

National Agricultural knowledge mapping in Egypt

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The study objective

- Identify existing organisations' database in food security and rural enterprise development with a focus on knowledge management (KM) and knowledge sharing (KS) in Egypt.
- Identify national knowledge management experts and practitioners involved in sharing and communicating knowledge and transferring technologies to small-scale farmers.
- Explore the existing policies and/or national strategies regulating KM-KS in rural and agricultural development.
- Identify the different ways of sharing and communicating the knowledge between the diverse actors to reach the small-scale farmers in rural development in Egypt.

Methodology

- **Sampling**
 - **The most suitable sampling technique is the network sampling technique (or snowball sampling, chain sampling, referral sampling).**
- **Tools for data collection**
 - **The organization interview guide**
 - **Organizations website survey**

The study results

- The total number of the organizations surveyed amounted to 52, where 25 of them were surveyed using a questionnaire guide, and 41 were surveyed by analyzing its sites/networks (14 were surveyed both ways).
- Except the Central Administration for Agricultural Cooperation (CAAC), all these organizations had a website or a network, while 12 of them have two websites (one is a part of a wider network).

Information exchange ties

- information dissemination of the organizations (63 organizations) surpass that of receiving information (47), while (40) of these organizations work both ways.
- some of the source organizations mentioned other entities as a receivers, while these entities did not mention these organizations as a source.
- Traffic crossing seems can be concluded from the frequency of ties of a single organization. This frequency is:
 - ARC (6),
 - FAO (4),
 - Central Administration for Agricultural Extension Service (3),
 - Central Laboratory for Agricultural Expert Systems (3),
 - MALR (3),
 - Sector of Economic Affairs (3),
 - Agricultural Economic Research Institute (2),
 - ENAL (2),
 - UNDP (2).

Knowledge Management experts

- Diversity of names refer to the lacking of a general trend for KM led by a single or group of champions. Seven nominated experts out of the 56 were from CLAES, although no single name of the seven was repeated.
- Most of the qualifications background of the expert mentioned was related to agriculture. This might be interpreted as an underestimation of the KM role in the organizations, or at least refer to unclear meaning of what is the KM expert.

Sustainable Agricultural Development Strategy towards 2030

- The strategy suggested a National program to promote the role of communications and information technology in agricultural development
- This national program includes three sub-programs, to achieve the following goals:
 - Establishing and developing modern networks linking the different sectors as well as individuals at all levels;
 - Modernizing and developing equipment and hardware needed for raising the efficiency of agricultural information and communications systems particularly at the village level, and
 - Ensuring the overflow of information and making information available to all the parties concerned with agricultural development.

Strategy, policy, procedures and instructions to handle information within the organization

- Only 10 of the 25 organizations mentioned something about dealing with information in its general policy.
- Written procedures were applied only in 8 organizations.
- Only 16 of the surveyed organizations have a regular format to follow for data entry.
- Except CLAC and AES, it seems that data quality and accuracy criteria i.e., concurrency, validity, updating are a missing concept.
- The only announced policy was published as a part of [kenanaonline](#) portal.

Knowledge documentation media

- The most common way almost in all organizations (23 of 25) is using computers for data or information storing
- 14 organizations use servers for storing information, but only 6 of them uses it own server
- There are also 6 organizations produce or using multimedia for storage.

Usage of data/information internally or externally

Category	Organizations	Percentage
Analysis for study and prediction	14	56
Statistics and raw data	13	52
Online/offline with search engines	13	52
Processed for report writing	12	48
Within DSS programs	12	48
Others	2	8

Knowledge reproduction

- It is noticeable that knowledge processing to reproduce knowledge is missing even as a concept.
- The only application of this kind was only implemented in CLAES as expert systems, farmers problems, and recently a software for data mining to work on the farmers problems database under VERCON.

Problems of dealing with KM/KS within the organization

	The problem	Organizations	Percentage
1	Lack of training to use KM tools efficiently	14	56
2	Lack of appropriate KM tools	13	52
3	Resistance to change.	12	48
4	Insufficient communication	11	44
5	Lack of funding to acquire appropriate KM tools	11	44
6	Little or no enthusiasm of employees sharing their knowledge, therefore there should be a reward system or incentives	10	40
7	Failure to integrate KM activities into everyday activities	9	36
8	Lack of support from top management	9	36
9	Lack of understanding of knowledge management and its benefits	8	32
10	Difficulty of capturing tacit knowledge	8	32
11	Organizational culture does not encourage knowledge sharing	8	32
12	Employees do not see personal benefit in knowledge sharing	8	32
13	Lack of time to share knowledge	8	32
14	Lacking a clear understanding of which information or knowledge being confidential and which knowledge is not.	7	28
15	Failure to use knowledge effectively	6	24
16	Weak utilization of captured knowledge into everyday activities	6	24
17	Employees too busy with other work	6	24
18	KM tools are too complicated	3	12