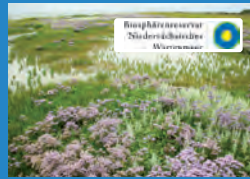


Deutscher Rat für Landespflege



**Biosphere reserves
are more than
protected areas
- breaking new
ground for a
sustainable future**

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German Council for Land Stewardship (DRL)

Biosphere reserves are more than protected areas - breaking new ground for a sustainable future

Summary of the Results from the Testing and Development Project "Concepts for new Landscapes - Sustainability in Biosphere reserves" (FKZ 3509 82 2300) from 1 October 2009 until 30 September 2010.

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LENNART-BERNADOTTE-STIFTUNG

This project was supported by the Federal Agency for Nature Conservation (BfN) with funds of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and by the Lennart-Bernadotte-Foundation.

1. Motivation and objective of the project

Biosphere reserves are established to protect and develop large-scale and traditionally variously used natural and agricultural landscapes including the diversity of biotopes and species that historically originated there. At the same time, they serve as models for the development and testing of ecologically compatible forms of sustainable land use; sustainable use by humans is expressly part of the biosphere reserves concept. Sustainable use refers to management techniques that are lastingly environmentally sound and compatible with nature in a comprehensive sense.

Implementation of this concept requires that all those involved in it (in particular policymakers, administrations, associations and inhabitants) have as broad as possible agreement on the objectives and measures in the sense of good governance. "Governance" is the process of collectively making and implementing decisions. In this context, therefore, one must also examine governance structures and the possibilities they offer for control within biosphere reserves. "Good" can refer both to the ideal of fair processes that involve as many affected parties as possible and to the achievement of results that can be endorsed in the light of comprehensive systems of aims (such as sustainability and biodiversity strategies). This dual designation of "good governance" – fair processes and good results – entail a dual spectrum of tasks for biosphere reserve administrations: process management and measures of nature conservation and landscape management in the broader sense.

Based on the content of the Seville Strategy, the results of examination of the biosphere reserves by the MAB National Committee, the Madrid Action Plan and our own analyses, the German Council for Land Stewardship (Deutscher Rat für Landespflege - DRL) examined the extent to which the above strategies and plans have been implemented and what role good governance plays in

them. At the same time, one developed proposals and recommendations that contribute to the required greater involvement and better implementation of sustainability objectives specifically in biosphere reserves.

Taking into consideration the present framework conditions, such as changing land uses (e. g. renewable resources), regional economic references (marketing, tourism), demographic development, climate change as well as legal provisions for natural and agricultural landscapes, the DRL

- presents newly adapted, ecologically-compatible forms of sustainable land use for agricultural landscapes,
- shows business models that support the protection and development objectives, leading to more sustainability and maintaining biological diversity and
- puts forth proposals for the governance structures required for these.

In addition to fundamental research (document analysis, telephone interviews, talks and discussions in the council board and committee meetings) a professional conference was held by the DRL on “Concepts for new landscapes – sustainability in biosphere reserves” both to gain access to the subject matter and to present the project to the professional public and discuss it extensively with experts.



2. Framework conditions of the biosphere reserves in Germany

The approximately forty year history of the World Network of Biosphere Reserves illustrates that its realization was, from the very beginning, linked with far-reaching objectives and fields of action for its implementation. Until the 1990s, the protective function was most important in the designation of reserves although there were initial approaches towards including human uses and development activities. This also is true for the German biosphere reserves. This explains why political decisions were made, for example that the responsibility for biosphere reserves was given to the federal and Land ministries responsible for nature conservation and environmental protection and appropriately allocated biosphere reserve administrations.

Not until the Minsk conference was the ratio of the size and content of buffer and transition zones distinctly criticized. Following the 1992 Conference on Environment and Development in Rio de Janeiro, the development aspect (development under sustainability aspects and the involvement of affected people) was given very considerable significance and was strategically broadly anchored in the new framework conditions of the 1996 Seville Strategy and the 2008 Madrid Action Plan. At the same time, the biosphere reserves were given additional tasks due to the changing nature conservation and environmental protection conditions (maintaining biological diversity, reaction to climate change, securing ecosystem services), to which Germany also developed its own solution strategies.

At the latest since the Seville Strategy and the Madrid Action Plan not to mention the demanding national strategies, the administrations of the biosphere reserves are confronted with such an extensive, multifaceted and complex spectrum of tasks that the question arises whether the types of organization existing in Germany,



the personnel of the administrations and the planning mechanisms are adequate for implementation.



Biosphere reserves should constitute the consistent and practice-oriented realignment of uniting nature conservation and land use at the regional level, through which nature conservation interests and other social requirements including ensuring the livelihood of people must be more distinctly and greatly linked. This places high demands on the staff of the administrations of the biosphere reserves and their composition.

The history of natural and agricultural landscapes is marked by dynamic change; for people as the users of the land, change is also necessary for socioeconomic reasons. The development mission of the administrations of biosphere reserves takes this into consideration to a high degree, for in addition to protective tasks, the field of work focuses equally on shaping the landscapes: new land uses and types of management – sustainably maintaining biological diversity, protecting the climate and securing ecosystem services – must be developed, tested and integrated with the involvement of the affected groups.

