



German Commission  
for UNESCO

United Nations  
Educational, Scientific and  
Cultural Organization



# Management Manual for UNESCO Biosphere Reserves in Africa

## Field Version



United Nations  
Educational, Scientific  
and Cultural Organisation



Man and  
the Biosphere  
Programme



Federal Agency  
for Nature  
Conservation



Federal Ministry for the  
Environment, Nature Conservation,  
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UNESCO Biosphere Reserves  
in Africa**  
**Field Version**

# Imprint

## Management Manual for UNESCO Biosphere Reserves in Africa Field version

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# Executive Summary

UNESCO biosphere reserves are model regions for sustainable development, balancing biodiversity conservation with socio-economic development and poverty alleviation. They can only do this successfully by engaging with local communities (participation and co-management).

This publication is a significantly shortened version of the “Management Manual for UNESCO Biosphere Reserves in Africa” which gives guidance to managers on: Why and how to work with local communities, how to address and manage local conflicts between stakeholders, how to share benefits with communities or how to elaborate a management plan. Managers can use this publication to introduce new staff and to make their work better understood by stakeholders and decision-makers. In this publication, there are no references to any scientific literature, and there are nor case studies. Those you will find in the full version of the “Manual”.

The “Management Manual for UNESCO Biosphere Reserves in Africa” was launched on 8 June 2015. This Manual addresses a demand postulated by AfriMAB in cooperation with representatives from the ArabMAB region in 2011. The Manual was elaborated by African experts and managers of UNESCO biosphere reserves. The authors are Professor Dr Wafaa Amer from Egypt, Sheila Ashong from Ghana and Dr Djafarou Tiomoko from Benin. The content of the Manual was refined consecutively through five workshops in 2013 and 2014, involving more than 110 managers and other experts, representing all UNESCO biosphere reserves in Africa; in addition, a wide online consultation was held in 2015.

In all workshops, also a “short version” was demanded, which is presented here.

The project of the Manual was coordinated by the German Commission for UNESCO in close cooperation with the AfriMAB Bureau and the UNESCO MAB Secretariat. The project to elaborate this Manual, including all workshops, was financially and politically supported by the German Federal Agency for Nature Conservation (BfN) with funds from the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) on request of AfriMAB and UNESCO MAB Secretariat.

# Introduction

## What are UNESCO biosphere reserves?

UNESCO biosphere reserves are designated in the framework of UNESCO's Programme "Man and the Biosphere" (MAB). MAB explores strategies which at the same time conserve biodiversity and enable its sustainable use and community development. As of June 2015, there are 651 biosphere reserves in 120 countries. Biosphere reserves cooperate in a global network, the *World Network of Biosphere Reserves*.

UNESCO biosphere reserves have an integrated concept which consists of much more than pure nature conservation. They have the task to promote sustainable economic and social development in the local communities. They have the task to promote participation, education, research and monitoring. Here, sustainable community development is not only a means to achieve nature conservation; it is a goal by itself.

UNESCO biosphere reserves are landscapes and ecosystems where people live and work (socio-ecological systems). They often conserve cultural landscapes: landscapes that have been created over centuries through a particular human use. In many cases, unique biodiversity has been created through this human use. Often cultural diversity goes hand in hand with biological diversity.

UNESCO biosphere reserves *have three main functions* which are interdependent and equally important.

1. Conservation of biodiversity and functioning ecosystems
2. Socio-economic development
3. Logistic support which means mainly research, monitoring and education

In this publication, we think of "participation" almost as a "fourth function" of UNESCO biosphere reserves.

UNESCO biosphere reserves have a clearly defined *zonation* with three zones.

- The "core area" is strictly protected in a legal sense, it is typically rather small in comparison to the entire biosphere reserve; of all human activity, typically only research is allowed there.
- The "buffer zone" surrounds the core area, with some restrictions as well – human activity in these areas should be compatible with the conservation goals.
- In the "transition area", the focus is not on "restrictions", but on "promoting" sustainable practices.



## UNESCO biosphere reserves support sustainable development in Africa

Some of the *challenges of the African continent* are: over-exploitation of natural resources, loss of biodiversity, land degradation and desertification, agriculture expansion and the need for: food security; social protection for poor and marginal groups; gender equality; disaster and risk management plans; access to water and sanitation facilities, as well as youth employment. All these challenges are *problems of unsustainable development*. Some causes can be found in Africa, some outside, for example by practices of countries of the global North and their companies. Irrespective of the causes, Africa, as all other continents, needs to *develop more sustainably*.

UNESCO biosphere reserves explore and demonstrate very specifically the meaning and the conditions of *sustainable development in specific ecosystems and landscapes*. They improve livelihoods, income and employment as well as community empowerment, and combine it with biodiversity conservation and climate change mitigation/adaptation. They improve the effectiveness of management institutions, reduce conflicts, and they improve participatory, collective decision-making, based on scientific evidence. They foster the long-term viability of a landscape, create local identity and pride and can even reduce emigration from rural areas. In transboundary cases, they support international and cross-border cooperation and peace. Thus, biosphere reserves can help to find solutions towards sustainable development in Africa.



## Biodiversity conservation: a quick overview

*Biodiversity* conservation is one of the three functions of biosphere reserves. We cannot survive without ecosystems that sustain human livelihoods, societies and economies. Modern conservation focuses on *entire ecosystems* instead of individual species. Ecosystems, through the interaction of plants, animals and micro-organisms, perform *ecosystem services* for human well-being. *Payments for Ecosystem Services* mean financial incentives for farmers or landowners in exchange for managing their land in a beneficial way for ecosystem services.

Managers in their biosphere reserves work towards the conservation of biodiversity and ecosystems. The task concerns the entire ecosystem of a biosphere reserve, not only the *strictly protected core area*. In the core area they work by restricting human use, for example limiting the access to tourists only to some parts or by improving habitats; in the transition zone, they work by inspiring and supporting communities to use resources more wisely; for example by using organic farming. Biosphere reserves as a whole are something else and much more than merely a protected area.

Many biosphere reserves in Africa are set up with a predominant goal of conserving large mammals which roam wide areas including agricultural areas. *Human-wildlife conflicts* are the consequence. Compensation schemes for the loss of crop harvest and human life should be tied to conditions, and should be supervised by an independent commission.

*Alien invasive species* put an intense pressure on ecosystems and particularly on endemic species. There are many experiences and proven methods available already on which invasive species can be contained successfully. Do a careful analysis of whether a species will really harm your priority goals, whether there are proven methods available and whether it is realistic to contain this species with the financial possibilities and expertise available. Seek advice from scientists.

*Ecosystem restoration* or land rehabilitation can be an important task of biosphere reserves in cases where there have been very unsustainable forms of land-use in the past, conflicts or disaster. Restoration does not necessarily require a technical intervention; sometimes it is enough leaving a certain area to itself (succession), provided that populations of key species still exist in the vicinity. Restoration should be responsive to local conditions and devolves responsibility to local communities, always based on a proper analysis.

## Development: a quick overview

UNESCO biosphere reserves help to eliminate extreme poverty by *improving livelihoods and generating alternative income opportunities, by providing rural health services, improving energy services and access to food, and promoting better nutritional practices*. If managers' mandate does not allow direct work on livelihood issues, they can work with public sector agencies, NGOs or foundations. At least through such alliances, they need to work with farmers to improve agricultural productivity and to move away from pure subsistence farming. This leads to higher farm and rural incomes, additional employment opportunities, and household food security. Through their holistic view at sustainable development, managers can ensure that changes in agricultural systems do not have negative effects on natural resources.

Whether a *particular form of land-use* is sustainable depends on the context and can actually be judged only by the consequences: if a resource is depleted or destroyed, the land-use was unsustainable. There are no easy solutions for sustainable land-use. But we know what unsustainable forms of land-use are: extractive industries such as clear-cutting of forests and mining or intensive agriculture based on monocultures, heavy use of pesticides and synthetic fertilizers. Several forms of traditional land-uses can also turn unsustainable, if done destructively and excessively. Examples are trophy or bush-meat hunting, forms of careless nomadic pastoralism, animal husbandry and fishing. Generally, use renewable resources only in line with their regeneration capacity and non-renewable resources only if they cannot be substituted by other resources.

