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8th Regional
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SciELO articles available to agricultural community, using OAI-PMH in AGRIS AP XML format

Background

- This work proves that semantically rich metadata for agricultural science and research publications based on the "AGRIS Application Profile" from the SciELO repository are handled by the OAI-PMH protocol.

- It shows how the selected subset of metadata, created with an ISIS application can be harvested through OAI-PMH protocol which in turn allows for further creation of additional services by giving greater access and visibility to SciELO data in the new AGRIS AP format compared to the used DC format.

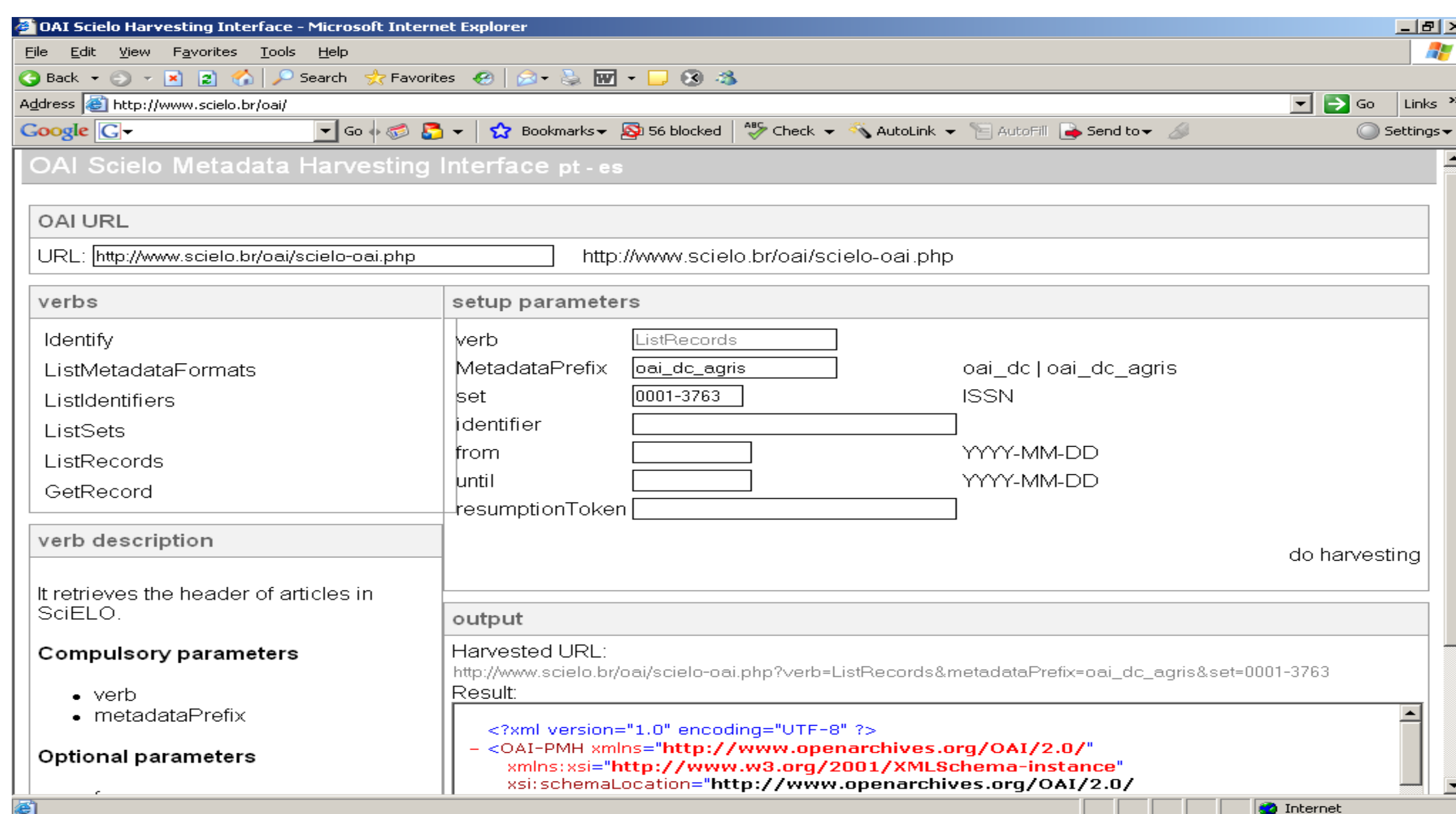| Title of the journal	ISSN of the journal
Agricultural Science	
1. Agricultura Técnica	0365-2807
2. Anais da Academia Brasileira de Ciências	0001-3765 N
3. Anais da Sociedade Entomológica do Brasil	0301-8059
4. Arquivo Brasileiro de Medicina Veterinária e Zootecnia	0102-0935
5. Bioagro	1316-3361
6. Bosque (Valdivia)	0717-9200
7. Bragantia	0006-8705
8. Brazilian Archives of Biology and Technology	1516-8913
9. Brazilian Journal of Microbiology	1517-8382
10. Brazilian Journal of Veterinary Research and Animal Science	1413-9596
11. Ciência e Tecnologia de Alimentos	0101-2061
12. Ciência Rural	0103-8478
13. Engenharia Agrícola	0100-6916
14. Fitopatologia Brasileira	0100-4158
15. Horticultura Brasileira	0102-0536
16. Interciencia	0378-1844
17. Journal of Venomous Animals and Toxins	0104-7930
18. Journal of Venomous Animals and Toxins including Tropical Diseases	1678-9199
19. MADERAS:Ciencia y Tecnología	0718-221X
20. Pesquisa Veterinária Brasileira	0100-736X
21. Planta Daninha	0100-8358