When they function well, they can serve as models for sustainable development in other regions.

Biosphere reserves are defined separately from the other large-scale conservation areas in the Federal Nature Conservation Act. The act grants the administrations of biosphere reserves the dual tasks of “protection” and “development” planning responsibilities. According to the National Criteria the framework concept is the primary planning basis, which should contain statements on “protection” and, contributing to other (specific) specialized plans, on “development”. In practice, the structure of existing framework concepts or plans often pursue the pattern of traditional landscape planning; the biosphere reserve administrations often lack adequate competencies for fulfilling the “development” task. Rather, the competencies are usually held by the local authorities, administrative districts, the “Länder” or the Federal government. We are therefore faced with the challenge of how traditional sector planning approaches can be overcome in biosphere reserves as model regions.



3. Status of the biosphere reserves in Germany

There are presently 16 biosphere reserves in Germany. They are described in profiles (content: name, map, address, personnel, representativeness, biological diversity, demography, economic development, education and communication, research and monitoring, governance, funding, integration in the World Network).



Foto: Nationalpark Schleswig Holsteinisches Wattenmeer

The information contained in the profiles and the data surveyed from the biosphere reserve administrations and other offices as well as the lectures and discussion results from the DRL-conference enable us to observe the status of implementation of the National Criteria, the Seville Strategy, the Madrid Action Plan, the sustainability strategy, the strategy on biological diversity and the climate change adaptation strategy while taking demographic aspects into account.

The designated biosphere reserves in Germany are, due to their special natural and cultural circumstances, suitable additions and enrichments to the World Network of Biosphere Reserves. The majority of the biosphere reserves fulfil the national criterion of a minimum size

of 30,000 hectares. Not all of the German biosphere reserves fulfil the national criterion whereby the (unused) core zone must take up at least three percent of the total area of the biosphere reserves. The development zones are also not always sufficiently large in all regions.

There are spatial overlaps in the protection categories and protective terms in the German biosphere reserves. Some biosphere reserves are also or in part national parks or nature parks, moreover their core and buffer zones are mainly – in line with the demands of the National Criteria – secured as nature conservation areas, the transition zones are mostly designated as landscape protection areas. Furthermore, parts of the biosphere reserves are also registered as FFH and/or EU bird sanctuaries.

Fifteen of the German biosphere reserves are recognized by UNESCO, while the Karstlandschaft Südharz biosphere reserve is presently in the recognition process. The biosphere reserves are legally safeguarded and – with the exception of the biosphere reserves Bliessgau, Schwäbische Alb, Karstlandschaft Südharz and Berchtesgadener Land – are in their consolidation phases. The necessary framework concepts have not been set up in all of the biosphere reserves.

The biosphere reserves have established administrations, most of which are attached to the “Länder” ministries for nature conservation and environmental protection. The administrations are equipped with basic personnel and materials for fulfilment of their tasks. In many cases, the administrations are allocated to the higher or supreme Land authority; their competencies are regulated; some are also authorizing authorities, they are frequently public agencies. Area maintenance is also regulated.

One can ascertain that although the structure of the existing framework concepts of the biosphere reserves deviate from one another, they often follow the principles of traditional landscape planning: recording and evalu-

ating the stock, based on this deriving models and defining tangible (environmental) objectives and, derived from these, proposals for measures. Management and development plans are necessary for implementation of the measures, for which the competency of the biosphere reserves is, in most cases, regulated via the corresponding law or ordinance on the establishment of the biosphere reserve.



Foto: K. Janke

Going beyond nature conservation planning, however, the biosphere reserves should prepare “special planning schemes for the sustainable development of tourism, transport and settlement in the transition area.” Because of the planning material, however, in most cases there are overlaps in competencies for this with local or district authorities or the relevant “Länder” or the biosphere reserve administrations hold no planning competencies whatsoever. This is crucial insofar as the cited planning areas are, for one, those in which integrative or sustainable approaches are especially desirable and necessary and, secondly, infrastructure-relevant projects in particular such as transport or local development planning in most cases lead to negative impacts on the natural balance in protected areas.

When planning authority is held by another authority than the biosphere reserve administrations, however, the biosphere reserve can, in case of doubt, draw up only non-binding recommendations. If the biosphere reserve administration has official competencies comparable to those of a lower nature conservation authority, then at least it can be involved as a public agency (Träger öffentlicher Belange), nonetheless at the risk that landscape planning arguments can be disregarded in consideration processes, yet also with the chance to integrate the objectives of the biosphere reserve in other plans via formal participation in planning procedures, as well as in self-initiated participatory processes (e. g. involving the population in the development of regional mission statements).

Frequently, the framework concepts and management and development plans of biosphere reserves serve as the basis for updating regional planning programmes, and are incorporated in landscape and green structures plans as well as local development planning. In Brandenburg, the Landschaftsrahmenplan fulfils the function of the framework concept.

The population per square metre is highest in the biosphere reserves of Bliesgau and Schwäbische Alb; neighbouring conurbation areas also have impacts.

