

Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe

Capacity Needs Assessment



Capacity Needs Assessment

APPROACH, ACTIVITIES, RESULTS, RECOMMENDATIONS

Mueller, B., Bonaiuti, E., Graziano, V., Jawhar, J., Akramkhanov, A. (2019). *Capacity Needs Assessment: Approach, activities, results, recommendations*. Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe project report. Beirut, Lebanon: International Center for Agricultural Research in the Dry Areas (ICARDA).

Key words

Capacity Development, CapDev, Knowledge Management, KM

Prepared by

International Center for Agricultural Research in the Dry Areas (ICARDA)

Project

Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe

Funded by

International Fund for Agricultural Development (IFAD)

Working Papers

Working Papers are one of ICARDA's global public goods; they capture and share knowledge and learning from projects and research partnerships. Each paper is internally reviewed as part of the Center's publishing process.

About ICARDA

Established in 1977, the International Center for Agricultural Research in the Dry Areas (ICARDA) is a non-profit, CGIAR Research Center that focusses on delivering innovative solutions for sustainable agricultural development in the nontropical dry areas of the developing world.

We provide innovative, science-based solutions to improve the livelihoods and resilience of resource-poor smallholder farmers. We do this through strategic partnerships, linking research to development, and capacity development, and by taking into account gender equality and the role of youth in transforming the non-tropical dry areas.

Address

Dalia Building, Second Floor, Bashir El Kasser St, Verdun, Beirut, Lebanon 1108-2010.

www.icarda.org

Disclaimer



This document is licensed for use under the Creative Commons Attribution 4.0 International Public License.

To view this licence, visit <https://creativecommons.org/licenses/by/4.0/legalcode>

Unless otherwise noted, you are free to copy, duplicate, or reproduce and distribute, display, or transmit any part of this publication or portions thereof without permission, and to make translations, adaptations, or other derivative works under the following conditions:



ATTRIBUTION. The work must be attributed, but not in any way that suggests endorsement by the publisher or the author(s).

Table of contents

Abbreviations	4
Executive summary	5
Introduction	5
Background	5
Assessment approach	6
Methods and tools	6
CNA working groups	7
Current institutional capacity according to the key respondents	9
Annex 1. Working group discussion guide	34
Annex 2. Online survey questionnaire	34

List of tables and figures

Figure 1. Flow chart to show the two-phase approach - face-to-face interactions with insitiution representatives and online suveys to gather deeper and more detailed insights.	7
Figure 2. Three important recommendations for Moldovan stakeholders	15
Figure 3. Three important recommendations for Moroccan stakeholders	20
Figure 4. Three important recommendations for Sudanese stakeholders	27
Table 1. Capacity gaps of the Moldovan stakeholders	28
Table 2. Capacity gaps of the Moroccan stakeholders	31
Table 3. Capacity gaps of the Sudanese stakeholders	33

Abbreviations

ARC Sudan	Agricultural Research Corporation - Sudan
CNA	Capacity needs assessment
CoP	Community of practice
CPIU-IFAD	Consolidated Programs Implementation Unit
ENA Meknes	National School of Agriculture
IAV Hassan II	Agronomic and Veterinary Institute
ICT	Information and communication technology
IDIS Viitorul	Institute for Development and Social Initiatives "Viitorul"
INRA	National Agricultural Research Institute
KariaNet	Knowledge Access to Inter-connected Rural Areas Network
KM	Knowledge management
KS	Knowledge sharing
NGO	Non-governmental organization
ONCA	National Office for Agricultural Extension
SAUM	State Agrarian University Moldova
Selectia	Research Institute of Field Crops "Selectia"
SKIM	Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe (acronym used after November 2019)
SKMNENACAE	Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe (acronym used prior to November 2019)
SKS	Sudan Knowledge Society

Executive summary

This Capacity Needs Assessment (CNA) was part of a process to identify knowledge management (KM)-related gaps in institutions engaged in the initial steps of The Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe project. The major purpose of the activity was to undertake an assessment and determine baselines for the current state of KM, knowledge sharing, and learning needs in target organizations in Moldova, Morocco and Sudan. The assessment allowed for a diagnosis of present KM-related practices and benchmarks for improvement.

To evaluate KM capacity gaps, face-to-face meetings were held with representatives of the institutions identified. The meetings helped the study team to collect first-hand observations, which were used to formulate a questionnaire for an online survey that was circulated to identify further information regarding capacity gaps. Findings of the CNA activities regarding current organizational capacity and capacity needs have been summarized in this document, grouped by country as well as by type of stakeholder, i.e. academic / agriculture extension.

The results will be used within an approach paper¹ (a crucial component of a project's evaluation process), detailing innovation plans for capacity development activities for the identified institutions.

Introduction

Knowledge sharing (KS) and management for public institutions, as well as NGOs, community-based organizations and the private sector, is a key element to ensuring appropriate dissemination and maintenance of knowledge, and to building capacities and development effectiveness in rural areas. Lessons learned and results in the field of KM must be scaled-out for enhanced impact in agricultural development and to ensure that knowledge gaps are identified, and then filled, so that public institutions and organizations in-country can benefit.

The Strengthening Knowledge Management for Greater Development Effectiveness in the Near

East, North Africa, Central Asia and Europe project is a grant project led by the International Center for Agricultural Research in the Dry Areas (ICARDA) and the International Fund for Agricultural Development (IFAD). The project also works with international partners Virginia Tech, CIHEAM-Bari, PROCASUR as well as National Agricultural Research Systems (NARS), governments, and agricultural extension services in Moldova, Morocco and Sudan.

Initiated in June 2018, the project facilitates and supports KM and capacity development activities in the three selected countries (with the possibility of extending to a further two) and will provide practical examples of KM best practices that will be analyzed and adopted by participating institutions. Increasing the capacities of participating public institutions in this work, by providing necessary structures and systems at the country and regional levels, will ensure that knowledge being developed can be effectively managed for long-term growth and development.

Background

A first step of the project, in October 2018, was to carry out an institutional KM mapping exercise to identify key players to be targeted in the rural development sector. The list of stakeholders was developed during proposal development stage via an internal consultation process within ICARDA and with respective country offices. Relevant organizations were suggested based on interactions within previous or ongoing projects in Morocco and Sudan. Suggestions were also solicited from the project co-implementing partners, particularly for institutions in Moldova. The identified stakeholders were then differentiated into 3-4 types of organizations that mainly represented research, education or extension (government and non-government).

The next step involved an inception workshop, which was also held in October 2018 at the ICARDA office in Rabat, Morocco. The objectives of the workshop were to formally launch the project and build partnerships for implementation, as well as to further determine the KM and learning needs of the target organizations through a Capacity Needs Assessment (CNA).

1 <https://www.ifad.org/en/web/ioe/evaluation/asset/39832459>

At the inception workshop, activities of the CNA included face-to-face discussions with organization representatives, group work to collect feedback to guiding questions, and the development of an online survey, which was circulated after the meeting. Information gathered from the CNA feed into formulating actions to address the identified gaps, considering ongoing and planned KM capacity development initiatives being undertaken by national and international partner institutions.

The intention of the CNA was to assess the KM capacity needs of project partners in order to enable them to deliver the following focus points of the project:

- Financial inclusion of rural women and youth;
- Natural resource management and climate resilience; and
- Productive agricultural technologies (e.g. water management technologies, conservation agriculture and drought-resilient crops)

As part of the CNA, the following questions were raised at the inception workshop with the target institutions:

- Where are we now in regard to our KM capacities?
- Where do we want to go?
- What is the best way to get there?

Upon gathering answers to these questions, three main capacity building activities will be planned to be held in 2019-2022: online interventions (in the form of online training courses); symposia (to encourage exchange between project partners); and learning routes (identification of best practices and visits to different locations for partners / stakeholders to exchange information regarding experiences). The ideas for these activities were developed from the findings / outcomes of the face-to-face meetings and from responses to two online surveys, which were completed by one key respondent per organization. As follow-up events to the workshop, write shops will also be held to enable the organizations to create KM capacity and innovation development plans.

Assessment approach

The CNA activities were sufficiently detailed to allow logical progression of the process, and at

the same time, flexible enough (comprized various assessment methods) to address the focus points of the project. The assessment was also versatile enough to allow for implementation in three distinct focus countries, and adequately robust to achieve the defined objective of assessing KM needs. Figure 1 below outlines the step-wise approach of the CNA face-to-face meetings and online surveys regarding the KM baseline of each organization and 'scoring' of various organization capacities in relation to KM (see Annexes for all questions).

The tools used for the CNA (described below) were derived from various sources, but the main document referenced was Sambati et al. (2018) – a paper by members of the International Livestock Research Institute (ILRI) and ICARDA, among others – based on a 2012 publication by FAO. The document is a selection of useful CNA tools, including guides for process preparation, timing and note taking, and methods / tools for data interpretation and report writing. The tools most appropriate for the project's scope, time and number of participants were used for this CNA.

Methods and tools

Stakeholder analysis and power interest matrix in a focus group

During the face-to-face meetings at the inception workshop, a stakeholder analysis was filled out by partners to list the key KM stakeholders of their institutions and place them on a power interest matrix. The matrix is a simple tool that helps to categorize project stakeholders with increasing power and interest in the project and enables stakeholder prioritization.

Organizational scoring with key partner representatives

Organizational scoring was conducted as semi-structured interviews with key informants of the respective partners to get in depth insight into the capacity development needs of the organizations. The scoring system covered four areas of ability relating to: policy (drafting, implementing and monitoring), knowledge (generation and sharing), partnership (creating and maintaining) and implementation (of development / research projects). The goal was to identify gaps within these areas of work from the point of view of key representatives.

Online surveys

To carry out the CNA activities across three different countries, two of the interventions – the organizational scoring as well as the KM baseline – were completed through online surveys. KM baseline was determined using an 'Infrastructure Readiness Tool', which analyses the technical status of an organization through questions about a company's IT infrastructure (computer software and internet accessibility). This ensured that all target institutions could be consulted at the same time with results collected in a timely manner.

ICARDA's Monitoring, Evaluation and Learning (MEL)² platform was used to create and disseminate the surveys among project partners, who received an e-mail from the system and separate invitation to complete the survey.

