

Nature's Property

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Like airplanes and money, boundaries are creations of man: they are not natural and have become one of the main obstacles to protecting priceless natural assets

Human expansion worldwide, and especially in Europe, has reduced the last areas of pristine nature to tiny, isolated spots on map. Although protected by law, many of these areas are already known not to be ecologically self-sustainable. This means that species will continue to die out because of a shortage of new habitats or due to inbreeding (genetic degeneration due to cross-breeding within a small population) if they are not given a larger territory or allowed to migrate. To address this crucial problem, UNESCO created the Man and the Biosphere (MAB) programme, aiming to develop large self-sustainable protected areas by enlarging existing national parks and nature reserves and connecting them with natural corridors.

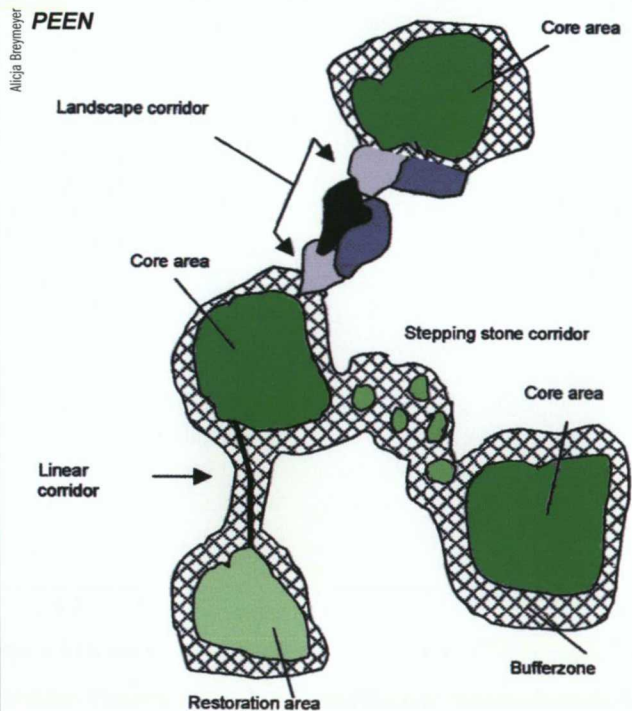
The modern "Biosphere Reserves" were born at the 1970 UNESCO General Conference, which formulated, for the first time, "the need for undisturbed natural areas that every member-state should designate within its borders; these biosphere reserves should contain ecosystems representative of the main biomes, or important to that country for other reasons. These reserves would serve as centers for research, education and management". In 1995, the next, most recent strategy for creating biosphere reserves was formulated during the MAB Conference in Seville: "Biosphere reserves, rather than forming islands in a world increasingly affected by severe human impacts, can become theaters for reconciling people and nature, they can bring knowledge of the past to the needs of the future, they can demonstrate how to overcome the problems of the compartmental nature of our institutions. In short, Biosphere Reserves are much more than just protected areas."

Zones of contact

Such protection and management are implemented by creating a spatial organization unit composed of the following zones: a "core zone," a "buffer zone," and a "transition zone." The core, or central zone of a biosphere

reserve should be subject to protection ensured by the jurisdiction of a given country and it ought to include representative examples of natural ecosystems belonging to one of the biogeographic provinces of the globe. The buffer and transition zones are managed and utilized by people. Today, 30 years later, the European Commission initiated the Pan-European Ecological Network (PEEN), which takes the philosophy of MAB Biosphere Reserves a step further. These zonal units are to be connected by ecological corridors. In this way the possibilities of movement, dispersion, or migration of species are guaranteed.

The 2005 MAB Bulletin of the World Network of the Biosphere Reserves already lists 482 Reserves existing in 102 countries. About half of those are situated in Europe. In Poland there are 9 biosphere reserves, usually organized around national parks, which constitute the core zones. The biosphere reserves are distinctly larger than the national parks themselves - a good example is to be found in the Białowieża National Park and Biosphere Reserve, which for the first 30 years existed without zonal structure on an area of about 10,520 hectares, but after the introduction of such zones in 2005 grew to 92,309



Methods to connect isolated biosphere reserves through natural corridors



Piotr Klosowski/Agencja Piękna

Protected since 1921, Poland's precious Białowieża is a true primeval forest listed by UNESCO as a World Heritage site. The park is home to the largest population of European bison (*Bison bonasus*) on the continent

hectares. Taken together, the 9 Polish biosphere reserves cover 478,242 hectares, while the 23 Polish national parks cover only 314,508 hectares; this means that the average park has an area of about 13,674 hectares, the average biosphere reserve - 53,138 hectares.

Three of our biosphere reserves are trans-border. The first European trans-border reserves of this kind were created in Poland: the East Carpathians Biosphere Reserve (Poland-Slovakia-Ukraine), the Karkonosze Biosphere Reserve (Czech Republic-Poland), and the Tatra Mts. Biosphere Reserve (Poland-Slovakia).

Reconciliation through ecology

The Polish National MAB Committee has made particularly strong efforts to create trans-border biosphere reserves. The main rationale is purely ecological. Crowded, densely-populated Europe has many valuable areas bisected by national borders, and it is clear to all that this is associated with the fragmentation of natural landscapes and ecosystems. The impact on their functioning and rational use is devastating. We proposed that trans-border reserves be established, and gained very broad support for the idea. The other rationale is partly political: Poland has a very long history of border conflicts, and the memory of these conflicts still hampers cooperation between the neighboring states. Do we trust ecology's peaceful mission in this field? At the very least, we do believe that it is very good that the actions of ecologists themselves have led to joint, coordinated efforts to care for large, internally linked ecological systems that happen to have borders running through them.

In May 2004, Poland became a member of the European Union; our eastern border with Belarus and Ukraine thus became the eastern border of the EU. This border runs through a chain of valuable natural ecosystems and biotopes connected by huge areas of forests and wetlands, with the beautiful River Bug along the border. We have a duty to protect these areas, and the best way to do so is by joining them together. Extensive, trans-border protected areas are now being organized. Together with its neighbors, Poland is trying to connect three such regions with ecological corridors: the Polish-Belarusian-Ukrainian West Polesie National Parks and Biosphere Reserves, the Polish-Belarusian Białowieża National Parks and Biosphere Reserves, and the Polish-Ukrainian Roztocze National Parks.

At the same time a new project is just starting, called the Zone of Joined Efforts (ZJE). It aims to create a trans-border chain of East European biosphere reserves spanning from the Baltic Sea up to the Black Sea, protecting thousands of square kilometers of forests and wetlands of Eastern Europe. ■

Further reading:

UNESCO MAB Programme <http://www.unesco.org/mab>

Breymeyer A. (2005). *The chain of transborder biosphere reserves on Eastern border of Poland and EU*. In: *Warsaw Regional Forum 2005. Proceedings*. Konrad Czapiewski, Tomasz Komornicki (Eds.). IGIŻP PAN Warsaw.

Breymeyer A., Adamczyk J. (Eds.) (2005). *Transboundary Biosphere Reserves at the Eastern end of European Union: people & ecological dilemmas*. National UNESCO-MAB Committee of Poland, Warsaw.