Agricultural Extension Information and Knowledge Management & Sharing Network

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Writeshop to develop capacity building and innovation plans,

22-23 October 2019- Agricultural Extension Hall – Khartoum -Sudan

WELCOME

Strengthening knowledge management for greater development effectiveness in the Near East, North Africa, Central Asia and Europe

Writeshop to develop capacity building and innovation plans

22-23 October 2019 Khartoum, Sudan

With the support of ARC-Sudan and Agricultural Extension And Technology Transfer General Administration Ministry of Agriculture and Natural Resources

Figure [1] The Organogram Of The Technology Transfer & Extension Administration [TTEA]

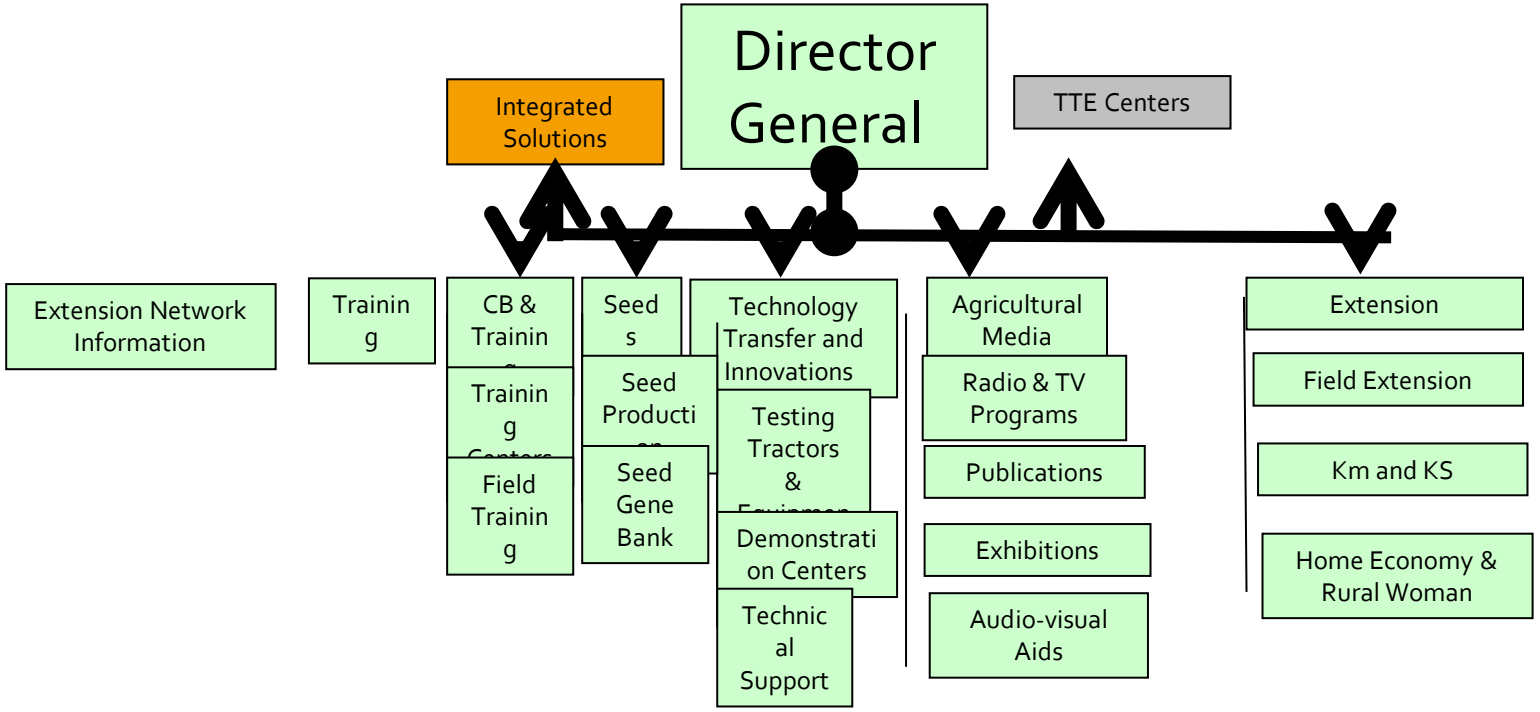


Figure2] The Organogram Of The Central & the State Departments of [TTEA]