Many other biosphere reserves are affected by rural depopulation, which can also have socio-economic effects such as insufficient use and dismantling of services (infrastructure, health, basic services), aging of the population, loss of jobs and loss of young trained workers.



4. Model developments and current challenges for biosphere reserves

Biosphere reserves should be model and learning sites, “open air laboratories,” where new pathways are tried with the aim of transferring the knowledge gained from this use to comparative areas outside the biosphere reserves. Since the German biosphere reserves differ considerably from one another with regard to their size, land uses, population density, the structure of their administrations, etc. and represent different landscapes and habitats, several of their missions and the approaches taken are particularly suitable and particularly promising for certain biosphere reserves.



Examples of innovative approaches and projects from the biosphere reserves are presented focusing on

- maintaining biological diversity,
- marketing regional products,
- mobility,
- tourism / leisure and recreation,
- agrarian land use, in particular grassland use and near-natural forest development,
- education for sustainable development, learning for all ages,

- research and monitoring,
- renewable energies,
- climate protection and climate change adaptation,
- identification by the population for “their” biosphere reserve,
- public relations,
- international cooperation between biosphere reserves and
- cross-border cooperation.

These should be understood as highlights that reflect the diversified missions of biosphere reserves and demonstrate the high degree of innovative, creative and communicative skills required of those involved in their organization.

There are important funding programmes financed by various public and private means. They pursue in particular the principles of sustainable development as set down in Agenda 21. Therefore, these funding programmes also test and promote sustainable developments outside the biosphere reserves at the regional level. They are, however, particularly well suited to the biosphere reserves because they make an important contribution to identity shaping, to cooperation and to cohesion within the biosphere regions. In academic studies of the regional governance aspect, at first it was ascertained that protection of nature and culture as community assets in large-scale conservation areas are not reliably suited for voluntary self-monitoring: the content is very complex and difficult to define, the stakeholder interests are very diffuse, sometimes controversial, the benefits are not always considered positive and often entirely new groups of stakeholders who previously had rarely any contact with one another need to join together.

The protected category of “biosphere reserve” is, however, suited as a catalyst for network-like governance activities since, when the rules of sustainability are complied with, they facilitate economic activities and de-



velopments. To achieve this, though, changes in the thought patterns and estimations of the stakeholders need to be set in motion: protected assets such as the landscape and culture are elements of our quality of life; they can be put into terms of economic values and they can also trigger emotional bonds. Therefore, governance processes are linked to many activities that need to be carried out, such as education, lifelong learning, regular communication, gaining acceptance, long-term motivation, achievement of regular successes, creating and maintaining an image, etc. In order to achieve governance arrangements, ever-longer periods of time need to be taken into account: the older a biosphere reserve is the sooner formal network structures emerge that effect regional self-monitoring abilities.



The development of governance and governance structures in a biosphere reserve can be divided into phases:

- During the initiation phase there is often resistance to united action for the objectives of the biosphere reserve.
- During the conceptualizing phase it may be difficult to mobilize the willingness to cooperate for the sake of a regional development scheme.
- During the implementation phase the circle of stake-

holders often transforms with the commencement of actual implementation projects.

- During the consolidation phase the key stakeholders are at risk of showing fatigue.

Governance processes do not just happen; they need to be initiated, in most cases by the competent governmental biosphere reserve administrations, sometimes with the help of moderators (e. g. development associations). They must additionally keep the triggered processes in motion and thereby attempt to implement the demands of the German guidelines. This is a great responsibility for them considering the field of tasks involved in and the skills required for governance.

The governance structures in Germany's biosphere reserves are presently at different stages of development. Therefore, forms of governance need to be found that offer the best prerequisites for achieving the objectives of the specific biosphere reserve while at the same time taking into account the specific institutional frame-



Supraregional and international organizations, initiatives and projects in which the

work conditions of the respective regions. One universal model for governance in the German biosphere reserves is neither realistic nor desirable as good practices are only conditionally transferable from single biosphere reserves to others. The emergence of cooperative processes is favourable; processes that refer not only to individual projects but to regional development as a whole and make ecological and economic benefits recognizable. However, without government support such processes prove to be fragile.

The examples of good practices prove that many successful efforts have been undertaken in the biosphere reserves to take up and implement the content of the Seville Strategy, the Madrid Action Plan, aspects of the Millennium Assessment, the sustainability strategy and the strategy for biological diversity as well as the climate protection strategy. Nonetheless in order to fulfil the claim that biosphere reserves are model areas in every respect, numerous impediments need to be eliminated. One crucial obstacle continues to be that the idea of



ch the German Biosphere reserves participate.

sustainability is still not yet well anchored in the thinking and actions of the people, institutions, bodies, etc. and therefore nature and the landscape continue to be under pressure. The only solution here is to constantly use education to shift society from the attitude of “growth” to that of “moderation.”

The administrations of biosphere reserves must be capable of adequately fulfilling the diverse tasks ahead in regional development. This broad requirement is not fully met. The administrations of the biosphere reserves are often staffed so that their work is aligned mainly to the issues of protection and conservation (cf. “personnel” in the profiles), and the (planning) skills and scope of action of the administrative staff of the biosphere reserves frequently are not sufficient to be able to effectively intervene in a steering way in the tasks of sustainable development (e. g. regional marketing, mobility) and to initiate and oversee jointly agreed strategies for the sake of long-term good governance.

