flora showing the correspondence with the plant populations established in the inter-glacial and post-glacial eras. The distribution maps for the genus *Salix* presented by the *Flora europaea* Atlas have made it possible to analyse the processes of species differentiation during those periods. An international project group initiated by the Geneva Botanical Conservatory has been engaged for the past two years in the computer-based preparation of a detailed, critical flora compendium for the Alps as a whole, on modern biogeographical and genetic principles.

Cryptogam research is less advanced; as yet, only the study on lichens is near completion, chiefly through Swiss and Scandinavian work. A comparative study of gill fungi in the Vanoise National Park and Lapland was published a few years ago.

Fauna inventoring is a protracted task because of the multifarious animal communities and the specialisation of the researchers involved. Recent work covers the orthoptera of the Graubünden and Lombardy Alps and the microlepidoptera of the upper Savoy Alps.

## Forging ahead

Although they are of great interest and need to be continuously updated, flora and fauna inventories represent only an initial stage in alpine nature knowledge and must be followed up with biocenosis research. This concerns the communities of species formed as a result of associations based on their physiological similarities and their relationship with the environment.

In the plant kingdom, research into Alpine biocenoses is already well ahead; a general system applicable to the Alps in their entirety has been devised and has undergone little change for three decades. In recent years, however, it has been extended to the Pyrenees, while the Balkan highlands and the Urals have been surveyed and significant progress has been made in the Caucasus Mountains. The high-altitude vegetation of European mountains is now known to be divided into three main types: the Alpine belt proper of the middle European ranges, the mountain tundra of the Nordic ranges, and the thornbush formations of the Mediterranean summits.

A further new aspect is biocenosis mapping. The Alpine belt of the Alps and Pyrenees has been fully demarcated on a medium scale, and there are detailed maps of plant associations covering part of the national parks and reserves. Computer processing of the data is in hand.

The study of plant biocenoses must of course be amplified by an examination of the fauna associated with each biocenosis and an analysis of ground-dwelling microflora and animal life, but these lines of research trends are far less advanced.

## Euromontana-Cea

In the wake of the second world war, Europe's mountain regions became depopulated and impoverished, partly as a result of technical developments in agriculture. In Montreal in 1948, the FAO warned about this situation, and in 1953 it organised an international conference on this subject in Switzerland, the first of its kind. It was here that Euromontana-Cea was found, as a working party within the European Confederation of Agriculture (CEA). Euromontana-Cea relied for support mainly on farmers' organisations, as there are no organisations which are specifically concerned with mountain areas except in France (Fédération française d'économie montagnarde - FFEM), Italy (UNCCEM) and Switzerland (Schweizerische Arbeitsgemeinschaft für die Berggebiete - SAB).

Every two years Euromontana-Cea organises a symposium on a theme relevant to mountain regions. Many of these have

## Study of species-habitat relationships

A third stage of knowledge is attained by studying the ecological relationship of each species with environmental factors (autecology) and interspecific relations within the biocenosis (synecology).

The survival of plants and animals at high altitude under extreme conditions depends on characteristic morphological and physiological adaptations: cushion-shaped plants; shortening of the annual life cycle; importance of underground organs and growth phases. Research into the biology of alpine species has made great strides thanks to the development of permanent stations at high altitude, equipped with an array of very sophisticated measurement devices with recording capabilities; special mention should be made of the work being conducted in the Tyrol under the Programme on Man and the Biosphere and at the Kazbek station in the Caucasus Mountains.

High mountain plant cover forms a patchwork whose complexity mirrors the extreme local variation of conditions in respect of topography, microclimates and soils. One prevailing factor is the brevity of the vegetation period, determined by the length of the snow-free period: each biocenosis is associated with an average duration of snow cover which can differ by as much as twofold between neighbouring communities. This duration, long computed by direct observation on the ground, is now systematically monitored by long-range sensing, satellite pictures being collated at intervals as short as one week. Once again, the most advanced studies concern the Tyrol.

resulted in the adoption of trend-setting documents such as the "Brigne Manifesto" in 1967 and the "Cestona Declaration" of 1989. As Euromontana-Cea has no legal personality, and its members are not tied by statutes and financial contributions, its activities are confined to framing recommendations, compiling documents and public relations work.

That is why members of Euromontana-Cea set up the European Federation of Mountain Populations (EFMP) in 1990. Unlike Euromontana-Cea, EFMP seeks primarily to bring together mountain region organisations and policy-makers into a single organisation and to be the decision-makers' partner in negotiation. ■

Euromontana-Cea  
Postfach 87  
CH-5200 Brugg



S. Meyers

A fauna inventory is long-term work, as is the research on alpine plant biocenoses which is progressing well.

Alpine nature conservation not only entails knowledge of the most valuable zones and their classification as reserves; the evolution of nature within these protected areas must also be monitored. An outstanding example is the management of herds of large wild ungulates (ibex, chamois and mouflon) in the national parks. Their numbers are scrupulously adapted to the carrying capacity of the territory in question, sometimes in the light of competition with domestic herds, and the population's state of health is constantly checked.

## Possible implications of climatic changes

In the past few years there has been research into the ecological implications which the climatic changes apparently impending may have in high mountain areas and elsewhere. Whether natural causes or a greenhouse effect generated by industrial activities are responsible, it seems to be reliably established that warming of approximately 1°C has occurred over the past century and that the rate is tending to increase. According to certain constructs, this process could cause a difference of several degrees within 50 years, and if so the ecological boundaries in mountain areas and particularly the upper limit of tree cover and subalpine scrub would be raised by several hundred metres; this would restrict and fragment the surface area of the present Alpine belt. Signs of this are already appearing. In the Scandinavian mountains the altitude of the tree line, formed by birches, is 40 metres higher on average than at the beginning of this century. Concurrently, 20 or so plant species of the snow belt have been recorded in Switzerland at increasingly high

altitudes. In the Western Alps, there are earlier and earlier springtime arrivals of migratory birds. Avian fauna appears to be a sensitive reagent, moreover, and is currently the subject of an extensive current research programme in the Bavarian and Piedmontese Alps, while in the Savoy Alps the distribution of some 30 bird species according to altitude has undergone statistical research for the same purpose. It is to be feared that under the influence of continued warming, the Alpine belt as a biological complex will be gradually pushed upwards and then become liable to combined surface area reduction and fragmentation, with qualitative and quantitative deterioration of environments and extinction of the rarest species. This risk must be considered forthwith when plans are made for the conservation of natural assets in high mountain areas. ■

Prof. P. Ozenda  
Alpine Biology Laboratory  
Joseph Fourier University  
BP 53 X  
F-38041 Grenoble Cedex



G. Baumgart



R. Humler





S. Meyers

# The Alpine Convention

Ulf Tödter

The idea of solving certain problems relating to the environment, nature conservation and Alpine development through an international Convention has existed for a long time. It was already to be found in the documents drawn up in preparation for the foundation of the International Commission for the Protection of the Alpine Regions (Cipra) in 1951. But it was not until 1991 that the governments of the Alpine states and the European Community signed an Outline Agreement, now being filled out by means of several Protocols. Cipra is assisting the government representatives as an observer, along with IUCN.

The Alpine Convention is an original international treaty. It was the first transfrontier Convention concluded in the heart of Europe, in an area with a population of over seven million, with the two aims of improving the protection of the natural resources and man-made landscapes of the Alps and ensuring that development pays due heed to environmental and social requirements. This comprehensive approach, placing man and the environment on an equal footing and confined to parts of nature not inhabited by man or to specific elements (such as water and air) is new.

Why is an Alpine Convention necessary? Over the past 40 years, a period which has been monitored with a critical eye by Cipra, as an umbrella organisation for the associations devoted to preserving the natural and man-made heritage, there have been worrying developments. A few examples will suffice to show why international action is essential in a good many spheres.

## Water resources

No major Alpine river is still in its natural state from source to river mouth. Only about 10% of their length remains unspoiled. 79% are impaired by hydroelectric plants and 82% by pollution. Other threats are looming.

Cipra is asking for the last few natural stretches to be systematically protected and for steps to be taken to restore life to them and return them to their natural state, especially in the regions where ecological damage has been severe.

## Winter sports

The 1992 Winter Olympics in Albertville (Savoie) left lasting scars on both ecology and economy: 65 km of new motorways, 33 hectares of land cleared, one million m<sup>3</sup> of various kinds of earthworks, 330,000 m<sup>2</sup> of building and 100 hectares of changes in land use. These are just a few key figures. The debt resulting from just the 14 days of the Games totals 285 million Francs, that for the new infrastructure many times higher, particularly for the regional and municipal councils.

Cipra is asking for major winter sports events in the Alps to be confined in future to places where the necessary infrastructure already exists. Applications should not be accepted by the IOC unless they are accompanied by a positive environmental, social and economic assessment.

## Opening up of new areas

The Alps are served by increasing numbers of roads, railway lines, high voltage power lines, pipelines, forest and farm tracks and cable-car lines. By the end of the millennium, between 3,000 and 5,000 km of new major and minor roads will have been constructed. The regions not yet opened up and suffering little disturbance are shrinking, and they are very important for vulnerable animal and plant species. The basic data facts could be assembled rapidly.

Cipra is therefore asking that the necessary legal and fiscal measures be taken to prevent the opening up of those tracts of land as yet undamaged and the carving up of more land. The main means of achieving this would be through agreements with land owners.

## Mountain economy and nature conservation

Hill farming is forced to become more and more intensive, as incomes fall. Farmers have derived no financial benefit from their efforts to continue to grow a variety of crops, maintaining ecological and landscape diversity.

Cipra is asking that they receive performance-related payment for their efforts (along the

lines of the eco-point systems being developed in Lower Austria), at the same time receiving advice and being subject to monitoring. Any further necessary financing could be found by discontinuing public payments (subsidies, tax relief, etc) not compatible with nature and the environment.

## Helicopters for skiers

The use of helicopters to take skiers to areas not opened up and relatively undisturbed means extra noise in the areas flown over, with potentially harmful effects on fauna. Such disturbance, causing animals to flee can have disastrous effects on the ecological balance.

The economic benefits of heli-skiing are out of all proportion to the risks. Cipra is therefore asking for heli-skiing to be prohibited throughout the Alps (it is still allowed in Switzerland, Italy and Vorarlberg). In frontier regions demand for this kind of skiing leads to distortion of competition in the winter sports sphere, leading to calls for the bans to be lifted where they do exist.