CNA working groups

The following partners were convened for the face-to-face phase of the assessment:

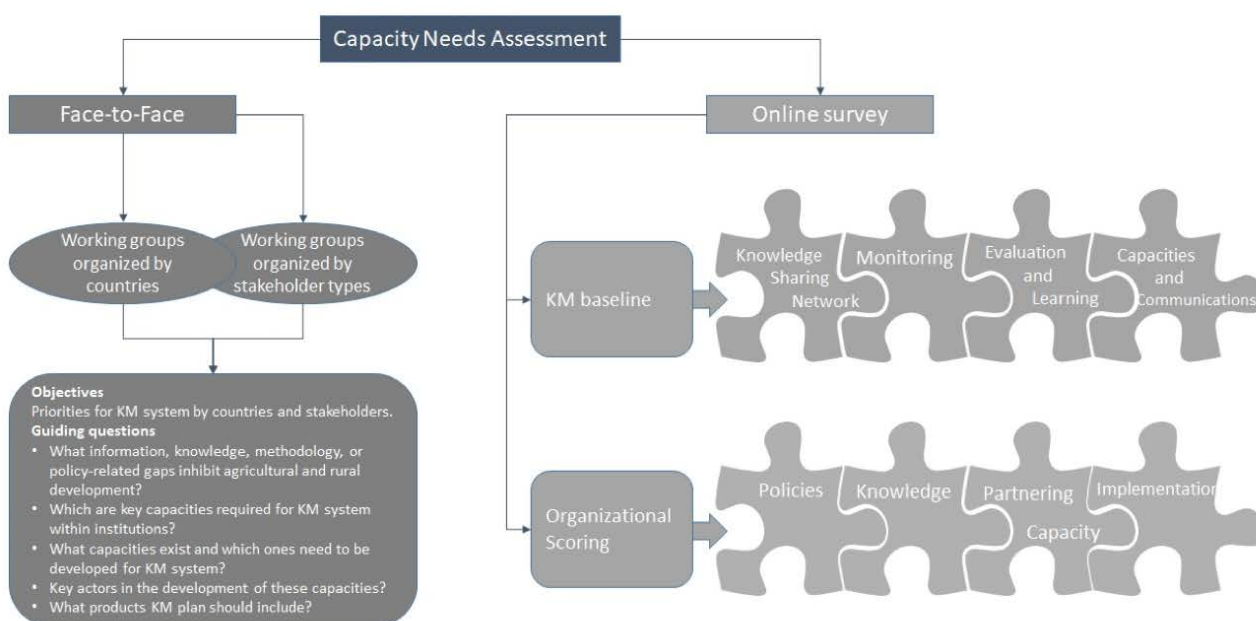
- Consolidated Program Implementation Unit (CPIU-IFAD), Moldova
- Research Institute of Field Crops "Selectia", Moldova
- State Agrarian University (SAUM), Moldova

- Institute for Development and Social Initiatives (IDIS) "Viitorul", Moldova
- National Agricultural Research Institute (INRA), Morocco
- National Office for Agricultural Extension (ONCA), Morocco
- Agronomic and Veterinary Institute (IAV Hassan II), Morocco
- National School of Agriculture (ENA-Meknes), Morocco
- Knowledge Access to Inter-connected Rural Areas Network (KariaNet), Sudan
- Agricultural Research Corporation (ARC), Sudan
- University of Khartoum, Sudan
- Knowledge Society, Sudan

The partners came together to form working groups, organized by country, to answer several guiding questions on KM. They provided feedback on what they considered the key issues regarding KM, the interventions to focus on to address these issues, and the interventions to be prioritized. Below are the questions and summary responses to discuss and develop priorities for an improved KM system.

What information (I), knowledge (K), methodology (M), or policy-related (P) gaps inhibit agricultural and rural development?

Figure 1. Flow chart to show the two-phase approach - face-to-face interactions with institution representatives and online surveys to gather deeper and more detailed insights.



- Lack of awareness of research results (K)
- Unstructured knowledge which is not useful and should be transformed into results (I, M)
- Knowledge inaccessibility for agricultural extension advisers and farmers (I, M)
- No feedback from advisers and farmers (I, M)
- No collaboration, duplication of efforts (P)
- No scientific platform for KM or sharing of best practices / success stories from other countries (M)
- No national agriculture information system (I, K)
- Duplication of roles by various organizations and inefficient fragmentation (M)

What key functions are required for an efficient KM system?

- The ability to generate knowledge
- The ability to use existing KM tools (and other tools for knowledge generation / dissemination)

What capacities already exist but need to be developed for the KM system of your institution?

- Restructuring research results / knowledge creation

- Effective use of KM tools
- Facilitation (or Support?) to create / enhance partnerships

Who are the key actors in the development of these capacities?

- Private sector

What communication products should a KM plan include?

- Publications
- Radio
- TV
- Farmer field school
- Call center
- Data sets
- Maps
- GIS data
- Experimental trials
- Open house visits

What communication channels are needed?

- WhatsApp
- Other social media

Current institutional capacity according to the key respondents

The following information outlines each organizations' capacity in regard to: policies, KM, partnerships, and implementation, according to the key respondent interviews. Whilst most responses have been summarized by the authors under each of the headings, some responses are provided as direct quotes.

The information gathered provided a KM baseline for the project, and from the baseline, recommendations have been drawn to develop concrete capacity development activities for each organization.

Three of the key recommendations of the CNA for each country are illustrated in Figures 2, 3 and 4 below (p15, 20 and 27), whilst a full list of the summarized recommendations can be found in Tables 1, 2 and 3 in the next section *Summary of institutional capacity needs* (p28-33).

Moldova

CPIU-IFAD

CPIU-IFAD was created by the Government of Moldova in 2000 to implement rural and agricultural development programmes funded by IFAD. In 2019 CPIU-IFAD is implementing two projects – the Inclusive Rural Economic and Climate Resilience Programme and the Rural Resilience Project.

Policies

The Ministry of Agriculture, Regional Development and Environment and the Ministry of Finance of the Republic of Moldova are the main stakeholders involved in creating policies affecting CPIU-IFAD activities. The policies of the Ministries are clear and well known by CPIU-IFAD, however, there are sometimes issues of enforcement within the organization, and conflicting policies can lead to problems in regard to implementing project activities. But the main constraint to policy implementation is human resources, which are low at the organization.

Knowledge

Policies allowing for KM among staff are in place at CPIU-IFAD. Access to knowledge is granted and supported by the organization's policies and regulations. Institutional systematic processes for reporting on CPIU-IFAD project activities are also in place but are not always effective. No trainings are provided for KM within the organization despite KM being a relatively new field and specialized training is required. KS techniques / tools include emails, conferences, websites, social media, presentations and printed material. Also, the company's computer software programmes are being updated and project data are effectively archived. It seems however, there are no specific processes on a larger scale for addressing and enhancing KM at CPIU-IFAD.

Partnering capacity

CPIU-IFAD is part of a network that includes all public institutions under the Ministry of Agriculture, Regional Development and Environment of the Republic of Moldova. They are able to access information of the other organizations in the network, for example, through reports published on the Ministry's website,³ and are confident that other organizations also have the capacity to access their information, which is uploaded on their own website exclusively for this purpose.⁴ CPIU-IFAD staff have the capacity to engage in dialogue around KM with other stakeholders and learning opportunities in building partnerships are in place.

CPIU-IFAD has collaborations in place with national and local authorities (Ministry of Agriculture, Regional Development and Environment and academic institutions), but accountability mechanisms to regulate the activities of these groups have not been set-up. Involvement with, and evaluation of, CPIU-IFAD's work depends on the type of partner and the agreements / contracts in place.

Implementation

Project management skills among CPIU-IFAD project staff are at a sufficient level for project implementation and follow-up activities. Project activities are monitored and evaluated through various mechanisms and compared against initial planning documents to ensure they align with what was expected.

3 <http://madr.gov.md/ro/content/rapoarte>

4 <http://www.ucipifad.md/en/rapoarte/>

KM baseline

According to the CNA survey responses, appropriate technology for accessing information / knowledge is provided at CPIU-IFAD. The use of e-mail and shared online information spaces are in place. Information regarding CPIU-IFAD projects is also published weekly on social media and monthly within various publications. Proper attribution is provided to ensure that partners are recognized and / or licensing is in place, and publications are accessible to all.

CPIU-IFAD is responsible for monitoring and evaluation (M&E) of the project achievements and KM. The M&E system is based on a range of indicators relevant to each project activity established within the project design document and reported under the project logical framework.

The M&E unit collects data from relevant staff members on the activities and outputs of the project, as well as the outcomes for project beneficiaries. These data are reviewed to analyze the performance of project components. These and other activities are geared to facilitating the compilation and dissemination of relevant project knowledge about challenges, experiences, and other insights to all stakeholders. Output and impact data are recorded in excel spreadsheets, while the analysis of outcomes is made using SPSS (statistical software). In order to spatially visualize the locations of project beneficiaries, the M&E unit uses Google Earth Pro.

Although project KS through, for instance, articles / workshops / social media is recorded using Excel spreadsheets, there is no specific monitoring platform (like ICARDA's MEL) for this activity. Communication materials are monitored at regular intervals to track knowledge transformation, production, dissemination and re-use, but the monitoring is not based on indicators, and academic factors are not considered within evaluation processes.

KS could have the same positive effect as that of producing impactful knowledge. So far, the organization has produced no major evaluation results on the impacts of sharing communication materials that can be used for institutional learning. It can be concluded, however, that communication dissemination at CPIU-IFAD is following a classic model of sending out a message through a

dedicated channel and allowing for stakeholder feedback. Project publications are usually in the form of reports and are shared via social media, websites, and in print at conferences, under the management of a designated communication officer.

Summary and recommendations

KM is a relatively new concept for CPIU-IFAD, and while the policies and technologies of the organization do enable KM and KS, training addressing KM is needed and would be appreciated among staff. CPIU-IFAD is able to actively engage in dialogue around KM with partners. Skills for project implementation and evaluation are at sufficient level to achieve the anticipated outcomes, and project evaluations follow an established system.

A centralized M&E tool using standardized vocabulary would be useful in order to facilitate institutional learning and support meaningful M&E processes. Capacity development activities addressing the implementation of these tools and techniques could be useful to support these changes.

Research Institute of Field Crops "Selectia"

The Research Institute of Field Crops – also known as Selectia – in Moldova, has a long history in developing crops, particularly winter crops such as wheat, and other crops including sugar beet and sunflower. Selectia has long-term field experiments spanning several decades to demonstrate and study different methods of land cultivation. Like other research institutes in post-Soviet countries, they are facing staffing issues with young scientists and funding to maintain long-term field experiments. To find solutions, a new faculty / department was recently established at Balti State University to prepare graduates in farming and crop breeding to enter the research institute.

Policies

There is a lack of policies regarding KM, including at the research and educational level. As part of the project, policies shall therefore be implemented and constantly observed and improved.

Research, education and innovation must be linked effectively through appropriate policies and their implementation. The separation of research and education is counterproductive to innovation. Further, due to the lack of policies, researchers are separated from extension services, which

creates barriers to promoting good research within agricultural practices.

The promotion of innovation is a key component and prerogative for national ministries. Improving professional knowledge should be obligatory for each institution and ministry, but policies in the area are missing and there are no clear mandates for KM at Selectia. Ministries and agencies must therefore come together to create the required regulations. Sporadically, Community-Based Organizations (CBOs) and Civil Society Organizations (CSOs) assist the organization with KM, by synergizing funds and the activities of Selectia, through short-term partnerships.

Knowledge

KS is carried out separately by each individual organization and there is a lack of clear coordination. Systematic KM should be organized at the ministerial level and within each organization with inter-ministerial coordination.

Training and education in KM should be encouraged, or mandated / incentivized by policies of the organization. Funds should be allocated for KM training and in order to implement KM activities, which should be carried out on a regular basis with all staff members of each department. The human resources department should also monitor training activities for staff. The project will provide adequate training to establish KM trainers of within the organization, who will conduct KM training with other staff members.

Whilst institutional processes for KS are currently not in place, seminars, round tables and conferences are used for this purpose, and from time to time, researchers do engage in district seminars with farmers.

Selectia has no website to obtain information about their innovations, although it does have a Facebook page.

Partnering capacity

Selectia is engaging with seminars and conferences organized by the ministry, research institutions and universities. Access to mass media and the internet is limited, negatively impacting the visibility of Selectia's work to potential partners and minimizing the KS potential of the organization. Other organizations can access some of Selectia's

information through social mediums. Skills to engage with other partners and stakeholders are limited and incentives from authorities to build these skills are lacking. Some trainings addressing partnership building are conducted but are not sufficient in terms of quality, and thus has not so far resulting in strengthened capacities.

Implementation

Central and decentral authorities are not given incentives to support Selectia's work. Extension services should be established within each research institution to allow for project implementation and monitoring. Management skills for project implementation are insufficient to achieve the intended outcomes and should be addressed through case studies and good examples. Programme M&E is not in place.

KM baseline

KM tools and technologies are in place but training on their usage is desired. Publications and information products, such as annual reports, are produced by research project executors and coordinators from the scientific councils, the Academy of Sciences of Moldova and the Ministry of Agriculture. Other publications by Selectia include books, scientific and newspaper articles.

