



## AOD 2.0:

A category based submission add-on for DSpace 4.0

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# AgriOcean Dspace

- In 2010, the United Nations agencies of FAO and UNESCO-IOC announced a joint initiative to provide a customized version of DSpace:
  - to promote **open access** to scientific literature in the field of **oceanography, agriculture and related sciences** available in digital form;
  - to assure good **metadata quality** and the use of thesauri and other forms of **authority control**;
  - to develop **sustainable** repositories that are more accessible and visible;
  - The customization is branded AgriOcean Dspace (AOD), and integrates the previous developments of both UN agencies in one customized version of DSpace.



# AgriOcean Dspace 1.x

## ■ customization of Dspace

- extended OAI-PMH interface with multilevel metadata formats: MODS, AGRIS AP, VOA3R AP
- use of controlled vocabularies (ASFA, AGROVOC)
- use of authority control for journals (ASFA and AGRIS list)
- availability of type based submission module
- Batch import functionality on submitter level
- easy to install version for Windows
- Based on Dspace 1.7.2 JSPUI
- Launched in 2010

A screenshot of a web browser window showing the "AgriOcean: Describe this Item" submission form. The browser is Mozilla Firefox, and the address bar shows "http://193.190.8.15/agri2/submit". The form contains several sections: "Title" with a text input and a language dropdown set to "English"; "Other titles" with a text input and an "Add More" button; "Language" with a dropdown set to "English"; "Reference" with a search icon and a table with columns "Year", "Volume", "Issue", "Start page", and "End page"; "Publisher" and "Place of publishing" with text inputs; "Links" with a "DOI of published version" input and "Alternative electronic locations (URL)" input with an "Add More" button. At the bottom, there are "Next >" and "Cancel/Save" buttons. The status bar at the bottom shows "Done" and "zotero".



# AOD Community

- UNESCO-IOC – FAO – VLIR-UOS:
  - OceanDocs: >50 institutes from Africa and Latin America
  - Afrilib (OdinAfrica)
  - IBSS(Ukraine) & CEEMAR (East-European network)
  - Ministry of Agriculture (Peru)
  - DPM, Senegal
  - KMFRI & KARI, Kenya
  - JIMMA University (Ethiopia),
  - VLIR-UOS Network of Cuban universities.
- Harvested by AGRIS & VOA3R
- Background information:
  - <http://aims.fao.org/agrioccean-dspace>
  - oceanteacher



# AOD 2.0

- Focus
  - High level metadata quality
  - Simple & easy submission interface
- But:
  - Developed as independent modules



# Metadata quality

- Rich metadata standards (Multilevel)
  - Refined metadata: To format the source: ex. *Acta Oceanográfica del Pacífico, 9(1). p. 103-114*, you need separate input elements
  - Use of ontologies: AGROVOC, ASFA, Geonames, ...
  - Unique identifiers: Author ID's, ISSN, DOI, Resource **URI**'s

= Granularity

= Unique definition/identification of elements

- The relevance of metadata quality becomes visible on the service side.



Agrovoc (FAO)

ASKOSI

- Agrovoc
- ASFA,
- CCS
- NERC
- Plant



Ontology plug-in (S/CI)

Submission (S/CI)

REST

Integration in Dspace:

- Submission
- Workflow
- Edit

Sword

ePrints



# Ontology plug-in

- Access to vocabularies through web services – implemented:
  - Agrovoc – VocBench
  - ASKOSI: harvester of vocabularies & ontologies (Destin)
- Java application:
  - Ontology Server (JAVA – servlet based) which implements the search and browse API
  - An Ontology client for the user interface written in Javascript, calls the Ontology server.
  - Freemarker





# Ontology plug-in 1

The screenshot shows a web browser window titled "OntologyApp" with the URL "localhost:8080/ontwebapp/ontology.html". The interface is divided into three main sections:

- History (clear):** A list of categories with expandable sub-items. The "lagoon" sub-item is highlighted under several categories: vbagrovoc, nerc, asfa, plant, CCS, and agrovoc.
- Search Results:** A search bar containing the string "lagoon" and a "Search" button. A language dropdown menu is set to "English". Below the search bar, a navigation bar shows counts for categories: vbagrovoc(4), nerc(0), asfa(3), and plant(0). The search results list includes:
  - Coastal lagoons
  - Inland lagoons
  - Lagoon fisheries
  - Lagoons
- Selected Results (clear):** An empty area for displaying selected results, with a "Save" button at the bottom right.