*Tourism* provides important income for many UNESCO biosphere reserves and may offer livelihoods to communities. Biosphere reserves are attractive for tourists, since they have an international designation related to high natural and cultural value. If not planned carefully and long term, tourism can have detrimental effects on the environment and on local communities. Managers should promote sustainable tourism. This is tourism which will create local employment and decent local income; which will use only available natural resources and will create incentives for biodiversity conservation; which will respect cultural diversity; which will be based on a common vision and on objectives agreed among all stakeholders, including shared benefits with communities.

Managers need to ensure, specifically, that *direct and indirect financial benefits*, which originate from the biosphere reserve, for example from tourism, are shared with local communities. Some biosphere reserves use a model in which they pass on a sum of at least 10 percent of their financial income from tourism to the local communities – often in the form of investment into infrastructure. Biosphere reserves should allow the communities themselves to decide about the use of such funds or investments.



## Science and knowledge: a quick overview

In order to manage, managers need to *know* their goals (biodiversity conservation, sustainable use of natural resources, poverty reduction, etc.) and their available means (staff, partners, funds, instruments, etc.). They need to know how using these means might lead to attaining goals; they need to monitor ecosystem change and whether their work has impact. One of the key principles of UNESCO biosphere reserves is *management based on knowledge*. Biosphere reserves bring together science and other forms of knowledge, including indigenous/traditional sources and common-sense in order to manage one particular region, in a very conscientious way. Too frequently, managers focus only on natural science investigating natural resources (endangered species, water cycle, etc.). However, managers also need science to better understand the different socio-economic aspects, such as why specifically some parts of the population exert pressure on ecosystems and how that could be improved.

Managers should promote *scientific* research which is useful to improve management. This can be improved if managers, stakeholders and communities participate in framing the research question (“co-design” of research); in devising methods, and in knowledge-generation (“co-production” of knowledge). This is called “Sustainability Science”, problem-oriented research that involves managers and stakeholders. If successful, results of such research are both academically interesting and at least partially a solution to a “real-life problem”.

In order to facilitate “useful” scientific research, managers can identify, revalidate, and make accessible databases, articles and reports about past research. They should ensure that research in the core area is non-destructive. They should review research proposals, protocols and procedures and should require researchers in advance to give access to all data through framework agreements. They should improve mapping capacity, including GIS, and also structurally document limits of existing knowledge. They might additionally organize a “biosphere research day”.

*Traditional knowledge* can consist of very complex systems of knowledge, know-how, skills and practices, which have been developed and maintained by indigenous and other communities over many decades and centuries. Much of that knowledge can be extremely useful, if it supports human rights and sustainable development. Biosphere reserve managers should promote such traditional knowledge as complementary to scientific research, empower women and indigenous communities as important guardians of unique knowledge, involve community in research co-design, and promote the recognition of traditional knowledge within formal local and national legal systems.

## Climate change and disasters: A quick overview

The global climate is warming today and it is warming due to human activity: This has been confirmed by science with incredibly high confidence. The bulk of the warming has been caused by industrial emissions of the global North, but also deforestation and industrialization in the global South today contribute very significantly.

For Africa and its biosphere reserves, all current challenges will be exacerbated by climate change, for example through increased frequency and/or intensity of extreme events (e.g. floods, droughts), rising mean temperature, reduced rainfall, sea-level rise, ocean acidification. Therefore, the focus must be on developing and testing *options for adaptation*, including safeguarding sustainable livelihoods of vulnerable groups. Ecosystem-based adaptation provides many good lessons how to proceed.

Addressing climate change should be a major issue in the management plan of each biosphere reserve, based on a *vulnerability analysis* and taking into account the concerns of biodiversity conservation; there should be a specific budget line for related actions. Management should not only reactively respond to threats, but proactively reduce vulnerability. Biosphere reserves should also be integrated into national climate change strategies or action plans and lessons learnt should be disseminated in the World Network of Biosphere Reserves.

A *natural disaster* is always the combination of a natural phenomenon and a large loss of life or property. Most natural phenomena cannot be inhibited; but natural phenomena can be inhibited to turn into disasters. Managers of UNESCO biosphere reserves clearly have to take into account the dimension of disasters – preventing them and reducing their effects. This requires managing natural habitats (e.g. to reduce the flood risk along rivers) and working with communities (e.g. to improve alertness or to relocate too dangerous settlements). Conservation of ecosystems is an effective approach to reduce disaster risk. Any form of preventive interventions (ecosystem or technical) will always be cheaper than coping with the impact of disasters.

## Institutional context of biosphere reserves: A quick overview

As of 2015, UNESCO's 195 Member States cooperate in the Man and the Biosphere Programme (MAB) to promote ecosystem research, to establish and to supervise UNESCO biosphere reserves. Decisions are taken by the MAB International Co-ordinating Council (ICC) which meets once every year. The UNESCO MAB Secretariat is located within UNESCO in Paris. In addition, UNESCO has many field offices in Africa with experts on MAB. You can approach them if you need expertise, contacts of experts and or contacts of funding partners. Today, there are nine regional and two thematic networks in the MAB programme, among them AfriMAB and ArabMAB. These regional networks are the most important platform for international cooperation and exchange of knowledge in MAB, strengthening capacities and synergies, and raising funds and public awareness.

The MAB programme, since its foundation in 1971, has delivered many innovations such as “zonation”, “transboundary sites” and ecological corridors. The most important innovation however is conservation with and through people. It supports international exchange of knowledge and experiences and applying science to human - ecosystems interactions.

A government of a UNESCO member state typically participates in MAB by setting up a MAB National Committee or at least MAB focal point. MAB National Committees act as a bridge between UNESCO and all interested national authorities and are involved in all processes of nominating and periodically reviewing individual biosphere reserves. The MAB National Committee should be your main interlocutor at the national level, promoting your cause politically. Also the UNESCO National Commission of your country is an important partner, whether or not they have set up the MAB National Committee; the National Commission is in charge of all UNESCO programmes in your country, it typically monitors the proper use of the UNESCO logo.

## Nominating and reviewing biosphere reserves: A quick overview

New biosphere reserves are sometimes proposed by scientists after a research project, sometimes by a national parks authority, sometimes by a community association. However, a *nomination cannot be submitted only by a small group*. The important part is to involve the entire population and to discuss the benefits of a biosphere reserve with local inhabitants. The nomination must be supported by a broad majority and by all key stakeholders. Therefore, nominating a biosphere reserve is always a long process. The process requires filling out a form of 37 pages, but gaining local support is much more difficult and important than filling out this form.

The nomination form and supporting documents must be submitted to UNESCO by a government entity, where appropriate through the MAB National Committee. The deadline is the end of September each year. Once submitted to UNESCO, its secretariat verifies the content of the nomination file. Completed nominations are then discussed by the expert “Advisory Committee for Biosphere Reserves”. Their recommendation is transmitted to the MAB ICC, which either approves or defers the nomination.

A decisive element in a nomination is to inform about the management plan. Has a management plan for the proposed biosphere reserve already been established? Is it currently under preparation? Does the preparation involve all relevant stakeholders and communities located in the biosphere reserve? Does it cover all zones? Does the management create a joint vision of the entire biosphere reserve?

Every 10 years, each biosphere reserve has to submit a so-called periodic review report. Again, a periodic review should involve all key stakeholders and communities; a periodic review is more important as process than as document. For the manager, the periodic review provides the unique opportunity to legitimize the biosphere reserve and to improve its quality. The periodic review must be submitted to UNESCO again through a government entity; it is again discussed by the “Advisory Group” and the MAB ICC. The ICC has adopted an “exit strategy” for biosphere reserves which have not yet submitted a periodic review report or which do not fully comply with the criteria. After several warnings to the biosphere reserves concerned, they might lose the status as a UNESCO designated biosphere reserve, if they continue to not meet the criteria.

