To Assess the Role of Farm Advisors in Informing Farmers about Reducing Wastes in Wheat Production (Case Study, Qazvin Province, Iran).

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Every year more than 30 percent of agricultural production is being wasted and a major reason for that could be the methods of cultivation and harvest which are being used by farmers. In order to reduce the wastes and increase production of wheat, the Ministry of Agriculture started a programme to hire University graduates students who would work as farm advisors and train farmers to methods amirf in increasing production and reducing wastes. The major purpose of this study was to assess the effectiveness of farm advisors in reducing wastes in wheat production in Qazvin Province. The population for the study consisted of 112 farm advisors and data was collected using a questionnaire. The data was analysed by using statistical methods in SPSS. The results of the study showed there is a meaningful relation between waste reduction as dependent variable and the number of contacts with experts in Ministry of Agriculture during cultivation and harvest periods, the number of contacts with extension experts as well as with researchers, the adaptability of training courses to improve skills of farm advisors, the adaptability of university education, the educational tools, the formal teaching methods, the awareness of farm advisors about factors causing wastes in cultivation period and methods of reducing wastes as independent variables. It was also found out that the methods used to supervise the activities of farmers had positive impacts on effectiveness of farm advisors.
Providing free access to scientific and technical information on land and water management through CemOA Institutional Repository

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Cemagref is a French public research institute whose results are directly usable in resource management and land use (water resources, land and aquatic ecosystems, rural areas, water technologies, agrosystems).


Policy: The publication deposit is mandatory since 1992. Only revised publications are allowed for OA publication (author-made postprints or publishers' pdf).

Stakeholders. The workflow is organized as follows:
- Authors complete the metadata worksheet and upload their pdf.
- They can add any question before transferring data to their reference librarians.
- Information specialists add specific metadata (authors’ affiliations, keywords, etc.). They control the self-archiving rights and help authors in fulfilling their copyright transfert agreement.
- A specific team controls the quality of records and pdf, then validates the deposits for publication (Publications database, CemOA IR, transfert to HAL).

Technical specifications:
- Scientists have a full-web deposit tool since 2004.
- The repository is harvested since 2009. We chose to add an OAI server to our Cadic Integrale software solution. It is OAI v 2.0 compliant (XML / Dublin Core formats) and allows the control of the published data (restrictions settings).
- The project team (information specialists and computer scientists) also participated in the implementation of the weboovice gateway with HAL, the French national institutional repository.

Visibility: CemOA records are integrated to the Cemagref portal and referenced by the main harvesters. To date, nearly 16,000 records and 1000 OA full texts are available through OAster and Scientific Commons, Driver, Avano and EauFrance, Google… Potentially 90 % of articles could be made freely accessible. In this, information specialists have a key role to play.

Entrepreneurship and increasing productivity of rural women by using Information and Communication Technologies (ICTs)

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In this article, we are stating a brief history about complementary of agricultural, industrial and information revolutions in history of humankind and importance of rural development and human situation of situation of women specially rural women in these processes. We then introduce a brief history of telecommunications and Internet and compare face-to-face education with technology-based education, concepts of sustainable development and rural development, importance of ICTs in re-shaping human societies, concept of empowerment of rural women, situation of women and girls in Iran specially in rural regions, gender and agriculture in information society, loops of household production in rural regions with emphasis on women work, model of empowerment of rural women through employment, various approaches and rationale for support women's entrepreneurship in different schools of development and growth, importance of statistics on women's entrepreneurship and problems in data collection, a brief statement of some national and international projects that have focused on ICTs for rural women in different countries and continents, potential strategies and approaches for improving access of women to ICTs, five areas that need to be targeted in any ICTs project to create an environment where women stand to directly benefit from ICTs as much as men, state situation of rural women in Turkey in accessing to ICTs in their development affairs, livelihood information cycle in rural regions, important informational needs of rural people, system elements of implementing ICTs for diffusion of innovations in rural regions, challenges of agricultural sector in new millennium, and situation of ICTs in management of development process. We conclude highlighting recommendations from discussions in Iran context, specially in rural regions and women in those conditions.

