

The Biosphere Tour

A 12000km Bicycle Trip to Biosphere Reserves

Observations and Recommendations



Report to the MAB Secretariat, UNESCO field offices and Biosphere Reserves

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1. Introduction

This report is the outcome of an eleven-month bicycle journey that was undertaken by the author from September 1st 2005 to July 31st 2006. The "Biosphere Tour", as the project was called, had three goals: Raising awareness for the biosphere reserves, observing the impacts of the programme on reserve management in different socio-cultural settings, and learning how the programme is perceived by practitioners and outsiders. After 12000km, the author had visited 18 biosphere reserves in 16 countries, discussed with several dozen experts and non-experts and written more than 40 articles with hundreds of pictures on the project website www.biosphere-tour.org.

The first goal has been achieved by web performance, a dozen articles in German, French and Arabic newspapers¹, future radio interviews² and, probably, book releases. The author continues to believe in the biosphere reserve approach and hopes to be able to communicate its benefits to a larger audience. The analysis of the visited biosphere reserves, however, provided mixed results. Although positive impacts were often visible, some observations indicate that the program's full potential has not yet been fully explored and that space for improvement still exists.

In the following, the author gives a brief overview of the visited reserves. General observations related to the MaB program's impact and perception are shortly presented in part 3. The last section gives a condensed array of recommendations that are perceived as having the potential to remove a few obstacles to the programme, with an emphasis on low-cost activities.

For the whole report, it has to be taken into account that such a project is unavoidably an emotional experience. Language barriers³, varying intensity and length of exchanges, strenuous travel conditions, personal disappointments and new hopes all increase bias and subjectivity of perception. Furthermore, the author is not familiar to internal processes and discussions within the Secretariat and the ICC other than those published on paper. The author, however, believes that this report can enrich the programme if it is seen as what it is: A semi-structured collection of impressions which can provide a basis for new ideas and discussion.

2. Visited Reserves

The author was given the opportunity to meet and talk with managers and/or employees in all of the biosphere reserves listed below in the order of visit. Their characteristics already hint at the extreme diversity of the worldwide network. Included are reserves from Western Europe, Southeast Europe, the Middle East, Southeast and East Asia, large and small, poor and rich reserves. Some of them were designated 30 years ago, others only recently. Some exist, others don't.

During research, travel and conversations, the author furthermore collected impressions of several other reserves not visited during the tour. These include Spreewald (Germany), Fontainebleau (France), Entlebuch (Switzerland), Miramare (Italy), Prespa Lake (project, Greece/Albania/FYROM), Cat Ba (Vietnam), Mae Sa-Kog Ma and Huai Tak Teak (both Thailand), Yading and Jiuzhaigou (both China) as well as a project on a transboundary reserve between Kyrgyzstan and Uzbekistan.

Mont Ventoux (France, 1990)

The "biosphere mission" is carried out by only one person in the rural development agency for Mont Ventoux, and mainly consists in habitat protection for key species. Local awareness of the label is low. The establishment of a regional nature park is envisaged but controversial.

Luberon (France, 1997)

For two decades, Luberon had been managed as a French regional nature park, with a vision and approach that already came close to those of biosphere reserves. The designation was seen as an

¹ Including, among others, "Frankfurter Allgemeine Zeitung" (Germany's most-distributed newspaper on an international level with 910.000 readers), "Al Ghad" (Jordan's largest newspaper) and "The Herald Tribune" (Lebanon).

² One-hour special on Germany's largest youth radio "Eins Live" on 20.09.2006 23:00h

³ The author is fluent in English, French and German and can sustain basic conversations in Arabic, Chinese and Spanish.

incentive for remobilisation and an attempt to increase research, public participation and international cooperation (Algeria).

Valle del Ticino (Italy, 2002)

The floodplains and surroundings of the Ticino river close to Milano serve as the only ecological corridor between Alpes and Appenines. Its management is guaranteed by the largest regional nature park in Italy with significant responsibilities that only reach their limits if national projects such as airport runways and roads come into play. One project promotes extensive and ecological agriculture.

The Karst (Slovenia, 2004)

The three designations (Ramsar, WHS, BR) of Skocjan's cave system and its surroundings are referred to by locals and management as "medals", "trademarks" or "awards". Activities in the buffer and (new) transition zone only focus on water quality issues. Only villagers living in the core zone benefit from the intensive tourism activities.

