The FAO Metadata and Ontology Tools

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Outline

- Introduction

- Metadata Tools
  - version 1
  - version 2

- Ontology Tools
  - AOS-CS Workbench

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Introduction

- AIMS
  - Facilitate collaboration
  - Promoting information exchange and knowledge sharing
  - Harmonization
- Tools' registry
  - Metadata / Cataloguing Tools
  - Ontology tools
  - Thesaurus tools
  - Miscellaneous tools
  - Share a tool

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Agricultural Information Management Standards
■ *Interoperability, Reusability, and Cooperation* ■

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- Metadata tools
- **Ontology tools**
- **Thesaurus tools**
- **Miscellaneous tools**
- **Share a tool**

Metadata/Cataloguing Tools

This page brings together a summary of known metadata tools used for creating metadata for various types of resources. It includes tools for entering and editing metadata, and utilities for processing, extracting, validating, and viewing metadata. Some of these tools allow for metadata to be served up in different formats, such as XML, RDF, XHTML, ISO2709 etc. Some tools are based on established metadata standards while others produce metadata based specifically on local application profiles.

Available tools are:

WebAGRIS	
Owner/ Creator:	Food and Agriculture Organization of the United Nations (FAO)
Description:	WebAGRIS is a complete, multilingual Web-based system for distributed data input, processing and dissemination (through the Internet or on CD-Rom), of agricultural bibliographic information. WebAGRIS also allows to link to documents that are available in electronic format. It is based on common standards of data input (meta-data standard, data structure), and dissemination formats (export formats, such as XML, HTML, ISO2709, etc.), as well as subject categorization schema and thesauri, i.e. AGROVOC.
URL:	http://www.fao.org/a....

Metadata / Cataloguing Tools

- WebAGRIS , FAO

- AgMES Metadata Tool , FAO

- DC.DOT , UK Office for Library and Information Networking (UKOLN)

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AGROVOC Metadata tool v.1

Creating metadata in AgMES and DC compliant format for websites

english | français | español

The metadata creator provides you with a template to create simple AgMES/DC metadata for encoding in your Web Pages.
Once you are satisfied with the content of each element, cut and paste the given metadata in the <head> section of your HTM(L) file.

Type the URL of the website to harvest.

http://

Submit   Help

Go directly to the input sheet to **manually** create AgMES tags in HTML, XHTML, XML and RDF formats.

Browse the AgMES elements and their definitions.

Send us your comments and feedback
Last updated: February 2003

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Title	AIMS Website
Creator	AGRIS/CARIS Documentation Unit
Subject	AIMS; Access to information; Diffusion of information; Indexing of information; Information classification; Information dissemination;
Description	The objectives of the AgStandards Project include development and proposal of agricultural information standards and ontologies for the
Publisher	AGRIS/CARIS Documentation Unit
Date	2006-08-24
Type	Text.Homepage
Format	text/html
Identifier	http://www.fao.org/aims

○ HTML
○ XHTML

Submit
Reset
Clear all
Help

AGROVOC
Text.Homepage
text/html
URI

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Format	text/html	text/html ▼
Identifier	http://www.fao.org/aims	URI ▼
Language	──────── ▼	
Relation	http://www.fao.org/aims/	────── ▼
Coverage		──────── ▼
Rights	http://www.fao.org/copyright_en.htm	

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Creating metadata in AgMES and DC compliant format for websites

