



AIMS



Open vocabularies, a need for linked open data infrastructures – the “VocBench” an open source project for a SKOS editor

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....and reality

Wheat

- Evaluations and phenotyping
 - Performance
 - [CIMMYT International Nurseries](#), 1998 - Present
Phenotypic data collected and returned by CIMMYT cooperators, for all bread wheat, durum wheat and triticale nurseries distributed by CIMMYT. Barley data is provided through the cooperation of the ICARDA/CIMMYT Barley Improvement Program.
 - **Uniform Regional Hard Red Spring Wheat Nursery**

Year	Report			Data tables	
2010	.doc	.pdf	.html	.xls	.html
2009	.doc	.pdf	.html	.xls	.html
2008	.doc	.pdf	.html	.xls	.html
2007	.doc	.pdf	.html	.xls	.html
2006	.doc	.pdf	.html	.xls	.html
2005	.doc	.pdf	.html	.xls	.html
2004	.doc	.pdf	.html	.xls	.html
2003		.pdf	.html		.html
2002		.pdf			

[1970 - 2001](#)

- **Uniform Regional Scab Nursery**

Year	Report			Data tables	
2012	.doc	.pdf	.html	.xlsx	.html
2011	.doc	.pdf	.html	.xlsx	.html
2010	.doc	.pdf	.html	.xls	.html
2009	.doc	.pdf	.html	.xls	.html
2008	.doc	.pdf	.html	.xls	.html
2007	.doc	.pdf	.html	.xls	.html
2006	.doc	.pdf	.html	.xls	.html

What is the basis of Linked Open Data

- Technologically open → RDF
- Semantically open → Open Vocabularies



AGROVOC

AGRIS

VOCBENCH



Rice

<http://a>

Property

Value

altLabel

■ Arroz paddy (pt)

■ <http://zdw.eu/stw/descriptor/1409970>

hasStatus

■ Published (string)

inDataset

■ <http://aims.fao.org/aos/agrovoc/void.ttl%23Agrovoc>

modified

■ 2013-08-27T16:54:37Z (dateTime)

prefLabel

- Arroz (pt)
- Arroz (es)
- Pirinç (tr)
- REIS (de)
- Rice (en)
- Riso (it)
- Riz (fr)
- Ryż (ziarno) (pl)
- rız (hu)
- ryža (sk)
- rýže (cs)
- рис (зерно) (ru)
- أرز (ar)
- برنج (fa)
- चावल (hi)
- ข้าว (th)
- 糙米 (lo)
- 稻米 (zh)
- 米 (ja)
- 벼 (ko)

closeMatch

created

exactMatch

hasStatus



Study on location movement of rice in Thailand

RDF 

Itagaki, K., Tokyo Univ. of Agriculture, Tokyo
Thuamyung, S.

Abstract:

Rice is the most significant cereal crops in many countries. Thailand is one of the world's largest rice producing countries. Thailand's population and per capita income has significantly increased, leading to a rise in the demand and supply of rice. Thailand is now facing a rice crisis, as the demand for rice is getting higher, in order to maintain a high quality and taste into consideration, crop production of rice because the growth rate of rice is substantially important state. However, rice consumption has decreased even in Thailand. Rice consumption is widely cultivated in everywhere nationwide.

[Read More](#)

Agrovoc Keywords

- o Oryza sativa
- o Quality
- o Rice
- o Marketing
- o Yields
- o Structural change
- o greenhouse effect
- o Thailand
- o Consumption
- o production location
- o Plant production
- o Trade
- o supply balance
- o Floor husbandry

Data from DBpedia:

Statistics



POPULATION

Gross Domestic Product

GDP TRENDS [SOURCE]

Human Development Index (0 - 100)

HDI TRENDS

FROM

Globalization

GHI

GHI

Child mortality

Mortality

FROM

Oryza sativa

Rice

Marketing

Structural change

[edit wikipedia](#)