## Governance structures of biosphere reserves

UNESCO does not specify or even prescribe what kind of organizational structure should be set up, in order to implement the concept of a biosphere reserve. In general, two “models” are in practice in Africa today that can be clearly distinguished, although in practice there are also mixed cases. Both models can be useful suitable governance structures. Both models have three main constituents:

- A “secretariat” or “management unit” consisting of professional staff who perform full-time paid work every day in concrete activities for the biosphere reserve
- A “management/steering/executive committee” with the key decision-making power
- An “advisory board”, which may also have a specific scientific mandate and is the place to assemble all available knowledge and to allow broader participation

The first model which is most typically in use in Africa is called the “authority model”. In this model, the management unit is more or less dependent on one ministry or even part of that ministry – either the Ministry for the Environment or the Ministry for Forestry or a similar Ministry. What is typical of this model is that the management unit itself has a sovereign mandate and “highest authority” on biodiversity conservation, making it difficult to become active in other fields such as community development. Often, the management units of such “authority model” biosphere reserves are only in charge of the core area. The management committee of an “authority model” biosphere reserve often is rather weak.

The second model is called the “NGO model” which is not wide-spread in African biosphere reserves so far. In this model, the management committee as supreme decision-making body is composed of several institutions and authorities; it has the task of approving strategies, work plans, budgets, the annual report and rules and procedures. It monitors progress and appoints the director. As a result, the management unit has less formal authoritative or executive power, but it can be active in several areas and in all zones. It can act as a platform to bring together diverse interests.

The management unit is in charge of daily coordination and implementation of the management plan, it engages with stakeholders and communities in day-to-day work. It facilitates scientific research and monitoring, project development and fundraising, communication with partners, sharing and disseminating knowledge, maintaining a calendar,



documentation, archive, financial accounting and reporting, and also maintaining contacts with MAB institutions. Not all biosphere reserves do patrolling and surveillance; although rangers often constitute the majority of staff, many skills and job profiles are needed.

Several countries have established national laws that specify what a biosphere reserve is; but no specific legal basis is recommended by UNESCO. Only the core areas of a biosphere reserve need to have legal protection, as a matter of fact the same is often the case for buffer zones.

As a manager you need to “lobby” for your biosphere reserve at the level of politics. This needs good arguments and also stories. The best possible way of promoting your biosphere reserve is to have it incorporated in overall provincial or national strategies or action plans. Of course, every strategy or action plan can be rewritten; but such action plans can provide a long-term strengthening and a permanent legitimacy. They may also facilitate access to funding. Examples of such national strategy papers are UNDAF, PRSP, UCPD, NSDS, NBSAP or climate change strategies. As a UNESCO biosphere reserve manager, you should know the content of international conventions and other instruments of international law and use their legal and ethical power; this also applies to concepts such as the Precautionary Principle.



## “Managing a biosphere reserve” - what does that mean?

Sustainable development is not only about the environment. As a manager of your biosphere reserve, the main aspect of your work may not be “monitoring restrictions of human use for biodiversity conservation”. Instead, you should focus on *engaging and empowering individual citizens*, about making them aware that every individual and every community is part of the problem and of the solution. Biosphere reserves support the most effective approach for sustainable development: participatory local development and management of resources. They involve stakeholders and people in the joint learning process for what is sustainable and what is not - that is why, they are often called “learning places for sustainable development”.

UNESCO biosphere reserves are instruments for integrated management of a landscape – i.e. managers have to be active at many different levels at the same time. Managers’ most important task is to motivate, moderate and negotiate, and to interact with local communities. Only by acting as a moderator, not by restrictions, they achieve integrated development: They can empower communities for sustainable forms of life and work.

An important aspect in terms of *engaging* stakeholders and communities is *joint planning*, i.e. planning ahead on a jointly defined development path. Managers need to achieve consensus with communities and lay down this consensus in strategies and a management plan – it has already been mentioned how important the management plan is. Also when you implement these plans – through own interventions, through fund-raising and through coordinating interventions of other actors, you need to engage your stakeholders and communities.

## In-depth: Management, planning, monitoring and evaluation

### Management

Management means *seeking to accomplish the goals of an organization through efficient and effective implementation of available resources*. What is crucial is that the goals of an organization come first. Resources are applied and activities are implemented in order to reach these goals. Your resources are in particular your financial funds, any laws and ordinances that give legitimacy and your staff and their knowledge.

But these internal resources are not enough, you need to draw upon the capacities, knowledge and commitment of your partners, committee members, stakeholders and communities to reach the ambitious goals of a biosphere reserve.

The goals of a biosphere reserve derive from its three functions. However, these functions do not yet fully specify the objectives of a particular biosphere reserve. Each biosphere reserve has to clearly identify its specific goals for itself, in its specific context. The goals of a biosphere reserve can remain constant over many years. But they can also change, in the light of new developments, such as climate change.

## Planning

Planning is an important part of management. It is an *analytical way of thinking about a concrete state of a desired future*: Planning starts from the optimistic assumption that it will be possible to realize the goals of the biosphere reserve. It *identifies the measures needed today in order to reach the desired goal in the future*. At the same time, management planning is a process and will be adapted in the case of changing goals, conditions, and unexpected events.

Planning contains *different stages*:

- a speculative “brainstorming” phase,
- a structured phase of formalizing assumptions and conclusions,
- checking their viability and likelihood, and
- writing down the result of the planning (plan).

Planning is not a one-time event: in case of unforeseen developments (which means: every day), managers need to analyse whether they represent threats or opportunities. If new developments are in conflict with goals of the management plan, managers need to weigh carefully the status of the management plan as an agreed roadmap: Is the plan a defence against threats or are new developments actually enriching the plan? Managers have to consult widely, while also being able to take quick decisions as needed.

## Management plan

A management plan is an official multi-year framework (process and document) for achieving your objectives in a structured way and “properly” adapting to change. UNESCO requires every biosphere reserve to have such a management plan. Also your government and any potential donor will expect such a written document. Managing without a plan is not effective and will lead away from your goals. Formulating a plan is a key opportunity to engage with stakeholders and communities.

A management plan as a *document* contains several items, such as:

- Status-quo analysis of strengths, weaknesses, opportunities, and threats (“SWOT analysis”)
- Status-quo analysis of priorities from the perspective of stakeholders and communities
- Scenario development, including analysis of external pressures and internal vulnerabilities
- A long-term vision, including medium-term goals to make the vision a reality, priority projects to achieve the medium-term goals and subsequent strategies
- Definition of desired concrete work results
- The activities and interventions necessary to reach the results and defined goals
- Measurable indicators to monitor the achievement of results and goals

The management plan needs to address all three zones and each of them very specifically. If there is no zonation at the time of formulating the plan, the identification of zones should be the first step. Each zone fulfills a special purpose and needs to be managed accordingly. Zonation plans always have to find agreement with local communities because zonation can affect the communities’ use rights and property. Formulating a management plan is not an easy task. It requires funds and in particular a mandate.

## Implementing plans: Monitoring and evaluation, adaptive management

Monitoring and evaluation (M&E) is a learning opportunity and an integral of improving the management of a biosphere reserve. M&E actually does not start at the end of a project, but already before its inception through the definition of goals. Goals must be measurable and accompanied by appropriate success indicators and associated data requirements and benchmarks (generic or situation-specific indicators).

*Adaptive management* means that there is monitoring, feedback and learning from the results of past decision-making for future decision-making, such that future actions become adapted. A second crucial aspect is embracing *uncertainty*. A third crucial aspect is *participatory management*, strengthening interactions of managers with stakeholders and scientists, thereby promoting learning *and* building relationships.

There are many formalized “techniques” of adaptive management and of management in general. Whatever technique you use, make sure that:

- You remain focused on your problems and not on the technique (don’t get confused by a technical approach).
- The technique *enhances dialogue* of managers with stakeholders and other outside experts such as scientists.
- The technique does not introduce *an artificially skewed picture of reality* or bias.
- The technique *strengthens your management institution* – the best technique is worthless, if the implementer suffers from implementing it.
- The technique really moves you forward by *widening the space of options* and/or eliminating options that under closer inspection are unlikely of doing much good.
- You *identify helpful knowledge gaps* - not “that you don’t know anything”.



# Managing conflicts

Managing and resolving conflicts is one of the key tasks of every day work of a biosphere reserve manager. Conflicts are something normal; they will emerge even with the best intentions. They can emerge from incompatible uses of the same natural resource, from power struggles or conflicts between methodologies, beliefs and “culture”. Addressing conflicts is an opportunity to strengthen the ties in a relationship, in a team, community and society.