Obstacles that stand in the way of sustainable development with regard to the planning competencies of the biosphere reserves are overlaps in the competencies of local, district or “Länder” authorities, old utilization rights, overloading by main sources of income and the hesitant introduction of sustainable new and innovative forms of land and water use.

The added value of biosphere reserves lies in the consolidation and synergies of competencies, strategies, planning, funding programmes and, not least, in functioning governance structures offering extensive opportunities for participation. This not only needs to be recognized within the biosphere reserves, but also and in particular requires the appreciation of biosphere reserves on the part of the Federal and “Länder” governments going far beyond the areas of nature conservation and the environment.

5. Recommendations

The DRL has compiled a series of recommendations for optimizing the demanding objectives of the biosphere reserves being model landscapes for sustainable development, maintaining biological diversity and climate protection and furthermore steering developments according to good governance. These recommendations address all competent offices and institutions that deal or should deal with the “biosphere reserves” field of activity: policymakers and administrators in the Federal, “Länder”, district and local authorities, academic institutions, interest groups in the fields of nature conservation and landscape management, environment, land use, water management, regional planning, traffic, industry and trade, education and science, international affairs, the interested public as well as the administrations of the biosphere reserves themselves.



Foto: E. Henne

Political classification and appreciation

As model areas for sustainable development, biosphere reserves should not only be funded, publicly strengthened and politically supported by the one sector of en-

environmental protection and nature conservation. Their cross-sectional orientation needs to be taken adequately into account in departmental responsibilities and participation. At the Land level, the state chancelleries and all ministries involved in the subject matter should take up responsibility for the implementation of biosphere reserve objectives and harmonize their funding programmes in such a way that high benefits and synergy effects can be drawn from the biosphere reserves and so that they can truly serve as model areas for emulation.

With their different functions and missions, national parks, biosphere reserves and nature parks should be considered equally ranked protected area categories. The differing presence of each of the categories in public awareness may not be permitted to lead to higher or lower acceptance in policymaking. Because of their special value as a protected category with a development mission in particular, biosphere reserves need more acknowledgement and support, which also requires appropriately sophisticated endowment with personnel and materials.

Representativeness, choice of areas

Until now, the selection of biosphere reserves by the "Länder" was based primarily on criteria related to their natural landscapes. This perspective is too narrow and should be expanded with a view to the interdisciplinary character of the MAB programme through the inclusion of socioeconomic and genetic agricultural landscape criteria. Knowledge about the needs and requirements of the people are indispensable for the establishment of biosphere reserves. Additionally, different economic and social conditions need to be taken into consideration in the selection. The biosphere reserves Bliesgau and Schwäbische Alb are partially of urban character; these are initial approaches in this direction. As yet, not all regions of Germany are represented by biosphere reserves. Insofar, additions may be advisable; this applies for instance to

moorlands, urban spaces and their surroundings and to large post-industrial and post-mining landscapes.

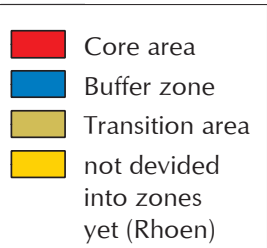


Legal safeguards

Under the new Federal Nature Conservation Act the “Länder” are free to decide in what form they will protect their biosphere reserves; it no longer demands a “legally binding arrangement.” From the viewpoint of the DRL this has no fundamental effects insofar as the contents of Article 25 of the Federal Nature Conservation Act are observed and implemented and regions are designated on the basis of the National Criteria of the MAB committee. The provisions of the “Länder” for protection and development of their biosphere reserves include ordinances, own acts and declarations. So far, no changes have been made to the previous procedures in Land laws, even where the laws have already been aligned to the new Federal Nature Conservation Act. However, not all Land laws contain statements on zoning, on research and monitoring, on education for sustainable development and not all “Länder” even intend to establish biosphere reserves at all, so that the DRL recommends appropriate adaptations in this regard.



Biosphere reserves in Germany with zoning (Federal Agency for Nature Conservation (BfN) November 2010 with data provided by the German „Länder“).



Zoning

The required minimum 3% core zone size is up to date. All biosphere reserves with deficiencies in this regard possess the necessary potential to designate a minimum 3% core zone area on a short-term basis. The “Länder” ought to implement this as soon as possible. The multifunctional character of the core, buffer and transition zones (with their graduated protective character and with their specific focal points) should be taken clearly into account in the framework concepts. The core zones and buffer zones should be designated as nature conservation areas or legally safeguarded in another comparable manner (e. g. in the scope of a biosphere reserve ordinance or law). Core zones should be as connected as possible, but at least linked together. Individual core zones should have a minimum size of 50 hectares as a guide value although this requires scientific evidence to be able to effectively protect species and their habitats. Since the core zones serve only to protect processes, uses (with the exception of research and monitoring) need to be given up at short notice or no longer authorized.