Role of Extension System in Development Using Wastes of Rice in Animal Nourishing (Case –Study: North-of Iran)

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Nowadays, animal husbandry is possible via nourishing science. Nourishing science for domesticated animals is recognition of articles food and nourishing physiology, prepare of foods stuffs elementary value and the keeping and the methods of feeding. On the basis of estimates percent 70-75 generation expenses of animal rearing concerned to animals feed. In climate conditions of Iran is not possible to development farms for cultivation of provender. Indeed most of iranian domesticates animals are ruminant and enjoy enable something from, later of product and accomplish in the best of state elementary needs. Rice productions can be original source of elementary needs. The rice is cultivated in the surface about 534000 hectares in Iran. More than 90% secondary products containing Iran, and straw are annihilated. Scientists researchers points out this value, elementary materials can diet for domesticated animals and also adds suitable technology is available could be by the name of technology but this technology is not authority for rearing of animal. Education measurement from rearing of animal and advancement experts and individual and global instruction inclined to instruction working places for rearing of animal, the budget guarantee and credits for securing needs of rearing of animal for above-mentioned the recommendation fit for the occasion to technology transfer and extremely for decrease of production expenses and Economical for rearing of animal.

The Global Biodiversity Information Facility (GBIF) – mobilising information for adapting agriculture to climate change

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presented by Anne-Sophie ARCHAMBEAU

Global warming is projected to have significant impacts on conditions affecting agriculture. A recent study published in Science suggests that, due to climate change, "southern countries could lose more than 30% of its main crop, maize, by 2030. In South Asia losses of many regional staples, such as rice, millet and maize could top 10%". Most agronomists believe that agricultural production will be mostly affected by the severity and pace of climate change, not so much by gradual trends in climate. Global warming is a complex phenomenon, there may be enough time for biota adaptation. Rapid climate change, however, can harm agriculture in many countries, especially those that are already suffering from poor soil and climate conditions, because there is less time for optimum natural selection and adaption.

Biodiversity-related information is rapidly becoming more accessible over the Internet. However, a major obstacle to advancing our knowledge of biodiversity, including the impacts on biodiversity of, and contribution of biodiversity to, global change is the lack of digital species-occurrence data available online in a common standard format to enable rigorous analysis.

Through the Global Biodiversity Information Facility (GBIF), scientists can publish their specimen and observation databases online whilst retaining ownership and custodianship, and thus become part of a growing distributed global network of shared biodiversity data. For many research communities, GBIF has been instrumental in enabling a link-up of their distributed information resources. Through the GBIF network, information on more than 190 million primary biodiversity data are currently (Nov 09) readily accessible.

CIRAD support for scientific information: a participatory process for tailored action training

Marie-Claude DEBOIN, Cécile BOUSSOU, Cécile FOVET-RABOT

CIRAD, France

As part of its mandate to provide scientific information and to support agricultural research in developing countries, CIRAD has developed an innovative approach to enhance the capacity of its Southern partners to access, produce, and disseminate scientific information. To ensure its actions are suited to a wide range of different needs for information in a rapidly changing world, CIRAD takes advantage of partnerships and builds customized relationships with information specialists in both Southern and Northern countries. The result is that training proposals from Southern institutions. The first step for CIRAD is to analyze partnerships, institutional means and external resources available at a national, regional or international level. Then, in close collaboration with the institutions concerned, CIRAD designs a package of both specific and complementary products and services. CIRAD may mobilize resources from global initiatives, support the access internet platform, and the following international programmes: Agora (FAO) OARE (PNUE), PERI (INASP), Teeta (Cornell University), or the CTA information dissemination service (SDI) or the question and answer service. In the international context of knowledge sharing and capacity building, CIRAD’s information management specialists have been involved in international cooperation projects such as the IMARK initiative by the FAO, which aims to design, produce and distribute free training modules concerning the management of agricultural information.
This poster will present a series of cases demonstrating the potential of adaptation in agricultural practices based on analyses of species distribution and ecological niche modelling. It will highlight the urgent need to contribute to global initiatives such as GBIF aimed at sharing information about biodiversity resources in order to facilitate such analyses.