Economic structural change refers to a long-term shift in the fundamental structure of an economy, which is often linked to growth and economic development. For example, a subsistence economy may be transformed into a manufacturing economy, or a regulated mixed economy is liberalized. A current driver of structural change in the world economy is globalization. Structural change is possible because of the dynamic nature of the economic system. Patterns and changes in sectoral employment drive demand shifts through the income elasticity. Shifting demand for both locally sourced goods and for imported products is a fundamental part of development. The structural changes that move countries through the development process are often viewed in terms of shifts from primary, to secondary and finally, to tertiary production. Technical progress is seen as crucial in the process of structural change as it involves the obsolescence of skills, vocations, and permanent changes in spending and production resulting in structural unemployment.

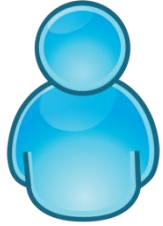
Greenhouse effect

Thailand

Trade



The IFPRI case in AGRIS



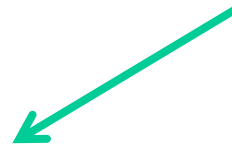
A user queries the system



AGRIS record with Agrovoc keywords



At least one Agrovoc keyword is a Country name



The system queries IFPRI sparql endpoint (<http://data.ifpri.org/sparql/>) to retrieve the global hunger index (GHI) and the child mortality rate related to the Country

Global Hunger Index ("low hunger" < 4.9)

GHI(2012): 19.7 [Serious]

GHI(2001): 21.7 [Alarming]

Child Mortality

Mortality rate of children(2012): 8.7 %

FROM: IFPRI



Vocabularies linked to AGROVOC

EUROVOC	General EU	6 779	EN, ES, FR + 21 more	Yes	skos:exactMatch
GEMET	Environment	5 298	EN, ES, FR + 30 more	Yes	skos:exactMatch
Library of Congress Subject Headings (LCSH)	General	30 784	EN	Yes	skos:exactMatch
NAL Thesaurus	General	30 298	EN, ES	No	skos:exactMatch
RAMEAU Répertoire d'autorité-matière encyclopedique et alphabetique unifie	General	16 407	FR	Yes	skos:exactMatch
STW - Thesaurus for Economics	Economy	1 165	EN, DE	Yes	skos:exactMatch
TheSoz - Thesaurus for the Social Sciences	Social sciences	7 750	EN, DE	Yes	skos:exactMatch
Geopolical Ontology	Country Names	253	AR, CH, EN, ES, FR, RU	Yes	skos:exactMatch
Dewey Decimal Classification	General	409	EN, ES, FR + 8 more	Yes	skos:exactMatch
DBpedia	General	10 989	EN, ES, FR + 8 more	Yes	skos:exactMatch skos:closeMatch
SWD (Schlagwortnormdatei)	General	6 245	DE	Yes	skos:exactMatch skos:closeMatch skos:broadMatch skos:narrowMatch
GeoNames	Geographical database	212	EN, ES, FR + 63 more	Yes	skos:exactMatch

The VocBench!

<http://202.73.13.50:55481/vocbench/>

Signed in as Administrator (Administrator) to: AGROVOC_SKOS_VB_2013-07-12_SIMPLIFIED

VocBench VERSION 2.0.1-SNAPSHOT [Build 20140213] (DEVELOPMENT)

Administration | About VocBench | RSS feed | Preferences | Help | Sign out

Exact word Go [Advanced search](#)

Recent changes **Concepts** Properties Schemes Validation Load data Export Statistics SPARQL [Concept navigation history](#) [Content language](#)

