



United Nations
Educational, Scientific and
Cultural Organization

Organisation
des Nations Unies
pour l'éducation,
la science et la culture

Organización
de las Naciones Unidas
para la Educación,
la Ciencia y la Cultura

Организация
Объединенных Наций по
вопросам образования,
науки и культуры

منظمة الأمم المتحدة
للتربية والعلم والثقافة

联合国教育、
科学及文化组织

Man and the Biosphere

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Man and the Biosphere

Since the 1970s, UNESCO has promoted international cooperation to improve people's relations with the biosphere – our life support system.

While 20th century technology has for the most part allowed better health and longer lives, higher food production, better housing, better access to information etc., the processes that have produced these gains are putting an increasing strain on the planet. One of the most telling measures of this strain is the unprecedented loss in biological diversity, i.e. the variety of life on earth from genes, species, to entire ecosystems.

PROBLEMS AND CHALLENGES

It is estimated that, as a result of conversion and exploitation of natural areas, the extinction rate of living species is now over 1000 times higher than the historical evolutionary rate. Since humanity is highly dependant on biological diversity for goods and services such as foods, fuel and fibre, medicines, soil regeneration and climatic regulation, this loss has been equated to a loss of our "life insurance" system.

In 1987, the concept of "sustainable development" was introduced to encourage using resources in a less wasteful way, promote solidarity of the developed countries with developing ones, and keep options open for future generations. This concept was at the heart of the UN Conference on Environment and Development in 1992 and the World Summit on Sustainable Development in 2002. However, in a world oriented towards materialistic

gain, it has proved hard to put it into action.

HOW HAS UNESCO RESPONDED?

In 1971, UNESCO's Programme on Man and the Biosphere (MAB) was designed to foster cooperation among countries in interdisciplinary research, demonstration and training in natural resource management. MAB strives to promote not only a better understanding of the environment, including global change, but greater involvement of

science and scientists in policy development concerning the rational management of biological diversity. In many places, MAB has made modest but significant contributions to realising sustainable development.

MAB operates through:

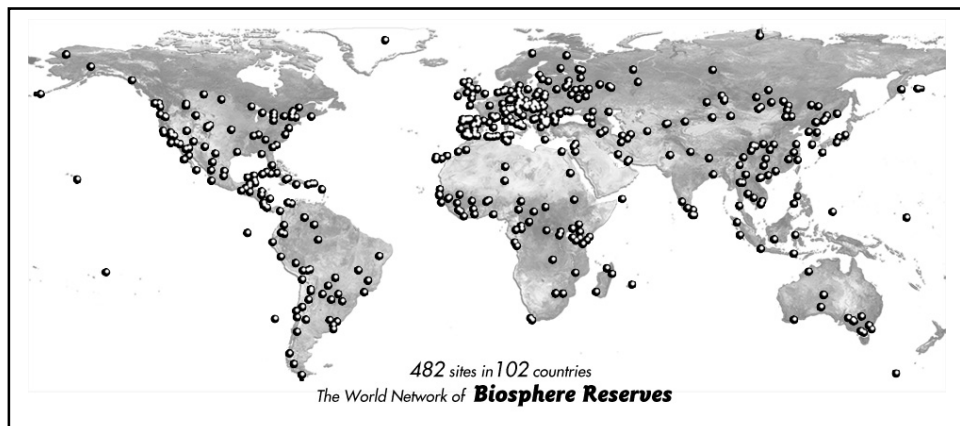
A broad based scientific agenda – working with different groups of partners.

Each country is invited to set up a MAB National Committee that represents government, academia and NGOs. Different countries or groups of countries conduct their own MAB research or participate in international endeavours coordinated by the MAB Secretariat, in cooperation with the Secretariats of global conventions (such as on Biological Diversity, Combating Desertification), other UN bodies (UNEP, FAO), and the main science programmes of ICSU (International Council for Science) and the European Union. Topics cover ecosystems such as: drylands and mountains; urban systems; humid



The island of El Hierro (Canaries, Spain), a Biosphere Reserve (2000)
(© El Hierro Biosphere Reserve)

Man and the Biosphere



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tropics; coastal and marine systems; or issues such as long term ecological research and scientific assessments of ecosystem services; promoting quality economies, use of new carbon trading mechanisms; exploring links between cultural and biological diversity. Training focuses on areas such as: integrated management of tropical forests; conflict prevention and management; Ecotechnie (ecology, economics and appropriate technology).

the human development index. Efforts are being made to explain the complementarity of biosphere reserves with World Heritage sites and Ramsar Convention Wetlands, and also to promote biosphere reserves as “learning sites” for the UN Decade on Education for Sustainable Development.

Scientific achievements are recognized through the MAB Young Scientists Awards, the Sultan Qaboos Prize for Environmental Preservation, and the Michel Batisse Award for Biosphere Reserve management.

The World Network of Biosphere Reserves is comprised of 482 sites located in 102 countries. The biosphere reserve idea originated under the MAB programme as a land management tool to reconcile the conservation of biological diversity with economic development. Biosphere reserve criteria have evolved to meet the challenges of sustainable development. Countries are invited to designate sites as biosphere reserves, and also to undertake a periodic review process every ten years to improve the functioning of existing ones. Transboundary biosphere reserves are receiving increasing interest as a UNESCO accolade of international cooperative efforts. Regional and thematic sub-networks allow exchanges of experience and ideas and the development of research, for example on alternative governance structures, or measuring progress using

To Find Out More

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