The Global Biodiversity Information Facility (GBIF) – Providing means for evaluating the
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presented by Anne-Sophie Archambaud
Crop wild relatives are a vital source of genetic diversity that can be used to adapt cultivated crops to climate change. However, the crop wild relatives themselves are also currently under threat from the impacts of climate change.

The Global Biodiversity Information Facility (GBIF), a distributed global network of shared biodiversity data, currently gives access to over 190 million primary biodiversity records (Nov 09). These free and open-access data include herbarium collections and germplasm accessions, providing the opportunity to evaluate the possible threats of climate change on wild gene pools of some of the major crops across the globe.

This study investigates climate change impacts on 11 wild gene pools, comprising 343 species, by analysing the potential distribution of each species using the Maximum Entropy approach in Maxent, based on compiled records accessible via the GBIF data portal. The future geographic distributions of these species for the year 2050 are then mapped based on 18 global climate models under emissions scenario A2a. Finally, the current and future species richness of these crop wild relatives is mapped to reveal the hotspots of predicted change where significant diversity loss is anticipated.

By highlighting areas where climate change impacts on the diversity of wild crops relative are likely to be greatest, this research indicates priority areas for collection of ex situ genetic resources for their long-term conservation in genebanks and future use in climate adaptation.

OpenAmapthique : A library management software for scientific and technical information specialists in research units.
Hatem KRI
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The Botany and Computational Plant Architecture Joint Research Unit (UMR AMAP) has developed an integrated library management freeware (ILMS), which is distributed under GNU/GPL licence.

The software, called OpenAmapthique, was developed specially for research structures. It is intended for scientific and technical information specialists and non-professionals in charge of managing documentary resources and publications within research units or laboratories.

In addition to the usual functions of an ILMS (cataloguing, document circulation management, budget management and OPACs), the OpenAmapthique system has several advantages:
- full control of internal publications within research structures (library, unit), covering every type of scientific document;
- the possibility of importing and exporting notes in EndNote format;
- a personal space for readers: access to loans, management of virtual shelves and personal search profiles, generation of alerts, etc.
- simple software administration, within the abilities of library staff;
- easy integration of internal publications into Internet/Intranet portals.

Environmental Awareness Marataízes
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The name “Marataízes” means “channels to the sea” in the language of the Indians who first inhabited the region. The city, located in Espírito Santo State, Brazil, has its geographic spread in more than 132 km2 and offers attractions such as a river, lakes, lagoons, islands, cliffs and more than 20 km of coastline. The local hydrography is a valuable natural resource, but the river Itapemirim, which borders the city suffers from silting while ponds and lagoons are polluted or already in the process of degradation. Nowadays, the city of 30 thousand lives has a context of few opportunities, both professional and personal enrichment. Local residents have little education and low income. The main activities are fishing, marketing of local products, and cultivation of cassava, sugar cane and pineapple. This last one, as well as the river, is an important natural resource, but both suffer from pollution and silting.

In the last 2 years, the city has been developing a project called “Environmental Awareness Marataízes” with the goal of popularizing environmental issues and actions, focusing on the river and its management. The project aims to provide information to the residents, to motivate them to take action and to protect the river as a natural resource.

The project has been developed through different actions:
- educational activities in schools and community centres;
- the creation of an Environmental Park in the Marataízes river area;
- the creation of a web site with information about the river and its conservation.

The project is supported by local and state government, as well as by NGOs and local organizations. It is an example of a successful local initiative in environmental education and conservation.