The national radio and TV channels report on achievements and outcomes of the research programmes. Conferences and seminars are being attended at the local, regional and national levels. Although books and articles about the organization's projects are regularly published, they don't mention project details, such as time frames. Information on attribution and licensing is not sufficiently available. Knowledge is addressed to farmers, authorities at different levels and students alike, with no distinctions in information presentation for different audiences.

A platform for monitoring communication materials is not in place but is desired. Monitoring is conducted on demand and upon request through audits, for instance, by external reviewers or government inspectors.

Indicators for monitoring communication are in place but are not used for the comparative analyses and evaluation of different research or for different research institutions and

universities. The library of the Alecu Russo Balti State University has a program for the evaluation of its H-index and ISI IF, the two most popular academic indicators of impact value based on citations, to evaluate the integration of researchers in different activities and their professional level. Selectia does not have these programmes.

At the present stage, there is a greater need for KS in order to directly benefit the lives of end-users, than for knowledge generation. Selectia researchers are involved simultaneously in the dissemination of knowledge and implementation of their research results.

Research results are published as recommendations for producers and disseminated through mass-media under the coordination of a communication officer. Different channels of communication are used to reach various audiences: books, booklets, conferences, newspapers, radio, round tables, seminars, TV, etc.

Summary and recommendations

Selectia states that KM should be addressed at the country level by ministries and taken up between universities, research institutes extensions services alike. Current country policies don't seem to address KM, whilst KS between organizations is very much based on individual efforts and lacks coordination. Selectia itself seems to have the resources and funds to conduct training with regards to KM but this has not yet taken place. Any training provided so far has not resulted in long-lasting strengthened capacities of staff.

Selectia might need the project to recommend how best to reach out to other partners. There is a lack of incentives within the organization, so reaching out and engaging in partnerships and dialogue with ministries and extensions services might improve the situation. Project management skills also need to be addressed.

M&E is done upon request and doesn't make use of a centralized system and no standardized vocabulary lists or indicators are in place. Selectia believes KS is important and uses a variety of traditional media and conferences but some knowledge is not transformed and does

not reach the farmer. This could be somewhat addressed if more services were delegated to the creation of extension offices and former researchers can take up these tasks and serve as bridge between producers and science.

Establishment of a KM platform through the project, and training in its use, would be appreciated by Selectia.

SAUM

SAUM was founded by the Ministry of Agriculture, Regional Development and Environment. Students of the university number 4,000, with a large portion of graduates continuing to master's degree level. There are over 60 PhD candidates pursuing future research careers.

The university is actively engaged in promotion and marketing to attract international students and maintains its web platform to provide access to education materials used in classes. SAUM is also very active in Erasmus exchange programmes and counsel students on academic programmes outside SAUM. SAUM is currently participating in 'SMART' projects within the Erasmus framework. SMART Cafes, for instance, are conceived as open labs that welcome students and recent graduates who have ideas and creative potential, but who lack skills and resources to realize them.

Capacity development and education is at the heart of the university and efforts are made to facilitate international collaboration to enhance and foster cooperation between education, research and entrepreneurship.

"Wider objectives of the SMART Cafes match the thematic focus of the project for financial inclusion of youth. SMART Cafes aim to advance the employment and self-employment potential of graduates from Eastern partner countries by fostering students' entrepreneurship, creation of business start-ups at university settings, and through open innovation in collaboration between universities and private enterprises."

Policies

There is a lack of strategy and regulation addressing KM. Coordination is challenging and human capital is limited. The Ministry of Education, Culture and Research of Republic of Moldova is involved in the development of policies relevant to SAUM. CSOs

and CBOs are not involved in policy-making but do assist with activity actualization.

Knowledge

KS is not adequately supported by policies and regulations. Sharing seems to be insufficient and a database of best practices is missing. Training for staff in KM is regulated through permissions but not by clear policies. The National Center for Continuous Training and Consultancy is carrying out training with respect to KM twice per year. Funding provided by SAUM depends on the nature of the training, which is also partially funded by the participants.

Policies for the academic mobility of staff and students are in place.

Partnering capacity

The university is a member of several networks, including the Interfaculty Committee Agraria Regional Network for Central and Eastern Europe, the Danube rector Council and the Agence universitaire de la Francophonie. A link to national library is present at SAUM, indicating government support. Other organizations can partially access the institution's project information through the SAUM website, as well as through meetings held by SAUM with students and entrepreneurs, and through the production of organization flyers and brochures and information days. Skills to engage with partners are in place and engagement depends on purpose and scope of the partnership. Trainings on teamwork and communication skills are conducted.

Implementation

Reports on the scientific activities, financial management and curriculum information of SAUM are presented annually on their website. Third parties analyze these reports, finalize evaluation surveys, and can establish partnerships with SAUM. A lack of human capacity for implementation of the evaluation results and follow-up was mentioned by the respondent.

Programme M&E is implemented by the authorities responsible for evaluating projects and programmes, i.e. the Academy of Science of Republic of Moldova, the National Agency of Accreditation and Certification and the Ministry of Agriculture, on the basis of the methodological framework for project evaluation in the Republic of Moldova.

KM baseline

KM technology is in place and accessible at SAUM to registered users (students, staff, researchers). Among the tools is an online learning management system, a conference tool and a student evaluation system. Regular information products include annual papers, the results of student conferences, an agricultural science journal, and e-learning courses updated with Moodle. Publications are properly licensed.

KM monitoring is an ongoing activity conducted using the Moodle platform. Standardized glossaries and vocabularies are used partially but are not authored by international institutions. No indicators, factors or metrics are in place for monitoring the organization's activities. Some academic factors are used for scientific publications and staff quality is observed through internal appraisals.

As for non-academic factors, the development of university-business partnerships is observed, again through appraisals. Sharing knowledge is of the same importance as producing impactful knowledge according to the respondent. Evaluation results are used to improve the teaching-learning process and communicated through scientific publications and / or methodical guidance. Whilst SAUM are active on social media and use institutional collaborative platforms, there is no designated communication officer.

Summary and recommendations

There are coordination challenges between different ministries regarding the policies affecting SAUM. Human capital for implementing policies is limited. Policies are not adequately enabling KS or showcasing best practices. Staff training is regulated and provided by a national provider twice a year, however, policies on training are not clear. Technology at SAUM is sufficient to enable KM / KS and training for usage is provided.

A capacity for partnering is present at SAUM and communication skills are being trained. Nevertheless, SAUM is not part of a KM community of practice (CoP) that it could benefit from and shall be encouraged through the project to engage in KM networks with access to best practices for KM, KS and M&E. SAUM reports to the founding ministries of the university, as well as to external partners who conduct evaluations of their work.

Clear structures for M&E seem to be in place, however the process and technologies are not defined further. Monitoring is conducted continuously through an online platform. Evaluation is mainly carried out for teaching and learning and is reviewed to improve these processes. Setting up clear processes, learning from project partners and engaging in networks for sharing and learning shall be supported through the project.

IDIS Viitorul

IDIS Viitorul (Viitorul meaning 'future') is a Moldovan non-profit non-governmental organization (NGO) and think tank, specializing in social, political and economic research, with a strong focus on advocacy. Aspects of the IDIS Viitorul's work link clearly to KM processes, such as its organizational science and policy outreach activities. IDIS Viitorul is also experienced in providing negotiation trainings, which, combined with the policy outreach, could be delivered to project stakeholders to facilitate KM within partner research institutions. IDIS Viitorul could partner with the project to develop a KM strategy for the partners of the project.

IDIS Viitorul's major areas of work consider modernization of the public sector through, for example, IT solutions for enhanced administration and management, and strengthening functional food markets. KM enhancement by the project will help IDIS Viitorul to achieve their aims.

The organization highlighted through the survey the need for sustainable management and development practices within IDIS Viitorul to deliver strong, long-term partnerships and enhanced efficiency of capacity development activities, as well as for regional socio-economic growth.

Policies

Local CSOs experience a number of constraints with regard to advocacy activities, including: deficient legislation on advocacy work; lack of clear regulations on lobbying; limited access to public information, impeding the conduct of appropriate analysis and elaboration of recommendations; shortage of knowledge and expertise for performing these activities; insufficient qualification of certain officials to cooperate and establish partnerships with CSOs.

It seems ministries that have an impact on the work of IDIS Viitorul have no clear mandates to act for social development in collaboration with local institutions.

CSOs connected with IDIS Viitorul are actively engaging in dialogue with policy makers but face limitations regarding policy implementation due to insufficient legislation. The CSOs are also involved in shaping policies and placing representatives of the people into national and international courts.

Knowledge

Training in KM, which is regulated by policies and regulations implemented by public academic institutions, takes place about three times per year and is funded by international donors. The IDIS Viitorul network thus has institutional processes for KM and KS in place, and whilst these are considered effective, the organization is always looking to improve their procedures. This is constrained however by a lack of sufficient (human, technical and financial) resources.

To improve the institution's transparency and e-governance, IDIS Viitorul is a member of the Policy Association for an Open Society network (PASOS). The network supports IDIS Viitorul in sharing best practices and providing mentoring in KM and KS through, for instance, the production of impact assessment stories, among other activities.

Partnering capacity

IDIS Viitorul is connected to prestigious international professional networks, among which are:

- PASOS
- Transitional Policy Network
- The Network of Institutes and Schools of Public Administration in Central and Eastern Europe, Slovakia
- Economic Policy Institutes Network of UNDP
- Network of Democracy Research Institutes
- Black Sea Research Network
- Stockholm Network
- Danish Development Research Network
- TRIALOG

IDIS Viitorul has the capacity to access other organization's information and these organizations can also access IDIS Viitorul's information. IDIS Viitorul staff have the necessary skills to engage in dialogue with other stakeholders and in strategic partnerships. Learning opportunities for non-technical skills are present at the institution.

Figure 2. Three important recommendations for Moldovan stakeholders



Implementation

IDIS Viirtorul has implemented many successful projects and engaged with various stakeholders, including government actors and civil society. IDIS Viirtorul have sufficient project management skills for implementation and follow-up. They represent themselves as a moderator and communicator between ministries and the public concerning several studies.

IDIS Viirtorul holds the relevant expertise in M&E for different types of projects, from the national to international level. A combination of formative and summative assessments based on benchmarking and success indicators is carried out. Risks are identified as well, and staff regularly monitor project progress. Partners of IDIS Viirtorul also work closely with them in regard to project M&E. Openness and access to discussions and forums through the IDIS Viirtorul website and through the provision of media kits is an essential part of sharing knowledge.

KM baseline

Technology at IDIS Viirtorul is adequate for KM and KS. They have had success with data warehousing, producing case studies, creating knowledge banks and a knowledge marketplace but less success with retrospective reviews, knowledge exchange, storytelling and monitoring.

Each month, they publish communication products, but licensing and attribution of their publications seems not to be applicable. Knowledge is shared only with IDIS Viirtorul members and consortia who implement projects.

Knowledge shared by IDIS Viirtorul is deemed to be accessible by all – regardless of age or gender. Monitoring of communication materials is only carried out occasionally upon request by donors, for instance, and involves the setting specific goals and identifying problems to be solved. A specific monitoring platform is not in place. Standardized

data and vocabularies are used as are indicators, and assessments on their activities are carried out. Academic impact factors do not seem to be applied to IDIS Viirtorul publications but non-academic factors are being used. These factors however might not be relevant for IDIS Viirtorul. Communication practices, managed under a communication officer, seem to reflect only internal communication and do not address publications.

