

**Metadata Framework for Resource Discovery of  
Agricultural Information:  
An introduction**

**Working Draft, June 2001**

**Food and Agriculture Organization (FAO) of the United Nations  
Library & Documentation Systems Division (GIL)  
AGRIS/CARIS & FAO Documentation Group**

## Preface

Network technologies have helped to lower many of the geographical barriers that impede access to information resources, but other obstacles have appeared in their place: one is the heterogeneous use of resource descriptions; another, more serious, is the lack of resource description at all.

Resource description varies depending on the structure, type and content of resources; it also varies with the interests of the information keepers responsible for the management of these resources. The cross-domain information needs of users who require access to information about relevant resources irrespective of where they are located, how they have been stored or by whom, means that nowadays users need to query more than one domain-specific information system in parallel while information managers seek to have a system that enables access to separately managed collections in-house.

To meet such information demands, a framework needs to be developed that would allow users to access information regardless of the above-mentioned barriers while giving the managers better control of information management and preservation. One main step forward in the development of such a framework, is the creation of a low barrier metadata format that allows for interoperability between cross-domain information systems. The Dublin Core initiative is a potential example of such a format; the initiative has many positive characteristics that distinguish it as a prime candidate for resource description for the primary goal of electronic resource discovery.

This proposal is part of a report on the work in progress to develop a metadata framework for resource discovery of agricultural resources. The document summarises the progress in the development of a metadata set for description of documents and document-like resources in agricultural sciences. The document also discussed the full description and the technical frameworks to be used for the proposed elements.

The report presents the objectives, the methodology and expected results of the development of a standard metadata format for resource description with the main purpose of resource discovery in the domain of agriculture.

The recommendations are based upon the proposed elements of the Dublin Core Metadata Initiative (DCMI). Research on the development of a framework is ongoing and sets a forum for discussion and participation amongst interested parties in the domain of agriculture. The work will be posted on various forums to target this audience.

## Introduction

The main project proposal consists of a metadata set of core elements and qualifiers that are generic to the description of agricultural resources. This includes description of project and document resources.

However, this document presents a further development of a specific application profile for description of document and document-like agricultural resources. This gives an example of how a unique application profile can be developed from the generic metadata set. This metadata set describe a minimum level format to allow interoperability between different islands of information.

## Objectives

1. To facilitate resource discovery
2. To assist the management of resources by its owners
3. To enable interoperability between different metadata structures through a minimum low format.
4. Develop a metadata set that is compliant with other standards such as (MARC, ISBD) and new emerging ones like the Dublin Core Metadata Initiative
5. Develop a metadata set using new tools such as Resource Description Framework (RDF) in HTML and XML, which aid in the exchange of information through:
  - providing better search engine capabilities which will assist retrieval for both internal and external search engines
  - allow inter-operability between applications and
  - support automated processing of web resources

## Methodology

In several logical-framework sessions, the group has:

- Developed a conceptual map of the kind of information resources used in agriculture.
- Evaluated standards and common resource description practices in use in the domain of agriculture.
- Identified several sets of agricultural information resources; however, the main project focuses on the description of project, document and document-like (bibliographic) resources. A pool of elements was identified which consists of qualifiers for project and document/document-like resources. The proposed qualifiers conform to the guidelines that are defined by the DC Metadata Initiative.
- Developed a specific application profile for description of document and document-like resources
- Made a full element description for document and document-like resources using the set of attributes recommended by the Dublin Core Metadata Initiative.
- From discussions and considerations within the working group and suggestions from other sources within the agricultural domain, a list of 13 elements for agricultural resources description was proposed.

## Suggestion and Comments

Suggestion and comments were received from: The Agstandards discussion group; FAO Staff; S. Weibel Director of Dublin Core Metadata Initiative

- To investigate several options of technical frameworks.
- To merge the DC elements *Creator*, *Contributor* and *Publisher* to one main element called *Creator*
- To drop the element *Source*, but elaborate the element *Relation* to include information about the source.
- A new element **TARGET AUDIENCE** was proposed.
- To create *Authority files* for elements and qualifiers that have secondary information that is not included in the metadata description of a resource but is relevant for resource discovery.
- Further discussions on the proposed Metadata framework, were held on an online forum, The Agstandards Discussion Group. This is a group of Information Management Specialists in the domain of agriculture that discusses various issues on agricultural information management. The comments and suggestions from this forum have been incorporated in the proposed application profile. These discussions are ongoing and there is a possibility of extending the discussions to other agricultural information discussion forums that would be interested to participate in these developments.

## Future developments

The work presented above is the first step in the direction of the development of tools that seek to aid resource discovery in the domain of agriculture. The initiative will be posted and advertised in agricultural forums so as to impact the targeted audience. The work is in progress and the logical frameworks that have been developed are in the process of being converted into technical frameworks.

The task force has the following mandate at present:

- Monitoring the impact of the proposed metadata application profile for agricultural resources, making any changes or enhancement based on the results of the impact study, and undertaking outreach work to promote and facilitate the rational and widespread use of Metadata.
- Registering our Metadata frameworks and specific application profiles with the Metadata registry at OCLC.
- Developing good documentation to support the application profile that we have created. i.e. User guidelines for implementers and users.
- Affecting further developments to incorporate specificity of disciplines through the elaboration and creation of specific application profiles as necessary.