Extension services through Mobile telephony and internet: The National Farmers Information Service in Kenya
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Public extension service remains the most reliable for the 4.5 million smallholder farmers, pastoralists and fisher-folk in Kenya who form 13% of the population. Current extension outreach is 2.1 million smallholders per year through Common Interest Groups (CIGs), Self Help Groups (SHGs), Extension Groups (EGs), field days, demonstrations, exchange visits and individual targeting. Hence, 2.4 million smallholders are not reached at all yet they are Kenyans who have a right of access to public extension services. Innovative ways were needed to have the majority if not all farmers reached by extension services to enable them to make a positive contribution to agricultural productivity that remains the economic mainstay of the country. This is made possible by the positive response on the use of mobile phones by all Kenyans including the illiterate, young and old. Why not take advantage of this opportunity on telephones and internet technologies to reach this enthusiastic population to pass agricultural information for enterprise production and marketing to contribute to food security and poverty reduction. Farmers easily get critical agricultural information for application at the right time that they need it. The National Farmers Information Service (NAFIS) is an electronically generated voice information service for providing farmers with agricultural extension packages through mobile telephony and internet. It is a Government extension service currently in English and Kiswahili languages with room to accommodate other languages. It is easy to use and requires minimal training. There are no extra charges beyond the normal telephone and internet charges. It can be updated with specific information by front line extension officers. Quality assurance is guaranteed through built-in alerts and feedback mechanisms are in place for response through emails. Farmers get agricultural information by dialing the NAFIS number (02047N1AFIS – 0204762347) on their mobile phones. Detailed information is accessible by browsing the NAFIS website www.nafis.go.ke.

The Food and Agriculture Organization (FAO) Open Repository
Claudia NICOLAI, Imma SUBIRATS, Stephen KATZ
Food and Agriculture Organization of the United Nations, Italy

One of the roles of the Food and Agriculture Organization of the United Nations (FAO) is to collect, analyse, interpret and disseminate information related to agriculture. The FAO’s Web site receives millions of visits per months and the organization has more than 50 years of experience in the production and the diffusion of information. With the aim of facilitating access to information FAO has been an early implementer of:
- the online catalogue for documents produced by FAO (FAODOC), which contains bibliographic metadata of electronic and printed documents produced by FAO since 1945;
- the Corporate Document Repository (CDR), a corporate output interface for FAO full text electronic publications and minimal metadata associated; and
- the Electronic Information Management System (EIMS), a workflow management tool and database which manages the publication of electronic documents and multimedia resources on FAO’s Web site.

This poster describes the creation of the FAO Open Archive (FAO OA) based on the merging of the CDR-EIMS and the FAODOC. With this approach, the FAO OA becomes one sustainable digital repository that offers a solid foundation for the collection, management, maintenance and timely dissemination of material published by FAO. This approach allows the work carried out the most suitable approach for the FAO OA to support the integrated workflow and complex data structure and can be of interest to other institutions undertaking a similar task. The modular, service-oriented
The _Musa_ Germplasm Information System: Enhances knowledge of banana diversity

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Bananas ( _Musa_ spp.) are a staple food and vital source of income for millions of people. These livelihoods in developing countries depend on over 1000 traditional varieties the mostly consumed locally. Because _Musa_ cultivars are usually seedless, their genetic diversity must be conserved as full-size plants or plantlets, in field collections or in vitro genebanks. More than 6500 accessions are conserved in about 60 _Musa_ national collections. The International _Musa_ Germplasm Collection (ITC) in Belgium, managed by Bioversity International, stores more than 1081 _Musa_ germplasm accessions in trust. The utilization of the germplasm in the collection depends on the availability of information relating to the characteristics of each accession. In 1997, a global exchange system - the _Musa_ Germplasm Information System (MGIS) - was developed and is today the most extensive source of data on _Musa_ genetic resources. It contains information on 5522 accessions managed in 22 banana collections, including passport data (where and when the _Musa_ accession was collected, donated or developed), botanical classification, morphoanatomical descriptors, and evaluation data (agronomic traits, resistance to biotic and abiotic stresses) as well as a set of standardized photographs showing the most important morphological traits. Each participating collection enters and manages its own accession data, which is centralized by Bioversity. Links have been created to external data sources such as the System-wide Information Network for Genetic Resources (SINGIER), under which FAO in-trust accessions held by ITC are published. MGIS has been recognized by the Generation Challenge Programme as a model system for storing accession-level data. The database has undergone two upgrades (see new release https://bana.rir.org/ and new website for downloading data), and new features should be made available in the coming months: such as links to a molecular database (TropGENE DB), Geographic Information System (GIS) records, data quality control and inter-collection data comparison.

