

# Monitoring matters: examining the potential of locally-based approaches

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**Abstract.** Monitoring of biodiversity and resource use by professional scientists is often costly and hard to sustain, especially in developing countries, where financial resources are limited. Moreover, such monitoring can be logistically and technically difficult and is often perceived to be irrelevant by resource managers and the local communities. Alternatives are emerging, carried out at a local scale and by individuals with little formal education. The methods adopted span a spectrum, from participatory monitoring where aims and objectives are defined by the community, to ranger-based monitoring in protected areas. What distinguishes these approaches is that local people or local government staff are directly involved in data collection and (in most instances) analysis. In this issue of *Biodiversity and Conservation*, 15 case studies examine whether these new approaches can address the limitations of professional monitoring in developing countries. The case studies evaluate ongoing locally-based monitoring schemes involving more than 1500 community members in 13 countries. The papers are based on a symposium held in Denmark in April 2004 ([www.monitoringmatters.org](http://www.monitoringmatters.org)). Here, we review how the case studies shed light on the following key issues concerning locally-based methods: cost, sustainability, their ability to detect true local or larger-scale trends, their links to management decisions and action, and the empowerment of local constituencies. Locally-based monitoring appears to be consistently cheap relative to the costs of management and of professional monitoring, even though the start-up costs can be high. Most local monitoring schemes are still young and thus their chances of being sustained over the longer term are not yet certain. However, we believe their chances of surviving are better than many professional schemes, particularly when they are institutionalised within existing management structures, and linked to the delivery of ecosystem goods or services to local communities. When properly designed, local schemes yield locally relevant results that can be as reliable as those derived from professional monitoring. Many management decisions emanate from local schemes. The decisions appear to be taken promptly, in response to immediate threats to the environment, and often lead to community-based actions to protect habitats, species or the local flow of ecosystem benefits; however, few local schemes have so far led to actions beyond the local scale. Locally-based monitoring schemes often reinforce existing community-based resource management systems and lead to change in the attitude of locals towards more environmentally sustainable resource management. Locally-derived data have considerable unexplored potential to elucidate global patterns of change in the status of populations and habitats, the services they provide, and the threats they face, but more effort is needed to develop effective modalities for feeding locally-derived data up to national and international levels.

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