## Managing conflicts within the biosphere reserve

Wherever possible in case of conflicts among stakeholders and communities within your biosphere reserve, you as a manager should be a neutral moderator. You need to be known and you need to be trusted to be able to manage a conflict. If you need to take sides and represent the “interests” of “nature” and/or of “future generations” – then you are not a moderator, but a conflict party yourself. Try to remain in the moderator’s role as long as possible and have a third party (e.g. nature conservation NGO/CSO) represent “nature’s interests”.

There are a number of *techniques* for handling, managing or even resolving conflicts. The important aspects are common to all techniques. Therefore do not merely focus on techniques, but really understand the key aspects that are necessary for you, as a neutral moderator, to successfully approach conflict management within a biosphere reserve:

- *Differentiate emerging and acute conflicts.* In cases of acute conflicts, carefully weigh every word, every intervention – in cases of emerging conflicts, a more light-hearted approach may just be the proper way forward.
- Promote *addressing conflicts actively*, through *style of dialogue and negotiation* among conflict partners.
- Help recognizing *win-win-situations*, avoiding the perspective on a conflict in which there is a winner and a loser.
- Help *thinking out-of-the-box* such that the conflict parties explore new and alternative options for compromise, based on common areas of interest.
- Help exploring *underlying causes of conflict*, with a view to preventing future repetitions.
- Wherever possible, use *well-proven traditional conflict resolution* methods.
- If you are the moderator, *really be neutral*, even if you think that one conflict party really has better reasons and more legitimate interests.
- You *need a mandate* to intervene as moderator. It can be wise to offer your moderation through a third party.

- Maybe you yourself are not the best moderator, maybe rather some other staff member, maybe an external scientist, elder or consultant. This is of course necessary, if the biosphere reserve managers are seen as a party in the conflict.
- Create *transparency* about the conflict and what is on the table, what benefits can be shared, what “deals” can be made.
- Try to *understand* for yourself, the conflict, the *conflict parties and their social context*, their power networks and the reasons/arguments/interests given (publicly stated as well as hidden reasons) and the meanings and concepts they give.
- Invite the conflict parties to a *neutral place* or “forum for negotiation” and provide them with a “nice” atmosphere.
- Depending on the context, invite not only the direct conflict parties, but important “background actors”.
- Wherever sensible, allow the conflict parties to discuss their issues among themselves *in private*; this might require that no information about the meeting is unnecessarily becoming public.
- As much as possible, try to *avoid speaking about “values”, “culture” and “traditions”* in the negotiation. They are absolute and not conducive to a compromise or consensus; nobody will publicly accept that compromises on values have been made.
- Shift the attention from *positions* to *interests*; in order to do this, start by explaining the interests and needs of the conflict parties, as perceived from your perspective; in doing this, choose open formulations such that each party can correct or supplement your presentation; focus on empirical facts and try to clarify different views of these facts.
- Emphasize the *high status of fair compromise in all traditional cultures* and in modern conflict resolution techniques used globally.
- Support the conflict parties to formulate the associated benefits and pros and cons.
- If you want to move parties from their positions, treat them as they *could be* and not as *they are*. Only if you leave and also emphasize the space for them to move, they can actually do it.
- If reasonable, formulate a written agreement and support its legitimization and its implementation.

## Managing external pressures

Frequently, conflicts arise because of outside interventions, for example a new infrastructure development or an international investment. If there is an indication that an outside intervention will not be overall beneficial to the sustainable development of a UNESCO biosphere reserve, managers *should not be neutral*.

In such cases, managers should take a stance to defend the objectives laid down in the management plan. While it will typically not be possible or even sensible to participate in protests since managers are often state employees, they should position themselves as “biased moderators”. In cases of large-scale and potentially negative external development, a counter-weight is needed which the biosphere reserve managers with their coordination and moderation skills can present.



## Funding for biosphere reserves

Biosphere reserves as institutions with a management team and employees need to be funded, which is often a big difficulty. However, the main issue regarding money that should be on the mind of a biosphere reserve manager is to increase the income of local communities. Such additional income should be generated from sustainable sources, e.g. through sustainable tourism, marketing of organic products including sustainably harvested medicinal plants, and ecosystem services – this is called the Green Economy.

### Diversify funding

In general, UNESCO does not provide funding for biosphere reserves. Each biosphere reserve has to be funded from national, or better even local sources, such as provincial governments,



local communities, and other private sector partners. In many cases in Africa, international donors provide important funds especially in the initial years of a biosphere reserve.

Although “authority model” biosphere reserves receive their budgets from the responsible ministry, they should try to diversify their income from local and international sources, if they are allowed to do so. “NGO model” biosphere reserves should also look towards national sources for potential co-funding. Those could be “national environmental funds” which exist in many countries. Sometimes, trust funds are set up for specific protected areas.

The UNESCO designation should be used as a “quality label” in order to attract a wide variety of funding from national, international, and private sources. A general advice for funding is to always have prepared “blanket project proposals” which cover a diversity of acute challenges of your biosphere reserve that cannot be funded from regular sources. Such prepared project drafts allow you to respond quickly to national or international calls for proposals. Develop good project ideas that would help you fulfil the goals of your biosphere reserve: if the project idea is really good, you will find funds more easily than expected.

Some biosphere reserves are able to raise considerable income through fees from tourists. A large part of the revenue from tourists should benefit local communities and the functioning of a biosphere reserve. Fundraising at the local level may specifically target the local private sector, e.g. through partnerships with local businesses such as large-scale tourism operators. In most cases, tourists will come to a region exactly because of the intact nature and biodiversity. Therefore, it is only fair if the tourism facilities contribute substantially to financing the interventions needed to keep nature intact.

In addition, other local (small-scale) businesses can have significant benefits from the biosphere reserve – and should therefore (in the long run) contribute to its funding. However, biosphere reserve managers should *not* start to engage with small-scale local businesses in this motivation. They should raise the awareness and interest into the biosphere reserve’s goals and activities by explaining the possible benefit *to* businesses. This can comprise joint national and international marketing strategies for products such as organic cotton or organic coffee.

The significance of partnerships with multinational companies will increase in the future, at the moment there are only a few examples. If you are approached by such a potential private partner, don’t directly jump to it, first become aware of the benefits and potential problems. Seek support from the wider “UNESCO family”, in particular the UNESCO field offices. You might also address the UNESCO National Commission of the country of origin of the potential private partner.

## Bilateral and multilateral donors

UNESCO biosphere reserves can be considered as “*donors’ darlings*”, ideal for bilateral development funding. The UNESCO designation according to binding global criteria implies a quality mark, a stamp of approval of quality management and quality development, which is assessed every 10 years through the obligatory periodic review. The UNESCO designation creates global visibility and thus stability of the management institutions; problems become visible globally. They also bring together all the stakeholders who are really needed to address a problem. The UNESCO designation can also be used as quality label for tourists and to promote marketing organic and/or fair-trade products. The World Network is a source of best practice solutions. Since they are attractive study place for scientists, such sciestudies may result in development projects.

Be aware that there are only few large-scale donors. If one or several donors think that you are not professional, access to foreign funding can be illusionary for decades. Therefore, as a first step, try to find out what kind of projects donors are interested in and what funding instruments they offer. In some cases, it can be better that an international NGO, a donor-country NGO or a donor-country implementing agency will take care of donor-handling. Make sure that in these cases your voice is fully respected in project design and project implementation (if necessary, including veto rights), that there is full transparency about budget and its spending and that the lion’s share of the funds provided actually reach the ground in your biosphere reserve. Intercontinental twinning partnerships among biosphere reserves are not “donor partnerships”, but “partnerships of mutual learning”. Yet also such partnerships can facilitate access to *other* donors.

To multilateral donors, you should preferentially present an idea which is multi-country or global in scope and interest, but addresses a local challenge as well. The same recommendations given above for bilateral donors also apply to multilateral donors. There are several of them; the most important clearly is the World Bank with the “*Global Environmental Facility*” (GEF).