Methodology for the Metadata Description of Authority data in Agriculture

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FAO of the UN, Italy

This poster presents the innovative idea of adopting a concept-based system exploiting an ontology-based structure for the authority control lists such as Corporate Bodies, Series, Journals, Conferences and Projects, currently used by the Food and Agriculture Organization of the United Nations (FAO) Bibliographic Catalogue. The objective of the FAO Authority Control Lists for Bibliographic Data project was firstly to provide more efficient management of the several multilingual forms of a concept, use of URLs, compliance and use of the official FAO Terminology and relationships between the out dated forms used and new authorized forms. Secondy the project aimed to provide consistency in the browsing, e.g. adding hierarchical relationships between concepts. The AGROVOC Concept Server Workbench (CS WB) system was chosen as software solution for the Authority Control Lists management since it allows the representation of semantics as such specific relationships between concepts and relationships between their multilingual forms. In addition, it is a web-based working environment which provides tools and functionalities that facilitate the collaborative editing of multilingual terminology and semantic concept information, which includes workflows for maintenance, validation and quality assurance of the data. As a result, the data from the FAO Bibliographic Catalogue authority lists were cleaned up, merged, corrected - particularly spelling mistakes -, mapped to the FAO Terminology official forms; the relationships were created and finally integrated in the AGROVOC CS WB. Finally, web services were implemented for accessing the lists and returning formatted data for repositories/data providers and search engines/service providers which would like to access and use to the FAO Authority Control Lists for Bibliographic Data for assuring efficiency in the data entry, cross-linguistic information retrieval and easy navigation.

Result of the survey on the use of terminology and semantics in open access in the agricultural domain

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Since 2000, Open Access (OA) and the Open Archive Initiative (OAI) models have been extensively promoted within the scientific and scholarly agricultural community. First through the AGRIS network - international initiative based on a collaborative network of institutions - and since 2007 through the Coherence in Information for Agricultural Research for Development (CIARD) - initiative to make agricultural research information publicly available – among others. Consequently many repositories based on OA have followed around the world and are at present contributing to the visibility and dissemination of scientific documents in the field of agriculture. According to the OpenDOAR directory, 29 repositories in Agriculture, Food and Veterinary have been implemented during the last years. But there are more implementations that are not currently present in international registries. The scope of this study is to get a detailed overview of the state of the art of OA and OAI within the agricultural research community. Therefore the characteristics of the main institutions, networks and associations taking a leader role in the promotion of OA and OAI in Agriculture and Related Sciences are analyzed. In the study we present the number of repositories, countries, number of documents contained, number of enriched metadata formats and use of semantics like AGROVOC. Special attention will be paid to available software tools for facilitating the creation of repositories using Agricultural metadata and semantic standards.
Increasing capacity of accessing to scientific information resources is one of key objectives for scientific library and information services, particularly for those centres which information resources development budgets are especially limited. Based on the outcomes of the situation analysis of our study, this poster (a) describes development trends, key issues related to information resources development under a networking environment; (b) put forward some recommendations on how to maximize efficiency of budget spending on information resource development from different perspectives; and (c) finally attempts to find a solution to reduce digital divide between different regions of China due to different economy development level.

Stimuler le développement par le savoir : le cas du centre de documentation pour le développement rural (CDDR)-SAILD
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Objectives
One of the first tools implemented at SAILD's creation in 1988 was the "Center of Documentation for Rural Development". The purpose of this communication tool is to help democratize information about rural development, in order to promote increasing agricultural productivity by providing rural development actors with relevant, suitable and accessible agricultural information.

Materials and methods
To achieve these objectives, the CDDR must process the information to make it easily and quickly accessible by the seekers. The material used is based on ICT - "Questions and Answers Service" (documentation mailing), "Allo, engineer" (consulting service using the mobile phone), "The Farmer's Voice online" (consulting service using email), a website, etc. Activities developing direct exchanges between scientists, practicing actors and those seeking information are organized very successfully since more than a decade: it is "information days". Participation and empowerment of beneficiaries of the Center's actions are essential factors in the methodology used.

Results
Acknowledgement from the public.
A documentary unit existing since over twenty years.
Documentary tools appreciated by the public.
A sub-regional radiation.

Conclusions and interest of the subject
CDDR's experience shows the interest of a documentary unit for the diffusion of scientific and technical information in rural environment. This experience is special in the African context, particularly in French-speaking Africa, where documentary units are struggling to exist.