
Addressing the research-management implementation gap at two UNESCO sites in the Seychelles

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Abstract

There is a much-debated ‘implementation gap’ concerning the application of science to conservation management. The Seychelles Islands Foundation, a public trust which manages the UNESCO World Heritage sites of the Seychelles, provides a strong working example of the diverse ways that researchers and practitioners can work together to change island conservation strategy and policy based on scientific evidence. The sites, Aldabra Atoll, a remote and relatively undisturbed raised atoll in southern Seychelles and the Vallée de Mai, a palm forest on the island of Praslin, differ ecologically and in the conservation challenges they present, but similar evidence-based management strategies are applied at both. Long-term biodiversity monitoring is geared towards assessing trends in their objectively-assessed values, and threats to these values, including (1) population status of endangered/endemic iconic species such as the coco de mer and giant tortoise; (2) distribution and abundance of broader taxa or guilds, such as landbirds, herpetofauna and predatory fish communities; (3) ecosystem-level processes, such as plant phenology, avian breeding success and coral recruitment; and (4) threat status, such as invasive species alien presence and distribution. Most analysis of trends is done internally, and research collaborations are established with experts to resolve complex questions that address conservation needs and require specialised knowledge, such as genetic analysis or advanced statistics. Specific research agreements ensure productive collaboration benefitting all partners, with co-authored papers being the main outputs. The findings and recommendations feed back into site management, facilitating the process of adaptive management. Examples of recent research impacts and management responses at these sites include: (1) substantially extended protected area coverage; (2) amended visitor regulations and policies; (3) informed decisions on invasive species eradications; (4) implementation of a sustainable coco de mer harvesting scheme; (5) zonation of protected area and tightened fishing regulations; (6) regular review and modifications of monitoring methods; and (7) identification of future research priorities. There is room for improvement in the current system, but it largely ensures that monitoring data are analysed, relevant, and incorporated into management. We show that bridging the implementation gap can work in practice when institutional structures and resources are in place.

Keywords: adaptive management, evidence, based conservation, island conservation strategy and policy, biodiversity monitoring, knowledge, action boundary

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