U. Tödter  
Chairman  
Cipra  
Heiligkreuz 52  
FL-9490 Vaduz

# In Italy

Fabrizio Bartaletti

For several decades now, the Italian Alps, like other parts of the Alpine range, have been undergoing far-reaching economic and social changes, largely as a result of the depopulation of the higher mountain areas and the development of mass tourism, particularly Alpine skiing. However, it would be too simplistic to say that the transformations, some of them radical, in the Alpine landscapes can be attributed to these factors, or that they have all taken place since the war. We must not forget the new political system established in the wake of the Congress of Vienna, which carved up the Alpine population among the major Nation-States, where the said population is forced to live on the fringes of society. The gradual spread of the railways throughout the Alps, the increasing use of hydroelectric power and the resulting installation of heavy industry have contributed to a greater or lesser extent to the decline of traditional activities and the break-up of the social and cultural fabric. Nor should we overlook the history of "upper-middle class" tourism, which, although it has not transformed the countryside, has shown up the sharp contrast between the lifestyle and customs of "high society", where members stay in luxury hotels, and the pitiful existence of the mountain dwellers.

After the war, in an environment where the traditional balance between population and resources had been destroyed, tourism suddenly underwent a phenomenal boom and, in the early sixties, began to develop into mass

tourism, which by the end of the decade centred increasingly on downhill skiing. At the same time, hydroelectric resources were increasingly being tapped for the lowland towns and industries, with the construction of reservoirs so huge that they engulfed whole settlements and transformed, or rather deformed, the landscape and the local climate. Motorways and long tunnels through the Alps were built solely to facilitate communications between the nerve centres of the states sharing the Alps.

On the one hand, we are witnessing the decline of the major chemical and metallurgical industries which have left their imprint on so many mountain valleys. The havoc wrought by unemployment has compounded the damage to persons, animal stock and vegetation caused by huge-scale emissions of pollutant fumes. On the other hand, hill farming is rapidly vanishing, particularly in areas with a Romance culture, where the land was carved up into excessively small holdings without the help of subsidies, and where there has been depopulation because it was impossible, or considered undesirable, to promote tourism. Nevertheless, in some valleys in the Western Alps, not even the development of tourism has arrested the demographic decline, even in the major resorts.

## A state of dependence

It would therefore seem that the economy of the Alps - to quote from a highly apposite theory put forward by P. Messerli - has, since the Congress of Vienna, been dependent on the major urban centres outside the mountain range, which are linked via the Alps. These are the centres which make use of the water, energy, climatic advantages, sites and key

Alpenzú grande (1779 m). Permanently inhabited several decades ago, summer agricultural activities are still carried out in this hamlet, which also serves as a base for tourists.



F. Bartaletti

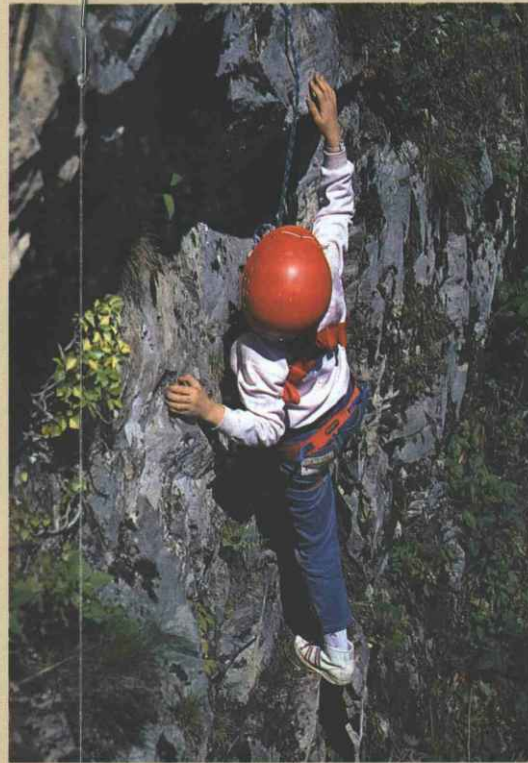
position of the Alpine range, which stretches from Central Europe to the Mediterranean and is criss-crossed with major road links along the main longitudinal and latitudinal axes. It will be interesting to see if this relationship of domination/dependence becomes even more marked or if, on the contrary, the Alpine populations manage to carve out a new niche for themselves within the six major countries through which they stretch and promote the implementation of a common policy based on agriculture, tourism, arts and crafts and energy production, deriving maximum benefit from their position as the nexus between different peoples and environments. If the latter happens, the Alps will be transformed from an outlying region complementing (though subordinate to) the decision-making centres in Paris, the German-speaking world, Northern Italy and Rome into an economic area specifically designed for the Alpine populations, who will be entrusted with the organisation and management of intensive relations with the countries bordering on the Alps.

The aim here is not to give a detailed account of the measures which are needed if we are to achieve this goal, but simply to launch a general appeal for greater co-operation between the mountain communities, possibly through the ratification of an Alpine Convention. There is a definite need for appropriate planning if we are to correct, or even call a halt to, the current model for touristic development and replace it with a less destructive alternative, less destructive forms of tourism (Sanfter Tourismus). However, we must realise that the Alps cannot ignore tourism, because it is an important component, and sometimes even the mainstay, of the Alpine economy, and also that, unless integrated with hill farming, any tourism development project is doomed to failure and will have disastrous effects on the demographic, economic and environmental fronts, in the form of intensive urbanisation and hydrogeological damage. So the impact of alternative forms of tourism must be clearly thought out and, above all, the locations for specialised tourism (summer day trips, cross-country skiing and other activities less detrimental to the environment) must be properly selected. It is common knowledge that, with a few exceptions, the economic repercussions are modest and that it is extremely difficult to channel demand towards a type of leisure which is not yet in vogue, because no one wishes to invest in leisure activities for which the need has not yet been felt.

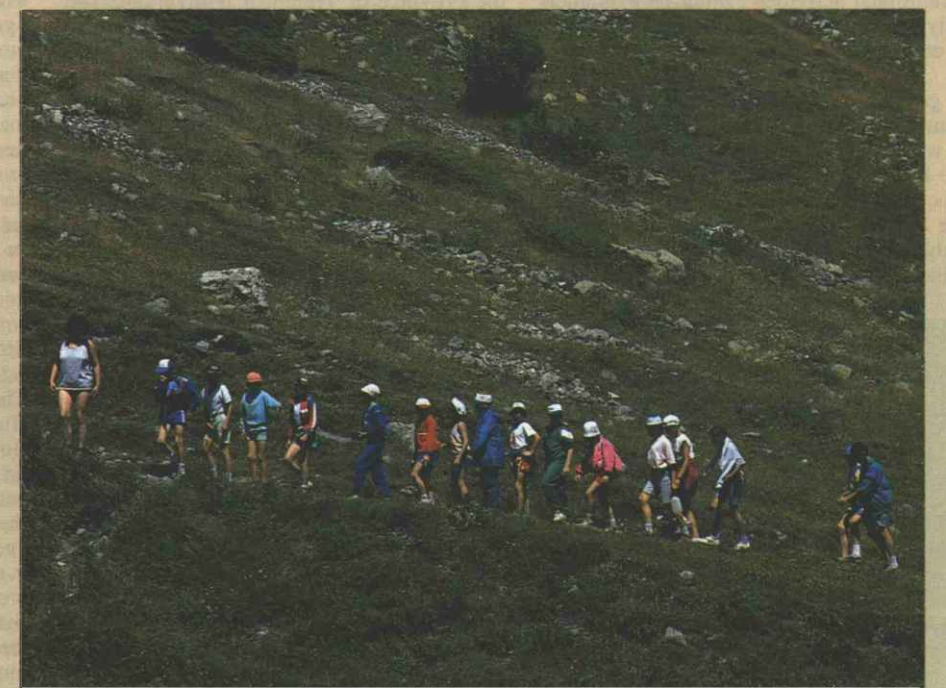
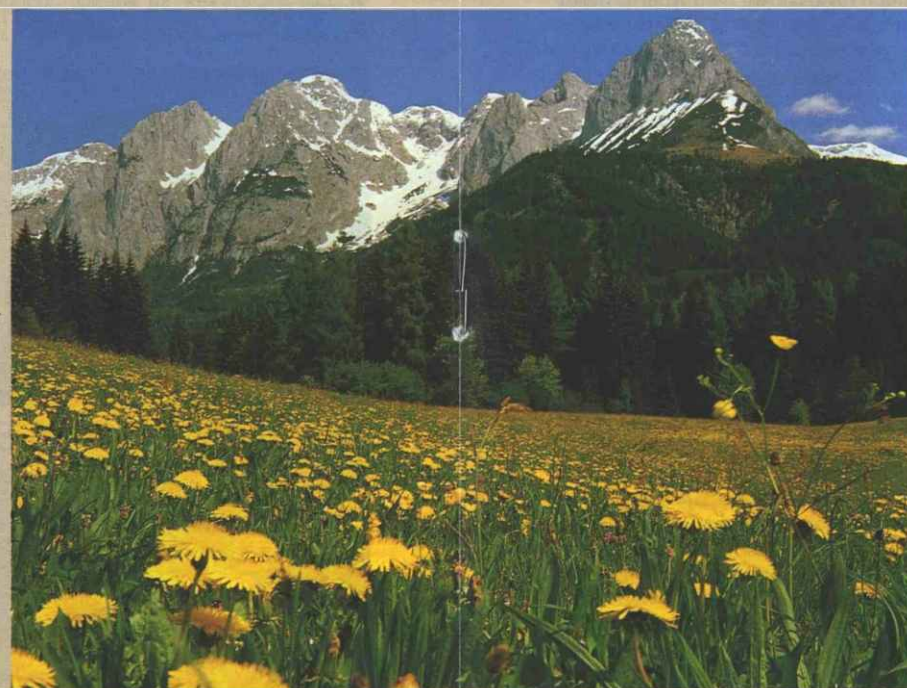
## Changes

Let us, however, leave aside such general considerations and move on and analyse the demographic and economic changes which have over the past few decades affected many of the municipalities in the Italian Alps which constitute (or whose territory includes) the main summer and winter holiday resorts. We have not referred to the valleys in the poorest mountain regions, where main features are an ageing population and unstoppable depopulation.





Our world is also theirs.  
Their world is ours too.







F. Bartaletti

Col du Tonale (1883 m). These three towers with synthetic faades, result of speculation in the early 1970s, are in a area with no infrastructure, almost left to themselves, (bad road, sunken footpaths, scrub, rubbish ...). Nearby, other towers rising amidst buildings which could not be more different from an architectural point of view, form the resort's centre.

tion, for example the Stura di Demonte valley in the Coni region, and the even poorer valleys on the southern slopes of the Gran Paradiso (Piantonetto, Ribordone, Soana), where the handful of remaining inhabitants deserve a medal for their loyalty to the mountain. We need a more reliable yardstick for assessing the "state of health" of the main tourist resorts in the Italian Alps. Demographic decline and the abandonment of traditional activities cannot be explained solely by an unfavourable economic climate and environmental damage.

