Managing explicit knowledge using SharePoint in a collaborative environment: ICIMOD's experience

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I Abstract

There are two basic approaches to knowledge management when it comes to initiating and sustaining process for generating, codifying, capturing, managing and systematically leveraging the knowledge. The tacit knowledge management approach looks at the kinds of knowledge that people have in their mind and involve intangible factors like personal beliefs, insights, experiences, values and moves to managing such individual knowledge. The explicit knowledge management approach focuses on managing the process to streamline already articulated or documented knowledge, e.g. papers, manuals, procedures within an organisation. When the knowledge is explicit, information technology (IT) can more readily be applied to enhance its value and make it more accessible. As a learning, enabling and knowledge institution ICIMOD has been working through its Integrated Knowledge Management (IKM) Programme in collaboration with its other thematic programmes, the various intricacies of knowledge management, including the above mentioned forms of knowledge. Through its numerous hosted discussion forums, brown bags, face-to-face seminars and using other conventional tools, ICIMOD tries to transform and capture the tacit knowledge. This paper shares ICIMOD's experience in managing the explicit knowledge, with the use of MS SharePoint 2007 as a tool, in a collaborative environment labelled as iDNA. This process is advanced by use of structured methodologies, metadata, workflow and workspace for the capturing of processes and shared knowledge and this work is ongoing. The richness of SharePoint 2007 is overwhelming and calls for careful planning. ICIMOD plans to benefit and add more societal value when we extend the iDNA across the boundary into the wider community and partners in the region.

Keywords – document management, metadata, knowledge management, SharePoint

II Introduction

Files, manuals, reports, papers are an integral and important aspect of any organisation. These documents are the form in which much documented knowledge resides, referred in the knowledge management domain as the explicit knowledge. Information technology (IT) can more readily be applied to enhance their values and make them more accessible, when put in an electronic form. They can become active knowledge repositories shared amongst project teams, organisation or partners. However, careful planning and implementation is needed to take full advantage of the codified, captured, discovered, used, accessed, transferred and cited knowledge.

Since its inception, ICIMOD has archived its paper documents according to basic archive principles where originating and receiving units acted as custodians. When the paper environment slowly shifted towards an electronic setting, a hybrid electronic environment emerged where information was either archived in cabinets or stored and spread on individual's desktop, Intranet or network shared drives. The hybrid environment caused confusion for the staff searching for documents, partly because it is not in all cases clear who the custodian is, where a document is stored, and if electronically, on which IT platform. Is it on a personal computer or intranet or in shared drives? As a result, an improved and one-stop electronic document filing/management/repository environment was envisaged such that it encompassed the information life cycle of documents from creation to filing, sharing, archiving and also provided an environment that upholds institutional memory and enabled sharing. Microsoft SharePoint platform was chosen as the IT instrument to fulfil this need of document management in ICIMOD.

Microsoft Office SharePoint Server (MOSS) 2007 supports document management needs by providing a broad set of document management capabilities that enables to: Store, organise, and locate documents; Ensure the consistency of documents; Manage metadata for documents; Help protect documents from unauthorized access or use; Ensure consistent business processes (workflows) for how documents are handled

III Approach

Planning

The planning process and the approaches taken were important, as it guided the types of documents shared, properties or metadata for a document, storage and access control to document, versioning, movement of documents via planning workflows. Defining the metadata, planning workflows and planning workspaces were crucial.

The planning process involved series of discussions with senior management and representatives from all the programmes and divisions to include all the required metadata and functionalities in the document management system. A team, called as IKM focal points, comprising a representative of each program area was also formulated. This team together with the IT team planned the implementation for document management at ICIMOD. The team together looked at reviewing current documents and made recommendations for templates, classification or taxonomy principles to categorise documents, information rights of documents including retention, programme folder structure and propose a migration scheme from the current existing computers and shared drives to the new environment.