## Participation in management and planning

Biosphere reserves have ambitious goals. Reaching these goals requires much more than what can be achieved by a small team. Management should be a process of coordination and communication with the aim of assembling a wide range of partners that work together to reach the goals: all members of the management team, ministry officials, all stakeholders, and local communities. UNESCO *requires that biosphere reserves are managed and planned through participation, involvement, and engagement*. Participation is typically required also by donors. But most importantly, it improves management through better legitimacy and acceptance.

*Participation* involves as many stakeholders as possible and engages communities to the extent possible into the management of a biosphere reserve. Stakeholders are all those that have a valid interest in the biosphere reserve or any of its natural resources or pieces of land; they can be individuals, informal or a formal groups with their representatives such as traditional or political leaders. Stakeholders can be inhabitants, migrant workers or pastoralists. Managers, key stakeholders and communities define and make explicit their roles, responsibilities, benefits and authority in the management of natural resources. Participatory management enables local communities to take part in essential decisions about their very own life and future.

Management that is successful in the long-term listens to the needs and wishes of stakeholders and communities and set priorities accordingly. Involvement, commitment, and shared values can never be imposed; they must be created by “bottom-up” processes. Participation requires time and resources, but is usually cost-effective in the long run, as it reduces conflicts, harnesses innovative ideas of communities, and reduces the need of expensive enforcement.

Participation must be “*optimal*”, not “*maximal*”. Not every management question needs a consultation. Every manager should check for any decision whether it is possible and advisable to involve stakeholders and the population. The number of issues for which participation makes sense is always higher than what any individual manager initially assumes. Optimization means: prioritization of the most relevant issues and parties concerned.

“*Key stakeholders*”: Every person living in the biosphere reserve and every stakeholder is important; still, some will and must be more important than others for your daily practice. For example, for practical purposes the designated representative of a group is more important to you than any other member of the group. The priority of stakeholders can only be assessed locally, by you. You need to consider who has direct or indirect influence

on the management structure of the biosphere reserve. You may classify all stakeholders into categories of importance (high, medium, low), into categories of activeness and take this into account in decision-making and in prioritising the management attention given to distinct stakeholders. Such a categorization as key stakeholder is acceptable, if it is an “internal” and “flexible” labelling to make management more effective. However, *you may never ignore somebody with assessed “low” priority*. Everybody deserves to be heard and respected.

**Representation:** When working with a group of people, make sure that you respect the *representative* whom the group has chosen for interaction with you. At the same time, be careful because some people falsely claim to be representatives of a group. There can also be communities and groups which are not organized at all and have no or very inefficient representatives. In spite of a representative, there can be disagreement in a group. In such cases, support identifying an opinion leader. Make sure to actively seek to include vulnerable and disadvantaged groups.



## Benefits of participation

This Manual emphasizes the role of “participation”, almost as a *fourth function of biosphere reserves*. Participation is beneficial both for the managers of biosphere reserve as well as for stakeholders and communities – and for nature.

Benefits of participatory management:

- Provides managers with better arguments to take decisions because they are based on all available knowledge.
- Provides managers with better legitimacy to take decisions because everybody has been part of the process.
- Improves social acceptance as it results in higher transparency and therefore, in more “rationality” in cooperation.
- Strengthens partnerships with local communities to implement decisions. This strengthens trust, equity, pluralism and good governance in the local community.
- Helps to resolve conflicts associated with natural resource use.

## Fundamental principles of participation

For participation to be successful, you often need to overcome suspicion and other forms of prejudice.

The following attitudes are essential to establish trust:

- Seriousness: Be realistic, be honest, don’t raise false expectations.
- Respect: Draw upon and value knowledge, opinions, needs, complaints and commitment of both the stakeholders and local communities.
- Benefit sharing: Share economic and socio-cultural costs, benefits and impacts equitably.
- Transparency and good governance: Set clear and transparent goals and rules which need to be respected by all partners. Make all relevant information accessible for relevant parties. Resolve disputes fairly.

*Co-management*: The term co-management can mean different things. Often it is used interchangeably with “participatory management”, with a focus on conflict resolution. But it can also refer to schemes in which communities are given the right to “co-manage” autonomously the natural resources in their specific area.

## Occasions for participation: Nomination, periodic review, management plans

You as a manager should regard each occasion or opportunity for involving stakeholders and communities as entry points for managing in a more participatory way. The nomination is the first and maybe the most important occasion to establish participation; participation should even start before the nomination. A key element of a nomination file is a credible vision shared by stakeholders, communities, and government authorities. The nomination file must also contain the details about the zonation, at least basic elements of the future management plan, and signatures of all relevant authorities and representatives. All these requirements are possibilities to start a true and participatory dialogue about the future of a region.

Periodic reviews need to give an account of the perspective of stakeholders and communities. They are also an opportunity for improving the effectiveness of the biosphere reserve through changes in governance set-up and the management plan. In order to reassess, further develop, and adapt the content of management plan for the future, stakeholders and communities need to be involved.

Sometimes, nominations and periodic reviews are facilitated by experienced external consultants. This could be an advantage, because it can help building trust when stakeholders can voice their concerns more “anonymously”; but it can also be an important disadvantage because the managers miss the opportunity to intensively engage with the “learning process” of a review.

A management plan should be a comprehensive and ambitious document – its elaboration must be a process. It is absolutely necessary to develop a management plan together with stakeholders and communities. Only through the commitment created in the process, you will later be able to implement the management plan.

### Occasions for participation: Zonation

Biosphere reserves need to have a zonation in which there are “no-touch” core areas which should only be accessible to scientists and only in some cases to tourists on specific paths. The core area(s) should be fully surrounded by a buffer zone which can be used economically by means that are compatible with the conservation goals. The transition area is a wider area around it with no or few restrictions where people live and work; the biosphere reserve should inspire positive change of livelihoods here.

If a future biosphere reserve plans its zonation or if an existing biosphere reserve plans a re-zonation because the existing one is inadequate, you as manager should first clarify what should be the objective of each zone in your local context, what activities should be allowed and prohibited in each zone and also consider the laws in your country and their implementation.

A (re-)zonation is an excellent opportunity for participation. Start with accustoming yourself in detail with the concerned area's history, its cultural traditions and values, and its property rights. Once you have collected this information, you could internally discuss a very sketchy tentative draft zonation, not to be circulated. Verify whether the three zones in your internal draft are large enough to reach their mutual objectives.

Afterwards the management team should discuss *with each individual community*, whether and where each community would like to establish a certain zonation in its territory and neighbourhood. Such discussions should be open-ended and its results should be respected but managers should be able to provide additional arguments and state benefits.

A first map of a zonation should be produced and circulated *only after* the first round of consultations at the local level. This first published draft map should compromise between rights and claims (traditional use rights, legal property, etc.) and take into account also future use and/or conservation. It should take into account the conservation value, e.g. endemic and endangered species, minimal disturbances, primary forests, “wilderness“, ecosystem health and minimal size, ecosystem connectivity and corridors. It should also consider natural properties such as watersheds, mountain ranges, dead-end valleys, etc.

However, in order to meet the needs of communities, you need to respect their wish to be part of a buffer zone, for example. You need to respect property rights, including common lands, historical and recent land-use and trends, grazing areas, mining sites, ecological pressures and their direction, infrastructure such as roads, power lines, canals, and of course socio-cultural traditions, heritage, and specifically sacred sites – sacred sites can be ideal as core areas. Arriving at the final map may require many iterations of consultation.

## Occasions for participation: Participatory evaluation and surveys

“*Participatory monitoring and evaluation*”, as the name suggests, involve communities into the evaluation of the success of a strategy or project. But this consists not only of asking “ready-made” questions to communities, they should also be involved into “what questions to ask”, i.e. into the planning of an evaluation, in the design of the process, as well as the

collection and analysis of data. Relevant tools for participatory monitoring and evaluation include *cost-benefit analyses* and SWOT analyses (Strengths, Weaknesses, Opportunities and Threats). Participatory evaluation, even of small-scale projects, can positively influence the dynamics of social change in a community. A project which is *implemented* in a participatory way and *not evaluated* (participatory or conventionally), is almost a waste of time.

