

## NCD Toolkit

In 2007 ETI has been developing NCD toolkit for GBIF in collaboration with the NCD working group. This toolkit is mentioned to be used for creating and managing data about biodiversity collections (not the artefacts in the collections) in a NCD compliant format and will be an example implementation needed for NCD to become a TDWG standard. It is a replacement for the Nodit database developed in the BioCASE project and can be used by GBIF nodes and other interested institutions like thematic networks. NCD will be proposed as a TDWG data exchange standard in 2008.

A short summary of the functionality:

- Storage of data in a NCD compliant MySQL database 4.1+
- Scripting with support for PHP 4/5
- Web entry/edit forms in English with an admin and editor role and login
- Possibility of creating user groups
- Management of orphaned records, which can exist because of an import, for instance an import of Nodit data
- A general import function
- NCD compliant export function
- Data in UTF8 in English with the option to create data in a additional language
- Open source code

The toolkit can be tested at: <http://145.18.162.52/ncd/manage> (login as 'admin' or 'user', password 'test') and will be released when import/export functions and NCD documentation are ready (scheduled for end of Feb 2008).

### **Second Phase** (not yet funded)

As a second phase we see an integration of the toolkit with an open source CMS (Drupal) to make extra functionality possible without the need of much extra development effort. This will also make it easier to add extra functionality by third parties or integration with EDIT scratchpads.

A short overview of extra functionality:

- Full textsearch (on all or selected languages) and browse options, templated design,
- Registration and email functions,
- Localisation options for a multilanguage interface including import of standard translation files (.po files)
- I18N options and workflow for easy translation of content in an unlimited number of languages including RTL languages
- Extended management options: block users, monitor traffic, extra roles etc)
- Rich text support for descriptions
- Image upload
- Comment options and Watchlist ('my favorites') for registered visitors
- Full revision control for editors

- Friendly URLs with GUIDs (which can aid LSIDs in BCI)
- RSS

A working prototype can be tested at <http://145.18.162.103/ncddrupal> (login as 'test admin' or 'test user', password 'test' or register).

Instead of being focused primarily on NCD, we propose to develop some extra functions targeted to GBIF Nodes and interchange with BCI. These are:

- Support for information about (local) biodiversity institutions without collections like Greenpeace etc.
- Possibility to upload and store images (logos, persons), for use like display on project websites
- Adres list generation for sending mailings by a GBIF node
- Ordering entry fields by importance, the ones defined as necessary for BCI Phase I first (to enable resource discovery as a minimum)
- Links for more information about persons to the World Taxonomists Database (WTD)

We propose that this toolkit will also be installed at GBIF/other major organisations for nodes which are not able to host it themselves.

### **Third phase**

- In this phase we propose to develop full synchronisation functions and de-duplication functions with other institutions using the same toolkit to achieve one globally unique record per institute/collection/person.
- In this phase the toolkit can also become an administrative/editor interface within BCI and can get interchange functions with BCI.
- Possible integration with GBIF Portal Toolkit
- Adding support for taxonomic scope of collections with complete name lists.
- Direct report option to NCD working group/TDWG for wanted extra options in NCD like missing values in picklists.

BCI and NCD toolkit are seen as complementary, BCI will be the world index with official records and LSID services, the toolkit will be used by institutions which need to create/maintain a (sub)set of records (which can be harvested by BCI) for their own websites.