Back

HTML AgMES Metadata

```
<!-- ================= Start metadata ================= -->

<link rel="schema.DC" href="http://purl.org/dc/elements/1.1/" >
<link rel="schema.AGS" href="http://purl.org/agmes/1.1/" >
<link rel="schema.DCTERMS" href="http://purl.org/dc/terms/" >
<link rel="schema.DCMITYPE" href="http://purl.org/dc/dcmitype/" >
<meta name="Keywords" content="AIMS; Access to information; Diffusion of information; Indexing of information;
Information classification; Information dissemination; Standards; semantic web; semantic standard; glossary;
thesaurus; thesaurus building; Data bases; Data collecting; Data collection; Data compilation; Data processing;
Data retrieval; Data storage; Databanks; Databases; metadata; metadata standard; ontology; ontology
engineering; ontology learning; Information retrieval; Information science; Information storage; Information
systems; Information technology" >
<meta name="Description" content="The objectives of the AgStandards Project include development and
proposal of agricultural information standards and ontologies for the combined purpose of resource discovery,
interoperability and effective data exchange between and among uniquely and richly described agricultural
resources. AgMES Project looks into the first objective of this initiative, preparing and promoting good practice
guidelines for using metadata in description of agricultural resources." >
<meta name="DC.title" lang="eng" content="AIMS Website" >
<meta name="DC.creator" content="AGRIS/CARIS Documentation Unit" >
<meta name="DC.publisher" content="AGRIS/CARIS Documentation Unit" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content="AIMS" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Access to information" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Diffusion of information" >
```

```
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" metadata" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" metadata standard" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" ontology" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" ontology engineering" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" ontology learning" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Information retrieval" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Information science" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Information storage" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Information systems" >
<meta name="DC.subject" lang="eng" scheme="AGS.AGROVOC" content=" Information technology" >
<meta name="DC.description" lang="eng" content="The objectives of the AgStandards Project include
development and proposal of agricultural information standards and ontologies for the combined purpose of
resource discovery, interoperability and effective data exchange between and among uniquely and richly
described agricultural resources. AgMES Project looks into the first objective of this initiative, preparing and
promoting good practice guidelines for using metadata in description of agricultural resources." >
<meta name="DC.date" scheme="DCTERMS:W3CDTF" content="2006-08-24" >
<meta name="DC.type" scheme="DCTERMS:DCMIType" content="Text.Homepage" >
<meta name="DC.format" scheme="DCTERMS:IMT" content="text/html" >
<meta name="DC.identifier" scheme="URL" content="http://www.fao.org/aims" >
<meta name="DC.language" scheme="DCTERMS.ISO639-2" content="eng" >
<meta name="DC.relation" scheme="URL" content="http://www.fao.org/aims/" >
<meta name="DC.rights" content="http://www.fao.org/copyright_en.htm" >

<!-- ================= End metadata ================= -->
```

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AGROVOC Metadata tool v.2

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Creating metadata in AgMES and DC compliant format for websites

english | français | español

The metadata creator provides you with a template to create simple AgMES/DC metadata for encoding in your Web Pages.

Once you are satisfied with the content of each element, copy and paste the given metadata in the <head> section of your HTM(L) file.

Type the URL of the website to harvest.
(Users of older versions of Netscape like 4.x can't use this feature!)

```
http://
```
Submit   Help

Go directly to the input sheet to **manually** create AgMES tags in HTML, XHTML, XML and RDF formats.

Browse the AgMES elements and their definitions.

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Creating metadata in AgMES and DC for websites

english | français

Output mode: display results in browser
Available output formats: AGRIS AP
- HTML
- XHTML
- XML
- RDF
- AGRIS AP

Title 1 DEL Agricu ... mation Managemer
Standa...

```
<!DOCTYPE HT
<html>
<head>
<META http-equ
<title>Agricultur
<meta name="D
<!-- ========

<link rel="schem
<link rel="schem
<link rel="schem
<link rel="schem
<meta name="D
<meta name="D
```

HTML

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF xmlns:dc="http://purl.org/dc/eleme...
<rdf:Description rdf:about="http://www.fao.org/aims/;">
<!-- ================= Start of metadata ================= -->
<dc:title>Agricultural Information Management Standards Web site</dc:title>
<dc:title>Agricultural Information Management Standards Web site</dc:title>
<dc:title>AIM
<dc:creator
<dc:publishe
<dc:date>2(
<dc:subject
<dc:subject
<dc:subject
<dc:subject
<dc:subject
<dc:subject
<dc:subject
<dc:subject
```

RDF

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ags:resources SYSTEM "http://purl.org/agmes/agrisap/dtd/">
<ags:resources xmlns:dcmitype="http://purl.org/dc/dcmitype/" xmlns:dc="http://purl.org/dc/elements/1
<ags:resource ags:ARN="XX2006012345">
<!-- ================= Start of metadata ================= -->
<dc:title>Agricultural Information Management Standards Web site</dc:title>
<dc:title>Agricultural Information Management Standards Web site</dc:title>
<dc:title>AIMS Website</dc:title>
<dc:creator>
<ags:creatorPersonal>AGRIS/CARIS Documentation Unit</ags:creatorPersonal>
</dc:creator>
<dc:publisher>
<ags:publisherName>AGRIS/CARIS Documentation Unit;</ags:publisherName>
</dc:publisher>
<dc:date>
<dcterms:dateIssued scheme="dcterms:W3CDTF">2006-08-24;</dcterms:dateIssued>
</dc:date>
<dc:subject xml:lang="en">AIMS</dc:subject>
<dc:subject>
```