The general statistics obscure at least two different demographic trends: while resorts in the westernmost and easternmost regions have lost 9 to 10% of their population in 20 years, Valle d'Aoste and the Southern Tyrol have experienced an increase of over 10%. Lastly, Lombardy and Trentino hold an intermediate position since the rate of increase -

particularly in the Autonomous Province of Trento - is considerably more moderate. Furthermore, it should be noted that during the second decade under consideration, the rate of increase slowed down (or else the decrease was more marked) everywhere. Lastly, if we take a close look at the overall population trend, we observe that, except in the Autonomous Province of Bolzano and a few areas bordering on the Valle d'Aosta and the Province of Trento, it is invariably the overwhelmingly positive net migration that is responsible for the increase or for limiting the decrease, and that the new residents are unlikely to come from municipalities next to the tourist centres. This situation obviously causes enormous upheaval in the socio-cultural fabric of our municipalities.

Where the breakdown of employees by economic sector is concerned, the most recent data (based on a survey of trade and industry)

available at municipal level unfortunately go back to 1981. In comparison with 1971, there is nevertheless a marked general increase in commercial sector employees: this sector shows an average increase of 57% even if we disregard the "hotels and public commercial concerns" branch, which is obviously booming.

As is to be expected in tourist resorts, there has been a marked turn towards the commercial sector and an equally widespread decline in agriculture, an alarming phenomenon if one considers the extent of the decrease in just ten years (-32%). There is a striking contrast between the Piedmont resorts, where the very marked decline in agriculture has not been offset by a sufficient increase in the commercial infrastructure, and the province of Bolzano, where agriculture is declining much more slowly and commerce is undergoing a tremendous boom, with the result that there are more tourist facilities. If we add the fact that of all the geographical areas Piedmont has the fewest employees per resort in the hotel and public commercial concerns sector, it is not difficult to conclude that this region has more problems than any other in the Italian Alps, even Friuli.

Having said that, and bearing in mind that even in the "flourishing" Southern Tyrol agriculture has lost over a quarter of its workers in just ten years, we must not forget that in 1981 the primary sector still employed nearly 15% of the working population in the main tourist centres of Southern Tyrol, with rates of over 25% in some cases. With a few exceptions, therefore, the Southern Tyrol resorts are still to some extent rural in character, but this feature is nevertheless tending to be increasingly obliterated by urbanisation and the expansion of the service sector.

#### Stock-farming makes a comeback

The stock-farming situation is more reassuring - although only in the Province of Bolzano - because the number of head of cattle has increased by over 30% in the last 20 years, and in at least 20 municipalities out of the 32 there are over 50 head of cattle for every 100 inhabitants. From that angle there is a striking contrast between the autonomous provinces of Trento and Bolzano, where tourist resorts have manifestly followed very different development models. A further heartening development is the relative comeback of stock-farming over the past ten years in the Valle d'Aosta and Piedmont, where it had

completely collapsed. Furthermore, in some 30 municipalities out of a total of 115, there are now fewer than one head of cattle for every ten inhabitants, and in some the number of head of cattle is derisory: 36 in Macugnaga (Novara), despite the adoption of an "alternative" model for the development of tourism, 28 in Courmayeur (Valle d'Aosta), five in Alleghe (Belluno) and none at all (!) in Argentera, Clavière, Carona and Madésimo, whereas in Alto Adige/Southern Tyrol it is only in Corvara and Santa Cristina that the total number of cattle is under 300.

#### Problems with urbanisation

As a rough and ready indication for solving the complex problem of deciding when a village becomes a town, we took as our principle the idea - supported by geographical reference books - that a population of 5,000 is theoretically sufficient in Italy, particularly in the Alpine region, for a given settlement to qualify as a town, provided the number of employees in the commercial sector (apart from the hotel branch) is at least equal to the national average for a population of the same size, ie 274, according to the 1981 census. The number of tourist resorts which have reached town dimensions is still low, or at least was low until 1981, but second homes, which were virtually the only type of tourist accommodation in many Alpine municipalities, presented, and continue to present, serious problems.

Over half the second homes are concentrated in Piedmont and Lombardy, which also have the greatest disparity between the numbers of hotel and private beds. The situation in the province of Bolzano is ideal, and there is an acceptable ratio between the two types in the province of Trento - although the latter has been markedly affected by this inferior form of tourist expansion - and to a lesser extent in Valle d'Aosta. The gradual decrease in the numbers of second homes and holiday flats as one travels eastwards is also significant. It is largely accounted for by the varying distance between the tourist resorts and the large urban centres of Milan and Turin, but also due to the diversity of tourism policies in the various provinces and municipalities concerned.

To conclude, despite the absence of complete, definitive and sufficiently detailed data on the 1991 population and industrial census, it can be said that the socio-economic changes and, in many cases, the urban transformations

#### Working population variations

Geographical areas	a. Number of persons employed in agriculture		b. Number of persons employed in trade		a *	b *
	1971	1981	1971	1981		
Piedmont	2 091	1 229	1 178	1 389	-41.2	+17.9
Valle d'Aosta	653	432	550	834	-33.8	+51.6
Lombardy	1 260	968	1 455	2 415	-23.2	+66.0
Aut. Prov. Trento	1 361	804	1 240	1 987	-40.9	+60.2
Aut. Prov. Bolzano	9 703	7 056	4 000	7 327	-27.3	+83.2
Veneto-Friuli	2 337	1 403	2 539	3 252	-40.0	+28.1
Total (115 municipalities)	17 405	11 892	10 962	17 204	-31.7	+56.9

\* excluding the "hotels and public commercial concerns" branch

brought about by the development of tourism in the Italian Alps have been very marked throughout the area in question, even in those regions which are known to be very concerned to protect hill farming and present the architectural heritage and local traditions, for example Alto Adige/Southern Tyrol. I am thinking of the longitudinal urbanisation of Val Gardena between Ortisei and Plan de Gralba, the smog which increasingly frequently hangs over Val Pusteria/Pustertal, and the large village of second homes which has grown up at the Costalunga mountain pass (Ferriendorf Karerpass), where ultra-modern buildings have partly disfigured the high mountain basin of Kurzras in Val Senales/Schnalstal.

fringes of development despite their great cultural and ecological appeal, by using all means at our disposal to encourage hill farming notably cattle farming, if necessary with the help of European Community subsidies. In my view subsidies should also be granted to people who are either indigenous to the area or related to former inhabitants and who express the intention to reinvigorate these abandoned or semi-abandoned villages by "cultivating the landscape". I would stress, however, that these should be persons originating from the place in question or the Alps in general, because if snobbish townspeople settle in elegantly renovated cottages, the remedy would be worse than the disease. ■

Prof. F. Bartaletti  
Institute of Geography  
University of Genoa  
via P. E. Bensa 1  
I-16124 Genoa

#### Choosing wisely

I suppose that we all would prefer to have a mountain which keeps its traditions, its landscape and its architectural values, in a word all the charm which constitutes the real driving force behind summer and winter tourism, and we would firmly reject any attempt to reproduce anonymous urban or, worse still, suburban models. What is most difficult, however, is to choose between upholding ecological values at the cost of prompting a rural exodus for want of any source of remuneration, and attempting to secure a high level of development, which presupposes certain ecological concessions, although not to the extent that the environment suffers any serious damage. There is no doubt that at the present time less than half of the area of the Italian Alps receives 90% of the tourists. So the "active area" (the prosperous part of the mountain, which is the preferred destination of hordes of tourists) contrasts starkly with the "passive area" (the depopulated, "forgotten" parts of the mountain). The time has therefore come to ease the pressure on the few areas which are now well-known and establish the conditions for the "intelligent" development of tourism on all the (many) sites which have hitherto remained on the

#### Population variations in percentage

Geographical areas	Municipalities	1971	1981	1991	71 - 81	81 - 91
Piedmont	19	24 120	22 961	21 796	-4.8	-5.1
Valle d'Aosta	9	9 346	10 210	10 481	+9.2	+2.7
Lombardy	21	39 330	40 924	41 525	+4.1	+1.5
Aut. Prov. Trento	18	29 550	30 348	30 704	+2.7	+1.2
Aut. Prov. Bolzano	32	112 160	118 359	124 604	+5.5	+5.3
Veneto-Friuli	16	51 799	49 866	47 072	-3.7	-5.6
Total	115	266 305	272 668	276 182	+2.4	+1.3



# A blessing in disguise?

Anton Gosar

Nature has always been exploited by human beings in accordance with the needs and priorities of society. Tourism has recently started to exploit particular landscape phenomena on a big scale. For example, the highland areas of Europe were at the beginning visited by tourists exclusively because of adventurous or health-related reasons. Tourists have climbed mountains to reach mountain tops or have walked through forests or stayed at spas to gain health. Later, ice skating and skiing were introduced. Nowadays fashionable sports, such as canoeing and rafting, sailing and surfing, parachuting and hang-gliding, mountain-biking and snow-boarding, etc have increased the list of recreational activities.

Lately, the mountainous environment, as a complexity of nature and culture becomes saturated and rushes towards self-destruction! The attraction based on the diversity and uniqueness of the mountainous cultural landscape is slowing vanishing: as in cities people are suffocated by car exhausts, visitors are hastily looking for parking spaces; skiers glide down slopes covered with artificial snow; tourists splash in chlorinated pools next to the lakes, due to pollution; video enthusiasts ascend mountains in ultra-rapid cable-cars and trains; everybody drinks Coke and dances to the rhythm of rock ...

The countries which have not yet achieved the above-mentioned culmination in their development, or have not yet experienced tourism as a powerful branch of the economy, still look upon it as a development-problems-solving institution. The former socialist countries of Eastern Europe have to be named in the first place. These societies are in a belated stage of the classical socio-economic transition. The visions of short-term positive economic effects prevail in planning. Tourism promises to provide work, income and profit without extreme financial and technical inputs at first. Experiences which touristically developed regions have gained might change the minds of enthusiastic profit-oriented planners and their respectful societies.

## A developed tourist region

The European Alps stretch at a distance of about 1,000 km and separate European lowlands from the Mediterranean in a 250-km-wide belt. The Alps belong to seven states: France, Italy, Switzerland, Liechtenstein, Germany, Austria and Slovenia. The range is criss-crossed by 405,000 km of economically relevant transportation lines, connecting East and West, North and South of the continent. More than 40,000 ski runs were recently constructed here. Within one hour, 1,200,000

persons can be transferred by cable-cars to mountain tops. About 110 million tourists per year spend their vacations in the Alps. Alpine resorts are destination points for two-fifths of European tourists. About 25% of the entire profit in the world, made by the tourist industry, is related to this natural and cultural phenomenon. Second only to the Mediterranean, the Alps are the most visited destination of Europe.

In the 1950s, the Alps became the central tourist attraction where multitudes of recreation-eager people crowded. The intensity of the urbanisation process poses a real threat, that the greater part of the mountain might soon become completely inhabited and developed. A megalopolitan region, where settlements merge into a uniform urban area, is no more just a subject of black-and-white futuristic presentations. In the greater part of the Alpine lowlands between Grenoble and Turin, Munich and Milan, Geneva and Zurich, Salzburg and Ljubljana, or Vienna and Zagreb, this has already come true. "Alpinopolis" - the pan-Alpine city - is slowly becoming a reality. It is joined by an urban zone with recreation and entertainment amenities, one author calls it "Pensionopolis" (= Sun City), located on higher elevations. The main agents of the later development are town residents, who after retirement move for good to the vacation dwellings. The urban way of life is driving the agrarian one out. Farmers have been left with slopes, caught between the high-altitude Alpine "Disneyland" and the "Megalopolis" of the valley, urbanised, polluted and saturated. The Tunnel, several rapid railway lines (ICE, TGV, Pendolino etc) and new highways will bring the Alps by 1995 within reach of only a few hours' drive to everyone in Europe.