Velebit mountain (Croatia, 1977)

The fact that Velebit hosted a GEF-financed project with the aim of establishing management plans for national protected areas revived the neglected biosphere reserve. While developing the plans, a holistic perspective on the mountain was adopted - in contrast to the national designation which sees Velebit partitioned between one regional nature park and two national parks without much exchange.

Tara river basin (Montenegro, 1976)

Montenegro's only biosphere reserve still doesn't have a management body or allocated financial means. A part of the Tara river basin, the national park of Durmitor, is a declared World Heritage Site, but even there, illegal logging, hunting and house construction are tolerated and taking place. Lack of institutional protection lead to the mushrooming of very active, local non-governmental organisations.

Skadar lake (Montenegro/Albania, project status)

UNESCO employees and wildlife experts put forward the idea of a biosphere reserve on Skadar lake, partitioned the between formerly isolated countries Montenegro⁴ and Albania, as the only designation for transboundary protected areas. Currently, cooperation activities are hosted by a GEF-financed project focusing on integrated ecosystem management on the lake.

Omayed (Egypt, 1981)

As the first reserve in Egypt, the 35km coastal dryland stretch was declared a BR before national legislation for protected areas even existed. Due to national programmes (resettlements, irrigation, inbound tourism) and other pressures, however, four of five ecosystem types in the reserve have been so fragmented and degraded that the reserve boundaries might have to be shifted in the future.

Wadi Dana (Jordan, 1998)

The Jordanian MAB committee has not met a second time after proposing the country's best-known nature reserve, managed by the Royal Society for the Conservation of Nature, who aims at running reserves "like a business". Its considerable success in the field of nature protection, awareness raising and tourism is overshadowed by their projects limited benefits to the population in the local village.

Al Shouf Cedars (Lebanon, 2005)

Primary goal for the youngest biosphere reserve on the itinerary is the protection of Lebanon's largest remaining stands of the Lebanese cedar which only covers a tiny part of the reserve area. A designation was desired when parts of the local population became aware of the reserve's economic potential, mainly in terms of tourism. Delineation of the transition zone seemed slightly arbitrary.

⁴ At the time of visit still part of the state "Serbia & Montenegro"

Sakaerat (Thailand, 1976)

The former US military research station was turned into a small forest reserve, but its resources were left for exploitation by the surrounding locals. Inspired by the biosphere reserve concept, and without contact to other biosphere reserves, a new director re-enforced nature protection while simultaneously setting up development alternatives such as tree nurseries, mushroom farms and wild pig breeding.

Tonle Sap Lake (Cambodia, 1997)

With a reserve area that comprises about 8% of the country's surface, and large populations even inhabiting and fishing in the core zones, the integrative management of Tonle Sap, the largest reserve on the itinerary and Cambodia's main source of fish and soil nutrients, is an enormous and multifaceted task that unfortunately couldn't be explored in detail due to time constraints.

Can Gio Mangroves (Vietnam, 2000)

After its destruction during the US-Vietnamese war, the mangroves of Can Gio, "lung and kidney" of nearby urban sprawl Ho Chi Minh City, have been completely reforested and later became the first "artificial" biosphere reserve. The designation has provided a boost to local tourism, but local development is still in its infancy.

Nam Khan Watershed (Laos, project status)

Two French project managers in the World Heritage Town of Luang Prabang are working on establishing a rural development project in the large watershed of the city's river Nam Khan. A designation as a BR is desired in order to add value to the area and win cooperation partners, therefore protection of natural resources has later been added to the project's goals.

Xishuangbanna (China, 1993)

The flagship of the five, not interconnected sub reserves of tropical forest are its Indian elephants, whose protection is the main concern for the management. Villages inside the reserve face major disadvantages, esp. crop destruction. 63 inhabitants were killed by elephants between 1997-2002. Elephants are furthermore a major tourist attraction, but benefits mainly go to outside companies.

Gaoligong mountain (China, 2000)

Classified as "A" reserve by the WWF, the 400km-long Gaoligong mountain is situated along the border to Myanmar. Research activities include the creation of an atlas of the impressive number of medicinal plants in the reserve (> 1000 species). The language barrier here was higher than ever, but conversations indicated that locals benefit only marginally from the reserve's designation.

Wolong Giant Panda Reserve (China, 1979)

The third reserve primarily focusing on the protection of a single key species. Centrepieces of Wolong are its highland forests and its research and breeding centre. The small local community mainly benefits from souvenir selling and bamboo growing. After a WHS designation in 2006, complying with the new criteria is seen as the major challenge for management.