AGRIS AP

Subject 1 | DEL | AIMS

Scheme

Language

Subject 2 | DEL

Scheme

Language

AGS.AGROVOC
AGS.CABT
AGS.ASFAT
AGS.NAL
AGS.CABC
AGS.ASC

Language | English

Subject 32 | DEL

Scheme

Language

add a new Subject | ADD

Browse Agrovoc

dc:subject	
Definition:	A topic of the content of the resource.
Comment:	Typically, Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.
Examples	
HTML:	<meta name="DC.subject" lang="en" scheme="AGS.AGROVOC" content="Food security" >
XHTML:	<meta name="DC.subject" xml:lang="en" scheme="AGS.AGROVOC" content="Food security" />
XML:	<dc:subject xml:lang="en" scheme="ags:AGROVOC">Food security</dc:subject>
RDF:	<dc:subject xml:lang="en">Food security</dc:subject>
AGRIS AP XML:	<dc:subject> <ags:subjectThesaurus xml:lang="en" scheme="ags:AGROVOC">Food security</ags:subjectThesaurus> </dc:subject> **Note**: To meet the requirements of the AGRIS AP XML standard, the element is further refined as <ags:subjectThesaurus />.
Close	

Search [water] Scheme [AGROVOC ▾] Language [English ▾]

○ exact match ● contains ○ starts with

maximum number of terms to display (limit is 300) [10] [Search]

Use the search box above to look for any keyword in AGROVOC or the Agris/Caris Categorization Scheme (ACS). Check the select boxes in the result list below to choose your keywords. They will appear in the text area below. Redo your search until you have selected all keywords in the textarea. Click 'Copy to form' to transfer the chosen keywords into the Metadata subject fields. Press 'ClearAll' any time to restart.

```
169@African inland waters@en@AGS.AGROVOC;
232@Air water interface@en@AGS.AGROVOC;
```

[Copy to form] [ClearAll]

10 terms displayed, out of a total of 218.

AGS.AGROVOC			
Count	Termcode	Terms	Select
1	31911	Abnormal water loss	☐
2	169	African inland waters	☑
3	25310	Agricultural wastewater	☐
4	232	Air water interface	☑
5	667	Asian inland waters	☐

Ontology Tools (1/2)

- Mapping / Merging:
  - Vocabulary Integration Environment (VINE) , Marine Metadata Interoperability Project (MMI)
  - Chimaera , Knowledge Systems, AI Laboratory, Stanford University
- OWL Validators:
  - WonderWeb OWL Validator, University of Manchester / University of Karlsruhe
  - OWL Validator , BBN Technologies

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Ontology Tools (2/2)

- Ontology Browsers / Editors
  - Swoop , University of Maryland
  - Protégé , Stanford University
  - KAON Suite , AIFB

- AOS-CS Workbench

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AOS/CS Workbench

- Support and manage the multi-language terminology work of information management specialists in the development, maintenance, and quality assurance of the AOS/CS

- Features
  - Text processing
  - Corpus Creation
  - Corpus Analysis
  - Term/Relationship Management
  - Quality Assurance
  - Versioning and Deployment

