

50 Years of UNESCO's Man and the Biosphere Programme

In 2021, the Man and the Biosphere (MAB) Programme celebrates its 50th anniversary as a major UN programme combining nature preservation and sustainable development. MAB is an Intergovernmental Programme governed by the International Co-ordinating Council (MAB-ICC), and meets annually. It guarantees the link between civil society, including all stakeholders, and the governmental authorities which regulate the functioning of UNESCO. From its creation in 1971, the Programme was the first to care about the relationship between nature and human beings. The MAB Programme immediately developed the basis, within the natural and social sciences, for the rational, sustainable use and conservation of the biosphere's resources and for the improvement of the overall relationship between people and their environment. It aims in addition to implement activities that will enable people to better manage natural resources for their own wellbeing as well as for the good of the environment.

Just how the Programme works was decided by a series of World Congresses in 1985 in Minsk, 1995 in Seville, 2008 in Madrid, and 2016 in Lima. These congresses elaborated the Statutory Framework and several Action Plans. The most recent Statutory Documents of the Programme are the MAB-Strategy (2015–2025) and the Lima Action Plan (2016–2025), determining how the Programme would function for a decade, and providing a roadmap for the Programme and its World Network of Biosphere Reserves.

Today (2021), there are 727 UNESCO Biosphere Reserves (BRs) in 131 countries, including 22 transboundary sites and 2 intercontinental sites.

BRs involve local communities and all interested stakeholders in planning and management. They integrate three main functions:

- conservation of biodiversity and cultural diversity;
- economic development that is socio-culturally and environmentally sustainable;
- logistical support, underpinning development through research, monitoring, education and training.

These three functions are pursued through the BRs' three main zones (illustrated in the Figure 1):

- The Core Areas comprise a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation;
- the Buffer Zones surround or adjoin the core area(s) and are used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education;
- the Transition Areas are areas where communities foster socio-culturally and ecologically sustainable human activities, including economic ones.

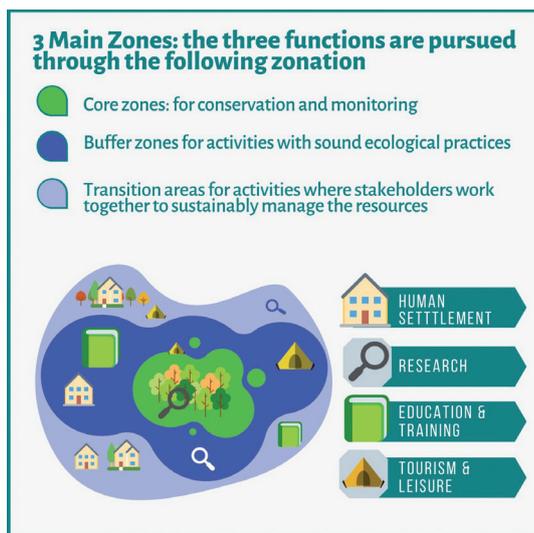


Figure 1 – The three functions pursued through the three zones of biosphere reserves. © UNESCO

The World Network of Biosphere Reserves includes representative areas of all major natural and semi-natural ecosystems, comprising more than 7 million km² in 131 countries. Their total surface area is almost the size of Australia. 5% of the world's terrestrial surface is protected by BRs; 1.5% is strictly protected as core areas. The core areas together amount to more than 1.3 million km², an area greater than that of Peru.

About 260 million people live in BRs worldwide, and BRs are present in every region of the world. They are sites of excellence for Sustainable Development through participatory dialogue, knowledge sharing, poverty reduction and enhanced capacities to cope with climate change. Brazil has the most extensive BR territory

(1 754 883 km²), and Costa Rica has the highest percentage of territory as BR (52.10%). Spain has the most BRs, with 53 sites; the highest mountain in the world, Mt. Everest (8 844 m), is located in the Qomolangma BR, China. The entire population of the highly endangered Sumatran Orangutan (6 600) lives in the Gunung Leuser BR, Indonesia. Without this BR, the entire population of one major mammal species would be endangered or disappear. The Tsá Tué, in Canada, is the first BR in the world to be designed and managed by its indigenous peoples, the Sahtuto'ine; the Gouritz Cluster BR, South Africa, is the only place in the World where three recognized biodiversity hotspots converge.

BRs are *laboratories for sustainable development*. Many projects, implemented partly or totally in concertation with the MAB Secretariat, underline the extreme richness and variety of approaches in BRs, and play a major role in helping to bridge the different needs of biodiversity conservation and sustainable development.

