Knowledge Sharing and Innovation in the CGIAR
ICT-KM Program Interventions

The Knowledge Sharing project is funded by the ICT-KM Program of the CGIAR

www.ictkm.cgiar.org
Why Knowledge Sharing?

The 15 CGIAR Centers and their many partners are together creating a wealth of knowledge that can help rural communities in developing countries build sustainable livelihoods. While all players are doing much to ensure this knowledge is widely shared, formidable obstacles to its uptake and use, and, ultimately, the impact of CGIAR agricultural research, remain. One of the missing elements, the appropriate and effective sharing of knowledge, both within Centers and between them and their partners, has reduced the effectiveness of CGIAR research and development (R&D) efforts.

This overarching problem has many causes; two of which involve:

- The lack of effective, internal institutional knowledge sharing
- The lack of knowledge sharing in research

As such, there is a need for a much better understanding and wider utilization of knowledge systems, knowledge sharing approaches and innovation mechanisms within and between the Centers, as well as between the CGIAR and its many external stakeholders at national, regional and global levels.
How It All Started – Phase I

With a motto of Collaborate, Create, Communicate, the ICT-KM Program is not just about technology – it is also about connecting people, technology and knowledge for agricultural innovation. Towards this end, the Program embarked on a project of a different kind: The Knowledge Sharing project. With a key objective to encourage open and inclusive sharing of knowledge, expertise and experiences among CGIAR staff and partners, the Program’s knowledge sharing work is aimed at supporting learning and change to improve the effectiveness and impact of CGIAR work. Building on previous efforts, the KS Project, which kicked off in 2004, has pioneered new approaches, built KS capacity in the Centers, and formed valuable partnerships.

The Pilots

During the two-year project period, four CGIAR Centers were actively involved in testing KS approaches and tools. Pilot initiatives supported by the project successfully incorporated KS principles and approaches into high-profile Center events, which served as entry points for promoting change in the Centers’ institutional culture. Pilot initiatives at CIAT and CIFOR resulted in the Centers organizing and conducting their annual staff meetings differently, while CIMMYT’s pilot led to the formation of an integrated team of scientists who share knowledge and information and work towards common goals. IVM’s pilot initiative helped the Center launch its own pilot project on KS in research. The events demonstrated how Centers can plan, conduct and evaluate their work with greater efficiency by drawing more fully on the collective knowledge of their staff. By creating opportunities for large numbers of Center staff to connect with one another through KS approaches, the pilots helped identify practical ways for each participating Center to enhance the efficiency of its work.*

Other Phase I Activities

During this same period, a series of complementary project activities succeeded in:

- Strengthening group facilitation skills in 10 CGIAR Centers
- Developing an innovative online toolbox (www.ks-cgiar.org/toolbox) to support KS initiatives
- Forging strong ties with a global KS community of practice
- Guest-editing an issue of the online KM4Dev Journal
- Examining the role of human resources policies and practices in relation to KS in 12 organizations, including six CGIAR Centers

In addition to achieving concrete outcomes through the pilot initiatives and other activities, the project also nurtured a core team of CGIAR KS specialists who possess the skills and motivation necessary to move this work forward.

Phase II

To build on the interest and gains generated by Phase I, the second phase of the KS Project was launched in early 2007 to offer CGIAR Centers new opportunities to develop, apply, evaluate and share innovative approaches for making their work more effective. Entitled “Improving CGIAR Effectiveness”, this two-year initiative comprises two main components: Institutional Knowledge Sharing (IKS) and Knowledge Sharing in Research (KSinR).

Institutional Knowledge Sharing (IKS)

Managed by CIAT, the IKS component focuses on scaling up project activities in CGIAR Centers and Programs, with the aim of mainstreaming knowledge sharing principles and tools. CIAT is also

*The project received valuable support through a partnership with the Bellanet International Secretariat, located at the International Development Research Centre (IDRC) in Canada.
fostering further development of the community of KS practitioners in the CGIAR, expanding it to involve professionals from all areas of the Centers’ work, including research, capacity building, research support, and management.

The IKS Project objectives and activities are threefold:

1. **Institutional change driven from the top** is incorporating KS into strategic activities at the CGIAR system level by supporting the design and preparation of the Science Forum at the CGIAR’s 2007 Annual General Meeting in Beijing, China; and working with the CGIAR Secretariat on the CSO Initiative to help facilitate the CGIAR-CSO engagement process.