3. Observations

It was the diversity of biosphere reserves and management approaches that made the trip worthwhile and interesting. The visited reserves not only varied extremely in size (from 7,800ha to 1,500,000ha) ecological and cultural features, but also in their history of designation, development status, income sources and management activities.

On the other hand, the large differences between reserves limit the extend to which precise generalizations can be made. The issues listed here are therefore only those which were observed in at least three different sites and which reflect the actual impact of the designation as well as its perception by managers, locals and outsiders.

3.1. Flexibility and Incomplete Implementation

The flexibility of the biosphere reserve concept has been hailed as one of the success factors of the program. A multidisciplinary approach, holistic perspective and a variety of themes give every potential manager an opportunity to find his interests represented by the MAB programme, while the Statutory Framework of the World Network of Biosphere Reserves includes few mandatory clauses and therefore demands little immediate change. It can surely be said that this strategy has been an important basis for the growth of the World Network of Biosphere Reserves.

On the other hand, it could also be said that this "soft" approach does not clearly encourage managers to go beyond what already existed before an area is designated a biosphere reserve. In fact, few visited reserves seem to integrate all aspects of nature conservation and sustainable development in the harmonized way the MAB publications promote. The most common problem, especially in developing countries, is a complete lack of management for transition areas. Mechanisms encouraging local participation in decision making is hard to find. Many reserves seem to focus rather on conservation or tourism than on comprehensive rural development that could benefit the whole community. Few reserves feature concentric zoning and some even include settlements in the core area.

When asked why the area was designated a biosphere reserve, managers often mentioned "rare ecosystems", "human influence" and "international importance". Few saw the biosphere reserve as a management approach, knowledge generator and place for participatory approaches and were thus neglecting the special nature and opportunities of the MAB approach. Lack of methodological guidance, communication and criteria enforcement can be seen as the roots of this problem. A few managers underhand admitted that they had "no idea how to resolve resource conflicts".

3.2. Missing Contacts and Missing Reserves

Establishing contact with biosphere reserves often proved difficult due to wrong or missing contact data on the UNESCO website (about one third of the reserves). Especially current email addresses, although available in every reserve, had often not been communicated to the Secretariat. This applies to all regions. In some cases, regional bureaus held the correct data; in others, the first contact had to be established by cycling by.

Much more irritating was the observation that some of the biosphere reserves did not exist. Tara River Basin, Montenegro, has neither a management body nor allocated financial means. The same seems to apply to two biosphere reserves in Northern Thailand: Sakaerat's manager was not able to find any responsible management body for Mae Sa-Kog Ma and Huai Tak Teak (both 1977). Interestingly, up to now, 11 years after the Seville Strategy and the establishment of the periodic review mechanism, none of those reserves has yet been removed from the list.

3.3. Confusion between WHS and BR

From a tourism perspective, the distinction between UNESCO as an organization, its World Heritage and the MAB program, seems to be neither clear nor necessary. Terms are often used interchangeably. The statement of an American tourist sums it up: "The UNESCO is the best thing the UN invented, because their sites are the most beautiful to visit."

Confusions are unavoidable for sites with double designation. Two examples:

- Visitors of the World Heritage Site Halong Bay (Vietnam), part of which was declared a BR (Cat Ba island), are told by guides "we were declared twice a World Heritage site", and a French guidebook adds "once for its beauty and once for its ecological value".
- The Skocjan caves in Slovenia participate in three programmes: Ramsar, World Heritage, MAB. Their marketing manager could not precise what the latter meant and spoke about "three medals". The director: "We are in the UNESCO. The rest are only special schemes".

3.4. UNESCO: Logo becomes a Label

UNESCO is an organization with a variety of programmes and activities, but many outsiders, especially the influential minority that can afford travelling, have seen the UNESCO name and logo only in connection with the World Heritage programme whose designation has become one of the most de-

sired labels for protected areas. However, as the WH criteria are often difficult to meet, the flexible approach of the MAB program provide a much easier alternative to become a "UNESCO site" and use the logo on panels, brochures and letterheads. An indicator of this attitude is the fact that the MAB logo is rarely displayed without the UNESCO logo.

Managers report that tourism numbers rise after a BR designation, that funding from international donors is easier to obtain and that employees and locals develop a new pride. Although these changes could be considered positive from the perspective of the individual reserve, they are based on wrong assumptions: Outsiders to the programme (and sometimes even insiders) often fail to see that – in contrast to a World Heritage designation that can be understood as a *recognition* for something outstanding that already exist – being a BR only refers to an *intention*, a commitment to networking, participation, exchange and sustainable development, and as such is not a guarantee for actual positive changes in management practice. A mismanaged BR might thus have an unjustifiably higher prestige than a well-managed, local protected area that does not participate in the programme.