OAI framework

OAI framework consists of data providers and service providers. The quality of service is proportional to the quality of the data harvested

A harvester is a client application that issues OAI-PMH requests. A harvester is operated by a service provider as a means of collecting metadata from repositories.

A repository is a network accessible server that can process the 6 OAI-PMH requests (verbs). A repository is managed by a data provider to expose metadata to harvesters.

Technical details on OAI-PMH plug-in at SciELO

- **OAIPMH plug-in is** a PHP Web application for exposing data from CDS/ISIS databases to OAI-PMH v2.0 framework

- Adapted for use with wxis (SciELO) databases. Implemented all 6 verbs of OAI-PMH

Who can use it?

Any service provider can access and harvest SciELO articles in DC or AGRIS AP XML at http://www.scielo.br/oai

Impact: Opens SciELO for dynamic harvesting over OAI-PMH, including AGRIS Network, libraries etc.
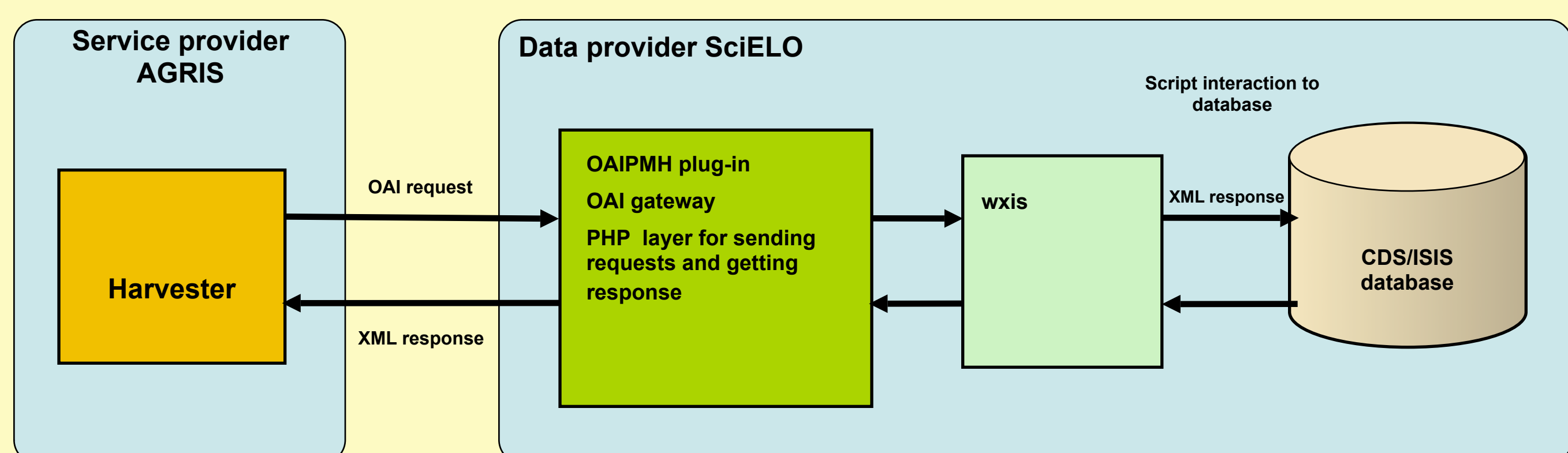
OAI functionality applies to:

- **Simple DC syntax:** The original data elements are grouped under 15 DC elements, with much larger requirements (no mandatory elements and all of them could be repeatable) and,