A "Close" button is visible at the bottom center of the application window.



# Ontology plug-in 2

The screenshot shows a web browser window titled 'OntologyApp' with the URL 'localhost:8080/ontwebapp/ontology.html'. The interface is divided into three main sections:

- History (clear):** A tree view of ontology terms. The path 'agrovoc > lagoon > Inland fisheries' is highlighted.
- Search Results:** A search bar contains 'lagoon'. Below it, three tabs are visible: 'CCS (0)', 'nerc (0)', and 'vbagrovoc (5)'. The 'vbagrovoc (5)' tab is active, showing a list of results:
  - Term:** Inland fisheries
  - Broader:** fisheries
  - Narrower:** Lake fisheries , River fisheries , Lagoon fisheries
  - Related:** Freshwater fishes
- Selected Results (clear):** A list of three selected results, each with a red 'X' icon:
  - Inland lagoons [vbagrovoc]
  - Lagoonal sedimentation [asfa]
  - Inland fisheries [vbagrovoc]

A white box with a blue border is overlaid on the bottom right of the search results, containing a list of links:

- River fisheries - vbagrovoc - [http://aims.fao.org/aos/agrovoc/c\\_6615](http://aims.fao.org/aos/agrovoc/c_6615)
- Lagoon fisheries - asfa - [asfa\\_6810](http://aims.fao.org/aos/agrovoc/c_asfa_6810)
- North Atlantic Ocean - nerc - [seavoxbody\\_1](http://aims.fao.org/aos/agrovoc/c_seavoxbody_1)
- Western Atlantic - vbagrovoc - [http://aims.fao.org/aos/agrovoc/c\\_29125](http://aims.fao.org/aos/agrovoc/c_29125)

A 'Save' button is located at the bottom right of the search results area.

