



Unblocking the flow of biodiversity data for decision-making in Africa



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ABSTRACT

African countries need to conserve biodiversity and use natural resources rationally if they are to avoid continued environmental degradation that jeopardizes sustainable development and human wellbeing. However, many government agencies cannot access or use the biodiversity data they need to make informed decisions for environmental and economic management. More than forty stakeholders representing governments, civil society organizations (CSOs) and UN agencies, including delegates from 20 African states, identified decisions that require biodiversity information and explored blockages and potential solutions to data access and use. The participants concluded that the key enabling environment includes data availability, data quality and usability, willingness to collect and use data, and financial and technical capacity. We recommend that African government departments across sectors work with academic bodies and CSOs to: i) enhance internal resources for monitoring and develop partnerships with donors; ii) build capacity for data collection, using tools, guidelines and communities surrounding CBD planning and biodiversity monitoring; iii) improve national and international co-ordination and

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cross-sectoral collaboration for biodiversity data management; iv) produce and use more data-derived products that encourage data use, especially assessments that demonstrate the importance of biodiversity to economies and wellbeing and dashboards that facilitate interpretation and analysis. Governments, CSOs and academic bodies should test different science-policy interfaces in a handful of pilot countries or regions, building on existing models to demonstrate how data providers and users can work together to break down barriers to data access and sharing and mainstream biodiversity information into decision-making.

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1. Introduction

Almost all of the world's governments have rallied around the Convention on Biological Diversity (CBD) Global Strategic Plan for Biodiversity 2011–2020 and its twenty Aichi Biodiversity Targets (CBD, 2010). However, recent assessments suggest the Aichi Targets are not on track to meet the 2020 deadline; the state of biodiversity is declining and species and habitats are being lost whilst human pressures on the environment are increasing (Secretariat of the Convention on Biological Diversity, 2014; Tittensor et al., 2014; WWF, 2014). Ecosystems are degrading and losing their capacity to provide the services that people depend on, with negative implications for human wellbeing and environmental sustainability (Cardinale et al., 2012; Bernstein, 2014). In order to address biodiversity conservation and ensure sustainable livelihoods, decisions at multiple levels across multiple sectors need to be guided by information on the state of the environment. However, numerous challenges block access to, and use of, biodiversity data, including gaps or other inadequacies in indicators, data sets and capacity (e.g. Secades et al., 2014; Stephenson et al., 2015). Some of the larger challenges identified in Africa include data collection, access and management, infrastructure and capacity (Han et al., 2014). There is also a widespread absence of credible science-policy interfaces where scientists and decision makers (from the government bodies and civil society organizations managing resources) can come together in a dynamic and constructive manner to address common issues (Young et al., 2014; Sarkki et al., 2015).

We present an analysis of the barriers that hinder the flow of information from generation to use in decision-making in Africa and how these might be unblocked. The analysis originated during an international workshop on 12 October 2014 held in the margins of the Twelfth meeting of the Conference of the Parties to the CBD (COP12) in Pyeongchang, the Republic of Korea. The workshop was hosted by the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) and the World Wide Fund for Nature (WWF) International. The main workshop objective was to bring together African environmental managers to identify the barriers to accessing and using biodiversity information within decision-making processes in their countries and to identify potential solutions. The situation in Africa is a particular cause for concern as a high proportion of the population depends on natural resources directly for their food and livelihoods, yet pressures from unsustainable use are causing continuing declines in resources and biodiversity which in turn is impacting human wellbeing (e.g. Craigie et al., 2010; Cardinale et al., 2012; WWF, 2014).

2. Methods

The workshop at the CBD COP was attended by 42 participants, including representatives from 20 African states (Angola, Botswana, Burkina Faso, Cameroon, Djibouti, The Gambia, Ghana, Guinea Bissau, Kenya, Malawi, Mali, Mauritania, Morocco, Niger, Senegal, South Africa, Tanzania, Chad, Uganda and Zimbabwe), as well as partner agencies *inter alia* the CBD Secretariat, the Global Biodiversity Information Facility (GBIF), the South African National Biodiversity Institute (SANBI), UNEP-WCMC and WWF. During a structured programme and a series of plenary and working group sessions, the participants identified

decisions in African countries that require biodiversity information, then provided the top five most important answers to two key questions: Why are some decisions currently not using biodiversity information? What are the potential solutions to ensure information is available when and where needed?

The results generated by the workshop participants (decisions requiring data, blockages to data use and potential solutions) were then compared with the findings of a literature review conducted by PJS, NBN and ER to produce overall conclusions on the major factors enabling the flow of biodiversity information into evidence-based decision-making.

3. Results and discussion

3.1. Decisions requiring information and data needed

The main decisions requiring biodiversity information, as identified by workshop participants, are:

- The development of environmental resource legislation;
- National planning and budgeting for resource management across sectors (e.g. protected areas, forestry, fisheries, agriculture, infrastructure, mining, water management), including delivery of multilateral environmental agreements (MEAs) such as CBD, the Ramsar Convention, the Convention on Migratory Species (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- Transboundary and global planning and collaboration, when managing shared resources and developing (and contributing to) global goals such as the CBD Aichi Biodiversity Targets and the UN Sustainable Development Goals (SDGs);
- Access and benefit sharing and the control and licensing of resource use (e.g. mining, hunting, and quotas);
- The measurement and mitigation of human impacts on the environment (such as legal and illegal exploitation of resources, threats from invasive species, and health-related issues such as those around Ebola);
- Mitigation of resource-related conflicts and human-wildlife conflict.

Biodiversity underpins natural capital – the natural resources and ecosystem services essential for development and human wellbeing – and therefore has an economic value. Values such as those held, for example, by forests (for timber, climate stability and hydropower to name just three) and coral reefs (for fisheries and tourism) can only be used in national accounting and managed effectively if they are quantified – which needs data. When ecosystem services are not measured their economic values are not taken into account in decision-making and ultimately biodiversity is lost, as has been shown in Malawi (Ring et al., 2010; Ministry of Natural Resources, Energy and Mining, 2015).

The decisions requiring biodiversity information in Africa are not limited to those ministries with a mandate for environmental protection. Workshop participants noted that it is critical to engage with decision makers across sectors in order to fully mainstream biodiversity into national efforts for sustainable development such as National Development Plans and Poverty Reduction Strategy Papers.

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