

The needs of those outside of the systematic community that use scientific names



Bob Allkin - Royal Botanic Gardens, Kew (r.allkin@kew.org)
 Daphne Duin - Museum National d'Histoire Naturelle, Paris (duin@mnhn.fr)
 Xavier Eekhout - Museo Nacional de Ciencias Naturales, Madrid (xeekhout@mncn.csic.es)
 Chris Lyal - Natural History Museum, London (c.lyal@nhm.ac.uk)

Taxonomic information has relevance and significance beyond systematics
 Non systematists depend on easy access to reliable indexes of the scientific names used for biological organisms which link current names with their synonyms.

Biodiversity information providers
 Hundreds of NGOs, governmental and commercial organisations from many disciplines build and manage biodiversity information resources both to meet their own needs and to serve diverse user communities.

These "intermediaries" between Systematics and End-Users operate in agriculture, food & fisheries, public health, the pharmaceutical & timber trades, development & sustainable use, ecology and climate research, conservation, plant variety rights etc.

To build cost-effective and efficient services the systematic community needs to know:

- Who are these organisations, in what professions do they work and who are their users?
- How do they find scientific names and for what purposes do they use them?
- What are their views of the information service that the systematic community currently provides?
- What improvements do they suggest for our delivery of names to them? What are their priorities?
- What would be the economic and social impacts were we to provide improved access to names?

These questions were explored with intermediaries through a workshop (see Fig. 1).

Workshop

An EDIT sponsored workshop brought together representatives from 14 organisations across Europe that manage biodiversity information and which come from diverse disciplines outside of Systematics. The workshop was an initiative of the Royal Botanic Gardens, Kew, EDIT and the Natural History Museum, London. It was hosted by the National Museum in Madrid.



How do intermediaries believe we should improve our service to them?

Participants proposed the following changes to improve the ease and effectiveness with which they a) find and access names and b) manage them over time (Fig. 2 and Fig. 3).

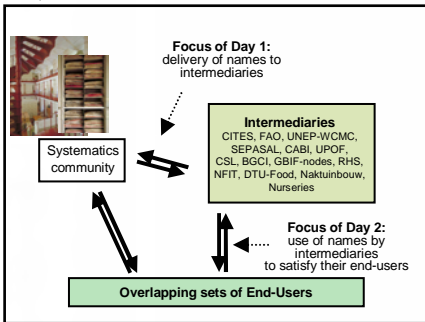


Figure 1. Workshop structure reflecting role of intermediary stakeholders

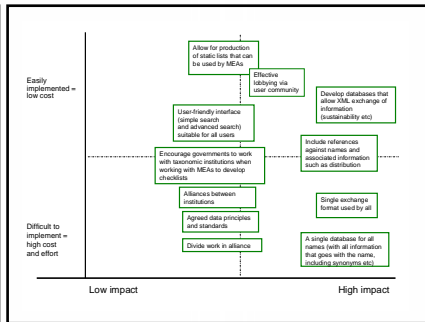


Figure 2. Participants' proposals for improvements in how to find scientific names

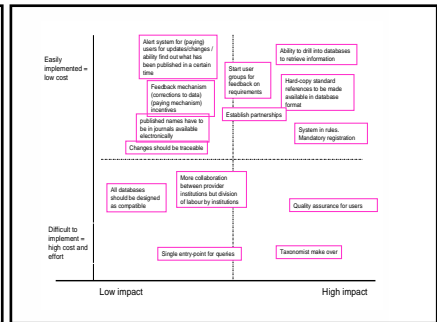
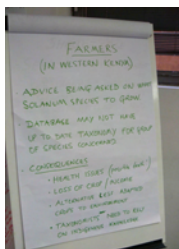


Figure 3. Participants' proposals for making their management of names more effective and efficient



Who relies on scientific names?

Participants documented the diversity of end-users of their own information services and who therefore depend indirectly on the appropriate use of scientific names (see Fig 1). Those cited included airport authorities, health regulators, trading standards and customs officers, small holders in Africa, lawyers and teachers.

What are the socio-economic impacts?

Participants spoke of impacts in their fields and suggested measures of the economic or social consequences resulting of failures to use the right name or find all synonyms.

Examples cited:

- EU Health Regulator mistakenly banned a widely used herbal plant intending to prevent the sale of a poisonous species (which is a homonym) causing disruption and loss of sales
- Spanish customs seize a legitimate shipment of African monkeys labelled with a more recent name than the authorities were aware of.
- National industries destroyed by pest quarantine failures (caused by ignorance of all appropriate synonyms)
- £1 million was spent unnecessarily on precautionary treatment of imported material through a failure to recognise a synonym.

Reinventing the wheel?

Since the services offered by the systematics community do not meet the needs of these Intermediaries, they continue to record scientific names in their own databases.

What are the costs?

Intermediaries incur costs a) entering and validating names (and synonyms) and b) maintaining name lists over time.

Participants' organisations employ between 1 and 150 staff to build & manage these databases.

Table 1. Participants' costs in managing scientific names

	Cost of researching, validating and entering names and synonyms for new organisms into institutional database	Cost of checking, editing and completing synonymy for existing database records
Number of person days each year for participants' organisations	Range from 5 to 750	Range from 5 to 1100
Average number of person days each year for participants' organisations	112	125

EDIT will distribute a summary of findings

Recommendations to the systematics community include:

- ❖ Improve access to scientific names through
 - central access point for all names
 - dynamic updates
 - indication of quality and completeness of resource
 - versioning
 - interoperability with their data
- ❖ Support for capacity building
 - how names should be used & interpreted
 - resource availability, scope and location
 - nomenclatural data management
- ❖ Enhanced information and links
 - common names
 - images and descriptions
 - trade / statutory / conservation / use



<http://www.e-taxonomy.eu>