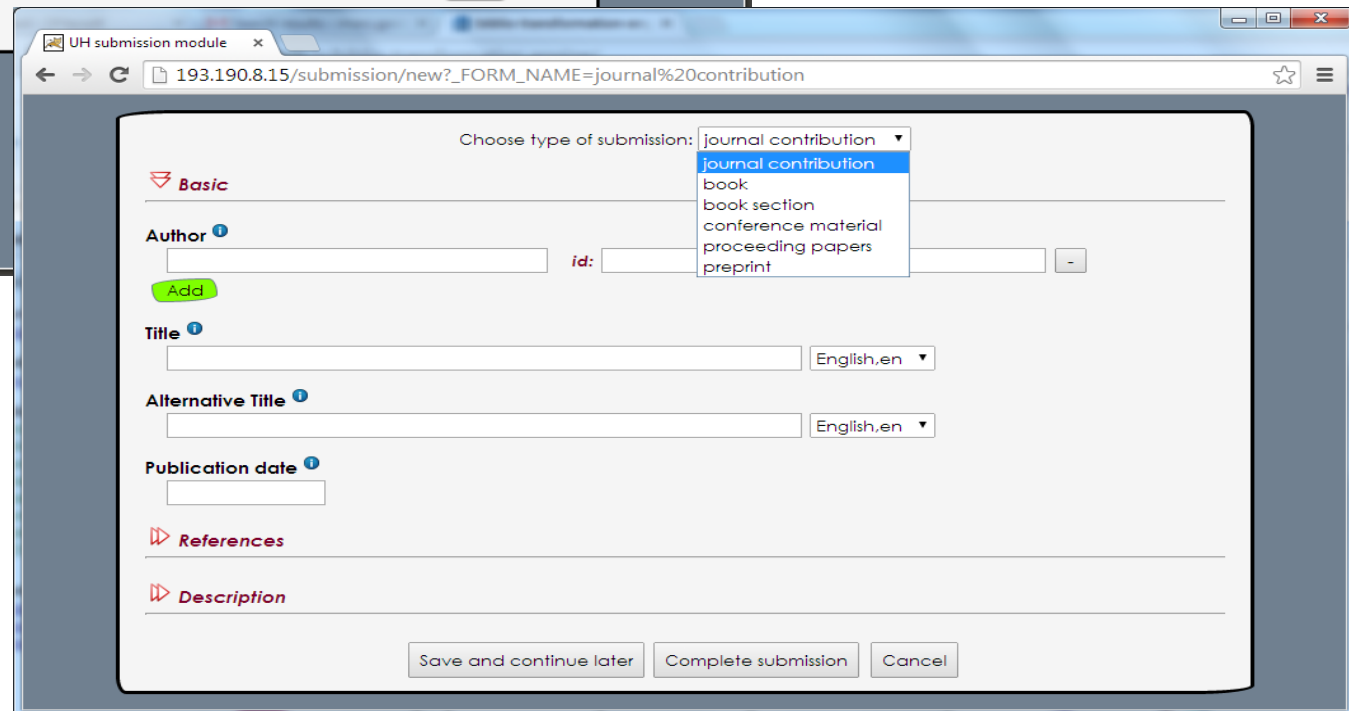
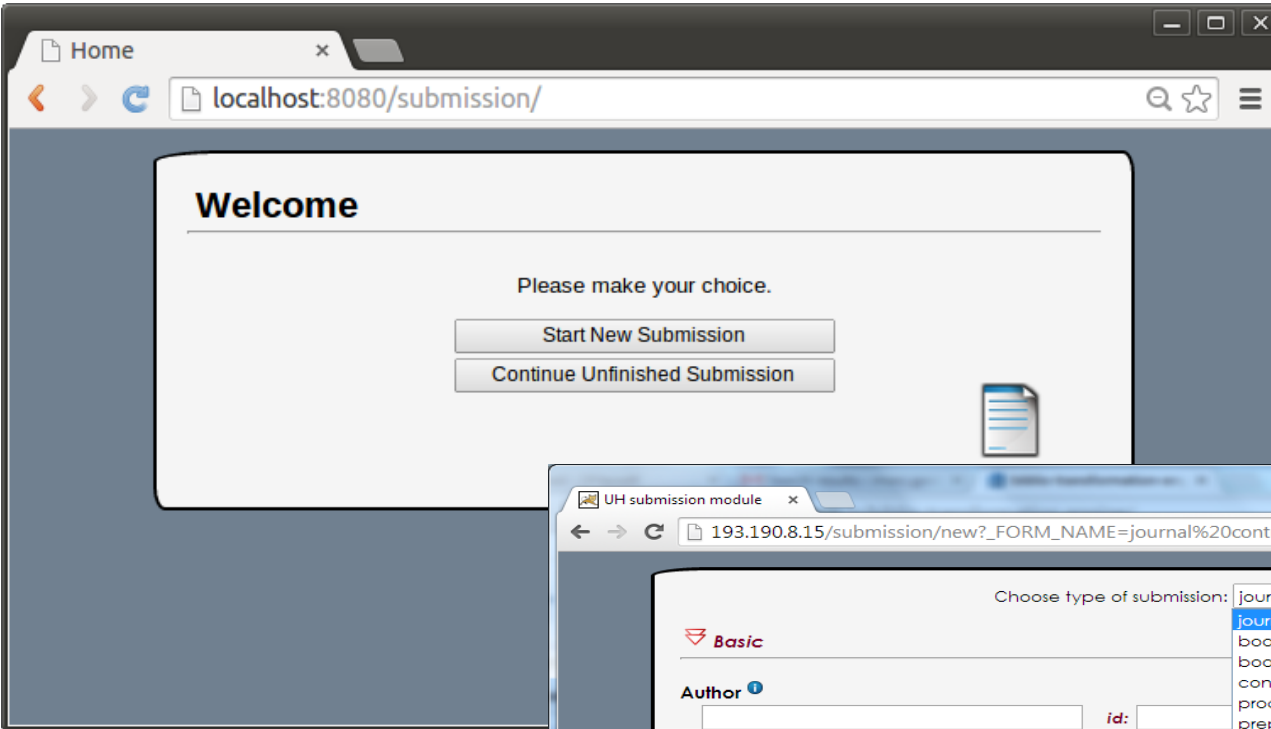


