

The Man and Biosphere programme of UNESCO: rambunctious child of the sixties, but was the promise fulfilled?

Peter Bridgewater^{1,2}



In the 1960s UNESCO, as the UN agency with responsibility for science, developed a new programme dealing with human-biosphere interactions — the Man and the Biosphere (MAB) programme. It was a ground breaking programme, seeking to use UNESCOs convening power in education, natural and social sciences, culture and communication to forge a new way of understanding the natural world and the role of people in it. MAB blended new science direction with an innovative site-based approach, the Biosphere Reserve. This paper examines the history of the programme, its successes and failures, and future prospects. The lessons learned are as much about programme development and management, stakeholder involvement, and institutional failure, as the science prosecuted and the results yielded. The programme does have a future, should it take advantage of the changing biodiversity research and policy landscape.

Addresses

¹ Centre for Museums and Heritage, The Australian National University, Sir Roland Wilson Building, Canberra, ACT 2601, Australia

² School of Nature Conservation, Beijing Forestry University, Qinghua East Road, Haidian District, Beijing, PR China

Corresponding author: Bridgewater, Peter
(Peter.bridgewater@anu.edu.au)

Current Opinion in Environmental Sustainability 2016, 19:1–6

This review comes from a themed issue on **Sustainability science**

Edited by **Hal Mooney**

Received 21 May 2015; Revised 19 August 2015; Accepted 21 August 2015

<http://dx.doi.org/10.1016/j.cosust.2015.08.009>

1877-3435/© 2015 Elsevier B.V. All rights reserved.

a most rambunctious child — the Programme on Man and the Biosphere or MAB, as it is widely known. To try and contextualise MAB I trace the programme from its early days to the future, through a decadal lens. A fuller history is in Petitjean *et al.* [1^{••}].

1945–1965—early beginnings

Biologist Sir Julian Huxley was the first Director-General of UNESCO and his vision was critical in establishing natural sciences in the Organisation. Over its first two decades UNESCO organised several projects, conferences and other activities on environmental themes. Enthusiasm often led practical realities, alas, and various forays came to nought. One that did not, however, was a major project on arid zones from 1949 to 1964 [2]. In some ways a precursor to MAB, this programme was successful, yet failed to achieve its potential. Batisse [3] noted: ‘(the UNESCO programme) had neither shrunk the deserts nor stopped erosion, which then more than ever before threatened the world. But it had contributed to *clarifying problems* in arid lands and their *economic, ecological and social repercussions* (emphasis mine).’ It is the link between ecological, economic and social that was important for the next stage of the adventure.

Meanwhile, UNESCO was forging links with Non-governmental organisations (NGOs). As nature conservation was an emerging issue in the late 1940s, in 1948 UNESCO, with the Swiss League for Nature and the French government, met at Fontainebleau, France to discuss establishing an international organisation for nature conservation, resulting in the birth of the World Conservation Union (IUCN). Holdgate [4] has detail on IUCN’s establishment, but important to note is that IUCN, now the key NIGO for nature conservation and sustainable development, is a scion of UNESCO, and continues a long relationship with UNESCO through MAB and the World Heritage Centre.

Preamble

The late 1960s was a period when the world was waking up to unsustainable environmental practices. Publication of *Silent Spring* by Rachel Carson in 1962 galvanised thinking in that tumultuous era. But while that was happening in popular environmental culture, within UNESCO senior figures were planning a significant meeting on the environment (The Biosphere Conference). That meeting, held in Paris in 1968, gave rise to

Perhaps the most important NGO link was with ICSU — the International Council for Science, and two component unions — the International Union of Biological Sciences (IUBS) and the International Union for Microbiological Societies (IUMS). One result was the establishment of the decade-long International Biological Programme (IBP), launched in 1963. The IBP was to be an ‘international programme of biological studies focusing on the productivity of biological resources,

human adaptability to environmental change, and environmental change itself' [5]. The first IUBS General Assembly took place in UNESCO in 1964, with UNESCO supporting the IBP over its life [6].