For example, the reforestation of the La Selle BR in Haiti is implemented by the local communities, aiming to restore the forest ecosystem in order for their fruits and other natural products to be harvested from the trees. The River Turtle Project in the Beni BR, in Bolivia, aims to restore the population of turtles as indicators for the health of the river ecosystem. The Plastic Reduction project in the Principe Island BR in São Tomé & Príncipe helped to bring about the total ban of plastic waste on the island and, at the same time, triggered the eradication of malaria there. The production of sustainable energy, and the introduction of electric transport and sustainable tourism in the island of Menorca's BR (Spain) is bringing about a radical change to transport on the island. And finally, the Great Apes Survival Project (GRASP) in Africa and Asia is being implemented in order to save great ape communities, some of which exist exclusively in BRs.

BRs are places where innovative ideas for sustainable development are tested and implemented. Local knowledge and scientific experience together, under the governance of all stakeholders, make BRs excellent places to implement the Sustainable Development Goals 2030, particularly (but not exclusively) goal 15 on *Life on Land*.

The MAB Programme has established many regional and thematic networks for better international, regional and inter-regional cooperation. In some cases, BRs have been established in former conflict areas, thus helping to fulfil the goals of *Science Diplomacy* and to enable neighbouring countries to overcome international conflicts.

Of utmost importance is the role of the MAB National Committees that coordinate the multitude of activities in individual countries, linking the sites with the World Network. For example, the Europe and North America region, the world's largest regional network, encompasses 40 countries and more than 330 sites. Another example is the Island and Coastal BR Network. Most of the world's population lives in coastal areas, and island and coastal populations will be the first to be faced directly with the challenges emanating from climate change, such as coastal erosion and sea-level rise. Therefore, there is a special ongoing project measuring the impact of climate change in coastal and island BRs. Other research projects, in mountain areas, measure the effects of global warming on glaciers, or focus on other impacts of global warming on the land and the respective communities.

International Cooperation Agencies use the World Network of Biosphere Reserves extensively. For example, the German Development Agency (GIZ) makes very targeted use of BRs and supports BRs outside Germany in bilateral cooperation, with investments of over 100 million euros per annum from its own financing mechanisms. Spain contributes generously to UNESCO projects, as do the Flemish government in Belgium, Austria, Korea and France. Often, UNESCO can use such extra-budgetary funds to implement projects that are not easy to finance even for a wealthy country like Germany. I will give you an example: UNESCO is currently organizing a costly (because multi-national) feasibility study (with a budget of over 6 million US dollars) for establishing a transnational BR in the Lake Chad region. The project includes all countries bordering Lake Chad: Chad, Cameroon, the Central African Republic, Niger and Nigeria – ecologically a highly significant region, and politically a sensitive one, where security can be precarious. The aim is to ensure the sustainable management of natural and cultural resources in this region, which is severely affected by climate change and overuse of resources, in order to reduce poverty in the long term and promote peaceful coexistence. UNESCO does not provide development aid, but it does strengthen cooperation worldwide. Our great strength is bringing together actors from very different regions of the world, such as Africa, Myanmar, Haiti and Bolivia. Especially in geopolitically highly sensitive (but all the more important) areas, we are able to act successfully with diplomatic tact and sensitivity – especially through the creation of BRs. In such contexts, UNESCO can provide a neutral platform.

So what is the agenda for the next 50 years of the MAB Programme and the biosphere reserves?

Worldwide, more than 60 countries still do not have BRs. These *white spots* on the world map of BRs include small island states in the Pacific or Caribbean, for example, as well as some states in Africa and other regions. In many cases, the political will is certainly there, but there is a lack of know-how and financial resources. Of course, even more financial support from richer nations for creating BRs in these countries would be desirable. But where the political will is not yet so strong, we need to demonstrate to people how much benefit they would derive personally from the creation of a BR. Because BRs demonstrably promote regional development.

The MAB Programme is also involving more young people globally. Through the MAB Youth Network and the MAB Youth Forums, UNESCO's MAB Programme engages with young people as actors of change, strength-

ening their presence in the governance of the MAB Programme at all levels, involving them in actions, in particular with communities in their own local BRs, and empowering them to make their voices heard in the global debate on biodiversity conservation and climate change. At the MAB Youth Forum, MAB Youth representatives raise issues concerning UNESCO, the MAB Programme, the World Network of Biosphere Reserves and their MAB National Committees. During the 2019 MAB Youth Forum, they decided to organize themselves into regional networks, each with its own action plan. These will be coordinated by nominated regional spokespersons, until the next MAB Youth Forum takes place. Regional focal points could also be given responsibility for organizing Regional MAB Youth Fora.

The MAB Programme communicates on social media, including via Twitter, Facebook and Instagram, and, of course, on the web. This allows not only the dissemination of communications from the MAB Secretariat but also direct contributions from countries, networks and individual BRs.

So, finally, I express my wish that within the decade of the Lima Action Plan, the MAB Programme and its World Network of Biosphere Reserves will get all countries on board with a least one Reserve per country, and that the Programme will have more and larger sites covering at least 10% of the Earth's terrestrial surface, including coastal areas and all islands which are close to the coast.

Thank you very much.

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