Sharing knowledge is considered by the organization respondent as of equal importance to creating impactful knowledge. The organization mentions a variety of different channels through which knowledge results are communicated: internal meetings, public presentations, press releases, petitions, dissemination of information to the stockholders and media through social media, round tables, infographics, video spots, video films, slideshows, posters, flyers, video animations etc. Several websites as well as TV, radio and newspaper are also used for communication purposes.

Summary and recommendations

CSOs are actively engaging and shaping a new KM landscape by addressing policy change, placing persons in respective positions and engaging in discussions to improve the overall situation and strive for a democratic environment.

Policies affecting KM and KS at IDIS Viirtorul are not always adequate due to issues of implementation. The organization itself has institutional processes for KM and KS in place but lacks human resources to implement them. They are strongly engaged in several networks and partnerships and conduct and participate in KM training internally and externally. They are striving to improve KM and knowledge access.

Project implementation and monitoring is done in an open and transparent way, based on a combination of formative and summative assessment of projects using benchmarks, risk assessments and success indicators. However, monitoring is only done upon request and does not make use of any particular platform. This could be improved through the project by implementing an M&E platform and providing training so IDIS Viirtorul can showcase their success stories.

IDIS Viirtorul might be a suitable candidate for the local project champion in Moldova.

Morocco

The Morocco organizations identified KM gaps and the effects of these at the inception workshop. Institutional awareness and unstructured knowledge are the main issues for these organizations; their information is inaccessible to farmers and a feedback loop from farmers to the researchers is missing. Together, the Moroccan partners identified that there is no common / unique system for KM in the country, which is compounded by a lack of motivation and conflicting interests among those responsible. This fact has resulted in the duplication of development efforts.

INRA

INRA stress that KM is an important aspect of their mission, and that major efforts have been made to establish an information system that provides access to their journal archive. They have digitized their collection to disseminate information through a variety of conventional and non-conventional channels and integrate information within global reference databases.

Currently, INRA operate 18 websites dealing with their thematic areas of interest, their social activities and maps they have generated to show the different regions of the country with weather updates, as well as information about irrigation, fertilizers and seeds.

Despite being relatively advanced in recognizing and facilitating KM, INRA identified gaps and areas in need of intervention and provided valuable suggestions to be tackled within the project framework, such as:

- Knowledge generation and management;
- Capacity building on KM systems;
- Experience sharing between NARS on success stories in KM;
- Inter-NARS collaboration for setting up national and regional networks on knowledge and information systems.

Policies

INRA's mission is defined by a decree related to its creation and responds to the expectations of their stakeholders – the Ministry of Agriculture and Fisheries and other related ministries. Changing the mission to consider the evolving socio-economic environment would mean validation and agreement of a new law by the government.

It seems there are policy coordination challenges between the ministries and other agencies, as well as a shortage in human resources within these bodies due to staff retiring and limited efforts by the government to replace them. INRA's activities are mainly affected by the regulations of the Ministry of Agriculture and Fisheries, and clear mandates seem to be in place. INRA's research program is validated by a scientific committee where stakeholder representatives provide their observations and recommendations.

Knowledge

INRA's mandate clearly states that they have to ensure dissemination of their research information carried out in-country and abroad. However, there is no national information system that facilitate access to the existing information and knowledge published by different NARS. Challenges in relation to knowledge generation and dissemination include not taking advantage of existing resources to avoid duplicating efforts.

Permission for training in KM needs to be obtained by staff. Training is organized by the human resources department and finance division and responds to INRA's needs and research programmes.

Knowledge is efficiently exchanged within the agricultural development sector in Morocco. Knowledge change is defined by particular processes put in place at the institution, and created knowledge is shared with the relevant stakeholders via diverse channels. INRA has received feedback from stakeholders that their KS and communications could be improved. A communication strategy is being developed within another project.

There are few learning opportunities with respect to KM at INRA. The Association of Agricultural Research Institutions in the Near East & North Africa has supported INRA over the past 10 years to set a regional agricultural information system in order to facilitate KS, but since 2012, the steering committee has never met, and the project was suspended. FAO-developed KS tools (Webagris / ISIS) were used but are no longer upgraded and therefore INRA is now using AgriOcean Dspace tool, also customized by FAO / AGRIS to include KM standards and vocabulary. No training has been carried out with regards to these techniques and tools, so INRA relies on tutorials from the internet.

Partnering capacity

INRA is part of a consortium that includes the Institute of Agronomy and Veterinary Sciences Hassan II and the National School of Agriculture in Meknes. These institutions share their resources to work together within specific projects. An example is the map of soil fertility project that works to produce a GIS website to help farmers use their geodata and get answers on how to use fertilizers for specific crops according to soil type.

INRA provides information to other organizations through their website, as well as through seminars and conferences. Whilst the Ministry of Agriculture seems to provide technical resources to NARS, it is not clear if they are able to access INRA's information.

INRA is able to engage and collaborate with partners as far as their limited staff number allows. Training for non-technical skills is not provided within the organization and INRA relies on support from organizations such as IARC and ICARDA.

Implementation

INRA's Director General is dedicated to providing a budget to support KS and communications but human resources, regulated by the Ministries of Finance and Agriculture, are low.

INRA's project partners provide broad feedback on their expectations and needs in meetings. For the moment, INRA seems to be equipped with the skills for project implementation and follow-up but might need support when it comes to multi-partner projects at the national level where a coordinating body is lacking.

KM baseline

Technology facilitating KS is in place at INRA. Desktop publishing tools are used for editing INRA publications and a database management system, namely Agris ISIS is used to maintain the reference database. GIS tools are used to manage map data (fertility, soil and climate change map).

The frequency of KS depends on the type of knowledge and the target audience. INRA shares its technological information with farmers through extension leaflets and at fairs, FFS and open house events, whilst posters and presentations are prepared for national and regional workshops. Further knowledge outputs are prepared for the INRA portal and delivered to the general public occasionally through radio and TV programmes.

INRA applies the proper attributions and licensing, especially for scientific journals. These publications mainly target researchers, professors, post graduate students, decision makers, extension advisors and farmers.

Monitoring of communication materials is conducted in the form of feedback from stakeholders. INRA monitors visits to the website via google analytics on a regular basis. They make use of FAO Agris standards – a data repository, and use its agro-vocabulary “Agrovoc” as a thesaurus for KM. INRA uses monitoring indicators and observes the ISI impact factor and H-index for researchers’ outputs and results.

Non-academic factors to monitor communication seem not to be observed. INRA considers KS less relevant than creating impactful knowledge. Learning from evaluation is inducted through feedback sent to authors and researchers, and also to an emailing list server within INRA to enable others to benefit from the assessment.

Communication can be divided into local and external communication. External communication is more structured than internal communication, as it targets a large population and requires the use of information communication technologies (ICTs), such as the internet and the INRA website, and DTP for editing. INRA has a directorate for information communication issues. They publish posters, leaflets, presentations and oral communication with mass media (radio, TV).

- Informal channels:
 - Invisible college: interactions (personal meetings / calls) between researchers from different institutions at national or international levels
- Formal channels:
 - Scientific meetings, workshops, fairs
 - On-site visits for students / scientists
 - Institutional publications in different formats (annual report, papers, books, leaflets, flyers etc.)
 - Field demonstrations and FFS
 - Internet (organization website, personal website, researcher’s website (ResearchGate) and social media
 - Media (TV and radio)

Summary and recommendations

Policies are defined by the Ministry of Agriculture and Fisheries, and INRA has clear policy mandates. Sharing knowledge is the main mission of INRA and the agricultural sector more widely, and organizations work closely together on this. However, duplicate efforts cannot always be prevented – mainly due to the absence of a national centralized KS portal. Since previous attempts have failed to successfully implement and encourage usage of such a portal, one of the main goals of the project should be to investigate the reasons for failure and address these issues to successfully implement a centralized portal.

IAV Hassan II

IAV Hassan II (IAV) actively focuses on South-South and triangular cooperation, which can be seen in its initial training of 1,400 engineers and veterinarian doctors from African partner countries. Currently, 10% of enrolled students each year come from IAV’s partner countries in Africa. The main research areas are on water management and animal health and they target extension services such as ONCA. IAV expressed the need for institutional KM systematization, solutions to prevent the loss of knowledge, and enhanced knowledge accessibility through increased capacities.

Policies

National policies only partially enable adequate access, management and exchange of knowledge in the sectors relevant to IAV, such as animal health.

At IAV, managerial and administrative staff are aware of KM policies. IAV mentions constraints with respect to financial resources, staff numbers and capacities for implementing policies around KM. The Directorate of Scientific Research and Postgraduate Studies at the university is planning to implement measures to improve the information system and to evaluate KM. Ideas have already been validated by the IAV and considered as part of a future strategy.

The Ministry of Education is responsible for the policies that affect IAV in terms of education, however, the Ministry of Agriculture also has a say in developments around formal studies relating to their field. Further, the Ministries of Environment, Internal Affairs and Energy also shape policies that affect the activities of IAV.

Several CBOs or CSOs are involved in IAV's research activities and in the production of knowledge, but they are not involved in developing policies.

Knowledge

Access to research, education and training at IAV is mainly regulated by policies and regulations, but it seems clear mandates for such at the university are missing. There is a lack of KS and exchange in the relevant sector. Institutional processes for KS do not exist and training opportunities, although considered essential and of high priority, are insufficient. IAV has a partial capacity to encourage the creation of knowledge networks and information sharing for better knowledge access. Such networks are usually formed through individual exchanges between researchers.

Currently, different tools and techniques for KS are being used, which include a library system platform, the organization's website, email groups, and the distribution of print material. A newsletter was also previously circulated but has now been discontinued. Three to four journal reviews are developed by staff and students each year. Internal and external communication processes need to be defined.

Specific training should be addressed towards university employees to be involved in a project. Up to now, no specific training has been implemented that could help staff in KM.

IAV intends to digitize its publications through a digital transformation project but needs support with the implementation processes.

Partnering capacity

IAV is active in several networks and has the human resources and capacity to engage with other partners, such as INRA, ENA Meknes and ICARDA. They are also a part of the French networks Grand Ecole, UniMed and a consortium including ENA Meknes, INRA and the National Forest School of Engineers.

As part of a digitalization strategy, agreements with other universities are being digitized and recorded using Excel. However, resources for creating and maintaining partnerships are limited and the capacities for such – beyond personal efforts – need to be strengthened. There are no learning opportunities for non-technical skills to help encourage and develop partnership dialogue.

Implementation

Individual efforts are the main driving force that control the planning and successful implementation of projects. There are no sufficient skills in project management and M&E. The IAV respondent mentions that the staff would benefit from training related to these areas.

KM baseline

Technical infrastructure for KM is in place but needs updating to increase efficiency. The Agricultural Center of Documentation at the university is about to be renovated, which is anticipated to finish July 2019.

An integrated system of library management (SIGB) is in place at IAV and the implementation of a security system in accordance with SIGB is ongoing. A plan is available for the implementation of the scientific information and documentation policy, which could allow access to internal and external partners' resources, but is yet to be implemented. Information of the Moroccan Agronomic and Veterinary Sciences is fully accessible on the IAV website.

Internet speeds needs to be increased and hardware at IAV needs to be upgraded to allow adequate KM. Software and other tools also need upgrades but the budget for this is restricted and strong advocacy is needed to convince decision makers at the Ministries of Agriculture and Finance to undertake such investments.