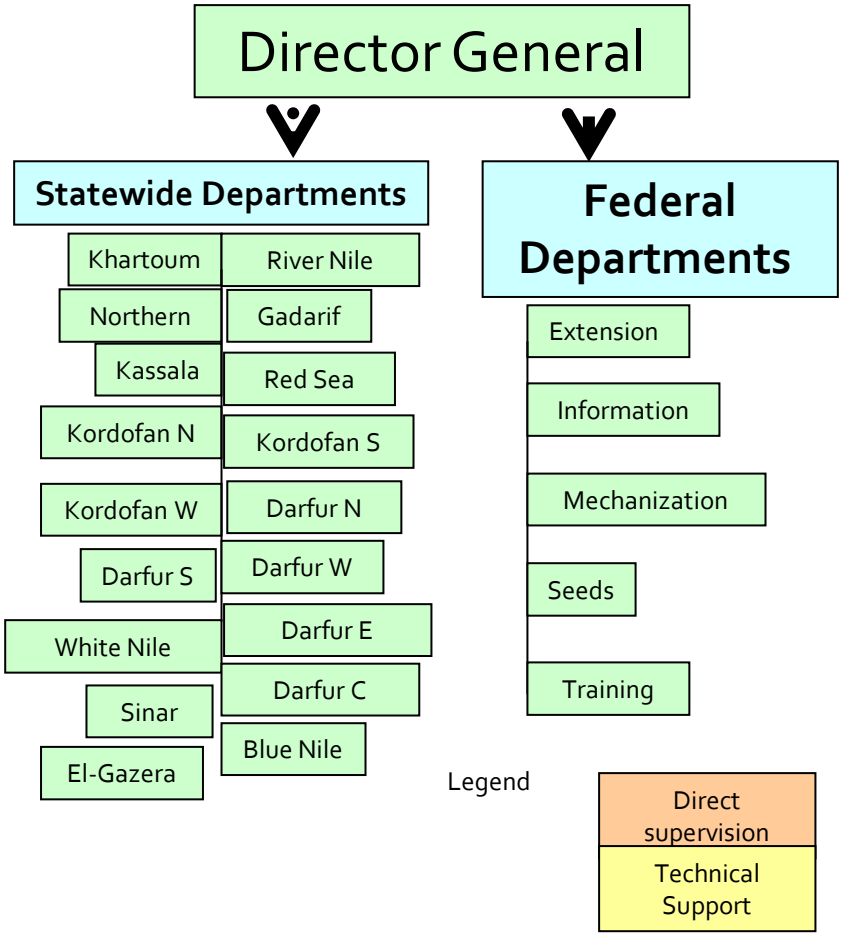


Figure showing the relation between farmers and departments at different levels

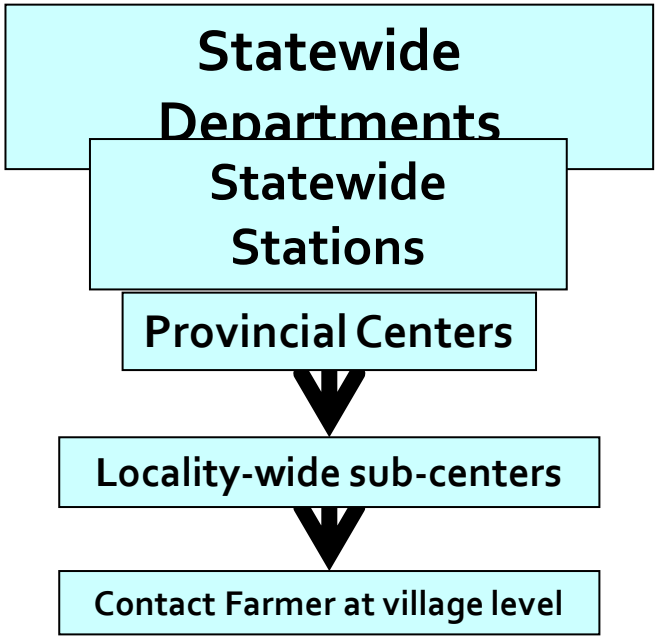


