



Taxonomy for invasive alien species management

- Recommendations for consideration by the in-depth review of the CBD programme of work for invasive alien species

Citation 2007, BioNET and the Natural History Museum, London. *Taxonomy for invasive alien species management. Part I: a global assessment of needs - what taxonomic support is necessary for IAS management?* BioNET-INTERNATIONAL, UK (forthcoming).

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Acknowledgement WSSD Implementation Fund (WIF) of the UK Department for Environment Food and Rural Affairs (Defra)

Introduction

BioNET and the UK Natural History Museum (NHM), supported by the WSSD Implementation Fund (WIF) of the UK Department for Environment Food and Rural Affairs (Defra), have undertaken a project to assess taxonomic needs in relation to invasive alien species (IAS) management. The [BioNET-NHM assessment](#) is a contribution to implementation of the Programme of Work for the Global Taxonomy Initiative (CBD decision VI/8), the first step of which is concerned with assessing taxonomic needs at the global level. Recommendations from the assessment are presented in the attached table.

Purpose of the assessment

Management of IAS – prediction, prevention, detection, monitoring, control - requires international and cross-sectoral responses, including those from taxonomy. Indeed, it has been stated that many aspects of IAS management depend on or benefit significantly from taxonomic support, i.e. the expertise and information needed to reliably recognise, name and identify species and all that that entails. To quote from the *Comprehensive review of activities for the prevention, early detection, eradication and control of invasive alien species, presented to the CBD at SBSTTA 6* (CBD, 2001) “Basic biological knowledge (e.g. taxonomy) must be combined with evolving technologies and tools for [IAS] prevention and management. These measures rely heavily on the existence of reliable and taxonomically comprehensive data.”

The continued calls for taxonomic assistance made by the IAS community and policy forums strongly suggest that improvements must be made to the provision of taxonomic support. However, because the taxonomic needs of IAS management have not previously been ‘unpacked’, the true nature of the required taxonomic support, and where it is critical to IAS management, has not been investigated.

Various policy and strategy setting documents have referred to requirements for taxonomic support for IAS management. However, many statements have been unspecific, e.g. ‘capacity building’, and lacking in clarity on what deliverables were expected from the new capacity. The only attempt at an overview of taxonomy and IAS, the Davis Declaration (Anon, 2001), has had limited circulation. Moreover, the Davis Declaration focussed on “information hubs” as a proposed solution to delivering taxonomic expertise and support, rather than detailing what that support would comprise, and what needs were to be met. In contrast, this BioNET-NHM assessment presents IAS management authorities, taxonomic institutions and international initiatives with a basis for a more coordinated, prioritised international taxonomic response across the various sectors engaged in invasives management. In so doing, the assessment provides Parties to the CBD with information for consideration when identifying gaps in current invasives and taxonomy work programmes.

Needs assessments at national, regional and global levels have been called for by the Convention on Biological Diversity as the first step in implementing its Global Taxonomy Initiative. ‘Needs’ in this context are for outputs of taxonomy, i.e. keys, identifications, distributional data, species diagnoses etc., the absence of which are proving an impediment to implementing the CBD. In this they are distinct from capacity assessments, which refer to the capacity to undertake taxonomic work, typically without linking this to particular deliverables. This BioNET-NHM assessment of the needs of IAS managers for taxonomy may be used as a source for future discussion and policy development under the CBD.

Methodology

The methodology of the current assessment is based on the [UK Taxonomic Needs Assessment \(2004\)](#), which focussed on the taxonomic information and expertise needed for conservation. The main sources of information were (a) high-level documents at the global and regional levels, and (b) interviews with representatives of global and regional organisations and initiatives, to provide background to the documentation and assess the opinions current in such bodies. We reviewed more than fifty documents and reports published between 1999 and 2006. We focussed on documentation created by policy-making organisations such as the Convention on Biological Diversity, because of their scope and because of the high level of international scrutiny and acceptance of their content. We also examined documentation arising from international stakeholder consultations, and from international organisations such as the Global Invasive Species Programme. Some of this material is formally published, while other documents are unpublished reports in the public domain. Twenty-one experts, selected for their experience in organisations considered to be central to international activities in support of IAS management, were consulted via interviews and / or questionnaire.

An assessment at the global scale, and using high-level documentations and staff, will not provide information necessary for planning actions to address needs at the national and regional levels. We propose work with national level IAS managers and documentation is necessary to identify specific actions required.

Results

Taxonomic needs identified by the assessment fall into three groups: (I) Taxonomic outputs and services needed by non-taxonomists for IAS management; (II) Taxonomic capacity and prioritisation required within taxonomic institutions in order to deliver on Type I needs; (III) Activities and prioritisation needs at a level above individual institutions to enable those institutions to implement the changes required at Type II level, and thus deliver on Type I needs.

Recommendations

See the attached table for a summary of recommendations.