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Concept Hierarchy

text corpus

.doc, .pdf, .xml, etc.
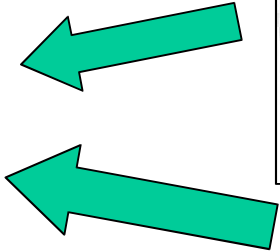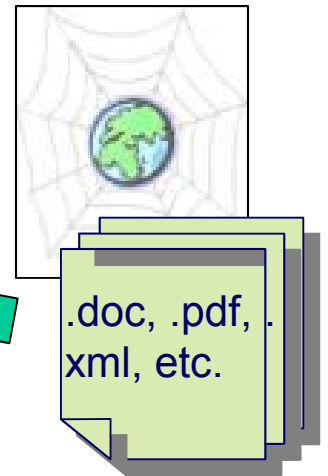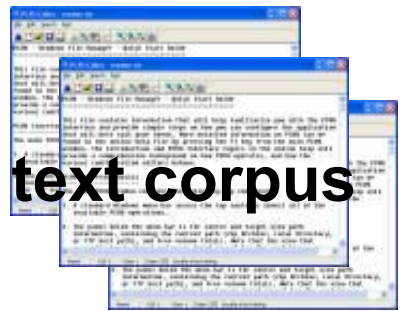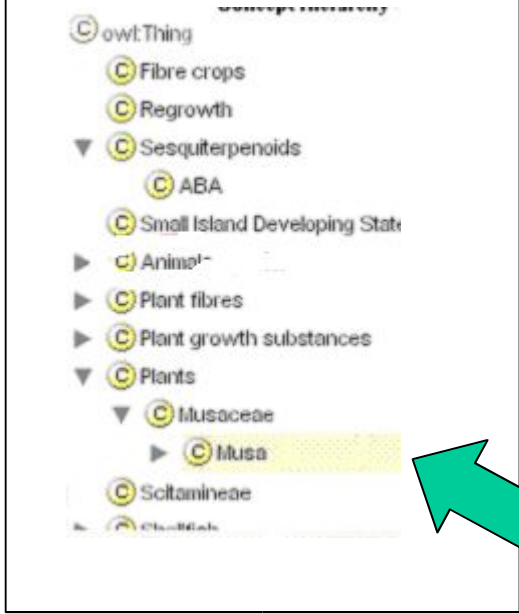
input

AOS/CS Workbench

**concordance
pattern-matching
multilingual**

input

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AOS/CS Workbench

- Users
  - Term editor
  - Ontology editor
  - Validator
  - Publisher
  - Administrator

- Functionalities
  - Terms management   - Search
  - Concepts management   - Import / Export
  - Classification schemes   - Corpus
  - Validations   - Administration
  - Help

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RSS

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■ **Coherence events**
■ **RSS**
    ■ All news
    ■ All events

:: NEWS ::

■ IMARK: Digitization and Digital Libraries now in French

The IMARK Steering Group is pleased to announce the release of the second module in French entitled "Numérisation et création de bibliothèques numériques offers 31 lessons concer... materials in digital for... electronic formats for te... comprehensive overvie... module was designed for... the required skills for c... information system man... and the creation and di... Cirad, FAO, UNESCO an... the development of the... either through the IMARK... to register and select a... partnership-based e-lea... networks world-wide in... consists of a suite of dis... management. With ove...

− <rss version="2.0">
    − <channel>
        <description>FAO: News and Events Management system</description>
        <title>FAO News and Events RSS Feed</title>
        <link>http://www.fao.org/nems</link>
        − <image>
            <url>http://www.fao.org/img2/Faologo.gif</url>
            <title>Fao.org</title>
            <link>http://www.fao.org/nems</link>
            <width>134</width>
            <height>19</height>
        </image>
        <language>en</language>
        − <copyright>
            Food and Agriculture organization (FAO), 2005. All rights reserved. <h
            the information in this RSS in terms of its correctness, accuracy, reliabilit

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What's next

Metadata Tool

- Extend to more schemes, connecting preferably via web services.

AOS/CS Workbench

- Integration possibilities with other Meta-models for Ontologies

Others

- Tools to create and manage RSS combined with DC, FOAF elements (especially 1.0) for other types of resources (organizations, experts etc.)

Volunteers?   **Thank you.**

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