The number of visits and the motive which brings visitors to the mountains is becoming a concern to the residents of the respective Alpine countries. Visitors nowadays most often want to ski or make use of the mountainous world in another leisurely way. In the past communities promoted winter recreational activities. For this purpose forests had to be cut and bulldozers had to alter the slopes. Cable-cars and ski-lifts were put in place. Constructions have often screened the view of the mountains. Natural disasters have become more frequent. Numerous brooks have dried out as a result of technical works. Because the snow on ski runs was machine-treaded, it took more time for it to melt. The artificial preparation of the snow with chemicals (hardening) caused damage to flora and fauna. Nevertheless, the fact must not be overlooked that the construction of these recreational amenities has had a correlation with the dynamics, eg the increase of the population, the urban structures, and tax revenues.

## Establish limits

Because of the stated problems several countries have recently implemented restrictions: a ban on the construction of new cable-car facilities and systems; restrictions on the use of snow blowers and chemical substances; the claim that waste waters be treated adequately as to ecology etc. Present deliberations, resulting from the structural saturation, are different from considerations in the past. Yet, technical solutions and/or law bypassing innovations can still be found: instead of a two-seat cable-car, a new four-seat cable-car is set on the same clearing site; the running speed of the cable-cars is increased by several times; the snow cover is artificially made deeper by constant use of snow generators in the permitted time intervals; on the former single-level parking areas, new multi-level garages are built. But, parallel to such actions some other, unconventional interventions were put into practice, too. They are not exclusively profit-oriented. Certain panoramic roads (Grossglockner) are being closed for a definite period of time when they become overcrowded; large areas were declared national parks (Tauern, Triglav), or are protected in some other way; access to attractive mountain sites is allowed to groups using mass-transit systems from places where they have parked their cars (Zermatt); on lakes, such boats are allowed which are driven by environment-friendly energy (Bled); bedclothes must be brought by visitors themselves, because they are not to be washed in Alpine huts (Allgäu). In certain places, a strict "ghettoization" of tourists is observed, with concentrated facilities and premises for them. Access to other areas is only permitted upon request. Tourists are then accompanied by a qualified guide. Surprisingly, many visitors appreciate the new method of the development planning.

The above-mentioned policies have found grounds in traditional tourist regions. The development boom of the past couple of decades has been re-evaluated by the local residents, particularly by the young ones. Some of their objections should be herewith named. They may be elaborated in places where societies seek tourism development and deal with similar outstanding mountainous landscapes.

Tourism stops emigration as it increases immigration, population density and seasonal employment. People concentrate in areas where for centuries not even a tenth of the present population has lived, or where human foot has not stood before. Tourism employs, with accelerated speed, the less qualified labour force. Workers often come from other regions and settle for good, thus changing the traditional demographic structures and regional peculiarities. Citizens from "leisure-exporting countries" - like Germany and Japan - purchase properties, which results in inflated real estate prices for the autochthonous population. Tourist visits introduce an Anglo-Saxon universalism. Tourism is not such a reliable branch of economy as experts used to claim and as it seemed to be. Natural

(climate: absence of snow) and socio-economic conditions (depressed economy, political instability) significantly influence tourist visits. Non-tourist economies (farming, forestry, construction ...) are subjected to the dominating branch of the economy - tourism. It arranges the area and the supporting economic system upon its own needs. Multinational and multiregional agencies become in part a dominant factor of the local economy (transnational hotels, restaurants, agencies).

## Central Europe developing winter tourism

Most former socialist countries of Central Europe believe that the way towards welfare, via market economy, will be least difficult if tourism would be developed and promoted. Along with capital cities and, in part, coastlines, they intend to develop mountains of their respective countries. The bow of the Carpathian Mountains and mountains of the Balkan peninsula are shared by ten former socialist countries of the region. The mountainous world is in size similar to the one of the Alps. Tourism has in places been present here for centuries (in health resorts, based on thermal and mineral waters). Winter Olympic Games were held here (Sarajevo 1984) too. However, there are only a few known winter-sport centres (eg Zakopane, Strbske Pleso, Borovec, Kopaonik). Some of them have been regularly advertised, but have never been particularly appreciated in the West. The world jetset individuals, whose names regularly appear on the guest lists of Alpine resorts, have never come to these mountains. In spite of topmost performances by the local skiers, the International Ski Federation has seldom approved World Cup competitions to be held behind the "Iron Curtain".

New-age politicians blame the former regime for the inherited conditions. Communist ideology obstructed tourist visits and hindered touristic development. Developers, encouraged by the profit-making of this branch of economy in the past and elsewhere, now tend to develop tourism on a big scale. They have succeeded in promoting urban tourism (eg Prague, Budapest, Sofia, etc). But in spite of open borders, low prices and attractive recreational facilities it will be an extremely complex task to promote winter tourism and make it internationally competitive. The following hindering elements have to be named: geopolitical conditions, inherited economy and polluted environment.

Beginning with changes in Poland, the recent turn of the decade was/is shocking and the future unpredictable. Countries disintegrate, revolutions are/were fought. Many development plans still remain unrealised. Governments cannot find investors. Tourists are scared to visit places. Tourism was here for many decades looked upon as a relict of the bourgeois past, the remnants of which (hotels, spas) should be swept away, the sooner the better. Residents of resorts have found jobs in new centres of manufacturing, particularly in metal producing and treating

facilities. It is therefore necessary to keep in mind that Central Europeans have in most parts not known commercial tourism nor lived with it for the period of the last five decades. Recent studies support alarming reports on the degradation of the natural environment. Pollution is on average higher than in the Alps. Not due to the impacts of urbanisation, transportation, or tourism, as there, but mostly because of the extensive, half-century long industrialisation. Experts provided data on the exceeding heavy pollution from metals, zinc and cadmium in particular. The highest concentration of heavy metals was discovered in the western and central Carpathians, particularly in the Tatra Mountains. Several studies expose problems related to the construction of power plants: the presence of sulphur dioxide in the atmosphere and sulphur and other chemicals in soils. With the exception of Bulgaria, the measured values of sulphur dioxide have been two to three times higher than in the Alps. Toxicity of water, rivers and lakes is excessive in parts too. One of the causes lies in the construction of megalomaniac hog farms tossed all over Central Europe.

Considerations by Central Europeans to develop tourism and invest in tourist amenities in mountains should therefore be realistic. Thus, any future actions should be based on the following guidelines:

1. Tourist facilities should primarily be designed for citizens of the respective country and for residents of neighbouring states! In the Alps the national structure of the visitors is heterogeneous only in a few fashionable skiing resorts. This, in spite of the fact that the European population axis, with numerous states and nationalities, is only a few driving hours away. Especially winter tourism is closely related to short distances, private means of transportation and a good network of roads.

2. Recreation should be available to the population of cities! Interests of people of the regional capitals (eg Warsaw, Cracow, Prague, Bratislava, Budapest, Belgrade, Bucharest, Sofia, Istanbul, Athens, Skopje ...) and larger towns should be taken into consideration. Recreation and tourist amenities, adapted to the ideas of the big cities, will be diverse, fashionable and will therefore yield financial profit.

3. Tourism - being an economy, a way of life and a spatial appearance - should be planned carefully! Ecological and cultural aspects must be taken into consideration in every stage of the planning! Attention should be paid to the following problems:

New urban constructions must be made diverse and functional. Disperse settling has to be avoided, but again, the citization character must be shunned. Extensive areas must be left for future generations to develop. Priority locations should be made available to commercial and highly profitable facilities. But, construction on highly attractive locations, on vistas or ridges, on the banks of

lakes or rivers, should be avoided. The carrying capacity of the cultural landscape has to be taken into account. In low rainfall areas, for example, one must deal with the fact that a single visitor may use up to 800 litres of water per day.

Villages and older constructions, to a large extent abandoned by residents, with no particular economic, historic or cultural importance, could be arranged into profitable resorts if adequately developed and advertised. Protection of the environment must be the development's first priority, followed by the technical arrangement of amenities known to and asked for by residents of the cities.

A multifunctional character of the mountainous landscape must be preserved. It should equally satisfy the interests of tourists, local residents, the tourist industry, and the society as a whole. In accordance with this objective, it is necessary to protect certain mountainous areas against the intrusion of the tourist industry. To the benefit of the latter, areas with outstanding environmental values must be declared national parks.

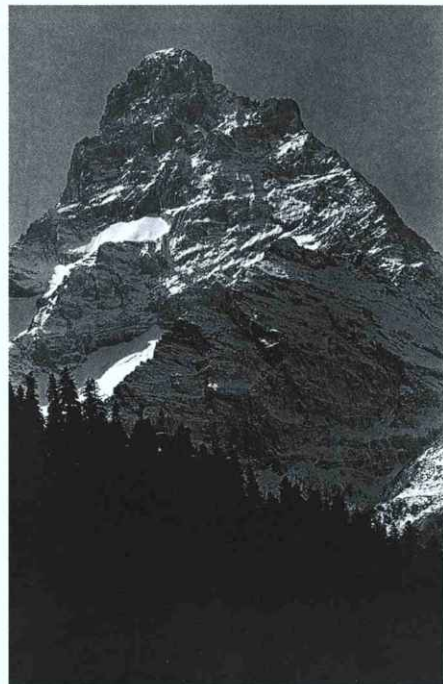
But, then again, learning from the Alpine experience, one should think twice! ■

Dr. A. Gosar  
Department of Geography  
Ljubljana University  
61001 Ljubljana  
Slovenia





P.N. Teberda



P.N. Teberda

## Teberdinskiy

Amirkhan Amirkhanov  
Nadezhda Polivanova

The Teberdinskiy State Nature Reserve is situated in the Karachayevo-Cherkesskaya Republic of the Russian Federation, on the northern slopes of the West Caucasus. It is a typical high mountain area, with 95% of the reserve located at a height of 2,000 m above sea level.

It was originally established to preserve the recreational conditions of Teberda and adjacent forest massifs, having both climatic and water and soil protection value. This nature reserve is an extraordinary one due to the existence of regulated tourism which historically appeared and developed simultaneously with the reserve.

A part of the Teberdinskiy Nature Reserve - the Dombay valley - is especially popular in our country and also among the foreign alpine skiing tourists. It is located at 1,000 m above sea level and tightly surrounded by a ring of mountain peaks. It is always windless, still and sunny. The alpine skiing season here lasts from December to March and the training of tourists at Allbek glacier - the largest one in this region - exists all year round.

