

Set the standard

Coherent, integrated data on biodiversity is crucial for European environmental policy, write Marc Metzger, Rob Jongman and Loboš Halada



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Policy commitments to protect biodiversity and mitigate environmental change, both within the EU and internationally, require pan-European strategies and supporting research for managing natural resources. In recent years it has become increasingly evident that standardised frameworks and methods are required among countries to enable the integration of both data and research programmes. These new initiatives are not meant to replace existing approaches, but to achieve international objectives and harmonisation. Nevertheless, the adoption of new harmonised methods remains a difficult process in Europe, because in the EU ecological data collection is coordinated by over 100 national and regional agencies, following country specific methods, classifications and priorities.

Biodiversity assessments to underpin EU policy and report to the convention on biodiversity (CBD), as well as European ecological research concerning global change impacts on ecological resources, are both hindered by the lack of coherent data and institutional barriers to data availability. Currently, the Natura 2000 network of protected sites is the EU's main mechanism to protect biodiversity, with legal protection for rare and threatened species and habitats. However, monitoring, and therefore data collection that could be used in research, is not collected using standardised methods, and data is stored nationally and not generally available for scientific use. Outside Natura 2000, there are no reporting requirements to the EU and national efforts vary greatly. Status and trends reporting and scientific ecological research therefore currently rely on coarse and indirect biodiversity indicators, for example based on the EU Corine land cover map or coarse species distribution maps.

To support data integration and provide robust figures on Europe's biodiversity, the EU has funded a research project to develop a blueprint for a cost effective, but scientifically rigorous, European biodiversity observation network (Ebony). The project is developing standardised definitions and data analysis methods that can combine existing long term ecological research, national and regional monitoring activities, and exiting biodiversity datasets (for example species distribution maps), with a strategic set of new observations to provide statistically robust estimates of trends in key biodiversity indicators. The new observations will comprise both stan-

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standardised field observations of habitats and vegetation structure, and earth observations from airplanes and satellites. The latter will provide insight into habitat connectivity and can be combined with the field observations to improve estimates and reduce the required number of samples.

It is especially important that the network fit within existing institutional frameworks. The final network should provide meaningful data and statistics, while linking to ongoing activities

conducted by governmental agencies and NGOs at EU, national and regional level. The definition of protocols, proxies and indicators for different species groups will therefore be carried out in a consultative process with partners in the consortium and external advisors. Ebony will also rely heavily on previous EU research projects and networks such as AlterNet, EuMon, BioHab and BioPress, and existing indicators developed in the framework of the CBD and in the Sebi process.

In addition to the need for national and EU relevance, Ebony also forms one of the first European research projects that is specifically dedicated to supporting the development of the global earth observation system of systems. By selecting the Ebony project, the EU has made a crucial step towards a European contribution to a group on earth observations biodiversity observing system, placing Europe at the heart of this initiative, currently led by the Nasa and Diversitas, the international programme of biodiversity science. Specific contributions include the development of a global environmental stratification, which Ebony will use as a framework to link activities in Mediterranean environments in Europe, Israel and South Africa.

Over the coming years, Ebony will develop a proof of concept that will demonstrate the potential for the full implementation of the biodiversity observation network. The final implementation will then be a matter of political will. ★