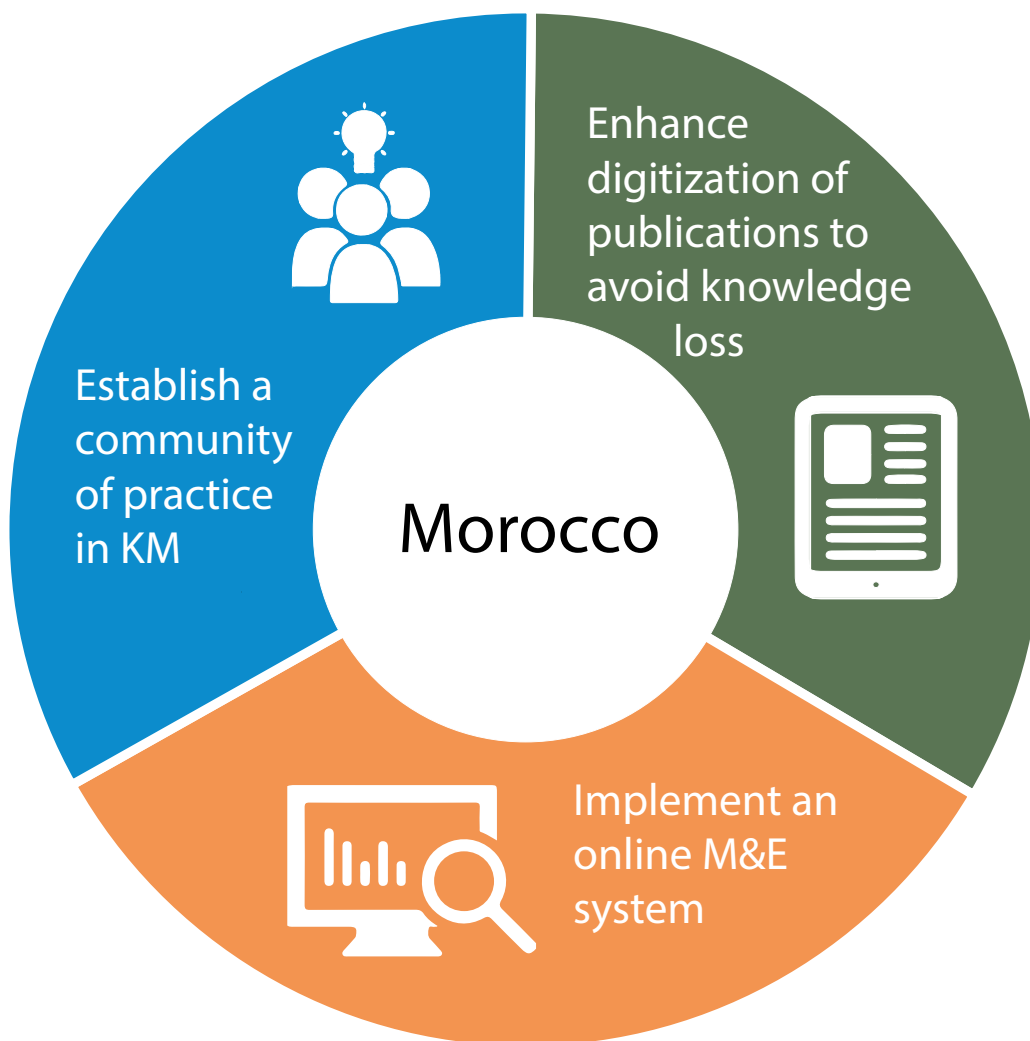
Summary and recommendations

Policies at IAV partially facilitate adequate KS and KM and the management and administrative staff are aware of the KM policies in place. However, due to some overlapping mandates of the Ministry of Education and Agriculture, certain policies are not always clear. CBOs and CSOs are not deeply involved in shaping policies.

There is a lack of KS and knowledge exchange in the relevant sector. Institutional processes for KS are non-existent and training opportunities are insufficient. A lack of financial and human resources prevent IAV from further advancing in KM and KS. New investments seem unlikely as recent improvements are already underway and will soon be finished.

IAV would benefit from the project implementing a KM platform to increase information access,

Figure 3. Three important recommendations for Moroccan stakeholders



and from training to drive change in KM. They would also benefit from forming new partnerships, which might lead to the funding required for the envisioned changes.

ONCA

ONCA was formed in 2013 to transform the knowledge it receives from Moroccan Ministries, INRA and other research institutions into useful knowledge for farmers so they can advise on best practices.

Policies

Policies at ONCA are regulated by the Ministry of Agriculture, which has a clear mandate on the activities of the office. ONCA apply national policies within their knowledge extension services.

Knowledge

The office had a visit from the EU delegation in 2017 to establish a KM system. A strategy for training

ONCA staff in KM is in place and an evaluation of staff training is carried out immediately following delivery. Follow-up evaluations are also undertaken at a later stage. Training topics include adoption of agricultural technologies and trainer training e.g. for extension experts.

Knowledge exchange between ONCA and its partners is carried out to some extent, but the key challenge is the transformation of information in order to reach farmers.

Partnering capacity

ONCA works with the non-scientific ARDNA network, which is a virtual network that connects farmers to knowledge in Arabic and French. They also work with local radio and TV networks and host FFS, experimental field trials and exhibitions with farmers. They work with agricultural societies and cooperatives and have 600 advisors in place. ONCA would like to develop more partnerships within the field of agricultural development in

order to provide the most reliable and high-quality information.

Implementation

ONCA transfers knowledge and implements policies through its activities advising farmers – but sees itself as an advisor rather than an enforcer of policies. The farmers ONCA work with usually have access to a phone with internet access, but not to a computer. ONCA collect farmer details and information on their needs within a certain territory in Morocco, and are working towards ensuring private sector extension staff are all licensed and certified. Working with a government team and the agricultural chambers, one of ONCA's EU-funded projects will install 120 centres all over Morocco to reach out to farmers. Project progress indicators are used in the EU-funded projects.

KM baseline

ONCA has not submitted the answers to the KM Baseline Survey. ONCA is active in KM and collects information on farmer needs through its FFS and experimental trials that are mainly held in rainfed areas.

Summary and recommendations

Through the project, ONCA will benefit from the training of trainers and from learning through exchange with other project partners. If they can provide clear and relatable lessons learned and experiences from the KM system they currently have in place, ONCA could act as a KM reference for other project partners.

ONCA want to engage in more partnerships and provide training for private sector extension staff. Increased exchanges with other Moroccan partners can enhance partnership building for ONCA, as well as collaboration and knowledge exchange between all Moroccan institutions.

ENA Meknes

Located in Meknes, ENA is a public Moroccan institution of higher education, focused on agronomic and rural development and scientific research, producing specialized technicians in agriculture. The institution was created in 1942 during the French protectorate of Morocco under the name of the Moroccan school of agriculture.

Some teachers at ENA use the Moodle Learning

Management system so students can access course information online, and the institution has developed online courses for under- and post-graduate students.

The ENA Meknes library uses a tool developed using PHP / My SQL to manage the book information database and has access to scientific databases and electronic journals.

Sudan

ARC Sudan

ARC Sudan was established in 1902 to explore the possibility of producing cotton under irrigation. It expanded rapidly to encompass research activities for different crops and various ecological zones in the country. In 1967, the research, which was carried out under a division within the Ministry of Agriculture, became the semi-autonomous Agricultural Research Corporation (ARC), affiliated to the Ministry of Agriculture and Forestry.

ARC has a wide network of linkages with bilateral and multilateral development agencies and regional and international research institutions. To create further partnerships with international research centres, ARC join the CGIAR fund in 2014 by signing 2-year agreement and contributing US\$1 million to the CGIAR s multi-donor trust fund in 2014-2015. As a donor to the CGIAR fund, Sudan benefit from world's largest agricultural research partnership in the fields of development and dissemination of improved crop varieties, sustainable agro-forestry and integrated crop-livestock systems.

Policies

Sudan has more than one ministry that enclaves policies relating to crops and livestock, which sometimes creates difficulties to address production issues and constraints faced by producers. In addition, there are no institutional linkages between research and extension. Moreover, extending credit to farmers is not included as a provision within production packages developed and released by research institutes, usually provision consists of technologies addressing various topics within the domain of agriculture.

In Sudan, the Ministry of Agriculture and Forestry, the Ministry of Animal Resources, Fisheries and

Pasture and the Ministry of Finance and Economic Planning are involved in shaping policies that affect ARC Sudan and have clear mandates on ARC's activities. CSOs and CBOs are not involved in developing the mandates of the above.

Limited awareness of policies and conflicts with other policies are the main obstacles for effective KM at ARC. A possible solution would be to conduct awareness workshops with the different ARC stakeholders.

Knowledge

National policies do not facilitate adequate KS at ARC and there is a lack of transparency which results in poor institutional awareness. Theoretically, training and access to research is regulated by policy but in practice, this is not always the case.

Agencies in the agricultural sector are not adequately managing and exchanging knowledge and information, since policies demanding this are not in place. However, some UN projects in the country are addressing this by forming steering committees.

ARC Sudan has no processes in place for KM and KS, however, some training for KM is available. Training is usually provided by the UN and other NGOs depending on the projects. There is no concrete mention about KM sharing tools and techniques other than use of the internet – training on the use of the internet has been carried out only for administrative staff, with defined training goals.

Partnering capacity

ARC is part of networks, namely South-South and the African Forum for Agricultural Advisory Services, and partners with institutions such as ICARDA, ASARECA and ICRISAT.

It seems ARC Sudan is lacking the capacity to access the knowledge and information of other organizations, whilst ARC Sudan's information can be accessed by others. ARC is well prepared to engage with other stakeholders and go into dialogue with strategic partners. ARC has scientists capable of conducting partnership communication and facilitation training.

Implementation

Central and decentralized authorities are committed to the implementation of ARC Sudan's

work and to providing an adequate budget for it. External partners are also involved in the implementation and evaluation of activities implemented by international and / or regional organizations. Project management skills are at a sufficient level for project implementation and follow up, however they are not utilized to the full extent. ARC has a directorate in place for M&E, but it is not effectively implemented.

KM baseline

Adequate technology is in place for KM, however the internet is not always reliable. Internet, WhatsApp, reports and meetings are used to facilitate KM. KS takes place occasionally, mostly through meetings and 'release committees' when new varieties are released. Communication products have the proper attribution or licensing, however, not all knowledge products are gender and youth sensitive. However, ARC does address production problems for crops grown predominantly by women, such as okra, cowpeas, and hibiscus. The main target audience of ARC Sudan's knowledge is the Ministry of Forestry, regional organizations such as ASARECA and ICRISAT, and project donors such as the African Development Bank.

Whilst no communication officer is in place, research results are communicated through ARC press releases and field demonstrations. Sometimes local TV and radio are used to support dissemination.

Monitoring of communication products is carried out occasionally by the ARC directorate of M&E. There is no specific monitoring platform in place and no standardized terms or vocabularies are used for managing knowledge. Indicators for monitoring are observed but it is not clear if academic or non-academic indicators are among them. Sharing knowledge is considered less important than producing impactful knowledge, but it is not known if M&E of ARC's projects is used for institutional learning.

Summary and recommendations

Different ministries governing policies affecting ARC and the agricultural sector in general result in a lack of clear direction and conflicting instruction in Sudan. A possible solution would be to conduct awareness workshops with the different stakeholders involved. As CBOs and CSOs are not involved in shaping policies, awareness raising sessions with these groups

and greater interaction with the respective ministries might be a purposeful approach. Policies facilitating adequate KS are not in place and knowledge is thus not shared to the desired and potential extent in the agricultural sector. Several UN projects and NGOs have tried to tackle this issue, but did not have KM and KS transformation at their core. ARC Sudan has no KM or KS institutional processes. Some training has been provided on KS tools, but only for the administrative staff. Setting up a KM plan and implementing institutional KM processes is of significance. Skills for project implementation and follow up are present within the organization but not fully utilized.