There are dozens of touristic, excursion and climbing routes of different degrees of difficulty. In the excursion area of Dombay the scientific personnel of the reserve show the tourists the most interesting places. The natu-

re reserve protects a great number of rare and disappearing plant and animal species included in the Red Data Book of Russia: 24 species of higher plants, three species of lichen, one of fungi, 12 species of vertebrates and 17 of invertebrates.

There is a Museum of Nature and a ginseng nursery in the nature reserve, enclosures with wild animals open to the visitors and saddled horses can be hired. The nature reserve has already existed for 56 years, preserving its unique nature.

But in the last ten years the human influence has intensified. The Dombay valley has become a vast tourist centre with five hotels and many tourist camps. Its area covers 104 hectares and is alienated from the nature reserve. The problems of the sewerage system for the settlement and refuse disposal have arisen. Purification works, built 20 years ago, are in poor condition and often cannot cope with the growing load, which nowadays exceeds the tolerance load of nature complexes by 15-20 times and the optimal one by 50-100 times. On the slopes of the Musa-Achiter mountain an alpine skiing route covering a total area of 150 hectares modern equipment has been installed. Because of construction work 10,000 cu m of unique spruce and silver fir forest have been ripped out. The stripped surface has

become a dangerous avalanche and mud-carrying torrent zone and presents danger both for the roads and for the constructions below the slopes. Soil erosion has already begun.

If the work on the ecological off-loading of Dombay does not start immediately, its unique nature will deteriorate and its reconstruction will be impossible.

A. M. Amirkhanov  
Deputy Minister  
Ministry of Environment,  
Protection and Natural Resources  
Kedrov Str. 6, building 1  
117874 Moscow  
Federation of Russia

N. N. Polivanova  
Deputy Director  
Teberdinskiy State Nature Reserve  
357193 Teberda, Stavropolskiy Kray  
Federation of Russia

## Delights in the heights

Hans Haid

*"Verfluech sigish  
Du dräckiges Geld, du goldischer Misch  
Der hier und überall umen bischt..."*

For some time now a vengeful poem in Swiss-German dialect cursing the "gentlemen" who deflect, pollute and built up the mountains for their own benefit has been circulating in Switzerland. This vehement and colourful curse reflects a new momentum in many parts of the Alps. The period of resignation is over. Authentic culture has been rediscovered: dialect, folk song and verse for magic cultural action.

So a new local and regional identity has arrived. The people of the Alps have rediscovered some of their own qualities: natural song and language, instinctive action, the culture of farm work and home-making and, deliciously, the speciality of natural fare.

### Nature and culture

Identity stems from culture. In many Alpine regions, a rediscovered, stronger identity has given rise to new kinds of resistance. First, people emerged from their torpor. Rejecting dependence, they offered each other help, with assistance from above, ie public and official agencies. The "new beauty of Alpine life" has three aspects:

- the new identity of the people of the Alps,
- resistance against resignation,
- action with spirit and resistance.

The Alpine curse of the canton of Grisons contained these elements. The old song has been reworded. The old dialect bears witness to opposition. The poem is a combination of spirit and verses. Anger about the destruction of the Alps is expressed through the force of the language, not that of draglines and high technology.

### The revival of old customs

A new custom has occupied the second Saturday of August for the last few years: the "Feu dans les Alpes" (Fire in the Alps) reflects the action of the committed. There is silence, beauty and poetry, there are songs, plays, revelry and a festive atmosphere, accompanied by speeches and presentations of religious objects. The old religious and magic rituals are coming to the fore again. In 1992 more than a thousand fires were lit in valleys and on summits in the Swiss, Austrian and Bavarian Alps.

For the first time in September 1992, the international association known as "Pro Vita

Alpina" awarded a "spirit and resistance prize" for rediscovered identity in three almost abandoned villages in the Val Maira, in Piedmont. Three people in San Martino superiore had started to bake bread again. In San Martino inferiore, Maria and Andrea Schneider were helping to make bread and giving support to the mountain people, who refused to give up. There is still hope for a good life in the mountains. The bread tastes very good.

The "Borgata" restaurant in San Martino serves delicious meals. Each new cultural mood is a matter for the head, the stomach and the heart.

### Initiatives

The delicious herbs of the Poschlav valley "herb initiative" (Kräuterinitiative), the herbs dried at an altitude of more than 1,600 metres at Matsch, South Tyrol, and the wild flowers collected in linen bags by the women of Tyrol's Lech valley add spice and interest to the cooking in many households, to local specialities and to the menus of top gastronomic restaurants. The new cook book produced by the "Iniziativa da las Alps" contains recipes and descriptions of events in the Alps, giving new spice to a more attractive diet for a good many local people. "Cooking in the Alps" (On cuisine dans les Alpes) requires an open fire, and many efforts are being made by ordinary people to combat the cruel destruction of the Alps through the excessive opening up of new areas, the appalling traffic criss-crossing the mountains, the concreting over of fields and the flooding of pasture land.

### Action is taken in an environment of poetry

The road to love runs through the stomach. The people of the Alps are adopting a new identity, which also encompasses new treats to eat, new initiatives and a new aroma.

On an ancient farm at Innervillgraten (East Tyrol, Austria), the traditional grilled lamb is incomparably subtle. The Villgrat "Frischlamm" is an example of how to enhance farm products and sell them direct to the public. The caterers who prepare this fresh local lamb deserve the coveted culinary distinction awarded.

The identity of the Alps is a matter of high quality and outstanding promotion.

There is no room for nostalgia or dreaming. Thanks to old-established traditions, to ancient wisdom in a new form, to the adaptation of rituals, customs and magic to contemporary tastes, and with a new joyful life, we are full of hope as we move towards the end of our century.

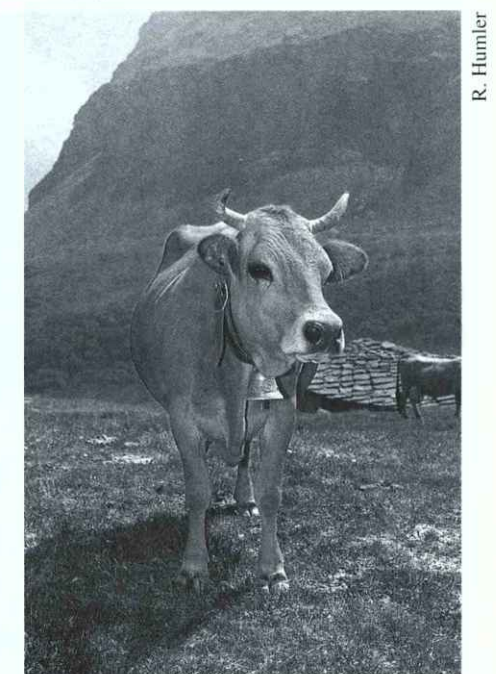
Prospects are good. We now have more than 130 new economic initiatives and over 200 citizens' schemes to help to save the Alps.

We must act with spirit and poetry

Saving the Alps? We are certainly not referring to a general idea, a wide-ranging rehabilitation, but it is crucial to the spice and innovation, in the same way as salt, pepper and leavening are essential to make our cooking tastier.

H. Haid  
Feldweg 8/28  
A-6111 Volders

Tarentaise cow. Each region has its race of cattle, each cow its milk from which regional cheese is made, a gastronomic ambassador.



R. Humler



# Wise use of natural resources

Fritz Sieren  
Peter Friedrich Sieben

It was March in the northern Caucasus and a mild breeze was already blowing across the south-facing slopes where the snow had melted. With the pilewort, arum lily and coltsfoot breaking through, the scent of spring was in the air. The new season rang out in the song of the thrushes, the twittering of the titmice and the endless drumming of the woodpeckers. As water from the melted snow rushed down the mountainside, the forest was coming to life again after the long, hard winter.

Lying in the shadow of Mt Elbrus - a 5,600 m massif inhabited by the Kabardians, a steppe people, and the Balkars, a mountain people - the north-facing foothills were still covered in snow, waist-deep or more in places.

It was lonely up in the hills. We had passed only a few small villages since leaving the town of Nalchik. Time seemed to have stood still: the landscape consisted of tiny villages amid a vast panorama of fields, with a few meagre orchards scattered in between. And the whole scene was given a romantic air by houses from a bygone era and towns with no new buildings, supermarkets, traffic lights or proper pavements.

It is a sad fact, however, that our nostalgia was inspired not by the rustic folklore one often finds preserved at such great expense in the German and Austrian Alps, but by the poverty, underdevelopment and lack of modern infrastructures of a place left behind by history. Although the scene appears beau-

tiful to the visitor, the daily life of the local population is one of hardship.

## Hunting scenes

Just before dawn, we entered the dark forest: first in a jeep and then on foot to begin stalking. The forester had told me the night before that we would find wild boar. Their numbers have multiplied since agriculture in the region has become more intensive. In the past, the damage they caused was not important. But now that economic considerations are of prime importance even in Russia, the local hunters with their old guns - sometimes with no telescopic sights - are unable to keep the game population down to reasonable levels. And there is not enough money to pay for crop protection.

The situation is aggravated by the fact that the local population are not keen to hunt the hogs because their Islamic faith forbids them to eat the meat, so many just leave any that are shot to the wolves, bears and foxes. Foreign hunters, who pay dearly to do what the foresters and farmers would rather not do themselves, are therefore welcome guests.

By now, my guide and I had reached a small, sparsely wooded plateau near the tree line. I turned round and admired the magnificent scenery, a match for anything in the Alps. Just then, my guide elbowed me gently to point out a boar rooting some 150 metres

away. "A papa kaban", a loner, he whispered, and gave me the sign to fire.

But that was easier said than done. The bushes offered no support for my gun, and I was not prepared to shoot without support at that distance. I knelt down carefully and began to crawl towards a fallen birch. The wind was favourable and the damp grass did not rustle.

But luck was not on my side. A small twig caught and snapped, alerting the great beast. Off he charged, snorting loudly in anger.

Only an hour later we had a second chance. The forest track opened out into a clearing, which we approached cautiously. And there before us was a group of at least 20 boar, busily rooting in the grass. I was probably in tune with nature again by then, and was able to approach without being seen and, more to the point, without being heard.

First, we just watched them. As I wondered which one to go for, my guide pointed to a large boar wallowing on his own, slightly apart from the group. I had perfect sight for aiming, and, while the rest of the group scuttled off, the lone boar probably did not even hear the crack of the gun.

Around midday, we met two other game-keepers at a crossroads. We spread out a large rug on the mossy ground and unpacked our bread, butter, cheese and sausages, which we seasoned with a kind of chives we had cut along the bank of a stream. We washed this all down with piping hot tea. I was no longer a spectator, but a part of nature.

The fresh air, the bodily exercise, the excitement of the chase and the hearty meal all gave a sense of wellbeing which made Germany, with all its great luxuries, seem very far away.

## Supporting the local economy

"We hunters must be a crazy lot", I said to myself. We pay as much for a week's shooting as for a holiday in a five-star hotel, and live in rundown houses that the owners would modernise if only they had the means. And we are not even put out by the lack of showers or the need to share toilets.