*Surveys:* The traditional approach to obtaining and to updating data is to look up relevant scientific publications and to collect data from authorities. For the case of most biosphere reserves, there is hardly ever exact and up-to-date data available on all these questions. Through “participatory surveys” you can try to improve biodiversity monitoring by asking communities to take part in observing for example when plants blossom and when animals reproduce. This can be done according to quite rigorous methodologies. However, gathering knowledge from communities also needs to respect traditional knowledge which has a high particular value and which is sometimes economically misused by companies. To prevent misuse of genetic information and associated traditional knowledge without fair sharing of benefits, the “Protocol on Access and Benefit Sharing” (Nagoya Protocol or ABS) has been established in 2010.





## Organizing consultations and hearings

How can you organize events and processes that make the abstract notion of “participation” a reality? How can you start to engage with communities such that they actually *want to participate*? How can you convince communities to spend their time listening to you and giving you their ideas?

Plan all your participative activities based on the benefit and added value they generate to the biosphere reserve and its communities. Never plan them just because you have read about an idea in this Manual or in another book! Don’t set up a hearing or any other format if it is not really needed.

### Community entry and vulnerable groups

The most important incentive for a community to participate in the biosphere reserve is that a biosphere reserve and the decisions taken there, actually affect their lives. However, not all aspects/decisions in a biosphere reserve actually do affect all local communities at the same time. Therefore, before you seek a dialogue with a specific community, inform yourself really well. *Talk about concrete issues only and the biosphere reserve’s contributions to the concrete lives in the community.*

As a manager of a biosphere reserve, you should make all efforts to *include the voice and interests of vulnerable and disadvantaged groups* into decision-making, i.e. indigenous people, language or religious minorities, migrants and nomads, the illiterate and the extremely poor, hungry and disable people, and specifically women. Being inclusive to vulnerable groups means more than “not excluding them”. You must give special attention to them and use target-group specific language. You should approach the involvement of vulnerable and disadvantaged groups as a 2-step process:

1. Organize *specific consultations* for one or several of the groups and explain the reason for a consultation in a way that is comprehensible to the groups without patronizing.
2. Make sure that the specific interests and priorities of vulnerable groups which you have jointly identified are *suitably reflected in the final result* of the consultation (e.g. a strategy of management plan).

## What results can you achieve in which kind of meetings?

In *information sessions*, you present the biosphere reserve or a particular aspect; you lecture and you answer questions. Do not count this as real participation; information sessions keep communities informed, but they might go home frustrated because they were not able to actively contribute.

In *consultations*, you present a particular problem and maybe different proposals for suitable solutions; you seek the opinion of the community on the problem and on the different proposed solutions. This is participation, although the problem and possible solutions have been pre-structured by you. Still, if you organize a consultation very openly, a consultation can lead to excellent exchange, dynamic interaction and much motivation and commitment with the participants – whether this suffices, depends on the problem.

In *hearings*, you present only an outline for the problem to participants. They should themselves contribute assessments about the severity of the problem; they should contribute arguments, causal connections and prioritizations, pros and cons. This is the most intense form of participation, with a truly open format. The danger of this format is that it can lead to the expectation that all arguments and opinions will be taken care of.

## Participation and management constraints

There are many “problems” and “constraints” why participation does not take place, even if it should. Some constraints are real and insurmountable. Other problems are just pretexts. Further problems result from previous lack of participation and real community engagement. Typical management constraints include lack of financial resources, of staff and time, of political support from ministries, legal instruments etc., and of clarity of purpose and vision. There are many other common barriers to effective cooperation with local communities, such as misconceptions or misunderstandings, all of which can be easily overcome *exactly through dialogue and interaction*.

Often in meetings, ideas are expressed that collide with “hard facts”. As a matter of fact, each biosphere reserve has some pre-defined strategies and purposes, there is law, administrative ordinance, and political rule, and there are pre-defined rigid budgets. It is first of all crucial to avoid generating wrong and unrealistic expectations ahead of a meeting. In a meeting, don’t discard “practically unrealistic” ideas, but instead treat them as “visionary” ideas.

## Multi-language environments

Traditional knowledge, customary institutions, and the names and uses of species and biodiversity are interconnected and inseparable from local languages and dialects. Safeguarding endangered languages is thus important to biosphere reserves. A biosphere reserve manager can help by encouraging the use of local languages at meetings, in official documents, and in educational programmes. A simple action of great value for conservation is to respect, to maintain and even to restore the use of local names of places and of species.

If there are people present in a meeting who are native in different languages, allow for at least one phase of working exclusively in native languages. In multi-language environments, it is important to have competent and trust-worthy staff members in your team that speak all the languages spoken on the ground.

## Key logistical questions of consultations and hearings

Please take the diversity of people into account: Some are afraid of public spaces or of disturbing hierarchies, some never appear or do not say one word, some participate, but aggressively, disturbing procedures. It is important to create a “secure climate of voluntary cooperation”.

*Time devoted:* If you plan to organize a dialogue in a biosphere reserve, never think only about one meeting - dialogue is incompatible with urgency. It may take months or even years until the parties start to truly listen to each other and jointly arrive at solutions.

*The setting is important:* Carefully choose the place and the timing of any meeting; the place is relevant to promote cooperation, involvement, openness, and transparency. The best option is to have a meeting in the same place where community meetings are usually held; it is second best to choose a place that looks very similar. Whatever the chosen place, make sure it provides best conditions for the meeting (chairs? free access? availability of drinks and food?). Think carefully about the seating arrangement. Also think carefully at which time people are available to meet.

In a meeting itself, focus on a “good opening”: everybody should feel welcome, and you should clearly state the objectives and major milestones of the meeting. Do not exert pressure, all should be free to accept or reject results. Take each intervention seriously and let no one overly dominate the meeting. It can be sensible to hire a professional moderator (neutral person, maybe from outside the region). If you are the moderator yourself, disentangle facts and emotions, do not pre-fabricate solutions and don't take strong own positions.

It is typically wise to foresee break-out sessions in small groups. As a moderator, you should regularly help participants in reformulating their ideas such that good ideas really fit with the context of the meeting and you should also regularly summarize. Focus also on a “good closing” with a synthesis and recall the decisions made.

## Organizing the process to formulate a management plan

A management plan is the key document of a biosphere reserve. It must be a comprehensive and ambitious document – its formulation and its regular updating must be a *participatory process*. Formulating a management plan is the *best occasion for participation* for biosphere reserve managers to engage a very wide range of stakeholders and communities. Therefore this is explained in more detail in the following.

### Securing the mandate

The process of formulating a management plan is long and needs many resources. Therefore you need the full explicit support from the management board, the advisory board and all other boards, as well as the explicit support from the superiors in government institutions, if applicable. The general support by the larger group of stakeholders might be tested during an annual meeting. Before a process is started, sufficient financial funds have to be secured. Since establishing a management plan is a requirement demanded by UNESCO and since the process is “quite large”, such a process might be easily eligible for ODA funding. Your crucial partners and your superiors should *fully understand* that a management plan *actually is very beneficial for everybody*.

### Steering groups

It can be wise to establish a separate “*steering group*” for the entire duration of the process of elaborating a management plan, because the work typically exceeds the oversight capacity of your “ordinary” governing boards. Be aware that often the process has taken up to 2 years. If you install a steering group, then let it steer. *Its tasks would include controlling the progress of the process, to identify gaps, and to revise and adopt texts*. Your “ordinary” governing boards should only take the initial and the final decision.



## The process of formulation

*First step:* You should start with collecting and structuring the *interests and problems of stakeholders and communities*. This could take place in a series of 1-5 workshops. You should next cluster these interests and problems according to themes resulting from the workshops.

*Second step:* Interests and problems are sometimes short-term. In a management plan, you need to develop a *long-term vision* of maybe 10 years. This should build on the themes identified in the first step. In practical terms, formulating the vision can be done at a large consultation, through a public call for proposals or a series of smaller consultations. As a text, the vision may consist, for example, of a short “summary statement” (1 to 10 sentences), and/or of more specific visions for each theme cluster (a few sentences, up to 1 page). The final decision about the formulation of the vision(s) should be made by the steering group and endorsed by your “ordinary” management board.