Use of Metadata

Successful implementation of knowledge management initiatives with regard to managing the documents, requires a systematic approach to name, classify and tag documents, collectively seen as the metadata (document properties). Metadata describes the attributes of a document and act as a surrogate representation for multi-dimensional retrieval of documents. One of the primary ways that people find information that is saved in a document management system is by browsing or searching for the metadata that is saved along with the documents. Defining metadata is an essential step to help organise documents and enforce consistency across the organisation. The following are key metadata used at ICIMOD – Name, Title, Author, Programme, Action Area, Projects, Status, Document category, Topics, Donors, Region and Country. Some of the crucial metadata such as name of the document, document category have been made mandatory so as to make searching easier and that the documents get classified properly. Balancing the amount of metadata was a challenge. With different metadata entered, the views of the documents can be customised according to the need. For example, documents can be displayed based on projects, donors or document category. The figure 1 below displays the documents grouped by Action Areas where as choosing the view "Documents by Category" displays the documents grouped by "Document Category" (figure 2).
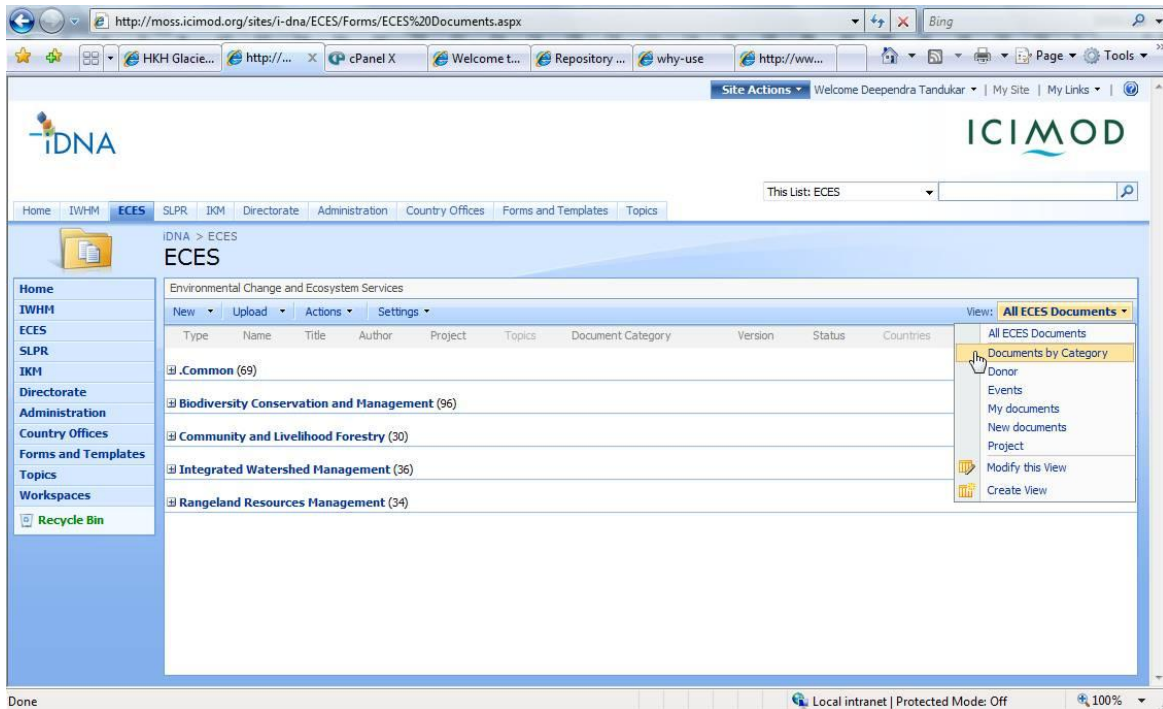
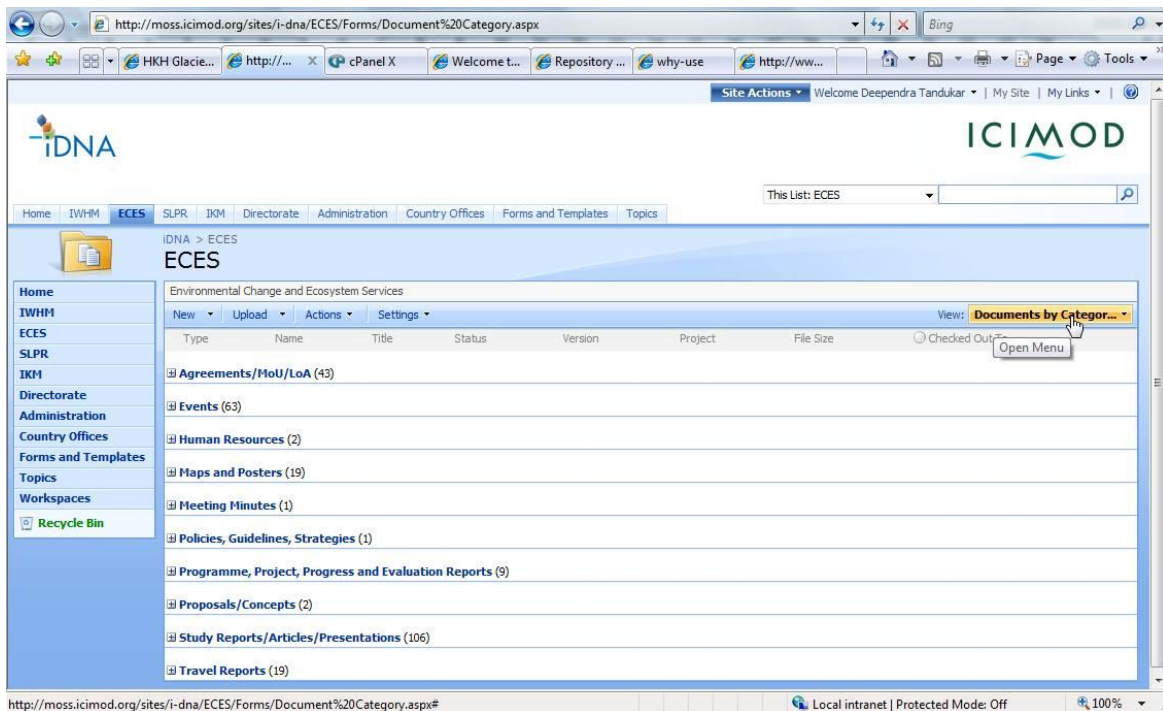Fig 1: documents by sub units (Action Areas)