Figure Showing steps of Extension Packages Formation Gadarif Example

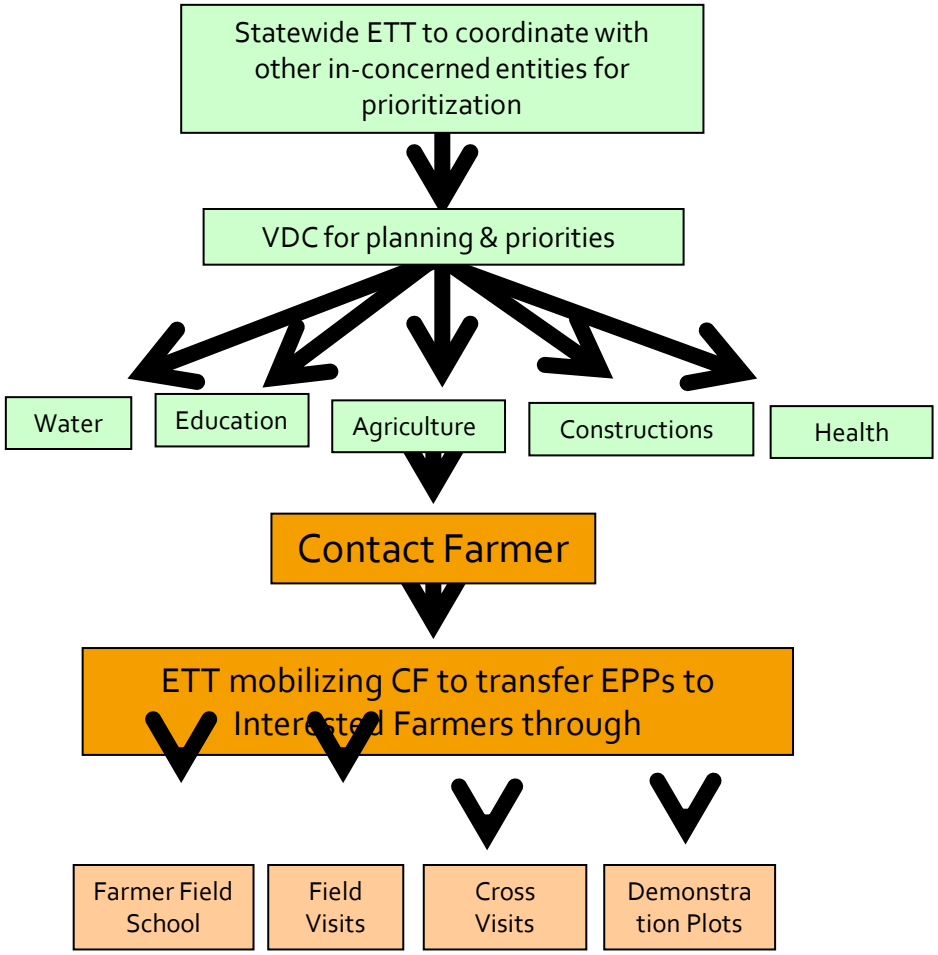


Figure is showing the Integration of the different organisations in the Extension System Cambodia Example