Concepts

URI: http://aims.fao.org/acs/agrovoc/c_330892

- activities (en); activité (fr); Attività (it)
- entities (en); entité (fr)**
- Accounts (en); Compte (fr); Conti (it)
- Acts (en); Decrees (en); Laws (en); legislation (en); Décret (fr); Loi (fr); Législation (fr); Atti legislativi (it); Decreti (it); Leggi (it); Legislazione (it)
- agencies (en); Agenzie (it)
- Agreements (en); accord (fr); Accordi (it)
- Assets (en); Actif (fr); Attivo patrimoniale (it)
- balance of payments (en); Balance des paiements (fr); Bilancia dei pagamenti (it)
- Bank deposits (en); Dépôt bancaire (fr); Depositi bancari (it)
- Biographies (en); Biographie (fr); Biografie (it)
- boards (organizations) (en); conseil (fr)
- Boundaries (en); Territorial boundaries (en); Délimitation (fr); Confini (it); Confini territoriali (it)
- branches (enterprises) (en)
Brand names (en); Brands (en); Proprietary names (en); Trade marks (en); Trade names (en); Marque commerciale (fr); Marque déposée (fr); Nom commercial (fr); Denominazioni commerciali (it); Marche (it); Marche commerciali (it); Marchi depositati (it); Marchi di fabbrica (it)
- brigades (en); work teams (en); Brigade (fr); Équipe de travail (fr); Gruppi di lavoro (it); Gruppi organizzati (it)

Legend ■ Proposed ■ Validated ■ Published ■ Revised ■ Proposed deprecated ■ Depreciated

entities (en); entité (fr)

Terms (11) Definition (1) Note (0) Attribute (0) Notation (0) Relationship (0) History (0) Image (0) Hierarchy

+ Add new term

Language	Term
English (en)	<input checked="" type="checkbox"/> entities (Preferred) W
Español (es)	<input checked="" type="checkbox"/> entidades (Preferred) W
Français (fr)	<input checked="" type="checkbox"/> entité (Preferred) W
中文 (zh)	<input checked="" type="checkbox"/> 实体 (Preferred) W
Cesky (cs)	<input checked="" type="checkbox"/> celky (Preferred) W
Deutsch (de)	<input checked="" type="checkbox"/> Einheit (Preferred) W
	<input checked="" type="checkbox"/> Entität W
	<input checked="" type="checkbox"/> Enttaet W
Türkçe (tr)	<input checked="" type="checkbox"/> Varlık (Preferred) W
українська мова (uk)	<input checked="" type="checkbox"/> ради (організацій) (Preferred) W
	<input checked="" type="checkbox"/> господарсько-економічні одиниці W

Show more

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Features!

- Collaborative Management
 - Validation&Publication Workflow
 - Fine grained user management
 - Full editing history
 - Fine-grained metadata and editorial notes
- Multilinguality
 - Multilingual vocabularies and multilingual application
- Native RDF support
 - Support for different triple stores
 - SKOS-XL Management
 - SPARQL query/update
- More features
 - Large scale thesauri management
 - Extensibility
 - Constant Evolution

And, last but not the least: **Free and Open Source!** (<http://vocbench.uniroma2.it>)



Continuous Evolution

VB2.1 (coming in these days)

- Self-installing DB, with auto-updating scripts, Wizard-driven system configuration, with import/export of configuration profiles
- SPARQL module: query/update content directly through the SPARQL query language for RDF; syntax completion & highlight
- Multi scheme management: now concepts can be shared among different schemes
- RSS feeds for all editing actions

VB2.5 (at the end of the year)

- Multi scheme alignment
- External Linking



Growing Community

Here is a list of partners adopting, or concretely considering the use of, VB2.0:

- FAO (Agrovoc, Biotech, Land and Water, FAO Topics, etc..)
- EU Publication Office (EUROVOC)
- Italian Senate (Teseo)
- European Environment Protection Agency (GEMET)
- Harvard (UAT: Unified Astronomy Thesaurus)
- EC Parliament Library
- INRA ([Infrastructure nationale AnaEE France](#) , in the context of [AnaEE](#) project)
- CABI
- UNCCD: United Nations Convention to Combat Desertification (...)
- Scottish Government (gov metadata)
- ...and others more





AIMS

..and more

- ▶ <http://rd-alliance.org/>
- ▶ <http://www.aginfra.eu>
- ▶ <http://agris.fao.org/>
- ▶ <http://aims.fao.org>
- ▶ <http://ring.ciard.net>
- ▶ <http://www.ciard.net>