Fig 2: documents by Document Categories

Workflows for automation

To support common document-related business processes, SharePoint has built-in workflows that can be used to manage tasks such as document review, approval, and signature collection. Workflow is

defined as the automated movement of documents or items through a sequence of actions or tasks that are related to a business process. Workflows help in managing document-related business processes more efficiently, because they automatically track and manage the human tasks involved in these processes. For example, if a person creates a document and wants to have feedback from five colleagues, one will use the built-in workflow for feedback collection – the workflow will then send notification messages to reviewers, creating tasks for them, and tracking their task status. At ICIMOD, workflow has been used for document rights management. The person who feeds the document in the system is granted a full permission for the document – others can view, edit or download but not delete.

Document workspaces for collaboration

A document workspace provides collaborative platform for working with other people that keeps all the members of the workspace up-to-date on the status of the document. It is a tool to collaborate on documents, create tasks, start discussion, add relevant links, and it helps to keep all the documents and supporting materials in one place. ICIMOD is taking advantage of the features of document workspace for external collaboration with partners. A number of workspaces have been created in iDNA for internal collaboration, some of them are Community of Practices (CoPs), and few are for collaborating with partners.
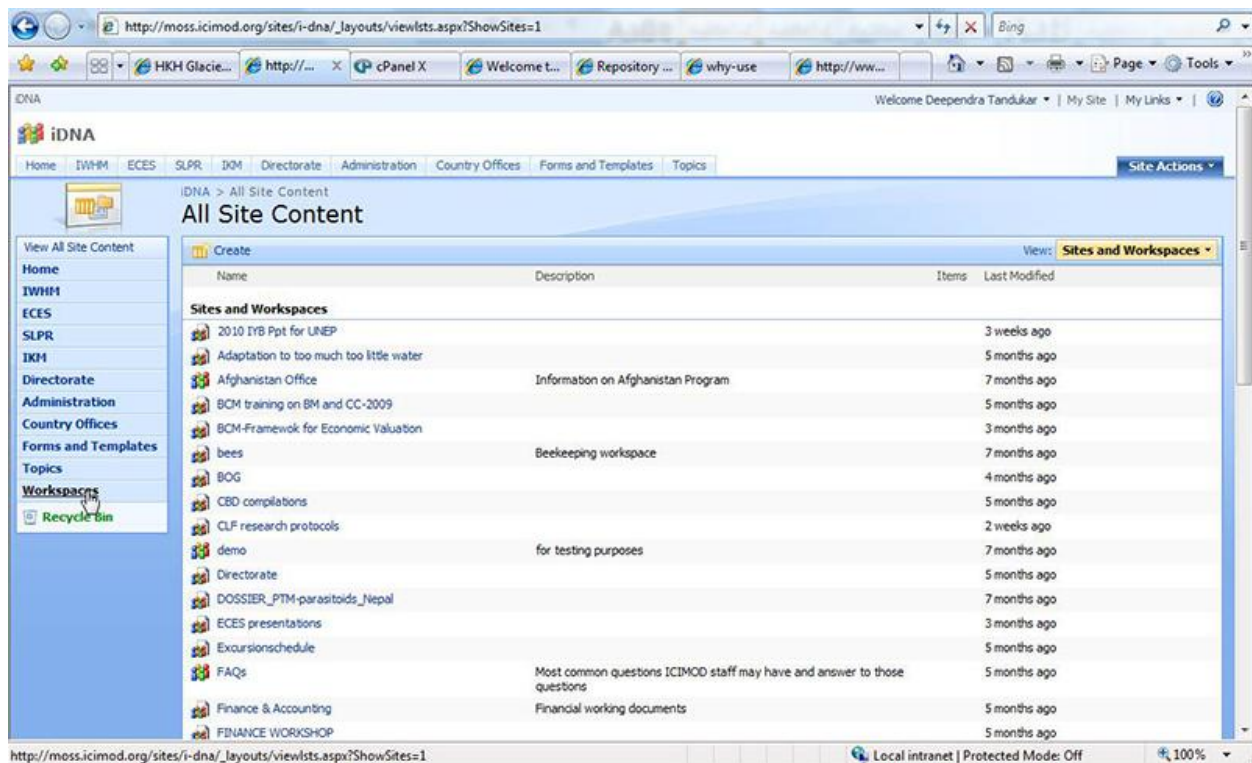