"Prestigious label recognized by the UNESCO" (letter of SMAEMV, Mont Ventoux, France 1990)

"[...] astonishing diversity of plants and animals that lead to the label 'biosphere reserve'" (tourism brochure, Mont Ventoux, France 1990)

Box 1: Quotations stressing the "label" character of MAB

3.5. High expectations, Demands and Disappointments

Due to UNESCO's high international reputation, managers (and outsiders) new to the program often expect considerable benefits from a BR designation – in the form of financial aid, donor contacts, help in project development, methodological support, consultants or other provision of knowledge resources such as books and brochures. Managers of Shouf (Lebanon, 2005) were surprised that UNESCO did not try to establish any further contact after sending the designation certificate. Sakaerat's (Thailand, 1976) manager wondered why he had not received any contact request during the six years he worked there. The project managers in Nam Khan (Laos) had hoped for more external advice during the first stages of the establishment of a new reserve: "The UNESCO follows the developments, but does not act as a motor. [...] They fear to intervene."

"Things won't change a lot after the MAB designation." (employee, Skocjan caves, Slovenia 2004)

"I think the MAB label has not affected the region" (employee, Valle del Ticino, Italy 2001)

"Ce machin ne sert a rien" (tourism employee, Mont Ventoux, France 1990)

Box 2: Comments from employees

When expectations are not met, individuals can condemn the whole concept, resign (see Box 1) or turn away: Although the Egyptian BR Omayed was the first to be established in Egypt, the Environmental Ministry now prefers the categories of the IUCN for the classification of its protected areas.

3.6. Committed Individuals

Even though the MAB program and its "network" approach sometimes seemed to be misunderstood or even abused, some observations suggest that the even a non-binding approach can trigger actual changes, that is, if it meets committed individuals. Sakaerat's (Thailand 1976) new manager, although virtually isolated from the network, found inspiration in the texts of the MAB Secretariat and embarked on self-financed efforts to improve livelihoods for locals surrounding the forest. Luberon's (France 1997) designation gave a new perspective to the two-decades-old regional park when the desire emerged to "reach a different scale, launch a new project, remobilize forces". And the designation of Omayed (Egypt, 1981) triggered the establishment of the national protected area network.

4. Recommendations

The following recommendations offer relatively non-intrusive and low-cost solutions to the perceived shortcomings. However, they reflect an outside viewpoint, might conflict with internal procedures the author is not aware of, and are therefore to be taken as first suggestions and basis for discussion only.

4.1. Wake Up the Sleeping

A network is a network if its participants participate. Due to a lack of incentives, however, several reserves decide not to play an active role – or not to play any role at all. The MAB Secretariat does not

see itself as a "police"⁵ and hesitates to remove non-existent biosphere reserves from its list. As the total amount of biosphere reserves has been chosen as one of several indicators for success of the MAB program, this situation is unlikely to change.

Taking into account the above-mentioned observations, however, one might suggest that the network's growth should first be qualitative, and then quantitative. The existence of sleeping, mismanaged or "on paper only" biosphere reserves does not only disappoint reserve managers or scientists looking for best practice examples and partners. It is also clearly a threat for the reputation of the MAB programme in the specific country. The "active" biosphere reserve Entlebuch (Switzerland, 2001), for example, had to clarify their difference to the "passive" biosphere reserve Parc Suisse (Switzerland, 1979) on its website⁶. As many outsiders cannot clearly distinguish between UNESCO and its programmes, a mismanaged biosphere reserve might even damage the reputation of the organization itself.

Even in a network, activity should be demanded from each participant. The MAB designation is already perceived as a label by large parts of the population, including managers, locals, visitors and media, so minimum criteria should include more than three zones and a vague commitment. It is therefore recommended:

- First, to develop a mandatory, but low-key and easy-to-use index, probably based on the indicators of the Seville Strategy, monitoring the level of activities and compliance with fundamental criteria. This index should be updated and reported by the reserve on a short-term scale (e.g. every two years for the ICC meeting).
- Second, to publish a list of biosphere reserves grouped by index intervals, e.g. high, medium, low and non-activity/compliance. Active reserves can thus easily find partners for projects, while reserves with low activity know better whom to ask for recommendations and might have an incentive for re-thinking their strategy.
- Third, the ICC should not hesitate to remove reserves from the list if management is nonexistent. This process should only be used as a last resort, but it definitely *should* be used.

