Arid and Semi-Arid Land Agricultural Productivity Research Project (ASAL-APRP)

ASAL KNOWLEDGE HUB PORTAL DEVELOPMENT





Feasibility Report 2016

Compiled and reviewed by: George Keya, Boniface Akuku, Irene Kimani, Salim Kinyimu
Typesetting: Elizabeth Simwa ; **Design and Layout:** Nogrecia N. Mnene

1.0 Introduction

The purpose of this study was to investigate the feasibility of developing a Knowledge Hub Portal and to examine reasons for adopting or rejecting it as an alternative way for Information management, Research Collaboration, Training and Knowledge Sharing.

A cross-sectional study among Kenyan ASAL research institutes and partners was conducted with a randomly selected researchers and partners. Data was collected and analyzed from the Research and partner institutions.

The majority of the researchers showed an affirmative intention towards adopting the Knowledge Hub as a new way to handle ASAL technologies and information. Reasons for adopting the Knowledge Hub portal included time and cost saving for sharing, training, collaboration, reaching a wider target group, centralized ASAL resources, information diversity, flexible in time and space for information handling, and information safety.

The main reasons for rejecting the knowledge Hub by the minority (approx. 7%) were computer illiteracy, lack of personal computer, lack or poor internet accessibility, information openness and plagiarism. This study reveals a high feasibility for developing a Knowledge Hub portal that enhance the way information resources are managed for the ASAL - APRP programs. Reasons analyses provide more directions on how the portal should be in operation.

1.1 Purpose of the study

The feasibility study was aimed at answering the following questions;

- What are the current information and management challenges? What needs to be put right?
- What are the alternatives (including ways to achieve those objectives), including costs and benefits of each?
- What is the recommended solution, which not only gives reasons for choosing the option but also discusses its feasibility? (document management, sharing, collaboration, and learning).

1.2 Project History

In developed countries and some of the developing countries, collaboration, document management, sharing and learning for specific research is done on a centralized online portal with different restriction levels. In Kenya, International Livestock Research Institute (ILRI) has tried this with document management center for its research. There is a need to apply the same idea, but modify it further to accommodate not only a document centre, but also training, collaboration and sharing for the ASAL – APRP project.

1.3 Methodology

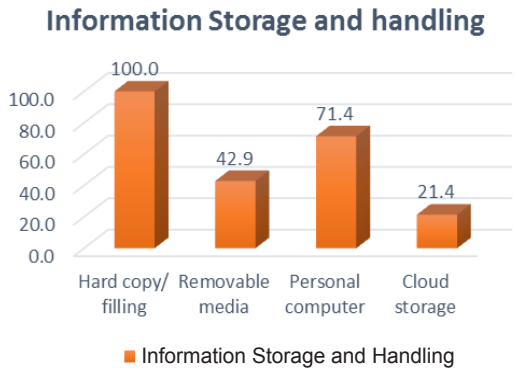
A semi-structured questionnaire and oral interview was used to gather information from the eleven (11) researchers and three (3) partners.

2. Operation

2.1 Current Operation

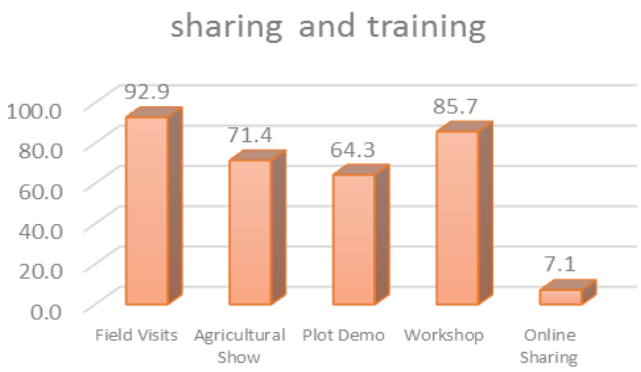
2.1.1 Document management

Currently, critical research information is solemnly stored in personal computers and hard copies with no back-up mechanisms in place. Referencing depend on availability of the computer owner.