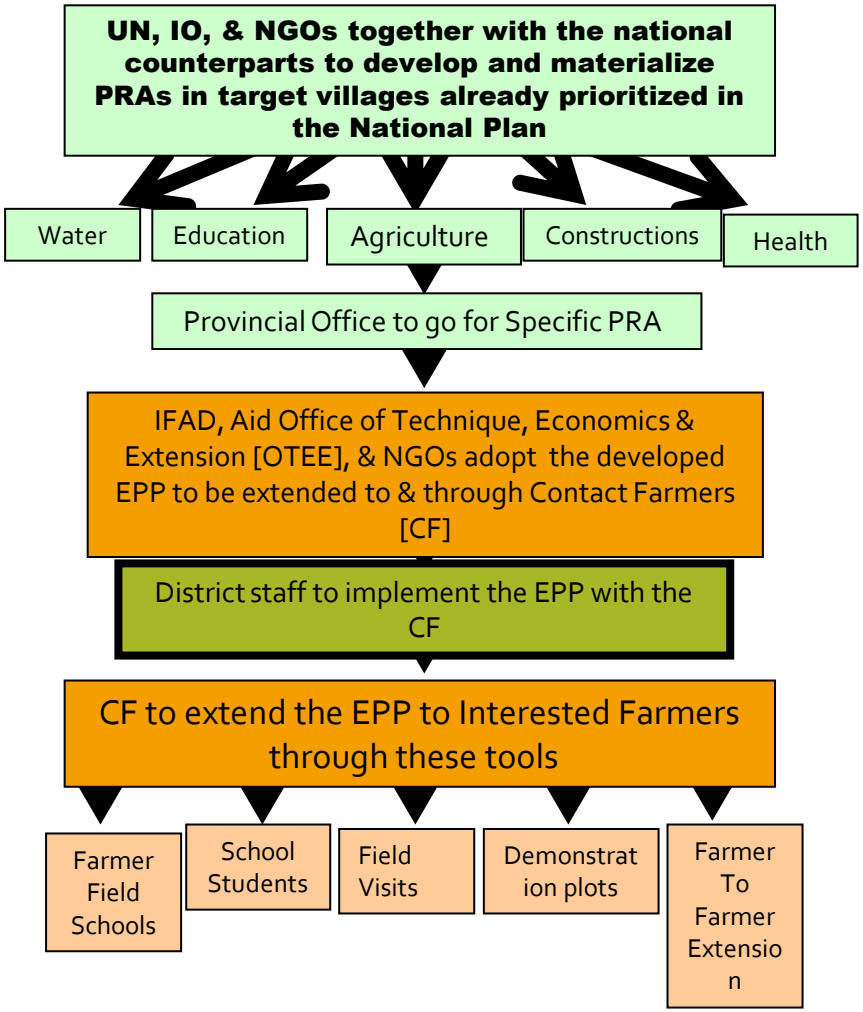
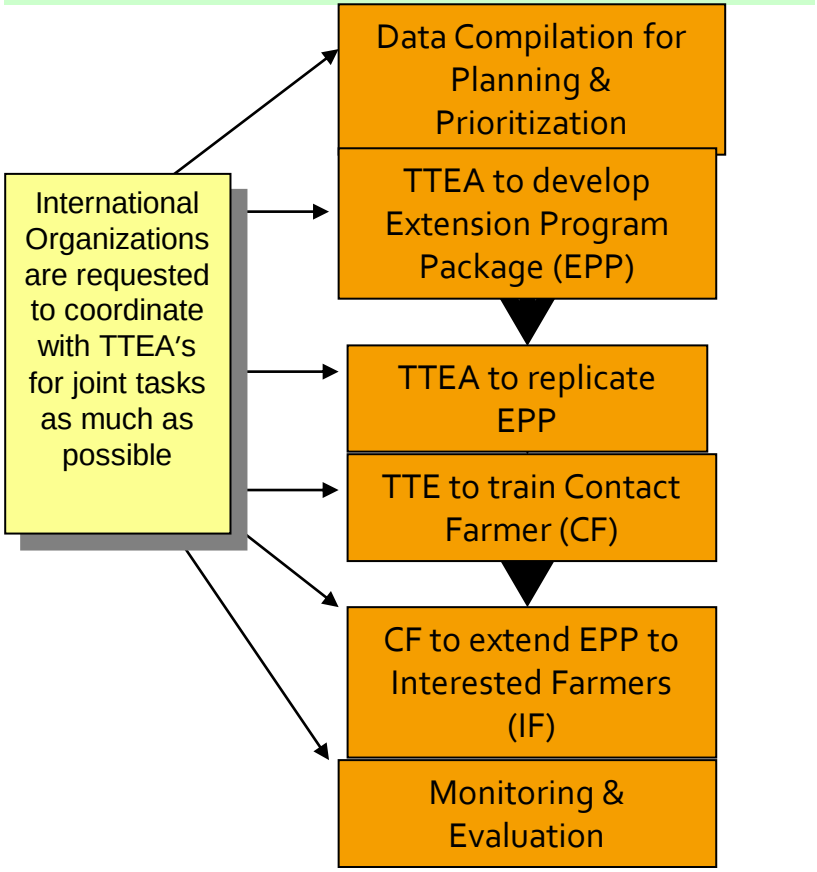