The directorate for M&E at ARC does not work efficiently and needs improvement. Monitoring skills are in place and external partners and ministries evaluate ARC Sudan's work. ARC Sudan will benefit from the project's partner exchange activities and from the possible implementation of a KM platform and related training. ARC Sudan has the resources and skills to engage in partnerships but should try to build further relationships with more varied partners.

KariaNet

KariaNet was founded by IFAD and the International Development Research Centre (IDRC) in 2005 to enhance the effectiveness of international development projects and programmes that serve the rural poor. The first phase, KariaNet I (2005-2008), worked with 10 IFAD-funded projects in five countries and was managed jointly by IDRC and IFAD. KariaNet II (2010-2013) worked all over the Middle East and North Africa (MENA) and had as its 'main clients' – the IFAD and IDRC-funded projects in the regions. A third phase was devolved to the Environment and Sustainable Development Unit of the American University of Beirut in February 2013 and is present in 10 MENA countries.

KariaNet introduced the Sudan e-Agriculture Strategy and Action Plan (2018-2020) with a focus on ICT use in agriculture and a proposed KM approach based on the project's experiences and capacity development activities. A circular model is highlighted in the strategy, where KM practices are defined at the partnership level and capacity development activities are implemented accordingly; overall feedback on the resulting achievements then informs the development and adoption of new KM strategies. This model

stresses the importance of consensus building in partnerships and M&E practices to assess results consistently, and on learning for improved institutional awareness.

Policies

Sudan has immense resources in terms of arable land and livestock but fails to utilize them. Constraints in agricultural policies include a seemingly top-down KS approach, which does not recognize indigenous knowledge or provide a feedback loop from farmers to extension agencies and ministries. Policy investment plans strive to engage the public sector to play a vital role in agriculture through various initiatives proposed in the Sudan National Agriculture Investment Plan (SUDNAIP) 2016-2020.

Knowledge

Farmers are not listened to, extension staff are poorly trained and bad operating facilities hold back extension staff from visiting farmers when they want to. Experience exchange is much desired among local farmers and it regarded as a key challenge to agricultural development in Sudan. Farmers trust each other and their local community over other entities, and there is demand for an extension system that uses local languages to address local needs.

There is therefore a need for centralized systems that ensure KS among farmers and allow for feedback to centralized authorities so they include that information and learn from the feedback as well. Extension agents play a vital role in making knowledge accessible and need to be trained on KM and KS. Any extension information also needs to be affordable for rural farmers.

Another identified gap is the absence of linking indigenous knowledge to scientific research. Overcoming this gap by linking the two can play a vital role in addressing cultural and trust issues between farmers and researchers and advancing KS in Sudan. An attempt by KariaNet to assess the existing knowledge centres raised two main questions:

- To what extent do the centralized agricultural KM systems support knowledge center access and utilization of agricultural knowledge by farmers?
- How can the existing agricultural KM systems support capture and sharing of indigenous

agricultural knowledge and best practices? Agricultural policies in Sudan are driven and built on country-wide solutions but fail to address local needs and take into account mistakes of the past made in previous projects. KariaNet's activities can be strengthened by identifying the best practices and innovations that provide an effective and efficient response to food security, agricultural and rural development challenges and opportunities.

The following are suggestions and learnings from the organization on how to emphasize the achievements of the previous phases within ongoing activities:

- Although not necessarily interchangeable terms, KM and KS terms should be used together to acknowledge a structured capitalization of knowledge, its storage and retrieval (KM), and the human processes and cultures for peer exchange and mutual learning that constitute KS;
- KariaNet activities have been cost effective as they were undertaken in line with existing ministry projects and used their resources, timelines and intellectual property. Some actions were carried out on a cost sharing basis – especially personnel training, and project panels and seminars;
- Improve coordination between donors, local actors and government;
- Create KM national and sub-national forums and communities of practices / interests, and establish national KM systems that encourage documentation;
- Advocate for and establish a mechanism for close collaboration between KariaNet's technical personnel and decision makers for better implementation of KariaNet activities;
- Training and capacity building in KM / KS should be delivered for KariaNet staff to enhance information dissemination at the national level;
- Enhance local interconnectivity and networking by best use of e-mails;
- Work more on collecting, organizing and publishing local knowledge and making it available on the KariaNet network;
- Enhance the role of social media to improve networking and information access;
- Enhance website interfaces and forums to be in multiple languages;
- Develop national KM / KS strategies that take into consideration the role of the government, and transversal cross-cutting themes;

- Invest in champions: advocacy for KM / KS and the operationalization of any KM / KS strategy would need skilled local champions. While KariaNet can distill the message regionally, only champions can move things at the country level and hence strengthen broader regional momentum;
- Address the segmentation between research and extension by making it use / user driven. This would entail both the research and development and the extension sector having to move beyond their 'comfort zone' to embrace multiple views of the users, and develop practical, out-of-the-box solutions that can be used;
- Mainstream agricultural KM / KS with emerging priorities that are organically related to agriculture, such as climate change, food security, environmental conservation and natural resource management;
- KariaNet activities and project failings and successes should be shared with governments to inform national KM / KS strategies;
- National involvement of all relevant stakeholders within KariaNet activities would play a major role in achieving the main objectives.

Processes are in place at KariaNet to facilitate KS and KM and emphasize cost effective measures, including regional and international partnership. However, there are weaknesses in many KM and KS areas and hence, plenty of technical and non-technical training measures could be undertaken. Establishing an intranet system and KS platforms is also of importance at KariaNet.

Partnering capacity

The following points were suggested for KM advocacy and capacity building:

- Establish KM technologies, groups and innovations, including: e-Learning platforms, knowledge networks, communities of practice, a knowledge base, discussion forums and a help-desk;
- There is a need for a collective, coordinated effort to mainstream KM / KS at KariaNet;
- There are significant opportunities for cross-fertilization and mutual learning that were identified throughout KariaNet phases I and II;
- Taking into consideration the complexity and magnitude of problems faced by the agricultural sector, KariaNet should follow an approach that promotes 'solutions' (success

- stories, best practices, working models) rather than just focusing on the problems identified;
- Promote evaluative thinking and learning from experience;
- Put farmers at the center of interventions;
- Knowledgeable and proactive national relays play a vital role in the efforts of KariaNet in the broad national sphere;
- Networking remains limited and mostly donor-driven, whilst the private sector is virtually absent and left to pursue an agenda of its own. There is a need to increasingly make room for the private sector through sectoral, value-chain approaches;
- Trade unions and farmer organizations are also almost totally absent from KM / KS systems, although they are supposed to be the main knowledge 'users';
- Factors that constrain the adoption of KM-KS systems within agricultural and rural enterprises relate to poor bureaucracy and inter-organization coordination, poor communication within the KariaNet network, inadequate local management capacity and the absence of qualified personnel in KM.

KariaNet has the ability to access other organization's knowledge and vice versa. They are a network themselves and engage with many partners to facilitate KS. Staff have basic KM / KS knowledge and an e-Agriculture Strategy is in place at the organization and will run until 2022.

Implementation

There are no clear KM-KS processes, M&E only evaluate their own projects, there seems to be a lack of external evaluation that raises growing concerns.

A KM (and M&E) system that performs the following functions is needed:

- Address the fragmentation of knowledge sources by creating national storehouses (such as agricultural knowledge tele-centres) that can provide unrestricted access to data;
- Produce a results-based M&E system as an integral component of the KM and innovation mainstreaming activities of the e-Agriculture Strategy;
- The system should focus mainly on the outputs, outcomes and impacts for the nine specified ICT programme areas, and will be employed to track, monitor and evaluate the e-Agriculture Strategy performance;

- The M&E system will also monitor input deliveries, and understand, facilitate and strengthen the existing M&E systems in the different projects, programmes and institutions. It will identify the indicators that will be used to monitor the planned objectives;
- The crucial starting step will be setting-up and assigning the baseline indicators. While some indicators are readily available, others may need to be generated from surveys or through research and consultations with concerned organizations;
- On the other hand, the end and annual targets will be derived from the strategic objectives of the various ICT programme areas. The baselines and targets will be the main focus for progress reports. The overriding goal of the M&E is to assist in the realization of the impact of the e-Agriculture Strategy. It is also important in ensuring that the interventions produce resilient and sustainable results. The system should effectively contribute to the following:
 - Decision-making, which may be linked to interventions at all levels of the e-Agriculture Strategy. This includes macro-level decisions related to policies that cut across sectors and affect the overall development process;
 - Accountability which provides critical assessments that demonstrate whether or not the interventions satisfy the target groups' needs and priorities. It should help to establish substantive accountability by generating answers to some critical questions regarding the achievements of e-Agriculture Strategy;
 - Learning, sharing and KM with the purpose of improving the overall quality of the ongoing and future interventions.

KM baseline

A KM baseline could not be established but vast information has been provided regarding organizational scoring and the e-Agriculture Strategy. To realize and implement the strategic recommendations, a set of ICT solutions were identified and an action plan for 2018-2020 was developed. The action plan is envisioned to be implemented in three phases:

- After adoption of the strategy, detailed M&E

and action plans will be developed for the expected outcomes for each phase;

- The plan is a living document and would be updated periodically based on ongoing developments;
- The report and recommendations will be evaluated, critically assessed and piloted by wider groups and the learning from these would continue to enrich this live document as the country continues to progress towards achieving its agricultural and developmental goals.

Summary and recommendations

Training courses and learning routes which enable local actors to become KM / KS trainers themselves shall be a useful tool for KariaNet.

Sudanese Knowledge Society

The Sudanese Knowledge Society (SKS) focuses on development areas relating to gender equality, reproductive health and rights, and sustainable agricultural development. Its approach to knowledge is based on:

- Involving diverse communities in meaningful events;
- Triggering engagement and transformation processes; which lead to
- Social development and empowerment for food security, with the added value of understanding communities' mindsets and practices rationales.

Policies

Information and communication-related policies are affecting the work of SKS. While the policies may look good on paper, they suffer from various issues like conflicting policies, poor coordination with relevant institutions, weak implementation capacity, but also cultural readiness and the typical ills of a security-oriented state with implications for the integrity of existing data and access to information. The main difficulties and obstacles to overcome are conflicts with other policies, coordination challenges, lack of enforcement, and limited resources and awareness. The policies of the National Information Centre and National Software Centre mainly affects SKS' work. The mandates of the centre seem to overlap and are rarely fulfilled. CSOs or CBOs are not actively or democratically involved in shaping policies unless they have

an affiliation with the ruling party. Expertise is sometimes sought but not always incorporated in an effective way.

Knowledge

Current policies in Sudan and at SKS fail to support adequate KS. The main challenges relate to the local culture and politics, as well as low capacities. Getting permission and funding are the main problems for professional development. Committees exist for information sharing and funding, however, monitoring of KM / KS is not taking place at SKS.

Knowledge in the development sector as a whole is not shared widely in Sudan. The process seems to be hindered by a culture of information ownership and a reluctance to share data that has been gathered / created by individual organizations. Also, a centralized knowledge database is missing. SKS itself is managed through an elected executive committee and practices KS in all of its activities (workshops, seminars, publications, blogging, etc.). The KS events, which work to provide platforms for people to present their work, are well attended and reach out and engage with a considerable number of organizations and individuals. SKS is also organizing events to include presentations, round-table discussions, and KM software demonstrations. No formal KM training is provided locally, but is sometimes available through the programmes run by SKS.

SKS communicate via social media (Facebook, and blogs) and IT staff and researchers are confident in using KM tools. SKS supports organizations and groups with enhancing their knowledge processes, but, as a volunteer organization, do face some restrictions in terms of available resources.