*Third step:* You might specify the vision further, by formulating and agreeing on sub-goals or medium-term goals with corresponding “expected results” (tangible output) and “desired impacts” (intangible outcomes). These are the goals that you need to achieve in 3, 5 or 7 years, such that in 10 years you can achieve what is formulated in your vision. There should also be a clear and credible causal connection between the sub-goals and the main goals of the vision. You should also formulate success indicators that tell you if you will have reached your different goals and note your underlying assumptions.

This third step should be done in an interactive planning workshop through an intimate approach with texts written down. For this step, you might focus on a smaller group and maybe select 15-30 participants from a public hearing who have been very active; including decision-makers and experts. A technical interactive planning workshop cannot be done in 1 day; depending on the size of the biosphere reserve, it may take up to a week.

*Fourth step:* The final step of developing your management plan is to *identify those projects and interventions whose implementation will help you to reach your goals*. Reach out to stakeholders and communities also for collecting ideas for projects and interventions, and for later clustering and prioritizing them.

Once you have formulated a management plan, there needs to be a process of approval and adoption. If there is a separate steering group, then it needs to adopt the final document first, the “ordinary” management board needs to endorse it. If there is no steering group, then you probably need to present the plan to all relevant authorities and key stakeholders.

## Maintaining a dialogue

Participation can be organized particularly simple for specific occasions as described above (nomination, periodic review, management plan, and zonation). However, participation only functions if it is a continuous process that leads to trust and mutual benefits. Which options do exist to keep up the interest of stakeholders and communities in the longer term and to strengthen the support networks of your biosphere reserve? But there is a warning: don’t invite your stakeholders without a reason, don’t visit them “just to say hello” – in most context people can think that you have too much time.

The best option to maintain a dialogue is to involve communities and stakeholders *into the actual work* of a biosphere reserve. This can take multiple forms, such as involving community members into conservation such as anti-poaching patrols or species monitoring, into ecosystem restoration such as mangrove planting, into community infrastructure development such as building schools, water or health services, into setting up support and marketing networks for farm produce or for fisheries.

Biosphere reserve managers can also engage deeply with communities through inspiring the *creation of land-use associations*. For example, where there is not yet a farmers’ association, managers might consider supporting their creation, since it is only positive if all farmers of a region jointly discuss common problems, common needs and interests,

purely among themselves. Such associations can have an economic purpose (e.g. joint marketing of their produce), a social purpose (e.g. helping each other after accidents), and a political purpose (e.g. jointly promoting their interests towards a mayor or governor). Biosphere reserve may also support the *creation of other “institutions” of civil society co-operation*, e.g. at the level of tribes, communities, and villages, in cases where there is no well-established or traditional formal or informal form of representation.

The easiest option to maintain a dialogue is to organize an *annual meeting* to reach all stakeholders and community members. A well-structured annual meeting with all stakeholders, which includes transparent, honest and comprehensive reporting as well as ample discussion opportunities, will normally be enough benefit for your stakeholders. Benefits to stakeholders can be improved, if they can propose part of the agenda and if it is safeguarded that the results of the discussion are properly used. The start of an annual meeting should consist of an *honest and comprehensive report* about the current state of the biosphere reserve and about the results of your work. In your reporting, focus on *results* of your activities, not the activities themselves. If you can, report on money spent, on priorities and how the priorities have been decided. Additionally, you need to *allow and actively promote discussion*, at least in two rounds: First, allow the stakeholders to controversially and critically discuss your report (be prepared for critical questions). Secondly, foster a discussion about major recent themes in the biosphere reserve that are relevant to stakeholders (ask your stakeholders to suggest such topics in advance).

If you face a difficult new challenge, use it as an opportunity for participation. Solve the problem (together) by setting up an *ad-hoc working group* combining outside and inside knowledge, which will meet maybe only 1 or 2 times. Such a working group can include representatives of your management board and/or advisory board, maybe 5 to 10 other stakeholders and/or active people from the community who are not members of any board, and 2 or 3 experts from the outside, maybe including from the MAB National Committee, the National Commission for UNESCO or the UNESCO field office. The expected result could be a short statement on advantages, disadvantages, opportunities and risks of all options. The official decision-making body could weigh arguments resulting from the analysis of the ad-hoc working group and finally take the decision.

*Competitions and flash surveys* both have two goals: helping to collect new ideas and involving the community to increase commitment. Often, biosphere reserve managers invite schools and their kids to express their knowledge, ideas and expectation about the biosphere reserve by announcing a competition. Through such kids' competition you can also reach their parents. Ideas can also be created through competitions for adults as “idea contests” to solve a typical development problem. Such competitions are not necessarily about a “prize” or even prize money, but about the recognition of excellent ideas, and about

the engagement process itself. Ideas can also be created through “flash surveys” which are more informal than an official statistical survey. Only a very short number of questions are asked to a small sample of local people, providing a trend about public opinion and collecting new ideas. Another alternative are focus group discussions.

Formal or informal *networks called “Friends of the Biosphere Reserve”* support many biosphere reserves globally. The purpose of such a network can be manifold: It can just be symbolical or it can focus on raising funds through a membership fee. If such a network is about fund-raising, be aware that you have to give something in return “to your friends”, at least a regular newsletter and an annual report. Such a network can also serve as an “operative arm” of the biosphere reserve, particularly when biosphere reserves are not allowed to participate in calls for proposal, to process funds and or to implement certain activities. In such a case, a formal “parallel” organization such as “Friends of the Biosphere Reserve” (which in many countries can be sensibly set up as a non-profit foundation) can serve to implement all additional activities.

## Education and public relations as community involvement

### Education for Sustainable Development

Good *environmental education* has the effect that children, youth and adults understand how ecosystems and the environment function. It has the effect that they change their behaviour such as to minimize negative impact on the environment. Protected areas and biosphere reserves are ideal places for environmental education.

*Education for Sustainable Development (ESD)* includes environmental education but constitutes a more holistic approach. Its main goal is to allow children, youth and adults to become global citizens, critical of unsustainable practices and to enable and to empower them to actively contribute to responsibly shaping a more sustainable future. ESD discusses social and economic issues including poverty; the main focus is not on transmitting knowledge, but to change attitudes and to create the competences needed by empowered, responsible global citizens.

Education is an irreplaceable, integral task of biosphere reserves. Biosphere reserves should conduct environmental education and ESD for its inhabitants, including children and youth, as well as for its visitors, including tourists.



The main work of a biosphere reserve in education should be *catalysing educational activities of partners*. This also implies the cooperation with teachers in the creation of didactically professional approaches and materials.

Biosphere reserves should consider ESD to develop knowledge and awareness and develop attitudes and skills in five different ways:

- Education as pre-defined formats such as: Visits of biosphere reserve managers to schools, school excursions, tourist itineraries, or exhibits at a visitor centre.
- Education as dynamic, needs-oriented learning processes, in which formats follow the educational needs of the target group.
- Education as an informal learning process targeted at important stakeholders (including public administration and elected officials), about the importance of sustainable development.
- Education as continuous mutual learning, in which the biosphere reserve managers themselves participate as learners – integrating participation, research, implementation and monitoring as a joint search process for sustainable development.
- Education as your very own learning from the exchange of practices, methods and knowledge with the World Network of Biosphere Reserves, including through partnerships.



## Recommendations

When working with *youth and children*, the most important thing is: Be lively. Be simple. Be exciting. Tell stories or invite local people to tell stories. Use quizzes and games. Prepare learning modules (for schools and/or universities) which are appropriate for the age and appropriate for the context of the teaching programmes; preferably do it in close co-operation with teachers or university staff. Ideally, topics are then included also into the curriculum. Do not only consider printed material; electronic tools might also be used, depending on the availability of internet.

Too frequently, managers only use the core area with its high biodiversity as a learning place, to communicate what biodiversity is, why we need it, and how an ecosystem functions. But in order to communicate all aspects of sustainable development, the *buffer zone and the transition area* are more appropriate.

Learning interventions for *adults* should not be regarded under the perspective of “formal learning programmes”. Do not “educate” adults, but interact with them in a mutual learning process in which you as manager also learn from them – and try to empower them. When working with adults, don’t lecture. Again, focus on what is understandable and what illustrates your concepts.