Figure showing the level of joint tasks between TTEA's, UN Organisations, International Organizations[& Non-governmental Organizations [NGO]



What is Knowledge Management (KM?)

Knowledge Management is sourcing and deploying knowledge, workable practices, and working relationships to improve organization performance.

What is KM?

Human Capital

Structural Capital

KM is sourcing and deploying knowledge, workable practices, and working relationships to improve organization performance.

Relationship Capital

What is KM?

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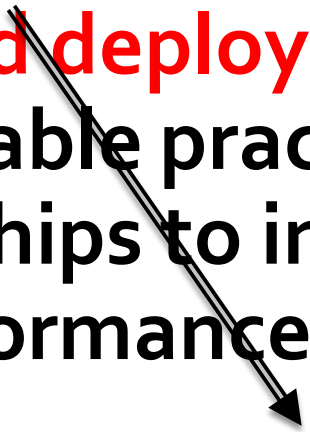

PROCESS

What is KM?

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Success Factors in the Light of Knowledge Management Theory

1. linking knowledge management to the *strategy* (serving targets),
2. developing a *culture* of knowledge sharing (trust, reward, procedures),
3. *involvement and participation* of stakeholders (ownership, user logic),
4. *capacity development* (training, technology, organisational development),
5. *contextualisation of information* (content, quality, retrieval, communication),
6. *monitoring and evaluation* (use, impact).

How can Knowledge Management (KM) help the Agricultural Sectors?

KM can help to:

- be more efficient
- be more effective in achieving goals
- push for greater accountability
- improve decision-making
- find innovative ways to grow
- harness and apply critical knowledge from other sectors

The Dimensions of Capacity Development (CD)

- In CD interventions, the three dimensions are interlinked; individuals, organizations and the enabling environment are parts of a whole.
- CD often involves the enhancement of knowledge of individuals, although the output of individuals greatly relies on the quality of the organizations in which they work.
- Furthermore, the effectiveness of organizations and networks of organizations is influenced by the enabling environment.
- Conversely, the environment is affected by organizations and the relationships between them.