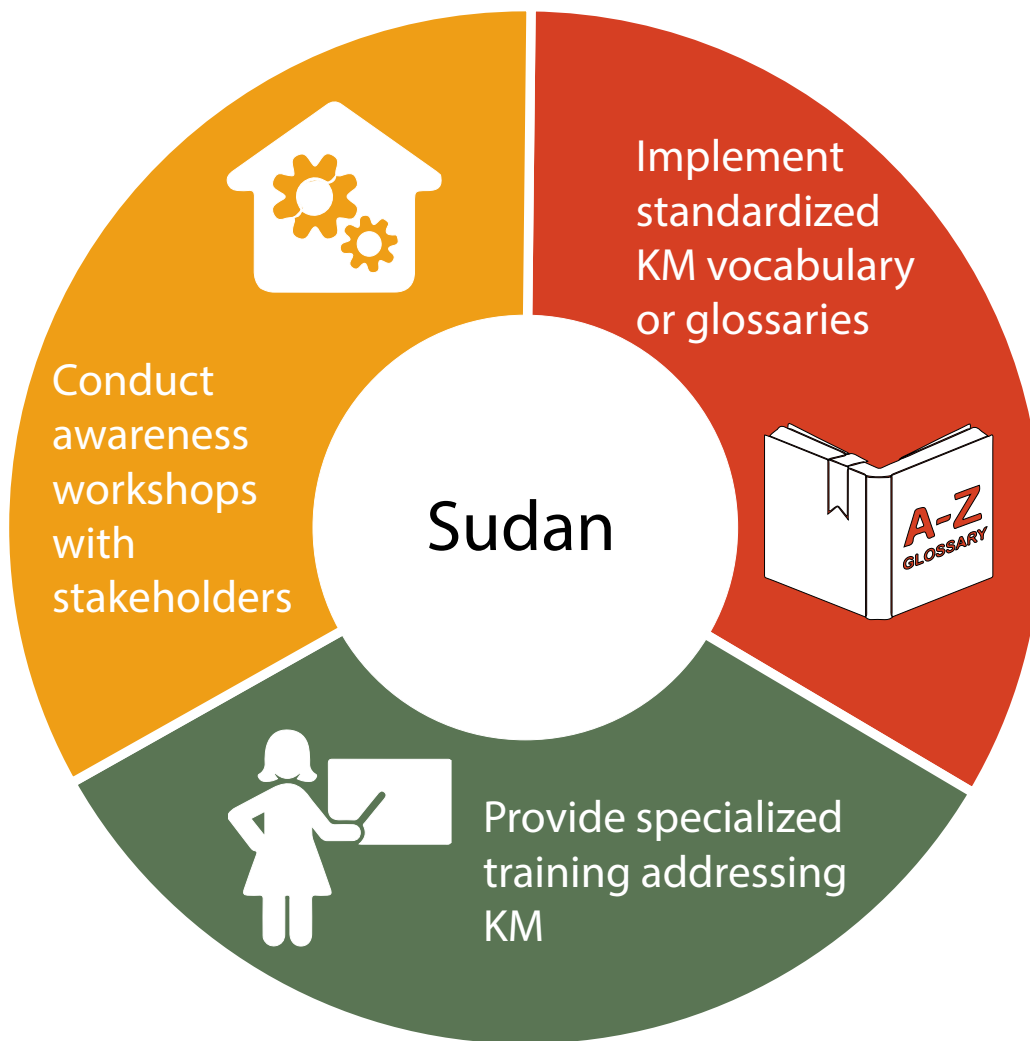
Partnering capacity

SKS is part of various networks including youth organizations and groups, CSOs working on sustainable development and the Confederate of Civil Society Organizations. They are able to access other organizations' information and trust that these groups can access their information. Skills do vary within SKS, but they have strong internal KS, and younger members of the organization are helping to extend the organization's online networks.

Implementation

No support is provided to SKS in terms of project implementation. They obtain support through

Figure 4. Three important recommendations for Sudanese stakeholders



engaging with partners who fund their activities. Partners are engaged in monitoring through a yearly assembly and through post-event evaluations. Given the diversity of the group, they have differently skilled people fulfilling the tasks of project management and organization. No formal M&E processes are in place, but progress is discussed in regular meetings and annual assemblies. Also, a number of attendees and new members as well as partners deriving from events are recorded.

KM baseline

Responses to the KM baseline survey were not completed by SKS.

Summary and recommendations

SKS is affected by policies that are in place, but not enforced and cultural reasons and coordination challenges prevent SKS from working efficiently.

While SKS’ mission is to share knowledge, this is hindered by conflicting policies, cultural thoughts on intellectual property and a missing portal for such knowledge products. SKS is actively sharing knowledge during their events which are attended well.

Topics on which they are sharing knowledge include issues relating to gender equality, reproductive health and sustainable development. KS activities include seminars, round tables, workshops and others. SKS is providing and informing on KM rather than seeking training for its own organization. Being a volunteer organization restricts SKS in their aspirations, while capacity in the organization is diverse and of high standards. SKS are part of networks and are capable of accessing other institutions’ knowledge. Support is limited for project implementation, but they reach out to partners and are engaged in enlarging their network.

M&E is not following formal processes and there are no KM platforms in place. The implementation of such a platform, together with training on its usage and an intended KM plan, would add to the KM capabilities of SKS. In Sudan, SKS could act as a leader in certain aspects of KS and KM.

Summary of institutional capacity needs

The tables below summarize the organization capacity gaps for the stakeholders according to country, as well as recommendations to address these gaps. Bulleted summaries at the end of each table highlight the key gaps and recurring recommendations.

Table 1. Capacity gaps of the Moldovan stakeholders

MOLDOVA STAKEHOLDER	GAPS	RECOMMENDATIONS
CPIU-IFAD	Human resources.	
	Monitoring completed through excel sheets, no web-based system in place.	Implement an online M&E system.
	No standardized glossary / vocabulary is used.	Introduce standardized glossaries and vocabulary to better facilitate KM and KS.
	Training with respect to KM is desired.	Provide specialized training addressing KM and introduce new tools and / or technologies to strengthen capacities within the organization.
	Staff not aware of evaluation results, hence no institutional learning is derived from projects.	Analyze and interpret evaluation results for a better understanding of processes and to foster institutional learning.
SELECTIA	No website has been created.	Implementation a website for the organization.
	Constraints in human resources due to older staff members retiring.	Find ways to make Selectia attractive for young recruits. Also provide training to new staff.
	A link between research, education and innovation is missing. Policies are not enforcing this.	Bring policy makers, research institutions and academics together to foster innovation.
	KM is done individually by each separate organization and lacks coordination.	A centralized KM system might support the efforts of coordination.
	Institutional KM lacks clear processes.	Set-up KM processes and a KM plan.
	No training on KM is in place.	Develop / participate in training on KM issues.
	Access to information across institutions is limited.	KS within and across institutions needs to be facilitated and enhanced, e.g. through a website.
	Previous training has not resulted in the desired outcomes.	Assess training needs and develop tailored training and evaluate outcomes on a regular basis.

MOLDOVA STAKEHOLDER	GAPS	RECOMMENDATIONS
	Training in the use of KM tools and technology is desired.	Provide training on specific tools and techniques used for KM and KS.
	No platform for monitoring is in place but is desired.	Set-up an M&E platform and CoP on M&E.
	No standardized vocabulary or glossaries are being used.	Implement standardized vocabulary or glossaries.
	Indicators for monitoring are in place but not observed.	Review indicators and defining processes for monitoring.
	Partnerships and networks not currently capitalized on.	Support reaching out to new partners and enhance existing partnerships.
	Work with extension services needs to be improved.	Provide training on management and communication skills.
SAUM	Lack of policies for facilitating KM and KS.	Suggest amendments to the policies
	Lack of strategy and regulation addressing KM.	Implement KM processes and a KM Plan.
	Limited human resources.	Engage with further projects to acquire more funds to hire staff.
	No database of best practices in place.	Share best practices among project partners. Learn from project partners.
	SAUM is not part of any networks. Projects are based on individual engagements rather than strategic efforts.	Create a CoP for partnerships to engage in networks and establish strategic partnerships.
	Monitoring in place and regulated by government and external partners.	Establish a monitoring platform and become more proactive rather than reactive.
	Monitoring activities are mainly concentrated around teaching and learning.	Set-up proper monitoring systems for research activities and publications.
	No communication officer in place.	Train staff on communication issues and set-up a KM plan.
	Academic indicators are not addressed. Use of standardized data and vocabularies not institutionalized.	Review indicators and data used for monitoring and improve monitoring processes.
IDIS VIITORUL	IDIS Viitorul sometimes fails to implement national laws.	
	Moldova lacks an efficient mechanism to supervise proper implementation of adopted laws.	Try to work with the government, CSO and work on awareness and introduction of useful policies that will also be observed.
	CSOs have a limited influence on shaping policies.	Awareness of policies needs to be raised and coordination efforts are required to make effect policies.
	No clear mandates from ministries – or they overlap.	IDIS Viirtorul capacities need to be strengthened for the organization to act as a mediator between other organizations, the government and the private sector.

MOLDOVA STAKEHOLDER	GAPS	RECOMMENDATIONS
	Lack of human, technical and financial resources for organizational KM processes.	Leverage funding and make the organization attractive
	Institutional processes for KM in place but need to be reviewed.	Address KM processes and implement a KM plan.
	Monitoring is done upon request and no monitoring platform is in place.	Implement a web-based / online M&E platform to enhance monitoring practices.
	A variety of communication tools are being used but processes could be streamlined.	Set-up a KM plan to improve communication efforts.
	Training on new technologies and tools for KM and M&E are needed.	Provide access to training possibilities and exchange knowledge and experiences with project partners.
		Become the local champion for the project.

The recurring gaps / recommendations for the Moldovan partners include:

- Establish an M&E platform as well as clear M&E processes. There is a desire for training for existing and new staff in this field;
- KM strategies, plans and processes are lacking and need to be developed;
- Standardized KM glossaries and vocabulary are mostly not in place, and where they are, they need to be better implemented;
- Develop and strengthen of partnerships and networking capabilities;
- Solutions need to be found to make the organizations attractive for young researchers;
- Become the local champion on KM and KS.

Table 2. Capacity gaps of the Moroccan stakeholders

MOROCCO STAKEHOLDER	GAPS	RECOMMENDATIONS
INRA	Implementation of a previous KM system failed.	Analyze reasons for failure and try to address these through a new system.
	Weather data is only available upon payment.	Negotiate agreements with partners.
	No centralized, national system for producing publications is in place.	Set-up a KM system, see above.
	There are gaps in knowledge generation and management.	Participate in targeted training to address KM. Share KM experiences and success stories between NARS.
	Shortage in human resources due to older staff retiring.	Make INRA an attractive employer for young researchers.
	Efforts are often duplicated, and synergies are lacking between NARS and actors in Morocco.	The implementation of a nation-wide KM system with access for all stakeholders will enhance communication and KS and reduce duplication of efforts.
	Learning opportunities with regards to KM are limited. Networks are missing.	Participate in training within this project. Learning from exchanges with project partners and engage in regional networks and CoP.
	Previously implemented tools are not being updated, so a move towards new tools has been adopted. Training for the new tools has not been carried out.	Participate in training on the use of new tools that have been implemented.
	Efforts for setting up a regional agricultural system in order to facilitate KS failed.	Analyze the reasons for failure. Design a new approach on how to continue, follow up or create something new.
	Internal communication can be improved.	Define communication processes and participate in training.
	Monitoring is mainly external and comes through feedback from stakeholders.	Review monitoring processes and making use of M&E platform.
IAV HASSAN II	Problems occurred with the implementation of a previous KM system between 2002 and 2007.	Analyze problems and learn from mistakes that happened.
	Information system needs to be upgraded.	Upgrade information system and train staff accordingly.
	Old documents need to be digitized.	Formulate an approach and participate in training to facilitate digitization of documents.
	There is a need for institutional KM systemization to prevent knowledge loss and enhance accessibility caused by staff turnover.	Review / analyze processes and set-up a KM plan and processes.
	Lack of human resources.	
	Lack of KS and knowledge exchange in the sector.	Foster engagement in networks and strategic partnerships.
	No training targeted at KM and KS has been provided.	Participate in training for KM and KS and learn from exchanges with project partners.