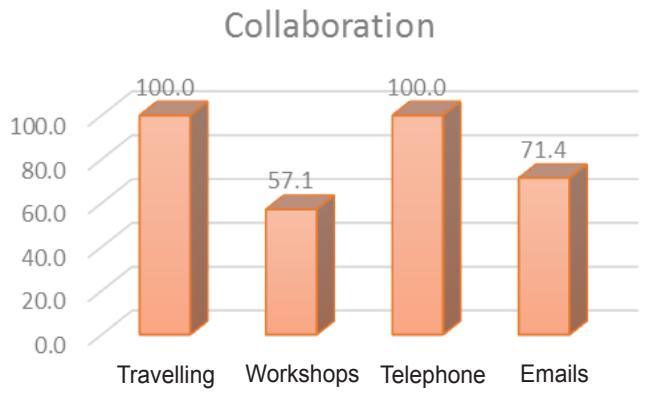
2.1.2 Learning and Sharing

Information sharing and training are done during field visits, workshops, Agricultural shows and on plot demo



2.1.3 Collaboration

Research collaboration was done traditionally where one researcher has to travel or email the other to track on progress.



2.2 Challenges with Current Operations

2.2.1 Document management

- Data loss in cases of user computer failure with no backup. Sometimes the researcher resigns and leaves with all their work.
- Querying/ searching for old information is sometimes a challenge when the user forgets the document name or the physical location of a file.
- Time and cost of travelling to access information that is on a remote distance.

2.2.2 Learning and Sharing

- A small targeted group is reached during field visits, agricultural shows, workshops and sites demonstrations.
- Cost of organizing the events.
- Cost of the targeted group to attend this events.

2.2.3 Collaboration

- Cost and time of travelling.
- Progress delays when the parties involved cannot meet due to tight schedules.

2.2 System Objectives

The proposed Knowledge Hub Portal when adopted will fully automate the four components (i.e. Document management, Sharing, Collaboration and Learning) in a way that will overcome the challenges addressed. Restriction will be placed at different level of access.

2.3 Issues

The collaboration module of the system is expected to borrow the interface from MS SharePoint. This means that the module will clone MS Share Point functions. The challenge will be to the system users who have not used MS Share Point before.

2.4 Assumptions and Constraints

- In every household, there is at least one member who is computer literate.
- Sustainability mechanism for both development and operational costs will be in place even after the end of ASAL – APRP project.
- The system will be upgraded in the next phase to accommodate more functionality.
- Fully adaptation of the system; researchers and partners will be willingly to share their information.

3.1 Alternative

The collaboration module can be designed using Forms and restriction set to only authorized users to that document. This will bypass cloning of MS Share Point into the portal. Since the portal will be used by members of the public, including non KALRO staff, using logins from KALRO Active Directory will not capture non KALRO staff. An alternative approach will be to set the login to use forms with a separate database that will store usernames and password for different levels of permission.

3.1.2 Benefits of Alternative

- It will reduce the overall duration for the system implementation.
- Reduce cost of implementation
- Reduce overheads and complexity of the system.

Proposed System

K-Hub will automate the way information is handled, learning and training is conducted, and the way collaboration is done.

Benefits of the Proposed System

- Cut down costs
- Reach wider group
- Flexibility to access information
- Avoid loss or misplacement of information

Addressing the Challenges

- Restriction will be placed at different level of access
- Publicity of the platform through KALRO social media
- It is expected, in every household there is at least one member with an internet enabled device.

Available Supporting Infrastructure

- Hosting services
- Fibre internet link to Headquarters
- Secure Datacenter
- Servers

Added support needed

- SMS Gateway (short code charges monthly)
- Publishing cost
- SSL Certificate
- Portal end points integration -Consultancy services
- System support and management
- Software licensing & SLAs

Reasons for Adopting or Rejecting Knowledge

Both the researchers and partners agreed that there is a need to automate the way information is handled, learning and training is conducted, and the way collaboration is done. To them it will cut down time and cost of travelling and organizing events, a wider target group will be reached, flexibility of accessing information from anywhere and at any time and it will avoid loss or misplacing information.

Recommendations and Conclusions

Knowledge hub portal is a feasible and valuable learning model, information resource management tool, collaboration platform and indeed a better way of sharing information that is worth availing to researchers, partners, students, farmers and policy makers.

From our reasons analyses findings, we have confirmed that ASAL information is not well organized and structured in a suitable way for ease of access. Farmers, extension officers and researchers spend a lot of time and money to organize events for sharing of knowledge. The hub will also be an interactive platform of inquiries for ASAL research.

Way Forward

With the available ICT infrastructure at KALRO Headquarters and given the support from ASAL-APRP Coordination, it is possible to implement Research Information and Training (RIT) for the case of Knowledge Hub.

P.O Box 57811-00200, Nairobi, Kenya
Tel: (+254) 0709 104000 / 0722 206986 / 0722 206988
Email: directorgeneral@kalro.org, Website:http://www.kalro.org/