Administration, organization, competencies

The administrations of biosphere reserves must be enabled to adequately fulfil the diverse tasks required by nature conservation and regional development, business, monitoring, education for sustainable development, moderation, communication and fundraising. Carrying out these complex tasks requires that the “Länder” appropriately endow the administrations with staff and materials, which is presently not the case in all biosphere reserves. The extent to which the staff is acknowledged as competent management and qualified specialists in all spheres of activity is also decisive; considerable improvements can be achieved here through further training and coaching measures by suitable institutions.



The advantages of governmental administrations are, in general, basic financial means, staff continuity, confidence building and experience in cooperation with other administrations from the same field. Biosphere reserve administrations do not generally need to be governmental; their tasks or at least partial tasks can also be shifted to private sponsoring organizations, private foundations or operating companies, as is the case in some neighbouring countries (e. g. the Netherlands, Austria, Switzerland). Nonetheless they must fulfil the requirements laid down in the UNESCO guidelines and the National Criteria for designating and evaluating biosphere reserves and no cutbacks may be made to the contents of the administrator mission.



Planning, planning culture

A particularly sound planning culture must be cultivated in biosphere reserves by the planners, as demanded by the MAB programme. The category “biosphere reserve” needs to be substantially upgraded by the Land planners by being set down in the regional plans as a specific development category for large-scale, nationally significant landscapes (priority areas). The framework concept for

the respective region and specifically also the management and development plans for the individual partial areas are decisive for describing the value of this category.

The objectives and models of the framework concepts with their zoning must be anchored at all levels of Land planning. Regional planning in biosphere reserves needs to be optimized. The integrative assignment of tasks requires of the biosphere reserve administrations cross-sectional, integrative planning schemes and new planning approaches, which must be reflected in the framework concepts. Key sustainability themes such as the reduction of land consumption, residential development and tourism development are cross-sector themes that demand appropriate planning strategies. Single model projects alone are not enough; the planning competencies for biosphere reserve administrations must be fundamentally optimized. Instruments that can be newly tested include, for instance, informal planning, e. g. based on the European Charter for Sustainable Tourism in Protected Areas, the ratification of which by the biosphere reserve administrations is recommended. Socioeconomic and sociocultural issues should be taken equally into account along with environmental protection and nature conservation issues in biosphere reserve planning. The framework concepts for biosphere reserves should be drawn up with the involvement of all of the important groups according to bottom-up processes of good governance, in order that the personal and economic concerns of the people can be better taken into consideration.

Biosphere reserves offer ideally suitable and also already partially utilized prerequisites for implementation of the Council of Europe's "European Landscape Convention", for they already reflect its demands and future sustainability demands are implemented there. The DRL considers the content and aims of this convention urgently worthy of support and therefore recommends that the Federal government sign this convention.

Governance, decision procedures

In view of the differences between the German biosphere reserves, the DRL cannot recommend one uniform model for their governance. Good practices are only conditionally transferable from single biosphere reserves to others – and then only following precise examination of their suitability and regional adaptation.

It is especially favourable when cooperative processes arise from governance that refer not only to individual projects but to sustainable regional development and that are strong because they lead to ecological and economic benefits. Such processes, however, require governmental support. In order to be prepared for these challenges, biosphere reserve administrations need to be strengthened with regard to staff and funding and for this the personnel need to possess special skills in communication and motivation.



The broadest possible and comprehensible alignment of the outer borders of biosphere reserves to administrative borders or the borders of regional interdependence should also be striven for in conjunction with gov-

ernance issues, because they facilitate identification of the population and the commitment of all social groups as well as the inclusion of local authorities in concerns about the implementation of the diverse biosphere reserve objectives and the use of suitable funding programmes. This is also a source of opportunities for possible expansion of the areas of biosphere reserves.

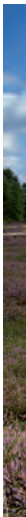
Participation and civic involvement are already obligatory for certain types of plans and measures; in the biosphere reserves in particular these obligations should be exceeded and citizens and associations should be involved in as many decisions as possible at the local and regional level.

All social groups, associations and interest groups (heritage protection and management, rambling clubs, nature conservation and landscape management, land use, industry and tourism) should continually be involved as eminently important and indispensable partners and stakeholders in the broad field of management and development of natural and agricultural landscapes.

As model areas, biosphere reserves are suitable learning places for different forms of governance that supplement or replace purely governmental administration. For instance, development associations, clubs and citizens' initiatives active in biosphere reserves can be commissioned with specific projects and measures by the administrators or even take their own initiative and accompany governance processes and enable decisions as moderators or mediators. However, this requires financial assistance from the government or the biosphere reserve administrations.

Demographic change

With regard to demographic development in particular, biosphere reserves located mainly in rural regions should



be given preferential treatment by Federal, Land and local policymakers in accordance with the Lisbon goals of the European Council of 2006 (investing in knowledge and innovation, developing business potential, investing in people and modernizing the labour markets and investing in more environmentally-friendly industries) and receive appropriate funding. Corresponding measures can decisively contribute to keeping people in the rural region with higher location quality and counteracting depopulation trends.