# Category based submission module

- Conceived as an independent tool:
  - No connection with DSpace or other software
  - No databases (Temporary results are for example saved locally as XML files)
- Larger usability:
  - ex. Ontology plug-in tested for ePrints
  - Use as 'RichDeposit' tool with SWORD at the backend
  - Integration in DSpace
- Developed using simple Java Servlet technology,
  - with FreeMarker & Javascript



# Category based submission module 1





# Category based submission module 2

UH submission module

localhost:8080/submission/new?\_FORM\_NAME=journal%20contribution

Choose type of submission: journal contribution

**Basic**

**Author**

Jones, Richard	id: id012	-
Silpetskyy, Denys	id: id001	-
Ciudad, Francisco	id:	-

**Add**

**Title**

Test title English, en

**Alternative Title**

Test alternative title English, en

**Publication date**

2012

**References**

**Links**

**Description**

Save and continue later Complete submission

UH submission module

193.190.8.15/submission/new?\_FORM\_NAME=journal%20contribution

Choose type of submission: journal contribution

**Basic**

**References**

**Journal title**

Mar	id:
MARINE GEORESOURCES & GEOTECHNOLOGY	
Journal of Ambient Intelligence and Smart Environments	

**Volume Issue Pages**

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**Description**

**Ontology plug-in: CCS - AGROVOC**

Open plugin to select values for this field

**Keywords**

	id:	
--	-----	--

**Add**



# Form Building blocks

The image shows a file explorer window with a folder named 'forms'. Inside the folder, there are several XML files: `_01_journal.xml`, `_02_book.xml`, `_04_conference.xml`, `_05_proceedings.xml`, and `_06_preprint.xml`. A code editor window is open, displaying the XML code for `_01_journal.xml`. The code is as follows:

```
<form name="journal contribution" xmlns="http://submission.uhasselt.be">
  <metadatafieldgroup id="basic"/>
  <metadatafieldgroup id="journal"/>
  <metadatafieldgroup id="links" />
  <metadatafieldgroup id="description"/>
</form>
```

The input form is based on building blocks.

Every category xml file refers to its building blocks.

The image shows a file explorer window with a folder named 'groupdefs'. Inside the folder, there are several XML files: `basic.xml`, `description.xml`, `links.xml`, and `proceedings.xml`. A code editor window is open, displaying the XML code for `basic.xml`. The code is as follows:

```
<groupdefIntttons xmlns="http://submission.uhasselt.be">
  <metadatafieldgroup id="basic">
    <display>
      <title>Basic</title>
    </display>
    <autocompleteField name="dcterms.creator">
      <title>Author</title>
      <description>Autocomplete: Choose out of the list of author names</description>
      <repeatable/>
      <authority ref-name="authors">
        <idvisibility>editable</idvisibility>
        <openlist/>
      </authority>
    </autocompleteField>
    <textField name="dcterms.title" size="large">
      <title>Title</title>
      <description>Enter the complete title of your deposit. Title and subtitle are divided by a double colon (:)</description>
      <required/>
      <showlanguage/>
    </textField>
    <textField name="dcterms.alternative" size="large">
      <title>Alternative Title</title>
      <description>Enter here the translation(s) of the title.</description>
      <required/>
      <showlanguage/>
    </textField>
    <dateField name="dcterms.issued">
      <title>Publication date</title>
      <description>Provide the publication date</description>
      <required/>
    </dateField>
  </metadatafieldgroup>
</groupdefinitions>
```



# To do

- Integration in Dspace 4.x:
  - Main problem: the integration in the Dspace workflow, as well for JSPUI as for XMLUI.
  - REST API has only read options
  - => Specific write functionalities have been developed
  - => Security problems
- Specific modules for Dspace
  - Integration of the Category-based Submission module in DSpace
  - Batch Import for Submitter: through the web interface.
  - Easy installer: A full integrated installation procedure



- The AgriOcean Dspace Team:
  - Imma Subirats, Thembani Malapela (FAO of the United Nations)
  - Denys Slipetsky (Institute of Biology of the Southern Seas, Ukraine),
  - Dirk Leinders, Marc Goovaerts (Hasselt University Library, Belgium)
- Information
  - <http://aims.fao.org/community/group/agriocan-dspace>
- Code at:
  - <https://code.google.com/p/ontology-plugin/>
  - <https://github.com/AgriOcean>