In that sense, it is hunters who engage in the kind of tourism that conservationists and environmental agencies are always calling for. No forests need to be felled to build hotel complexes with foreign capital, no ski-lifts, leisure parks or rambles' trails need to be provided for the masses to attract more and more tourists for a short season.

No staff need to be recruited in the towns to cook exquisite meals and provide perfect ser-

*Since human beings have occupied the most easily accessible places in Europe, fauna and flora have had to alter their habitats and in some cases have even disappeared altogether. Mountain regions have always provided - and still provide - refuge for many kinds of animal, including game species.*

*The rational exploitation of well managed and properly regulated hunting can support the populations of mountain regions through tourist hunters, who bring many benefits to an area, making use of local and regional resources such as guides, inns and transport, and paying for licences. This could all add up to a natural and renewable source of income. The same could apply to other regulated and managed activities described in this issue.*



In the Caucasian foothills

vice for spoilt guests. Out in the forest clearing, no meal could taste better than our home-made lunch. And no service could surpass the friendliness of our hunt guides.

Pleasant though it was to lie in the clearing, we were eager to get on with the stalking. Our two guides dealt with the dead boar. There would be customers for it in the town.

Over the next few days, I shot some more wild boar. We saw the trail of a "medvyed", a wild bear, which the spring sunshine had enticed out of his den earlier than usual. We came across herds of sika and two large stags that had already shed their antlers. Once, we even found a red deer calf that had been eaten by wolves, leaving only bundles of hair, its hooves, head and gnawed backbone.

The weather was not very kind. We had to put up with mist and drizzle every day, but still that was more agreeable than the ice-cold snowstorms that freeze you to the bone in winter. Then, no normal tourists venture into the region, only huntsmen taking part in wild boar hunts. That is the pattern of tourism throughout the year.

When we got back to our vehicles, the fog cleared and we saw blue skies for the first time. The white mountain ranges of the High Caucasus emerged like a crown encircling the old hunting lodge. The virgin forests wound round the foothills, sheltering the wild boar we had been hunting.

This was confirmed again when our guide invited us into the village inn for a farewell drink. The innkeeper and several villagers were already waiting: word had spread that two hunters were in the area.

"You should see what it's like in autumn and winter", said mine host, "when the hunters come for the big hunts. It's just like a village festival".

The villagers' happiness was understandable, explained our guide. Without the groups of eight to ten hunters visiting four or five times a year, the village inn would have closed long ago. In summer, too, visiting hunters stopped over in the inn, providing a regular income for the innkeeper and his family.

I was surprised to see how many people in the region benefited from hunting and stalking. Around 20 villagers act as beaters at every hunt, not to mention the guides and other helpers. Some farmers lend their horses to the stalkers, and there are supplies to be bought in, meals to be prepared and accommodation to be provided.

Some families would have moved to the town long ago were it not for the extra income the hunters provide. One guide even wanted to earn an independent living solely from his work with visiting hunters.

Despite the economic benefits that huntsmen bring to this structurally weak region, it is

pleasing to note that no-one attempted to "rip us off". We were all treated as friends, sharing for a few days the lives of these men and their enthusiasm for a mountain environment that is still unspoilt. We will be back for more.

F. Sieren  
P. F. Sieben  
An der Ebenau 37  
D-5788 Winterberg-Züschen



B. Winsmann



# Mountaineering: protection first

Josef Klenner

The history of mountaineering goes back to the beginning of the last century, when the first small clubs and associations were founded. National unions were formed shortly afterwards: six came into being between 1857 and 1874. The pioneer was the British Alpine Club, followed closely by the Austrian "Alpenverein", the Swiss "Alpenclub", the Italian "Club Alpino", the German "Alpenverein" and the French "Club Alpin".

Initially, the aim was to conduct scientific research and to open up the Alps to mountain hiking and tourism. For this purpose, mountain huts were built and paths were marked out. Shortly afterwards, a mountain rescue and mountain guides organisation was formed.

The main aim in opening up the Alps to tourism was to alleviate the extreme poverty of the farmers living isolated in the mountains. Social concerns predominated.

The development of mountaineering clubs has matched that of society as a whole in each country. For this reason, individual clubs differ vary greatly in terms of their development and the differences stand out clearly today.

Over the decades, other mountaineering clubs have been formed and are still in existence today. Clubs have been founded in many of the countries which became independent after the collapse of the East bloc and the Soviet Union. It should be noted that the Alpine Club of South Tyrol was founded in 1945 although the Club Alpino Italiano already existed. The historical development of South Tyrol was a significant factor in this.

In fact, there are enough unusual features in the history of the various mountaineering clubs to fill an entire book.

## Varied work

With time, the work of mountaineering clubs has grown more varied. An important factor is the particular mountain range with which they are associated, because a comparison of priorities shows that they are not the same in the Alps as, for example, in the Himalayas or the Andes.

In Europe at least, one can currently identify three different levels on which mountaineering clubs operate: the national level, the local level and the international or global level.

Looking first at the national activities of European mountaineering clubs, one may observe a whole series of parallel functions.

The training of young and adult mountaineers has always been a major concern. The teaching of safety techniques has made possible a steady reduction in the number of accidents. The work of mountaineering clubs is influenced increasingly by a sense of responsibility for nature conservation. The growing pressure exerted by transport, tourism and atmospheric factors call for urgent measures. The mountaineering clubs are very important in this respect.

Another task is maintenance of paths and of the huts which are still used by mountaineers as sleeping quarters and bases. The provision of energy and drinking water supplies and the disposal of refuse and human waste are major problems in this regard. In the past, the huts were only frequented by small numbers of mountaineers and the occasional group, but now, on many days and weekends, crowds of holiday-makers head for them, so that saturation point is sometimes reached. We therefore need new paths and new techniques for supplying and cleaning the huts. Their isolated, high-altitude location is a major factor in this regard because, for example, sewage treatment processes which work well in the valleys cannot be used under the climatic conditions to which mountain huts are subject.

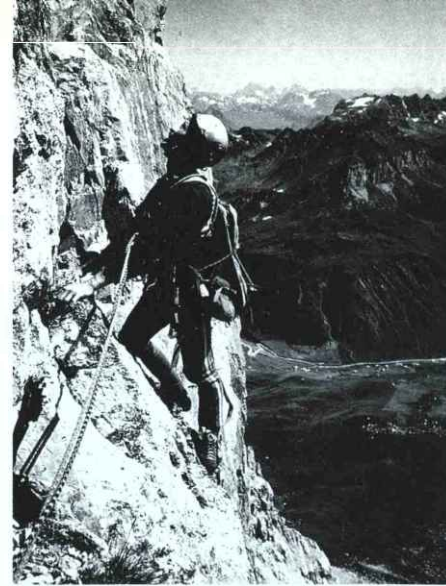
A whole series of new sports have emerged in recent years, especially at high and medium altitudes. They include hang-gliding, para-gliding and mountain-biking. The mountaineering clubs are certainly affected by these sports, but they played no part in their introduction or development.

The same cannot be said of rock-climbing, whose popularity has grown considerably in the last 15 years and which has recently become established as a competitive sport. Rock-climbing in the true sense is part of mountaineering, where it has opened up new horizons, while competitive climbing depends on purpose-built facilities in sports halls.

## Effective international co-operation

Mountaineering clubs have been co-operating and pooling experience for several decades. For a long time, scientific research formed a strong link. Nature conservation and the upkeep and management of mountain huts are currently the main areas calling for joint solutions. Indeed, these two areas are indissolubly linked.

National approaches to nature conservation are meaningless unless they are viewed as part of a transfrontier approach embracing the entire Alpine region. Mountaineering clubs have already been practising this kind of co-operation operating for a number of years. Their primary aim is to reduce the pressures as much as possible without harming the legitimate interests of the local population, especially with regard to tourism development.



H. Magedebran

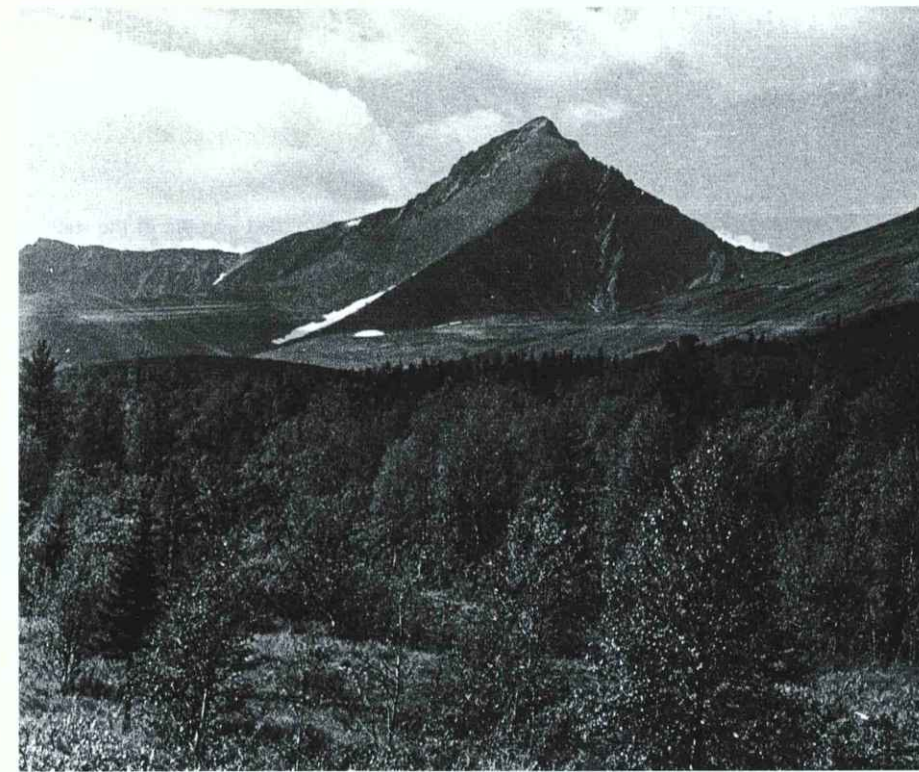
Where mountain huts are concerned, the tasks are the same in the eastern Alps as they are in the Mont Blanc area. Joint action will be required on the part of the clubs to complete the development of new techniques.

The concerns of mountaineering clubs across Europe are fairly similar, but worldwide the situations differ considerably. Environmental, geographical and social conditions are too varied for the same criteria to be applied.

Under these circumstances, co-ordination of activities and objectives is extremely difficult. This complex task is for the most part carried out by the International Union of Alpinist Associations (UIAA) founded in 1932. The Union has committees of experts which deal at international level with such matters as mountain conservation, safety, expeditions, medicine and mountaineering. As it is entrusted with increasingly weighty responsibilities, the UIAA is bound to take on a growing importance.