	Skills in project management, M&E and outreach are insufficient.	Participate in training to enhance capacities in these areas.
	Institutional processes for KS are not existing or exhaustive and training opportunities are insufficient.	Define processes for internal KS and KM. Set-up a KM Plan.
	Funding is rare for projects targeting KM.	Learn from partners in this project engage in partnerships and utilize networks to minimize or leverage funding.
ONCA	Extensive training for extension agents is needed.	Participate in training of trainers or similar to enhance capacities of extension agents in the long-term.
		Act as positive example and share the experience of the current KM system in case it is running and can serve as good practice example.

For the Moroccan partners, the following appear to be the most important gaps / recommendations:

- To set up an effective, nation-wide KM system in Morocco, the failings of previous KM systems should be analyzed;
- Implement an online M&E system and receive training in KM setup processes, as well in how to develop KM and KS plans;
- Establish a CoP in KM to enable greater knowledge and experience exchange and learning between the Moroccan partners;
- Enhance the digitization of publications and documents to avoid knowledge loss due to staff turnover.

Table 3. Capacity gaps of the Sudanese stakeholders

SUDAN STAKEHOLDER	GAPS	RECOMMENDATION
ARC SUDAN	Exclusion of CBOs and CSOs from policy shaping.	Learn from scenarios in Moldova.
	Lack of policy awareness and problems with conflicting policies in Sudan.	Conduct awareness workshops with the different stakeholders involved. Include CBOs and CSOs in these sessions.
	Previous NGO projects did not address the core problem of KM.	Address the main problems at the policy level.
	Project management and M&E skills are not fully utilized.	Enhance and build up these skills and enhance monitoring practices.
	No KM platform or M&E platform in place.	Set-up a KM plan and implement institutional KM processes. Setup M&E platform.
	Not sufficiently active in partnerships and networks.	Engage in partnerships, CoP and other relevant networks.
	KARIANET	Lack of clear KM / KS processes
No M&E system in place		Setting up M&E platform that allows monitoring according to the e-Agriculture strategy and SUNDAIP.
SKS		SKS could become a training provider for KM.
	Policies, coordination challenges and cultural reasons prevent SKS from working efficiently.	Enhance negotiation and partnership skills to moderate and ease these difficulties.
	No portal for KS.	Implement a KS portal / system. Join / provide training in KS, become a local champion on KM and KS and serve as a best practice example.
	Volunteer status sometimes restrictive. Support is missing.	Find alternative solutions or engage in partnership to overcome these difficulties and limitations.
	Monitoring does not follow formal processes.	Setup M&E processes.
	Volunteer status sometimes restrictive. Support is missing.	Find alternative solutions or engage in partnership to overcome these difficulties and limitations.
	Monitoring does not follow formal processes.	Setup M&E processes.

The trends in recommendations for the Sudanese partners are as follows:

- Create a KM plan and establish a KM system and defined KM processes;
- Provide specialized training addressing KM;
- Implement standardized KM vocabulary or glossaries;
- Conduct awareness workshops with stakeholders;
- Setup an M&E platform that considers the e-Agriculture Strategy and SUDNAIP;
- Engage in more partnerships to learn from other institutions / countries and setup a CoP.

Annex 1. Working group discussion guide

Within the parallel working groups, where stakeholders were grouped by countries, discussions were held in order to provide feedback on what the key KM and capacity development institutional issues were, as well as what actions needed to focus on and what should be prioritized.

In a second round of discussions, stakeholders were grouped by type of institution, i.e. academic / research institutions and agricultural extension services. These groups discussed specific problems hindering the exchange of knowledge, as well as tools / methods that could foster knowledge exchange between the beneficiary organizations. The stakeholders also outlined common areas of work.

The guiding questions for working groups were as follows:

- What information, knowledge, methodology, or policy-related gaps inhibit agricultural and rural development?
- Which are key capacities required for KM system within institutions?
- What capacities exist and which ones need to be developed for KM system?
- Key actors in the development of these capacities?
- What products KM plan should include?
- What communication materials are needed?

Annex 2. Online survey questionnaire

Survey 1: CNA for "Strengthening Knowledge Management (KM) for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe (SKMNENACAE)"

Welcome to this survey as part of the Capacity Needs Assessment (CNA) for the project Strengthen Knowledge Management (KM) for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe. By assessing capacity needs and (KM) gaps, it shall be determined which following steps can be taken to address these needs and gaps. It is envisioned that several different capacity development activities such as organizational learning and capacity building activities across the partners will be implemented.

When answering the questions below please keep in mind that this project focuses on KM, so try to tailor your answers as the follow up capacity development activities shall address gaps in KM.

For the purpose of this project we use the following definition of KM:

There are numerous definitions of 'KM' in literature. To harmonize different understandings of KM in different contexts, we use the following definition within this project that encapsulates key elements. Most definitions consider KM as the process of systematic approach to creation/generation, capture, storage, retrieval, enhancement and dissemination of knowledge or knowledge products.

There are four thematic blocks within this survey.

Policies refers to rules, regulations, guidelines, laws that affect or determine your work.

Knowledge obviously looks at the core of this project which is about KM.

Partnering capacity looks at your organization's ability to engage in partnership with other organizations.

Implementation refers to your organization's capacity to implement your work with respect to soft and hard skills.

Thank you very much for taking your valuable time to answer the following questions.

Organizational scoring

Policies

- Q1. Can you tell us something about the policies that affect your work?*
- Q2. How can they be improved?
- Q3. Where do you see the weaknesses?
 - awareness of policy (Are staff aware of these policies?)
 - coordination challenges (policies not changed according to changing needs or miscommunication between ministries or other organizations)
 - enforcement of policy mandates (policies are in place but not enforced)
 - conflicts with other policies (local restrictions, or different ministries have conflicting views)
 - resources (human, capital, time)
- Q4. Which ministries and departments are already involved in the development and administration of legislation relevant to your activities?*
- Q5. Do you feel they have clear mandates?
- Q6. To what extent are partners and stakeholders of your organization both at national, regional and local levels (Community Based Organizations - CBOs and Civil Society Organizations - CSOs) involved in planning and developing these mandates?*

Knowledge

- Q7. Do policies and regulations at a national or institutional level facilitate adequate knowledge sharing?*
- Q8. What are the challenges with respect to these policies and regulations?
- Q9. Is access to research, education and training of staff regulated by policy?* (e.g. staff needs to obtain permission to attend training or pursue further studies)
- Q10. If so, which policy regulations and how are they implemented and monitored?
- Q11. Do agencies (central, regional, local) adequately access, manage and exchange information and knowledge in the relevant sector?*
- Q12. If no, what are the constraints to effective organizational KM processes and practices?
- Q13. Do you have institutional processes for knowledge sharing and management in place?* Please describe them
- Q14. How effective are these processes?
- Q15. Are there any training opportunities for staff in your organization with respect to KM?*
- Q16. Please provide examples. How often does training occur? Who funds it?*
- Q17. What knowledge sharing techniques and tools are in use?*
- Techniques might be certain processes you follow or specific things you do Tools might be software, archives, web-based tools etc. (Please try to describe in detail)
- Q18. With respect to these techniques and tools, has any training been carried out in this regard?*
- Q19. If so, are the training methods and delivery defined based on relevant goals and profiles?

Partnering capacity

- Q20. Is your organization or department part of or becoming part of a national or sub national partnership network?*
- Q21. What are those networks? Please describe
- Q22- Does your organization have the capacity to support access to information belonging to other organizations and partners?*
- Q23. Do other organization have the capacity to support access to information belonging to your organization?*
- Q24. To what extent do staff have the necessary skills to engage in dialogue with other stakeholders and in strategic partnerships?*
- Q25. Are there learning opportunities to strengthen non-technical skills- e.g. communication, networking, facilitation, planning?*

Implementation

- Q26. Are central and decentralized authorities committed to implementation of your work and how is this commitment reflected in accountability mechanisms?* Do you get the necessary support to carry out your

- work and are the supporting institutions accountable for their actions? Please provide examples
- Q27. To what extent are your partners involved in implementation and evaluation of your work?* e.g. they might be partners you work regularly with or in projects that are involved in these processes. Please describe
 - Q28. Is knowledge in, human resources management, planning, budgeting and monitoring and evaluation at sufficient level for implementation and follow-up?*
 - Q29. How is programme monitoring and evaluation implemented?*

Survey 2: KM Baseline Survey for "Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe (SKMNENACAE)"

Welcome to this survey as part of the KM Baseline Assessment for the project Strengthen Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe. By assessing the potential (KM) gaps, it shall be determined which following steps can be taken to address these gaps. It is envisioned that several different capacity development activities such as organizational learning and capacity building activities across the partners will be implemented.

Thank you very much for taking your valuable time to answer the following questions.

Knowledge sharing processes

- Q1. Is technology (e.g. PCs, communication technology, Internet access/speed/reliability) in your organization available, adequate and allocated appropriately?*
- Q2. Can you describe the tools used in your organization that facilitate KM?*
- Q3. What is the frequency of knowledge sharing? (regular products/irregular publications)*
- Q4. Is the knowledge you disseminate showing proper attribution and or licensing?*
- Q5. To whom is your knowledge accessible?*
- Q6. Is it gender and youth inclusive with respect to means and content?*

Monitoring

- Q7. How do you conduct monitoring of your activities?*
- Q8. Do you have a platform in place for monitoring?*
- Q9. What's the frequency of your monitoring activities (continuously, regular intervals, occasionally when requested, etc.)?*
- Q10. Do you make use of standardized terms and definitions, such as glossaries and vocabularies, as references or guidelines for managing knowledge?*
- Q11. If yes for above, are those terms and definitions published or authored by an international institution?*

Evaluation and learning

- Q12. Do you have indicators, factors or metrics in place to monitor your organization's activities?*
- Q13. Which academic factors, if any, are you observing for evaluation purposes (e.g. ISI impact factor, H-Index) and why?*
- Q14. Do you observe non-academic factors?*
- Q15. Is sharing knowledge more, same or less relevant than producing impactful knowledge?*
- Q16. How do you use evaluation results for institutional learning?*

Capacities and Communication

- Q17. What are your communication processes?*
- Q18. Do you have a designated Communication Officer?*
- Q19. How does your institution or individual researchers communicate results (outcomes, recommendations)?*

Strengthening Knowledge Management for Greater Development Effectiveness in the Near East, North Africa, Central Asia and Europe is a grant project led by ICARDA and funded by IFAD. The project also works with international partners CIHEAM-Bari, PROCASUR, Virginia Tech as well as NARS, governments, and agricultural extension services in Moldova, Morocco and Sudan.

Initiated in June 2018, the project facilitates and supports KM and capacity development activities in the three selected countries and will provide practical examples of KM best practices that will be analyzed and adopted by participating institutions. Increasing the capacities of participating public institutions, by providing necessary structures and systems at the country and regional levels, will ensure that knowledge can be effectively managed for long-term growth and development.

The project website (<https://mel.cgiar.org/projects/SKIM>) provides background information and describes the project team, partners and stakeholders engaged. The website also shares key documents including the project proposal, and outlines the goals, objectives and impact pathway of the project, as well as additional resources and information on news and events.