2. **Institutional change deep inside** is fostering the gains from the first project phase and introducing KS into organizational change management projects of the CGIAR Centers by supporting and learning from three IKS pilot projects.

3. **Strengthening KS champions** is being achieved by (a) supporting virtual collaboration; (b) developing and offering a KS training course; (c) actively participating in KM4Dev community activities; (d) developing the KS toolbox further; and (e) supporting project communications through the KS Website and blog, Dgroups, etc.

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**Institutional Knowledge Sharing (IKS) Pilot Projects**

**Good Practices for Managing Research Data**

Most research conducted by CGIAR Centers depends on the collection of primary research data. Effective and efficient research data management requires special skills and experience, but there is seldom a systematic approach to teaching and training new staff to manage research data, or to update existing staff on new methodologies and technologies. Skills and experiences are often scattered among Center staff with different specializations, such as database managers, programmers, data analysts, data managers, principal investigators, executing scientists, etc. Good practices are often not recorded in the form of institutional guidelines and training materials of practical relevance for day-to-day research data management work or the induction of new staff members.

This project will develop, collect, record, and apply good practices in research data management at IRRI and CIMMYT, and also initiate and support communities of practice for research data managers at both these Centers. In turn, this will enable scientists to produce better quality research and release their primary data as global public goods that will be available and usable for future secondary use. This effort will add value to current CGIAR research for future generations.

“There is still little experience in using wiki technology within CGIAR centers to support communities of practice or institutional change processes. The openness and visibility of a wiki is often seen as a risk, rather than an opportunity for increased participation and collaboration in communities of practice.”

THOMAS METZ, IKS Pilot Project Leader, IRRI

**Using KS Approaches to Facilitate Organizational Learning and Change**

Any strategy process must ensure full and active participation by key stakeholders, and communicate the strategy’s essence for its successful implementation. Due to the decentralized nature of CIFOR, understanding and participation in the Center’s new strategy development has been uneven. With greater understanding and use...
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of KS approaches, staff will feel that their input is solicited, valued and put to good use.

This project will use KS approaches to (a) increase staff and Board of Trustee participation in the CIFOR strategy development process to identify and address common issues and concerns; (b) ensure open and participatory discussions on CIFOR’s core values by all staff; (c) facilitate internal communication and build trust while addressing potentially sensitive strategic issues; and (d) capture and document lessons from the overall strategy process and from specific activities to facilitate communication, share lessons learned and design a framework for monitoring and evaluating strategy implementation.

“Although KS is not new to CIFOR, it is not yet fully internalized as a critical component of the center’s organizational change management.”

Fiona Chandler, iKS Pilot Project Leader, CIFOR

Storymercials: Attracting People to Our Knowledge and Keeping Their Attention

CGIAR Centers collectively spend about US$20M annually on communications aimed at (a) increasing the likelihood that CGIAR research-based solutions for development will be adopted and used; (b) satisfying current donors that their investments have paid off and assisting them to build awareness of the issues within their constituencies; and (c) increasing the likelihood that potential donors will want to contribute to CGIAR efforts.

Despite this investment, which largely focuses on communications products and mechanisms (mostly print or web-based, and information-driven) to attract people to CGIAR knowledge, awareness of the Centers’ work and contribution to development is often low. Since knowledge products with more mass appeal are needed, this project will examine the role ‘storymercials’ (1.5 to 3 min video clips) can play to attract people (donors and partners) to knowledge, thus increasing the uptake of research outputs. It will also develop, apply, evaluate and share this innovative knowledge sharing approach across the CGIAR.

“ The storymercial will be a combination of video, audio and images. At the heart of the storymercial is the story; the oldest most proven way humans learn and remember information.”

Helen Leitch, iKS Pilot Project Leader, Worldfish

Knowledge Sharing in Research (KSinR)

The KSinR component is a new addition to the ICT-KM Knowledge Sharing portfolio aimed at looking more closely at the needs and potential of knowledge sharing within the research domain. Managed by IWMI, this component will identify and pursue opportunities to enhance collaborative learning and innovation in major CGIAR partnerships through the use of KS approaches (Scaling Out).