Because of their mission, biosphere reserves are predestined for meeting demographic change with schemes aimed at extensive maintenance of the necessary infrastructure and maintaining or enabling the population to have appealing residential and job options. For example, the planning sponsors should also develop and test schemes in conjunction with consolidated or with mobile structures (mobile town halls, mobile police force, mobile physicians, mobile shops and adapted school structures). In other places mixed school grade levels or ungraded schools have proven successful and can be further developed in biosphere reserves.



Biological diversity

Maintaining biological diversity is a task of biosphere reserves set down in the framework concepts or in the laws and declarations. The administrations attempt to fulfil this task through various concrete measures (e. g. registering and evaluating species, fauna and flora protection, identifying and managing biotopes or habitats, reintroducing vanished species and combating non-native species).

Great efforts continue to be needed in order to fulfil the model function of the biosphere reserves and to implement as many objectives of the National Strategy for Biological Diversity as possible at the regional level.

Generally, the biosphere reserve administrations require staff and funds in particular to maintain the diversity of wild and domestic species, breeds and varieties, to preserve the diversity of habitats and agricultural landscapes, to improve the ecological condition of the rivers and floodplains and, where needed, to develop these with the users and other stakeholders.

In some cases, the new Federal programme Biologische Vielfalt can be drawn upon for co-financing, for its funding focal points include measures

- for species for which Germany bears special responsibility (e. g. wildcat, felwort),
- for so-called hotspots of biological diversity (specific types of natural and agricultural landscapes) and
- for safeguarding highly varied ecosystem benefits, also in combination with climate protection functions.

At the same time, however, the users within the buffer and transition zones must be called upon to take more efforts to move towards sustainable, diversity-promoting methods of management. The administration has the task here of shaping the framework conditions in the area so that they are eligible for funding.





Foto: M. Hellner

Climate protection / climate change adaptation

The administrations of the biosphere reserves actively deal with issues of climate protection and with adaptation strategies. Some have carried out or are presently implementing their own projects at the local and regional levels (climate and biodiversity, climate and tourism, climate and water, climate and forests, climate and renewable resources). They are also incorporated in higher-ranking projects (R & D project Biosphere Reserves as Model Regions for Climate Protection and Climate Change Adaptation). Nonetheless, further-reaching measures are necessary. This applies to the continuation of basic research, communicating the results and developing ideas about how the findings can be input in concrete plans and measures, e. g. in local and regional climate protection programmes. Therefore, continued intensive occupation with the subject matter is needed and for this, in turn, staff and fundraising, e. g. also in combination with support programmes.

The biosphere reserves also deal with problems that must be solved with regard to gaining acceptance for various ways of producing renewable energies, which ultimately

also benefit climate protection (wind power, solar power, hydroelectric power, renewable resources), and their effects on the landscape and the natural balance.

Land uses, energy production

The preservation and the management of traditional, irreplaceable agricultural landscapes and agricultural landscape elements, e. g. vineyard monuments, irrigation systems, woodland pastures, hedges, hedgerow landscapes and many more remain the important task of biosphere reserves. Their area many not be allowed to shrink to the extent that they are entirely isolated, ecologically dysfunctional and eventually become “museumized” as relicts; as folkloristic fragments of agricultural landscapes. Traditional, irreplaceable agricultural landscapes must also be maintained in order to preserve biotope traditions that are essential for many biocoenoses.

In the scope of land use, all available options for adaptation should be utilized under sustainability and climate change aspects; including, as always, observance of the natural site conditions, promotion of organic farming and near-natural forestry, combined with optimization of the avoidance of greenhouse gas emissions. High ecological standards must be observed such as those required, for example, by Naturland for organic farming (conservation of soil, air and water, sustainable management, production without genetic engineering, actively practiced nature conservation and climate protection) or FSC for near-natural forestry (maintaining biological diversity, heeding sensitive ecosystems and ecological functions, avoidance of environmentally harmful measures).

Suitable and diversified crop rotation systems need to be developed for the cultivation of renewable resources. These should take into consideration old, biomass-rich local varieties, species-rich wild plant mixtures and landscape management timber for biomass production,



large-area testing of the products of hydrothermal carbonisation, the re-establishment of traditional types of forest uses (coppicing, composite forests) with different site-indigenous tree species and use for energy, the establishment of novel agro-forestry systems and forest types. Climate-relevant benefits must be taken advantage of in all types of use and adverse effects on biological diversity excluded.

Extensively used, species- and blossom-rich grassland, which is equally significant as an element of the agricultural landscape and as a habitat, is also highly endangered in the biosphere reserves due to intensification, ploughing up and succession. Model methods need to be developed and tested with which it is possible to utilize the usually crude fibre-rich crops of these areas whether – appropriately processed – as feed, as fuel or for the production of electricity. The production of medicinal plants can also contribute to conservation of grasslands.

As model regions and outdoor laboratories for sustainable management and with the safeguards of regionally and chronologically restricted experimenting legislation,

biosphere reserves should be given the opportunity to define and implement their own focal points of development. These could be in the fields mentioned above, enhanced by all variations of energy production from regenerative sources such as geothermal, wind and hydro-power stations, marine systems and photovoltaic plants, which are very controversial in protected areas in particular. Exemplary good governance solutions must be found for this.