Fig 3: list of workspaces

Operations

Implementation of the SharePoint for document management is challenging. To formalise the implementation, the system was given the name – iDNA, ICIMOD Digital Networking Application which also resonated a purpose – ICIMOD DNA - lifeline of ICIMOD. ICIMOD finalised on metadata that were to be used with the documents, a template to maintain the consistency in look and feel, separate library for each programmes. Conventions were drafted for document naming, title, usage of date format, document categories. Versioning options were sorted. A pilot approach was taken. Piloting was done

with one of the programmes, namely Environment Change and Ecosystem Service, to demonstrate proof of concept and to sell the idea to the entire ICIMOD. The concerned staff gradually uploaded the documents from other distributed media into the iDNA, feeding along metadata. Piloting, though tedious and time consuming, illustrated the larger benefit. ICIMOD then implemented iDNA with all of its programmes, along with building capacity of the staff. iDNA now basically serves as a central document repository in ICIMOD and at times serves as a collaborative tool for partners. Currently there are a little above 1000 documents uploaded in the system which is accessible from anywhere and anytime for all the staff. To make iDNA more useful, all the business forms and templates have been added in iDNA, reference library has been created where articles, journals, books, etc can be found based on ICIMOD's Thematic Topics, ICIMOD Express: the information board where – formal and informal events are posted. Possibility of automating forms and process is being explored. Documents in the iDNA can be searched by browsing through programmes, or underlying structural units or by using its powerful search engine. Document searching can be done based on metadata of the document for example by donors, document category, programme, author and so on.

IV Lessons Learned

Introducing a new system in an organisation is a challenge. A lot of planning is called for in the case of implementing a document management system along with choosing a suitable platform to host. SharePoint 2007 is a large enterprise platform with a very broad range of capabilities like providing blog, wiki and RSS feeds to content management to hosting portals and intranet and therefore needs careful deployment, particularly in terms of integration with emails and managing permissions. Besides, using SharePoint as an IT instrument, other enablers like defining policy and guidelines, building up sharing culture are critical success factors. At ICIMOD, we are taking all these enablers together. The implementation process required a lot of testing with user acceptance and thus the whole process was gradual. This work is still in progress but tending towards stability and gaining user confidence.

It will be worth looking at the use of folders against the use of metadata. Certainly, use of metadata to tag documents provided multi-dimensional retrieval and is powerful concept which is central to document management. But it is being felt that this was a little rigid approach. We are accustomed to file in folders based approach and there are valid reasons why one can still use folders in SharePoint libraries. Folders group documents for the benefit of the authors and contributors and is familiar to people used to work with file shares. Grouping documents in a simple folder without adding extra metadata and creating views is an easy approach. However, the naming conventions of the folders must carry meaning. We noted that the major disadvantage of using folder concept in SharePoint was that it was not possible to use it for filtering. Thus, a balance approach with a mixture of controlled number of folders along with metadata would be a good choice and we hope to take this path.

V Conclusion

A central and collaborative document management system was required for managing explicit knowledge, scattered here and there in different places and systems at ICIMOD and to fill up this need, the initiative was launched. The eventual outcome of this initiative is to encompass the information life cycle of documents from creation to filing, archiving and disposing, to support project and planning life cycle with managed documents environment, espouse knowledge sharing within ICIMOD and partners and networks and to provide an environment that upholds institutional memory. So far our effort has been concentrated within and work is still in progress, except in a few cases of using it for external collaboration via workspace setting. We plan to benefit and add more value when we extend this knowledge sharing environment and explicit knowledge both within and across the boundary into the wider community and partners in the region.

Reference - White papers for SharePoint 2007, Microsoft Corporation, available at http://technet.microsoft.com/en-us/library/cc262733(office.12).aspx