The goal of this component is to improve the effectiveness of Centers in working with partners, delivering research results and achieving development outcomes. The main objectives and related activities of this component are:

- **Knowledge Generation** – Learning about knowledge sharing concepts, approaches and tools that may be used and useful for enhancing collaboration, learning and innovation within the CGIAR research domain by:
  - Supporting and learning from six KSinR pilot projects (research projects piloting KS approaches)
  - Conducting a CGIAR-wide KSinR study
  - Reviewing KSinR in literature, on websites, and in other projects/initiatives

- **Knowledge Sharing & Brokering** – Sharing and brokering knowledge gained through the project, both internally and externally derived, with the CGIAR and its partners and stakeholders by:
  - Documenting knowledge generation activities (pilot project experiences, a CGIAR KSinR study and KSinR review)
  - Incorporating participatory monitoring and evaluation (M&E) into the pilot projects
  - Using alternative knowledge sharing mechanisms – website, toolbox, blogs, etc.
  - Interactively sharing knowledge through events, meetings, visits, mentoring, etc.

- **Knowledge Application** – Using information, lessons learned, experiences, impact and evidence of KSinR to influence and support its wider adoption within the CGIAR by:
  - Influencing Centers and Challenge Programs, through recommendations and support
  - Supporting and developing related initiatives in the CGIAR
  - Developing and supporting a network of KSinR champions

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IN AN EFFORT TO PROMOTE AND ENCOURAGE KS ACTIVITIES ACROSS THE CGIAR, THE FOLLOWING PILOT PROJECTS, LED BY STAFF OF CGIAR CENTERS, ARE SUPPORTED AS PART OF THE KNOWLEDGE SHARING IN RESEARCH PROJECT:

Knowledge Sharing Research (KSinR) Pilot Projects

Applying KS Tools to Impact Monitoring and Project M&E

The WorldFish Center’s project ‘Community-based fish culture in seasonal floodplains and irrigation systems’ (CPWF35) sponsored by the Challenge Program on Water and Food involves national research partners in five Asian countries. It aims to develop appropriate technologies through an adaptive learning approach, encouraging both national partners and direct beneficiaries at the community-level to evaluate fish culture activities each year and modify the following year’s approach based on the results. As such, more participatory approaches to impact monitoring would provide a complete and accurate picture of the local conditions as well as project impacts, with project beneficiaries sharing knowledge and experiences more openly.

This project will (a) apply KS tools to assess the impact of CPWF35 in Vietnam, and evaluate the value and applicability of the tools in the project context; and (b) build capacity amongst national partners, and CPWF35 project staff at IFPRI and WorldFish, in the application of KS tools for Monitoring and Evaluation (M&E).

Learning Alliances for Wastewater Agriculture and Sanitation for Poverty Alleviation (LA WASPA)

This project, led by the International Water Management Institute (IWMI), is being undertaken in two cities (in Sri Lanka and Bangladesh), where over 300 urban and peri-urban farmers use wastewater, often storm-water drainage mixed with household and sanitary waste, to irrigate crops. This activity and its resulting health risks are often not properly addressed due to sectoral planning; poor communication among government officials; no involvement by community members; lack of knowledge about other sectors and alternative technologies; and, sometimes, ignorance that wastewater irrigation is even taking place.

The project will involve all stakeholders in integrating and testing a knowledge sharing in research concept that will allow them to holistically plan and manage sanitation and wastewater in the city for agricultural end-use. By building on the existing knowledge sharing methodology of Learning Alliances, the project will augment an existing EU-funded WASPA Asia project by developing and implementing a monitoring and evaluation method that will lead to a better understanding of the process and improved application in the future.

“Knowledge sharing is a fundamental part of bringing together the relevant stakeholders and encouraging them to work together. A better understanding of the processes involved in knowledge sharing will improve this and future projects.”

Alexandra Clemett, KSinR Pilot Project Leader, IWMI

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Knowledge Management Harmonizing Research Output

During the successful Laos-IRRI project, the Rice Knowledge Bank (RKB) mechanism was introduced to bring the results of local research to farmers via various extension services. To improve this resource’s effectiveness, it is necessary to strengthen the link between research activities and extension services, and increase the base of relevant, validated technologies in the local language. Lao representatives have also expressed a desire to harmonize several research projects in the northern uplands that are funded from different sources, thereby ensuring results are coordinated and distributed for maximum impact.