The economy

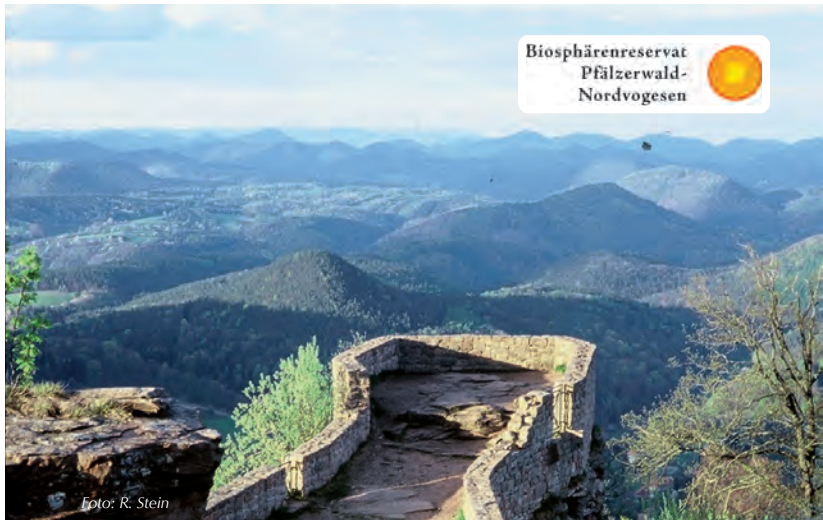
The economic relationships and interdependence with surroundings regions (e. g. conurbations as in the Schwäbische Alb biosphere reserve, Rhön biosphere reserve, Schaalsee biosphere reserve and biosphere region) are important as labour and educational markets and as sales markets (economic cycles) and for safeguarding basic logistics. They are also the foundation of sustainable forms of tourism. It is therefore necessary that the biosphere reserve administrations' framework concepts also deal with the regionally specific strategies and models for the use of such relationships and cycles so that they are not left behind by economic developments.

A minimum number of enterprises, which are not exclusively located within the borders of a biosphere reserve, are necessary to establish value creation chains and regional alliances. To support sustainable management the DRL recommends the enlargement of the sphere of activity of the biosphere reserve borders in the form of a "biosphere reserve region" that takes social and economic relationships and cycles into consideration.

The experiences of some biosphere reserves with their own umbrella or regional brands prove that good socio-economic success can be achieved; umbrella or regional brands contribute to shaping an identity and promote motivation and cooperation among inhabitants.



Corresponding product creativity and marketing strategies should be particularly promoted in cooperation between the biosphere reserve administrations, nature conservation and environmental protection associations and regional trade associations. Yet here too, multiple competencies are needed for implementation that basically go beyond those of the administrations or partners and for the acquisition of which trainings, coaching measures or the commissioning of suitable institutions is needed.



Communications and public relations/cooperation

Good and long-term public relations work using modern information channels serves to convey and help people understand planned and current measures; it is primarily important to inform inhabitants and guests of the objectives and tasks of biosphere reserves.

A task of the administrations, it should, however, also be carried out by associations with qualified and, in particular, sufficient staff to foster local bonding, identity, commitment and solidarity and stimulate people to actively become involved.

Various programmes and alliances are offered under the umbrella brand “Nationale Naturlandschaften”, which the biosphere reserve administrations make use of in different ways. The aim of the initiative “Partner der Nationalen Naturlandschaften” is to regularly gain trained and trainable partners using qualitative environmental standards who effectively function on site as additional ambassadors for the protection and conservation of their protected areas and are dedicated to nature conservation and environmental protection. Among these, for example, are partners from the sectors of lodging and restaurants, rail and bus transport, tour excursions, forest, tidal flat and guest tours. If they satisfy the minimum standards the partners are authorized to use the protected area’s logo. The DRL recommends that all biosphere reserves join this initiative, since identification and advertising effects enhance appreciation of the protected areas.

The DRL also recommends involvement in the “Fahrtziel Natur” alliance to all biosphere reserves for sustainable tourism.

In October 2010, the “Verein für Biosphärenreservatsforschung und -kommunikation/ Ernst-Moritz-Arndt Universität Greifswald e. V.” set up the international communication platform <http://www.biosphere-platform.net/> for biosphere reserves. It supports the World Network of Biosphere Reserves, enables all participants from research and practice to enter into dialogue and offers the use of a digital library covering all topics linked with biosphere reserves.

The staff of the biosphere reserves as well as academics, policymakers and the public ought to take advantage of active involvement in this and of dialogue and access to the latest information on research and project results.





Education for sustainable development

In biosphere reserves as model regions, education for sustainable development must be carried out at two levels. At the one level, the stakeholders in biosphere reserves need to be given skills they can use to develop the region. For today's challenges (demographic change, climate change, economic developments) these include basic knowledge of the different natural circumstances (typical flora and fauna, landscape and cultural history, denominational differentiation, forms of residential and land uses, mentalities, customs, dialects, etc), whereby historical circumstances need to be linked with issues for the future. At the other level, the special situation of the biosphere reserves needs to be better utilized to practically convey the objectives and content of education for sustainable development not only to the people living there, but also to visitors.