- **AGRIS AP syntax:** more complex than simple DC with mandatory and nested elements, exploring more complex structure of the original metadata for further integration in a value added services
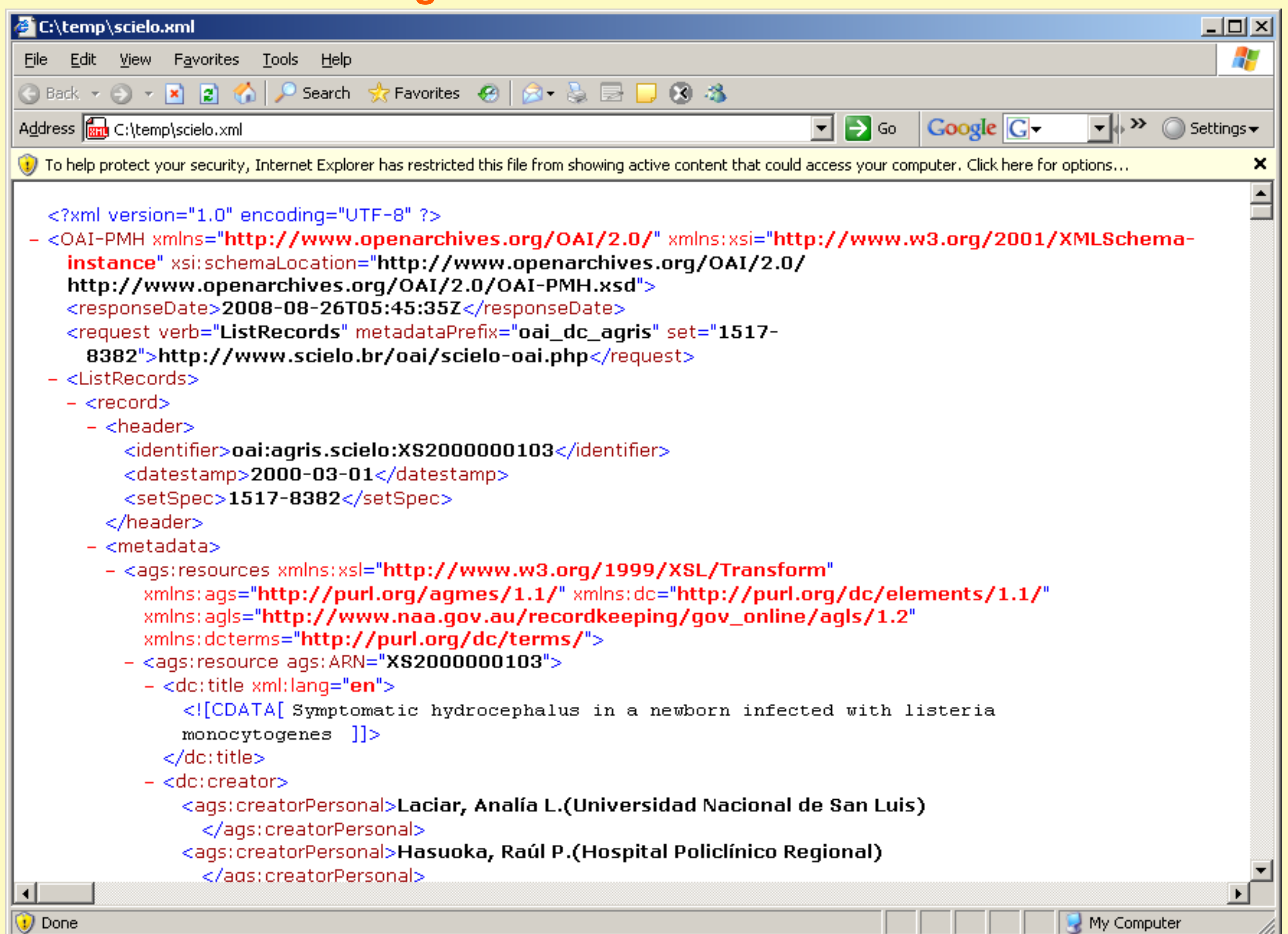
Flow of the process:

Harvester request: http://www.scielo.br/oai/scielo-oai.php?verb=ListRecords&metadataPrefix=oai_dc_agris&from=1998-01-01&until=1999-01-01&set=0001-3714

Using a script for ListRecords for harvesting SciELO journal articles for different sets (setSpec) identified by the ISSN of the journal in AGRIS AP XML format (oai_dc_agris)