Although one might argue that biosphere reserves in developing countries might face financial or technical obstacles in reporting the indicator, lack of communication is less and less a viable excuse with the worldwide rise of the Internet, especially in government and management circles. If communication is nonexistent, a reserve cannot participate in a network anyhow.

4.2. Maintain Network Channels

A network depends on information exchange. Knowledge about new and interesting developments in other biosphere reserves could not only provide an incentive for passive reserves to become more active – it could also open doors to the outside. The development of an indicator should therefore be accompanied with an increase in communication and transparency between the reserves, the MAB Secretariat, UNESCO field offices and the interested public, aiming at keeping exchange channels open. Missing contact persons, unclear responsibilities and old data can delay or detain the communication process. It is therefore recommended:

- To develop (or re-develop) a web-based information system for biosphere reserves, where information can be easily updated and maintained by the reserves themselves. The database could not only include up-to-date contact data and current research topics, but also past and present cooperation between biosphere reserves, zoning maps, lists of partners, research publications etc. Combining indicators and the actuality of the data, it can easily be seen which reserves are interested and participating in the network, what they do and how they can be contacted – a mirror of the programme. An up-to-date directory of research topics, activities and contact information can also increase the general appeal of biosphere reserves for donors, researchers and other partners.
- To regularly test contact data, especially websites and email addresses, on a short-term basis (at least once a year).

⁵ Interview with Jane Robertson-Vernhes, MAB Secretariat, UNESCO headquarters, Paris, 01.09.2006

⁶ See the Entlebuch website: http://www.biosphaere.ch/pages/frame/fg2_2.html

- To set up a public newsletter from the MAB Secretariat to regional bureaus and reserve managers, updating on current issues and new developments.

4.3. Strengthen Research Activities

In contrast to other protected areas, the World Network of Biosphere Reserves provides a unique opportunity that still has not been fully explored: That of applied, multi-disciplinary research, focusing on man-environment interactions. Nevertheless, the research portfolio of many reserves (if it exists) seems to be dominated by basic ecology and biodiversity issues. Research is often determined by universities and other outside organizations and not oriented towards decision-making and management. In the process of reviving the network, and in the light of UNESCO being an organisation for science and education, the MAB Secretariat therefore should promote

- research that is more oriented towards application, taking into account more economic and social aspects and sciences
- low-cost research mechanisms such as programs that aims at directing research efforts by students (e.g. the mandatory research for M.Sc. and Ph.D. theses) to the reserves.

Some reserves already publish lists of desired research topics (e.g. Entlebuch, Switzerland, and Rhön, Germany) and promise logistical support for students. This practice could well be extended to other reserves, preferably in a coordinated manner e.g. via inclusion in the above-mentioned information system.

4.4. Provide Methodological Support and Guidelines

Biosphere reserve managers often lack methodological knowledge about management of their reserves. Although a multitude of studies and reserve management guidelines from different organizations are available, many are not for free or they are found on different parts of the Internet.

- The MAB Secretariat could greatly enhance support to reserves by collecting those publications, adapting them to the biosphere reserve context, if necessary, and making it available to reserve managers, including a small fund for sending paper versions. Such a "knowledge centre", if well done, could even partially avoid the cost-intensive work of consultants (not mentioning flights).
- Projects and initiatives that aim at establishing a biosphere reserve could be helped by a (free or low-cost) "starter kit" which describes pathways towards a possible designation.
- Again, a newsletter could inform managers about current developments and new trends.

5. Conclusion

After a few months the author threw away the Seville Strategy that he had transported in his bags: The idea to evaluate the visited reserves according to the Seville indicators set the stakes too high, as problems in many cases were much more basic. On a closer look, the reasons for the discrepancy between the visions of the MAB and the down-to-earth reality observed in the reserves was found in a lack of resources, but even so in the lack of incentives, expertise and guidance – a situation whose improvement lies in the hands of the ICC, the MAB Secretariat and field offices.

In the end, however, whether or not biosphere reserves work as they should depends to a large part on the motivation and commitment of individuals on a local level. When the ideas and concepts of the MAB programme run into those individuals, great things can emerge. It was those people who motivated the author to continue his trip, remain committed to the programme and give something back in the future. If this report only triggers a few new thoughts, this goal has already been achieved.

6. Acknowledgements

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