The project will identify ecologically sound, integrated technology options from the various Lao northern uplands projects. This knowledge will then be added to the Lao Rice Knowledge Bank (LRKB) in a form appropriate for wide dissemination to other farmers. A community of practice of potential users of this knowledge will be also identified and trained to use the LRKB.

A Knowledge Sharing Approach to Safe Food

Most vegetables, which are typically consumed raw in urban and peri-urban areas of sub-Saharan Africa, are produced with polluted irrigation water. This KS project will work in collaboration with four projects addressing the related public health concerns: two of the Challenge Program on Water and Food, and two supported by WHO, FAO and IDRC. These projects are testing a number of interventions from farm to fork to enhance food safety and the institutionalization potential of such interventions. To achieve this, collaboration with end-users and authorities is crucial. This IWMI-led KS project aims to apply knowledge sharing approaches to complement the dissemination approach of the aforementioned projects and thus fill identified gaps.

The project will facilitate open knowledge sharing between researchers, end-users, and policy- and decision-makers to discuss appropriateness, viability, constraints and required incentives regarding the adoption potential of suggested innovations. It will also support innovative actions for knowledge sharing via local-language radio broadcast, and the development of multi-media training material for catering and Farmer Field Schools.

International Farmers Conference

VARIetal development is one of the main tools for improving crop production and alleviating poverty in rural areas. However, breeding philosophies and methodologies have produced a gap between the attributes that formally-trained plant breeders look for and those preferred by farmers, leading to poor adoption of most released varieties. Although this gap is being addressed by participatory plant breeding (PPB), the process is being adopted relatively slowly. In addition, other than farmers, PPB primarily involves plant breeders, social scientists and biodiversity conservationists, but a lack of cross-fertilization among these different stakeholders has constrained development of PPB.

“Knowledge Sharing in Research with the emphasis on the end-users or multi-stakeholders is challenging and highly rewarding since it makes our research more meaningful.”

Tonya Schuetz, KSinR Pilot Project Leader, IWMI

“We need to strengthen the link between research activities and the extension services in order to bring the results of research to farmers in a way that is useful to them...and this requires researchers/research projects to start to share knowledge in different ways”,

Ben Samson, KSinR Pilot Project Leader, IRRI
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Led by the International Centre for Agricultural Research in the Dry Areas (ICARDA), this project will (a) document and inform the wider scientific community of farming community knowledge worldwide and its potential for plant breeding; (b) demonstrate the importance of recognizing and strengthening such knowledge so processes, products and services are relevant; and (c) stimulate other agricultural institutions to document farmers’ knowledge in the prioritization, development and implementation of research. This project will organise an International Farmers’ conference to achieve many of the objectives listed above.

Shared Learning to Enhance Research Priority Assessment Practices

CGIAR Centers have put effort into developing methods for identifying research topics with the greatest impact potential. Generally these estimates rely on the articulation of “impact pathways”, the probability of research success, patterns of adoption and indirect effects. Priority assessment is a “learning” tool that uses past evaluations to help make predictions regarding the adoption potential of recommendations and technologies under specific conditions. It can also be an important way to engage partners and external stakeholders in a process of shared reflection over the validity of assumptions underpinning impact pathways. In addition, it can be a critical tool for monitoring and evaluation.

However, innovation is needed in priority assessment for other newer areas of the research portfolio of the CGIAR and its partners, often with impact pathways that are more difficult to predict, and benefits that are more difficult to quantify. Also, while individual priority assessment efforts have often been novel and systematic, there has been no forum or body in the System focused on systematically promoting priority assessment innovations. This project, led by the Center for International Forestry Research (CIFOR) on behalf of a CGIAR System-wide consortium on priority assessment, will improve innovation, documentation and communication of collaborative priority assessment approaches involving the CGIAR System and its partners.

KS Website: http://www.ks-cgiar.org

“As a barley breeder, I have come to appreciate that when you start working with people and not just focusing on the plants you remove a lot of barriers to adoption and find out what really is a good variety for the people on the ground”

Stefania Grando, KSinR Plot Project Leader, ICARDA

“With something as important as figuring out the best research areas with the greatest potential to produce benefits for the poor, it is vital that the CGIAR improve their priority assessment practices—and sharing knowledge and experiences within the System as well as with partners and external stakeholders can help to achieve this”

David Raitzer, KSinR Plot Project Leader, CIFOR