As may be seen, the tasks performed by mountaineering clubs have changed considerably. In addition to the socio-political aspects, nature conservation and protection of the Alpine environment stand out today as the major concerns. The fact that they are addressing these important issues shows that mountaineering clubs cannot be viewed in isolation. They are an integral part of society in each country. They also have a role to play in the building of a united Europe. ■

J. Klenner  
President  
Deutscher Alpenverein  
Alpenvereinshaus  
Praterinsel  
D-8000 Munich 22



C.S. Madmolea

# The Urals

Yuri Badenkov

With the demise of the Soviet Union, Russia lost many of its mountain regions that were historically part of the Russian Empire: Transcaucasia, Central Asia and Kazakhstan, Carpathians and Crimea. Still, nearly 40% of the territory of modern Russia are mountain and highland areas. Mountains of European Russia are the Urals, Northern Caucasus and subpolar mountains of the Kola Peninsula; Asian Russia includes the mountains of southern Siberia (Altai, Sayans, Transbaikalian Mountains etc), mountains of the Far East (Sikhachi Alin, Kamchatka, Chukotka) and highlands of eastern Siberia.

The highlands of Russia have common typical problems:

- peripheral and marginal character as compared to more developed lowlands,

- interventionist economic policies pursued from the "centre" in relation to the highland natural resources (mineral, biological, hydro-power, recreational, etc),

- discrimination of the interests of the aboriginal and minority mountain people,

- degradation of the mountain environments and depletion of their natural resources (of biological resources, in particular).

In Russia there is essentially no state policy pursuing the goals of sustainable regional development of the mountain areas, as there is, say, in the Alpine European countries (France, Switzerland). Absence of legal and economic support for development explains the current conflicting pattern of development both in the socio-political sphere (ethnic conflicts in the northern Caucasus, in

Tuva, Bashkiria), and in environment conservation and management (Altai, Urals, northern Caucasus, Khibins in the Kola Peninsula, Kamchatka).

The new economic model adopted for development of Russia (transition from state monopolism to market relations) gave rise to several new phenomena, in particular in the field of special reservation of territories, environmental conservation and tourism. The governmental and non-governmental organisations are widely declaring (and attempting to implement) their desire to establish new national parks following the West European and US models. This may seem a positive phenomenon. However, the economic crisis in this country puts forward as priority the idea of commercial interest from the pre-supposed inflow of Western tourists to the national parks (the idea being rather unrealistic in itself in view of low-level infrastructure), fully ignoring the interests and traditions of the local mountain communities. Then, many national parks are established on the basis of the already existing protected areas or are replacing them, thus destroying the system of reserved territories that existed in the USSR and devastating biodiversity of the mountain areas.

These new trends of environmental development and conservation are in contradiction with recommendations of the Rio Conference.

It is quite obvious that Russia will have to go a long and difficult way in developing its mountain regional policy, taking due account of its historical and national features. For this purpose the European experience (for instance, the Convention on the Alps) may be extremely useful for the Russian policy-makers, environmental scientists and the public activists. The public movements supporting a special status of the mountain countries are vigorously developing in the mountain republics, like Altai, Dagestan, Tuva,

etc. However, the Parliament of Russia has not yet made a single step in this direction.

Possessing outstanding national and ethno-cultural diversity, the mountain countries of Russia urgently require specially adapted non-uniform strategies of sustainable development taking into account the natural factors, cultural traditions, and the need for environment conservation.

## Urals: is environmental rehabilitation possible?

Mountains of the Urals and the adjoining highlands stretch in the meridional direction as a narrow band (100-400 km wide) from the Arctic coast to semi-deserts of Kazakhstan. They form over 2,500 km of the borderline dividing the east European and the west Siberian plains and the European and the Asian continents. The highest ridges are in the subpolar Urals (Mt Narodnaya, 1,875 m), northern Urals (Mt Telposiz, 1,617 m) and southern Urals (Mt Yamantau, 1,640 m). Low ridges of the middle Urals do not usually exceed 600-800 m.

The Urals are an important climatic barrier: its western macroslope gets 600-800 mm of precipitation (up to 1,200-1,500 mm in the subpolar section), while the eastern Transurals macroslope gets 200-300 mm less.

The characteristic landscapes of the Urals are the taiga and mountain taiga in different combinations with mixed and broad-leaved forests in the south. Despite significant reduction of the forested areas as a result of their multi-century exploitation, the forest landscapes account for about 60% of the territory.

## A little history

The Urals belong to the major economic regions of Russia. Their natural resources were intensively exploited by Russia for over seven centuries. Before the Russians settled in the Urals, the indigenous people lived on nomadic pasturing in the south (Bashkirs, Chuvash, Tatars) and hunting, fishing and reindeer-breeding in the north (Komi, Nenets, Khanty). Economic activities in the area were spatially fragmented and did not harm the natural environment. In accordance with their religious and cultural traditions, the Ural tribes protected individual rocks, trees, caves, lakes, forests.

Since the end of the 17th century, Russian entrepreneurs have started to expand their activities to the Urals, and to use their natural resources on a large scale (minerals, above all). Development of mining in the area (over 12,000 mineral deposits were recovered) went together with cutting of forests and formation of a specific settlement network of towns-enterprises that has essentially lived up to nowadays.

During the second world war the major enterprises were moved to the Urals from western



regions of the USSR; in a very short time a powerful industrial area with orientation on defence industry has been created. This specialisation was maintained in the "cold war" years.

The unique path of development of the Ural region in the USSR explains its special status of a "closed and secret" area, and dominated the policy of management and utilisation of its natural resources, socio-economic development, and environmental conservation. The specific character of development of this mountain country should be taken into account when discussing the current state of the region, planning for rehabilitation of the transformed landscapes, and formulating the solutions to the multivariant (and multicentury) conflicts of the society-environment interaction.

This general background of economic history of the Urals is overlain by the network of regions possessing diverse levels of economic development as a result of their natural diversity:

- low-developed regions of the polar, subpolar, and particularly of northern Urals: extensive fragmented land cultivation, reindeer-breeding fishing, forestry and coal mining;

- southern part of the northern Urals and the middle Urals: regions of intensive forest felling and suburban agriculture around the "towns-enterprises" (Ekaterinburg, Perm), and in the mountains and foothills of the Chellabinsk oblast and Bashkortostan;

- southern Urals: regions of uniformly spread intensive agriculture and animal-breeding.

The principal features of economic development of the Urals region, as mentioned above, were, i.a., defining the strategy of environmental conservation: reservation in the undisturbed state of the unique, rare and some typical objects in the specially allotted territories that were given the status of national or regional reserves, sanctuaries, nature monuments, natural (national) parks. The above-reserved areas form a system of protected areas and, in accordance with the concept of Territorial Schemes for Nature Conservation, are an element of regional development plans.

#### Protected territories

##### *Polar and subpolar Urals*

The state reserves are planned to be established in the mountains massifs Rai-Iz, Poi-Er and around Mt Narodnaya (National Park) for conservation of the forest tundra ecosystems. Nature monuments are limited in number.

##### *Northern Urals*

The nature reserves in the area include: the Pechora-Ilych nature reserve (established in 1930) located on the western macroslope; the Malaya Sosva (1980) reserve is in the middle

Ob areas, Denezhkin Kamen, Konzhakovskiy Kamen; and the Vaghilskiy Tuman sanctuary. To conserve the forest taiga ecosystems 30 gene pool sanctuaries have been or are planned to be established. In the Transural section of the northern Urals 50 nature monuments (botanical and hydrological) have been registered.

##### *Middle and southern Urals*

The national reserves are: Visimskiy (middle Urals, Ekaterinburg), Ilmenskiy mineralogical (southern Urals, Cheliabinsk), south-Urals high mountain, and Bashkirian reserves.

Numerous geological and botanical nature monuments (275 in the end of the 1980s) with the status of regional protected territories, and sanctuaries for valuable hunting species are scattered all over the middle and southern Urals.

All activities for delineation of the specially protected areas and formulation of their development strategies are supervised by the Commission of Nature Conservation under the Urals branch of the Russian Academy of Sciences, and in the most recent years, by the Regional Committees of the Ministry of Environment of Russia. It should be emphasized that in the Urals there exists a developed network of research institutions of the Russian Academy of Sciences. Their major research orientations are:

- optimal use of natural resources,

- reclamation (rehabilitation) of landscapes and environment,

- reserved and protected areas and nature monuments.

#### Tourism and environment

The Urals are not in the list of the "elite" tourist regions of the former USSR and Russia, like the Caucasus, Pamirs, or Altai. Still, the trekking and skiing (in the north) tourist routes are traditionally popular, among citizens of the Urals region in particular. Water tourism (canoeing and rafting) along the Chusovaya and Ural rivers is widespread. In the recent years horse-riding in the low hills of the southern Urals attracts tourists. However, one cannot boast a high level of the tourist industry in the Urals.

These problems have two aspects, basically. On the one hand, they are usual for all old developed mining areas (like Appalachians, for instance): transformed landscapes, pollution, resource degradation, etc. On the other hand, being a "closed" area for nearly 50 years the Urals developed their own unique problems: not available or lacking information on the actual state of the environment, domination of the military-industrial complex in management of resources, age-long policy of colonisation of the indigenous people, as well as of old migrants from Russia.

This rather simplified account of the state of the Urals region suggests some principal tasks faced by scientists and policy-makers:

- inventory of the natural resources and re-evaluation of the state of environment, in other words, a "new discovery" of the huge mountain country from the perspective of geocology and sustainable development,

- search for new strategies for sustainable development and for a compromise between the industrially developed territories and the still low-transformed landscapes,

- conservation and development of the network of specially reserved territories, as a kind of framework supporting life and activities of the society in the transformed landscapes (in the situation of crisis of the whole national economy this task appears super-difficult),

- development of new models for rehabilitation of the indigenous and minority nations of the Urals in the context of the traditional forms of interaction (and co-existence) with the environment and the resource management.

One should underline that similar tasks (with various modifications) exist today in all mountain regions of Russia. But in the situation of the Urals - the historical and geographical divide of Europe and Asia - the search for solutions is of particular complexity and scales and is a great challenge for scientists and policy-makers! ■

Y. P. Badenkov  
MAB 6 Project  
Staromonetny 29  
Moscow 109 017  
Federation of Russia

# La Vanoise National Park

## 30 years of encouraging progress

The oldest of France's seven national parks, La Vanoise, diplomated by the Council of Europe, has spearheaded nature conservation in France for the past 30 years.

It is no accident that the Alpine goat was chosen as its emblem from the outset: the protection of that species was one of the major campaign issues. From some 60 individuals in 1963, its population has now risen to over 1,000. The animals roam all over the park and cross the border into Italy where the Gran Paradiso National Park is currently celebrating its 70th anniversary and ten years of fruitful co-operation with La Vanoise.

In the 30 years of its existence, La Vanoise has experienced both approval and discredit, it has come under attack and been defended, and is now recognised and accepted by a large majority.