1965–1975 Genesis of MAB, World Heritage Convention and UNEP

With IBP underway, in 1966 the General Conference of UNESCO proposed an Intergovernmental Conference on conservation of natural resources. Besides IBP, the Food and Agriculture Organisation of the UN (FAO) and IUCN were ready partners; and so the *Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere* was held in September 1968. The key figure in this Conference was Michel Batisse, then head of Natural Resources Research, and his later reflection on the conference [7^{*}] remains the key perspective on its results.

The conference called for the establishment of an 'international programme of research on man and the biosphere'. Remarkably swiftly by today's standards, some two months later, UNESCO's General Conference 'invited the Director-General to prepare a plan for the long-term intergovernmental and interdisciplinary program', designed to build on IBP. And so MAB was born, with the aim to be a fully interdisciplinary effort across natural and social sciences.

The 1968 Conference also influenced greatly the subsequent UN Conference on the Human Environment held in Stockholm, Sweden, in 1972. A key result from that Conference was the establishment of the United Nations Environment Programme (UNEP). At the same time, states parties of UNESCO agreed the *Convention Concerning the Protection of the World Cultural and Natural Heritage* (popularly the World Heritage Convention), and within UNESCO the Science Sector (MAB) shared administration of the Convention with the Culture Sector.

The MAB concept developed rapidly, and was presented to the next General Conference in 1970, which accepted a consolidated proposal. The proposal included 13 streams of activity, nearly all cross-cutting and interdisciplinary. As with all things intergovernmental, it was urged that countries set up national implementation committees, and an Intergovernmental Coordinating Council (ICC) was established. One problem with the ICC was, and remains, its membership which may or may not be scientifically literate. This has echoes in more recent discussions of the poor functioning of the Subsidiary Body of the Convention on Biological Diversity (CBD), due to underrepresentation of technical expertise [8].

As MAB progressed, the ICC decided that, as well as research, MAB should seek to develop a portfolio of sites

representative of global ecosystems in which biodiversity conservation was combined with satisfying basic needs of local people and simultaneously accommodating ecological research and training [7^{*}]. This idea resulted in 'Biosphere Reserves' which, even today, are perhaps ahead of their time. UNESCO, with UNEP and IUCN held a joint meeting in 1974 to frame the objectives and functions of Biosphere Reserves — an indication of how close those organisations were in those early days.

By 1974 ICC had agreed 14 projects in the MAB portfolio, all of which, with the possible exception of project 14, linked natural and social sciences in problem-solving, or improving knowledge (Box 1). But here was the germ of a problem — the support staff in the MAB secretariat were largely natural scientists, although there were some staff with social science skills. Yet that should not have been the issue, since staff with those qualifications were already in UNESCO, but in the social sciences sector. However the strong silo-basis (and thus mentality) of UNESCO militated (and continues so to do) against obvious possibilities for cross-sectoral co-operation. 1974 also saw the end of the IBP, and not all involved were happy that MAB, rather than an extension of IBP, now occupied that space, and some support for MAB was thus lost, and even antagonisms formed.

Box 1 Research projects agreed under the initial phase of the MAB programme.

1. Ecological effects of increasing human activities on tropical and subtropical forest ecosystems;
2. Ecological effects of different land uses and management practices on temperate and Mediterranean forest landscapes;
3. Impact of human activities and land-use practices on grazing lands;
4. Impact of human activities on ecosystem dynamics of in arid and semi-arid lands;
5. Ecological effects of human activities on the value and resources of wetlands;
6. Impact of human activities on mountain and tundra ecosystems;
7. Ecology and rational use of island ecosystems;
8. Ecological assessment of pest management and fertilizer use on ecosystems;
9. Effects of major engineering works on man and his environment;
10. Ecological aspects of urban systems with particular emphasis on energy use;
11. Interactions between environmental transformations and of human populations;
12. Perception of environment quality;
13. Research on environmental pollution and its effect on the biosphere;
14. Conservation of natural areas and of the genetic material they contain.

One (perhaps still unresolved) aspect of the research projects raised by di Castri [9] was the appropriate scale and focus at which they should be undertaken; ecosystem or human-use system?

Download English Version:

<https://daneshyari.com/en/article/7462391>

Download Persian Version:

<https://daneshyari.com/article/7462391>

[Daneshyari.com](https://daneshyari.com)