The limit for harvesting at one time was set to 100 records and then Resumption Token was used for the rest of the result
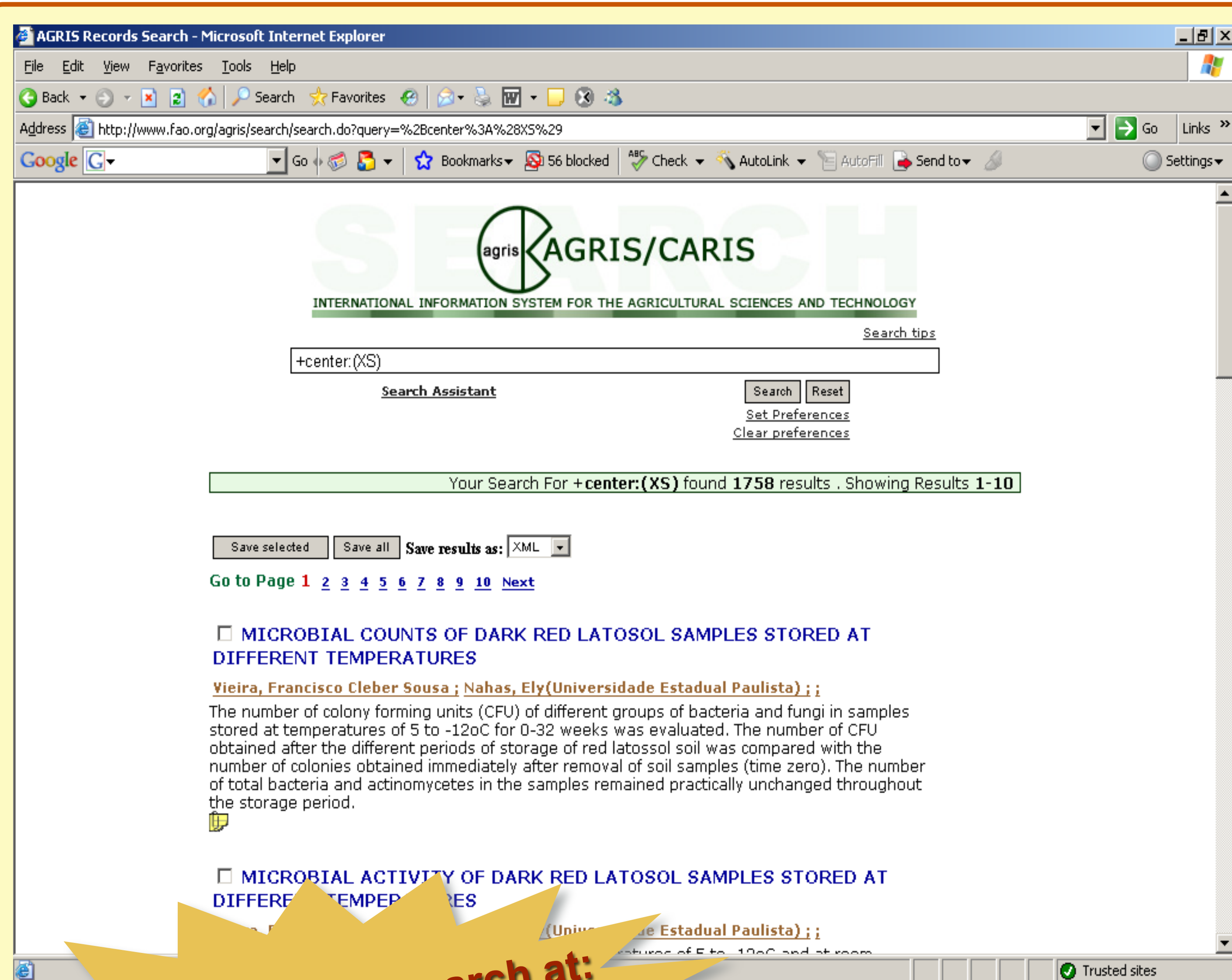

Result from harvesting in AGRIS AP Xml

Main steps in this process were:

- Selecting of Journals with agricultural thematic from the Web site of SciELO
- Define a methodology for harvesting
- Development of OAI-PMH plug-in for harvesting in AGRIS AP
- Harvesting of the legacy data of the selected journals
- Applying XSLT transformation
- Validation and check
- Registration and inclusion in AGRIS central database
- Implementation of a harvester for automatic harvesting.

Test the AGRIS search at:
http://www.fao.org/agris/search/search.do?query=%2Bcenter%3A%28XS%29

Food and Agriculture Organization of the United Nations