For specific target groups, try to offer trainings and/or information sessions, e.g. for farmers on corresponding themes such as growing plants for energy production or new harvesting technologies. If there are training institutions, e.g. rural training schools, try to cooperate with them as “multipliers” of your message. Stakeholders, including public administration and elected officials, should be “educated” about the importance of sustainable development as well. You should actively use and interpret any discussion and negotiation meeting as an *opportunity for mutual learning*.

## Media relations

Local and national media are important partners in order to illustrate the idea of biosphere reserves, to overcome prejudice and misconceptions, to generate interest in ongoing activities, to motivate engagement, to clarify benefits and to build trust. National media are important to generate political and financial support in capitals as well as to inform domestic tourists. Be optimistic that your truly interesting stories will be taken up by local media; if you package them right, several of your stories will be taken up by national media.

Your work in media relations should focus on building good contacts especially with local media outlets – and wherever possible also with national media. Identify a staff member or a member of the management board as “media focal point”, and announce her/his contact details. Task one staff member to establish personal contacts with media outlets; these are much more effective than randomly distributing press releases. You could organize press conferences and “visits on the ground”, especially on important events, e.g. the designation by UNESCO, the periodic review, or the finalization of the management plan.

Restrict the number of messages in your press releases to those that are really crucial and simplify them as much as possible. Repeat these messages as often as sensible across press releases. Adapt the messages according to the target audience (e.g. political journal vs. tabloid).

Reasons for the press to report about you can be much more frequent than you might think: Any new exciting project in a UNESCO biosphere reserve will be much more newsworthy than the same project in a place “without a name”. Have realistic expectations about the limited newsworthiness of “standard” activities.

Be clear *to whom* you communicate (target group – local, national, international? general interest or potential tourist?), *in which media* (newspaper, TV, radio, website, social media?) and *with which messages*. What is really important: Do not explain abstract concepts, but tell exciting stories. Working with the press can only be effective if you have “simplified” your message such that it is understandable to your target audience. It can be wise to produce short (2-page) topic-specific dossiers for the media, e.g. about your work in biodiversity conservation, in improving livelihoods, or in disaster preventions.

Maintain an updated, *professionally designed website*, which provides information in target-group specific formats. Use few, large and good photos (but small in data size) – don’t use many small pictures and animations. You could also consider establishing an article about your biosphere reserve on [www.wikipedia.org](http://www.wikipedia.org) – or improving the existing article. Establishing a profile on Facebook or similar social media sites is also not too difficult, but the profile must be updated very regularly and must be monitored every day. Also monitor the profile of your region on tourists’ website such as [www.tripadvisor.com](http://www.tripadvisor.com).

Produce material such as brochures, flyers, banners, and booklets only as far as this material has clear goals, a real use and a clear target audience.

Whenever you have the opportunity to get access to *good quality photos* and film material about the biosphere (including all intellectual property rights), use it – the communicative power of such material is particularly strong. But be careful: If a picture

or film shows mostly “wild animals”, then this film will not help you communicating the real goals of a biosphere reserve. It is also important especially for film and photo material to be fully respectful of communities, their members, their values and traditions.

If you work with international journalists, you should seek external advice, because expectations and needs of journalists from other countries can be very different from your local journalists.

## Transboundary Biosphere Reserves and other special cases

*Transboundary Biosphere Reserves* (TBRs) are a useful instrument for the conservation of *shared ecosystems* that cross national borders and that often depend on being large and uninterrupted (such as for migration of large mammals). Often the population on both sides of a border is identical in language and culture; thus new regional identity of divided communities can be built, as an addition to national affiliation. If there are differences in language and culture, a TBR can help overcoming stereotypes and strengthening peace. The UNESCO designation puts often peripheral region on the border on the world stage, improving socio-economic development, e.g. through a rise in tourism.

TBRs introduce a cooperation framework and re-adjust the laws, instruments and approaches for managing a shared ecosystem. TBRs are established for decades, enabling true cooperation and the building of joint institutions. Moreover, TBRs are not only an agreement among governments; they are an agreement “with UNESCO as a neutral solicitor”, providing an additional “guarantee” to an agreement.

TBRs facilitate the development of joint policies for land-use across borders, the development of joint projects, the pooling of capacities/resources, the exchange of experience and joint involvement of the local communities and of stakeholders. The countries can share monitoring stations, research laboratories, machinery, equipment, data bases, gene and seed banks and tree nurseries, education material and capacity-building documents. Joint tourism itineraries can be promoted; joint tourism marketing can be initiated. Joint training of staff is cost effective and also mutually instructive. TBRs can also make accessible new funds due to their specific aspect of international peace and integration, and with their aspect of entire-ecosystem management.

UNESCO today proposes that TBR come into existence by joining two existing biosphere reserves across a border, i.e. a joint nomination by all governments involved through an official agreement and a common work-plan. The information is presented in a special nomination form that is based on the “Pamplona recommendations”.

These recommendations propose to establish a cross-border working group of local and national partners as well as to establish a permanent joint secretariat for this coordination structure and a separate budget for its operation. In almost all cases of existing TBR, each country maintains its own separate management team for its national part of the TBR. It is vital that each separate team designates one person as a focal point for co-operation.

A joint understanding and agreement on zonation and goals needs also to be found; UNESCO recommends that all countries agree on one overall zonation and on joint goals, a *joint vision and joint priorities*. They need to harmonize the management tools, intervention logics, monitoring methodologies and joint research programmes implemented on both sides of the border. This will save money, lead to better data quality, enlarge the perspective and pool skills. If the regions on both sides of the border do not have a common language, it is advisable to agree on one working language in meetings and translating important documents.

As of June 2015, there are 15 TBRs globally and 3 TBRs in Africa, with many more under preparation.



## Cities in biosphere reserves

Biosphere reserves should be representative for all major ecosystems. This is why “urban biosphere reserves”, *biosphere reserves in cities*, have been discussed. While this is conceptually interesting, it is too difficult politically and practically. What is in fact much more important is to regard *cities in biosphere reserves*. This today is almost normal in the World Network, many biosphere reserves contain important parts which are also considerably shaped by significant urban human settlements (not only villages) within the borders of the biosphere reserve.

Specifically in Africa, a large number of biosphere reserves is still very rural. But also here, many biosphere reserves are close to cities and illustrate how people can live from the resources and ecosystem services of natural habitats; this includes enjoying them during holidays and recreation. The concept of a biosphere reserve can be a very valuable planning space and management framework for cities and their adjacent natural areas.

## Coastal and island biosphere reserves

Marine ecosystems are under enormous pressure from pollution, ocean temperature rise, ocean acidification, over-fishing including bottom trawling, invasive species, unsustainable tourism, and marine extraction of minerals and fossil fuels. Several of these pressures such as over-fishing and tourism can be controlled. Therefore, marine protected areas are implemented increasingly.

In principle, a coastal UNESCO biosphere reserve is the same as a terrestrial biosphere reserve, but in the ocean, it is more difficult to effectively preserve species and wilderness under water, resolve conflicts among users (current or future) and restore degraded or overexploited areas. A coastal biosphere reserve has a zonation, too, and the core area may again be a strictly protected area such as a national park out in the coastal ocean. What makes island biosphere reserves special is that they have a natural outer boundary – in the biosphere reserve methodology, this has advantages and disadvantages.

### **Suggested further reading:**

For quotations on the information provided, for additional material, for case studies and for any further information and in-depth insights into the topics discussed in this “field version”, please study the full version of the **Management Manual for UNESCO Biosphere Reserves in Africa- A practical guide for managers.**

It is available online and can be downloaded using the following link:  
<http://bit.ly/1E8sjfU>



UNESCO biosphere reserves balance nature conservation with socio-economic development and poverty alleviation, in particular by engaging with local communities and using a knowledge-based approach. They are model regions for sustainable development.

This is the short version of the “Management Manual for UNESCO Biosphere Reserves in Africa”. The “Manual” focuses on why and how to work with local communities, including practical aspects such as how to address and manage conflicts, or how to elaborate a management plan.

The “Manual” and this short version have been elaborated by African experts and managers of UNESCO biosphere reserves. It is edited by the German Commission for UNESCO in collaboration with AfriMAB, ArabMAB and the UNESCO MAB Secretariat. It is supported by the German Federal Agency for Nature Conservation, with funds from the German Federal Ministry for the Environment, Nature Conservation, Building, and Nuclear Safety.