In biosphere reserves as “learning regions” for sustainability, learning processes should be initiated among all social and age groups and implemented together with partners from the educational sector. In the field of education for sustainable development especially, biosphere reserves have an exceptional mission compared with other protected area categories and therefore also have the opportunity to truly project this in an exemplary way beyond regional borders. This opportunity should be taken advantage of more intensively.

Education for sustainable development is not only a task for the biosphere reserve administrations; their staffs need to live by and give meaning to its basic principles. Education for sustainable development in biosphere reserves can range from a personal professionally oriented “understanding of the interdependencies between humans and their natural environment” to the involvement of as many local stakeholders as possible in the necessary sustainable development.

The cognition and awareness of ecological interconnections and subject matter closely linked to these, such as one’s own lifestyle, consumption or the effects of globalization can thereby be heightened.

Research and monitoring

Biosphere reserves should be considered and utilized more than heretofore by the Federal government in the Environmental Research Plan (Umweltforschungsplan), in the framework programme Research for Sustainability of the Federal Ministry of Education and Research and in other research programmes as priority research areas in regions with primarily rural character.

Many unresolved issues concerning the reciprocal effects between humans and the environment / nature, on ecological, economical and socially compatible uses

and other forms of management as well as their changes can be studied here since the biosphere reserves represent the most varied types of landscape, agricultural and land uses.



Foto: Agentur Maichle-Schmitt

The local administrations and stakeholders should be involved by allowing them to give the tendering offices three to five important and up-to-date problems and challenges per year that they consider in need of solutions. Later they should also be able to participate in the transdisciplinary research process.

All Federal and “Länder” authorities should include the biosphere reserves in their respective long-term observation programmes so that substantiated statements can be made on the status of the sustainability in biosphere reserves. The results of such cross-sectional sustainability monitoring should be incorporated in the evaluation of the biosphere reserves. Generally, monitoring must be standardized, streamlined and consolidated. Monitoring in the biosphere reserves may not only encompass nature and environment issues, but must also encompass socioeconomic and sociocultural aspects. In order to promote such sustainability monitoring in the

biosphere reserves, this task needs to be added to the National Criteria as an application criterion and appropriately called for during evaluation.

Funding programmes

The funding programmes of various ranges of promotional activities (ELER, LEADER, INTERREG, LIFE+, chance.natur, Federal programme “Biologische Vielfalt”) partially overlap in the biosphere reserves or areas are left out. The concentration of funding programmes in biosphere reserves has great synergy effects and leads to high efficiency, for at the biosphere reserve level these funding programmes are very well suited to the programme aims of “man and the environment” as they support conservation and sustainable development.

In order to more intensively enable sustainable innovations from national and regional funding programmes in biosphere reserves in particular, it should be examined whether 10 to 30 % of the funding volume can be steered in that direction.



Involvement in the World Network

A dialogue among the biosphere reserve administrations (nationally and internationally) as well as among the bio-

sphere reserve stakeholders facilitates reciprocal learning with regard to empowerment and problem-solving skills and should be adequately supported not only by the Federal government, but also by the “Länder”.



Foto: Biosphärenreservat Berchtesgadener Land

The positive achievements of the German biosphere reserves should be documented in the World Network of Biosphere Reserves. The EuroMAB platform is especially suited for this and continual participation by the German biosphere reserve representatives needs to be ensured.

All biosphere reserves should also be used as the destinations of visiting international delegations in order to convey knowledge and experience of exemplary sustainable management.

The above-mentioned new communications platform <http://www.biosphere-platform.net/> also makes a significant contribution to active involvement in the World Network of Biosphere Reserves and can be used not only by the staff of biosphere reserves, but also by policymakers, academics and the general public.

German Council for Land Stewardship Deutscher Rat für Landespflege (DRL)

Foundation: The German Council for Land Stewardship is a non-profit organisation which was established in 1962 by the former President of the Federal Republic of Germany Dr. h. c. Heinrich Lübke, who wanted advice in environmental politics.

Task and working method: The task is to work out expertises in the field of nature conservation, landscape management, landscape planning and environmental protection. Basic objects of the work are fixed in the Green Charter of the Mainau. The German Council applies for projects of actual importance at different institutions (e. g. ministries, foundations). The topics of actual importance are discussed during the two assemblies per year. Usually work begins with a scientific conference. The results of such a meeting are the basis for further researches and discussions with other experts; this work is done by subcommittees of the members and by the co-workers of the office. The result is a scientific expertise with recommendations what has to be changed (e. g. laws, guidelines, education) in future. The expertises are regularly published in a series (Schriftenreihe des Deutschen Rates für Landespflege) and send to all political parties, decision makers, universities, higher and lower administrations, non-profit organizations/nature conservation groups, who may be concerned in those questions and interested in improving the situation.

Finances: The German Council for Land Stewardship applies for projects at different institutions.

Members: There is a limited number of members: The German Council for Land Stewardship can have 20 active members. In addition it provides honorary members and correspondend members. The members are chosen by the council assemblies. The members represent the following fields and are experienced experts in their subjects: landscape ecology, landscape planning, biology, forestry, agriculture, city planning, architecture, economy, legislation, industry. The actual number of members is 29.