The main achievement of La Vanoise is that the natural environment has been conserved intact at its heart but remains accessible via a network of well kept footpaths.

For some years now, the park has been announcing its firm intention of strengthening the existing ties of co-operation and partnership with the localities of the peripheral zone in such fields as environment and heritage conservation, agriculture and spatial planning.

The value which La Vanoise attaches to scientific research is reflected in its fact sheets, leaflets, brochures and other publications and in the films and television documents which it produces. These are always well received by an extremely varied public.

Enforcement of the regulations is a matter of constant concern in view of the number of violations of the code of conduct that ought always to be observed in a protected natural area of such outstanding interest.

To celebrate this anniversary, all of France's national parks held a colloquy in Chambéry from 5 and 6 July of last year to discuss their future. A future which, at the dawn of the 21st century, holds out great promise. ■

M.-O. Guth  
Director  
La Vanoise National Park  
BP 705  
F-73007 Chambéry Cedex



E. Hüttenmoser



J. P. Ferbayre/La Vanoise



R. Humler



# At the Council of Europe



## Pan-European Conference "An Environment for Europe"

Addressing the pan-European Ministerial Conference "An Environment for Europe", which took place in Lucerne from 28 to 30 April 1993 with the emphasis on East-West co-operation and solidarity, Catherine Lalumière, Secretary General of the Council of Europe, welcomed the decision of all the European partner countries, the intergovernmental organisations, the major financing bodies and the non-governmental organisations to co-ordinate their action in the struggle to combat the deterioration of the environment worldwide.

In the document presented by the Council of Europe, the emphasis was on nature conservation; a number of proposals for practical action were made, including:

- a pan-European inventory of areas which are or should be protected;
- an inventory of legal, regulatory, administrative and other instruments for preserving biological diversity outside parks and reserves;
- the development of environmentally benign tourism.

The participants approved the report prepared by the Council of Europe on this subject and responded favourably to the idea of declaring 1995 European Nature Conservation Year.

A declaration was adopted on the following points: an environmental action programme for Central and Eastern Europe; conservation of biological diversity; the state of the environment in Europe and an environmental programme for Europe.

## Freshwater Europe Campaign draws to a close

The campaign on water management and water conservation conducted by the Committee on Environment, Regional Planning and Local Authorities of the Council of Europe Parliamentary Assembly is moving into its final phase.

The end-of-campaign conference, at Berlin from 26 to 28 April 1993, assessed the findings of a range of colloquies on various topics, and closed with the adoption of a final declaration.

The conclusions, drafted in consultation with representatives of the four groups of target partners (local authorities, the business community, the science community and NGOs) have been incorporated in a report on which the Parliamentary Assembly will have a public debate during its autumn session (27 September - 1 October 1993).

The debate will close with a vote on a draft recommendation which will make specific proposals to the Council of Europe Committee of Ministers and member governments.

The Committee of Ministers will be asked to act on the conclusions concerning the Council of Europe's activity programme, namely:

- develop work on training, education and information about management of water resources;
- pay special attention to the problems of the Mediterranean basin and Central and Eastern Europe;
- promote whatever action will help local authorities manage their resources.

Member governments will be asked to encourage whatever national, bilateral or multilateral initiatives will help improve freshwater management. Emphasis will be placed on the valuable contribution which intergovernmental organisations can make to the design and implementation of freshwater policy.

## A bioethics Convention for 1994

The Steering Committee on Bioethics (CDBI) is at present preparing a draft Convention for the protection of human rights and dignity of the human being with regard to the application of biology and medicine.

This convention will be the first of its kind. It reflects the vocation of the Council of Europe to lay down rules and principles for the protection of the human being. Scientific discovery is advancing at a prodigious rate. The potential for progress in the field of human health is vast, but at the same time there is a risk of human dignity being impaired through improper use of certain techniques.

The Convention will contain a series of general principles and rules on such matters as free and informed consent, the protection of legally incapacitated persons, the preservation of the human body from commercial interests, genetic engineering and genetic testing. Protocols to the Convention may be concluded in specific fields. Two protocols are at present in preparation, one on organ transplantation and the other on medical research.

The CDBI consists of experts appointed by the member States of the Council of Europe, by the observers (countries of Central and Eastern Europe), and by among others, the European Community, Canada, the United States and the Holy See. It brings together scientists, doctors, ethics experts, legal experts and theologians.

Basic material for this Convention comes from the Committee's previous work and from important recommendations of the Parliamentary Assembly (for example on genetic engineering, organ transplants and the use of embryos for research or commerce). The Convention is expected to be ready for signature in 1994.

# National Agencies of the Centre

## AUSTRIA

Dr Ernst ZANINI  
Amt der Steiermärkischen Landesregierung  
Rechtsabteilung 6  
Naturschutz und Kulturverwaltung  
Karmeliterplatz 2  
A-8011 GRAZ  
Fax 43-316 877 43 14

## BELGIUM

M. Jean RENAULT  
Ministère de l'Agriculture  
Administration de la  
Recherche Agronomique  
Manhattan Center 7e étage  
Avenue du Boulevard 21  
B-1210 BRUXELLES  
Fax 32-2 211 75 53

## BULGARIA

Mme Auréola IVANOVA  
Division des Relations Internationales  
Ministère de l'Environnement  
67 rue V Poptomov  
1000 Sofia  
Fax 359-2 52 16 34

## CYPRUS

Mr Antonis L. ANTONIOU  
Environmental Service  
Ministry of Agriculture  
and Natural Resources  
CY-NICOSIA  
Fax 357-2 44 51 56

## CZECH REPUBLIC

Dr Bohumil KUCERA  
Czech Institute for Nature Conservation  
9 Slezska  
120 20 PRAGUE 2  
Fax 42 2 25 45 55

## DENMARK

Ms Lotte BARFOD  
National Forest and Nature Agency  
Ministry of the Environment  
Haraldsgade 53  
DK-2100 COPENHAGEN Ø  
Fax 45-39 27 98 99

## ESTONIA

Mr Kalju KUKK  
Head of General Department  
Ministry of the Environment  
42 Toompuiestee  
EE-0100 TALLINN  
Fax 372-2 45 33 10

## FINLAND

Ms Leena KARHUNEN  
Ministry of the Environment  
Ratakatu 3  
P O Box 399  
SF-00121 HELSINKI  
Fax 358-0 1991 499

## FRANCE

Mme Sylvie PAU  
Direction de la Nature et des Paysages  
Ministère de l'Environnement  
14 boulevard du Général Leclerc  
F-92524 NEUILLY-SUR-SEINE CEDEX  
Fax 33-1 40 81 99 53

## GERMANY

Mrs Helga INDEN-HEINRICH  
Deutscher Naturschutzring eV  
Am Michaelshof 8-10  
D-53177 BONN  
Fax 49-228 35 90 96

## GREECE

Mr Donald MATTHEWS  
Hellenic Society for Nature Protection  
24 Nikis Street  
GR-105 57 ATHENS

## HUNGARY

Mrs Louise LAKOS  
Department for International Co-operation  
Ministry for Environment and Regional Policy  
P O Box 351  
H-1394 BUDAPEST  
Fax 36-1 201 28 46

## ICELAND

Mr Sigurdur Á. THRÁINSSON  
Ministry for the Environment  
Vonarstraeti 4  
ISL-150 REYKJAVIK  
Fax 354-1 62 45 66

## IRELAND

Mr Michael CANNY  
National Parks and Wildlife Service  
Office of Public Works  
51 St Stephens Green  
IRL-DUBLIN 2  
Fax 353-1 66 20 283

## ITALY

Dr.ssa Elena MAMMONE  
Ministère de l'Agriculture et des Forêts  
Bureau des Relations Internationales  
18 via XX Settembre  
I-00187 ROME  
Fax 39-6 48 84 394

## LIECHTENSTEIN

Mr Wilfried MARXER-SCHÄDLER  
Liechtensteinische Gesellschaft  
für Umweltschutz  
Heiligkreuz 52  
FL-9490 VADUZ  
Fax 41-75 233 11 77

## LITHUANIA

Dr Mindaugas LAPELE  
Lithuanian Environmental  
Protection Department  
A Juozapaviciaus 9  
232600 VILNIUS  
Fax 370-2 35 80 20

## LUXEMBOURG

M. Jean-Paul FELTGEN  
Ministère de l'Environnement  
Montée de la Pétrusse  
L-2918 LUXEMBOURG  
Fax 352-40 04 10

## MALTA

Mr John GRECH  
Head of Administration  
Department of the Environment  
M-FLORIANA  
Fax 356-24 13 78

## NETHERLANDS

Drs Peter W. BOS  
Ministry of Agriculture, Nature  
Management and Fisheries  
Department for Nature, Forests, Landscape and Wildlife  
PO Box 20401  
NL-2500 EK's-GRAVENHAGE  
Fax 31-70 379 82 28

## NORWAY

Ms Sylvi OFSTAD  
Ministry of Environment  
Myntgaten 2  
PO Box 8013 DEP  
N-0030 OSLO  
Fax 47-22 34 95 60

## POLAND

Mr Marcin HERBST  
Krajowe Centrum Edukacji Ekologicznej  
ul. Dubois 9  
PL-00 182 VARSOVIE  
Fax 48-2 635 00 20

## PORTUGAL

Ministerio do Ambiente e Recursos Naturais  
51 rua de O Seculo  
P-1200 LISBOA

## SAN MARINO

Mme Antonietta BONELLI  
Département des Affaires Etrangères  
Contrada Omerelli  
Palazzo Begni  
Via Giacomini  
47031-SAN MARINO

## SLOVAKIA

To be nominated

## SLOVENIA

Dr Jorg HODALIC  
Environment Protection and Water Regime Agency  
Vojkova 1a  
61001 LJUBLJANA  
Fax 38-6 1 125 263

## SPAIN

Mme Carmen CASAL FORNOS  
Dirección General de Política Ambiental  
Ministerio de Obras Públicas y Transportes  
Paseo de la Castellana 67  
E-28071 MADRID  
Fax 34-1 554 62 77

## SWEDEN

Mr Ingvar BINGMAN  
Swedish Environment Protection Agency  
Smidesvägen 5  
PO Box 1302  
S-171 85 SOLNA  
Fax 46-8 98 45 13

## SWITZERLAND

M. Jürg KÄNZIG  
Ligue suisse pour la protection de la nature  
Wartenbergstrasse 22  
CH-4052 BALE  
Fax 41-61 312 74 47

## TURKEY

Mr Hasan ASMAZ  
Turkish Association for the Conservation of Nature  
and Natural Resources  
Menekse sokak 29/4  
TR-06440 KIZILAY -ANKARA  
Fax 90-4 417 95 52

## UNITED KINGDOM

Mr M. W. HENCHMAN  
English Nature  
Northminster House  
GB-PETERBOROUGH PE1 1UA  
Fax 44-733 68 834



Information concerning Naturopa, the Centre Naturopa or the Council of Europe may be obtained from the Centre or the National Agencies listed above.