The Functional Capacities Development

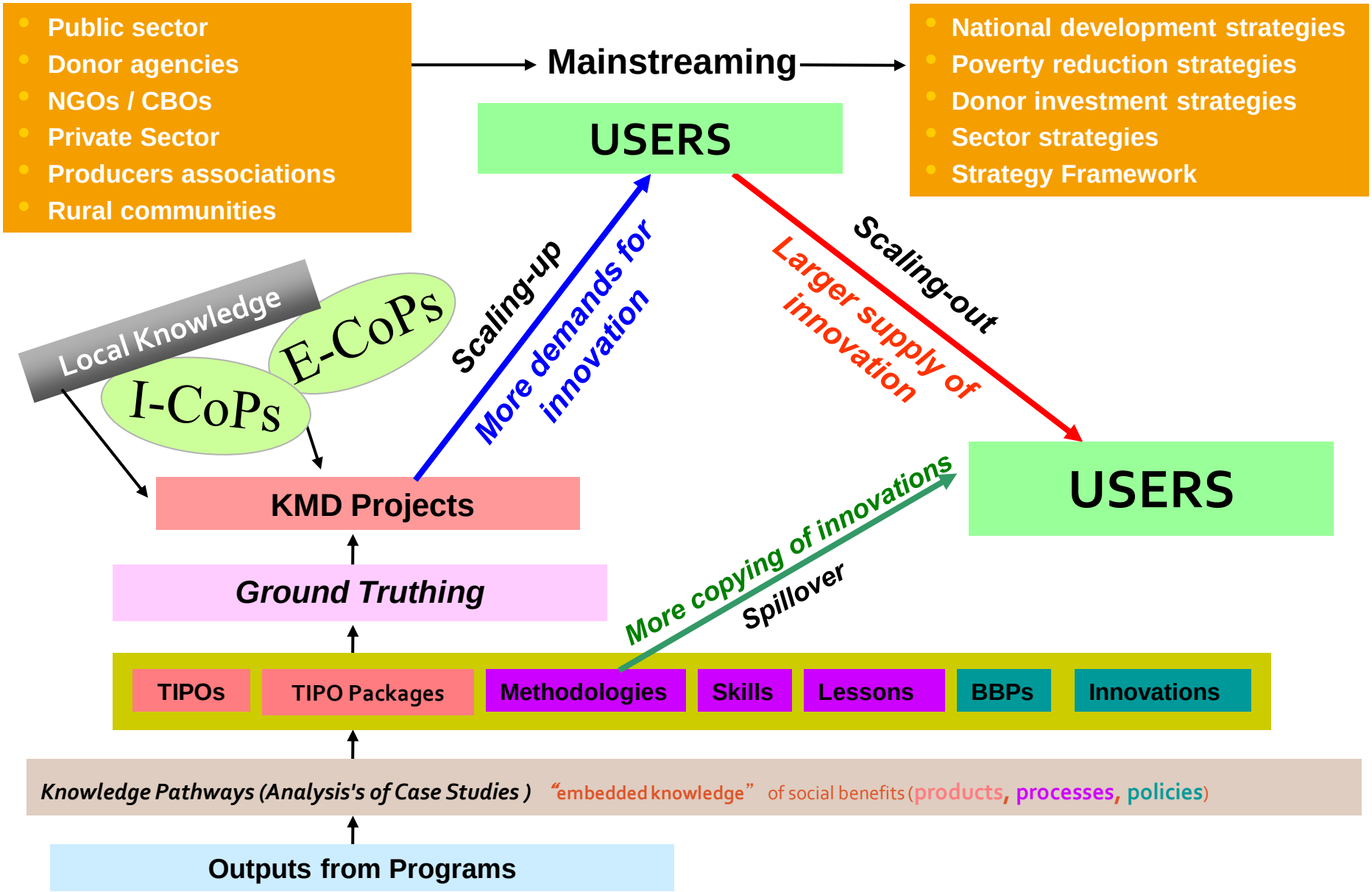
Institutional Frameworks	**Formal institutions:** – Policies – Laws – Rules and Regulatory Frameworks – Procedures and guidelines
	Informal institutions: – Norms – Customs – Other informal arrangements affecting behaviors
Organizational Arrangements	**Organizational Structure and staffing arrangements** **Networking and Partnerships for collective actions**
Individual Knowledge, Skills, and Attitude	**Understanding of:** – tasks – roles and responsibilities
	Social & Technical skills
	Know-how: – knowledge of how the task can be carried out successfully – professional experience

What knowledge to deliver?

The Key Agricultural Knowledge Elements (KAKEs)

- **Outputs:** Technological, institutional and policy options (TIPOs).
- **Lessons learned:** Knowledge of the positive/ negative factors, circumstances and conditions that affect projects and outputs.
- **Methodologies:** Approaches and methodologies developed in generating and disseminating this knowledge.
- **Best practices:** Innovative procedures, approaches and tools (e.g. Expert Systems, Decision Support Tools) that offer win-win scenarios for pro-poor growth through agriculture.
- **Technical advisory notes (TANs):** Concise communication guides of selected TIPO- packages suitable and adoptable by a range of users and stakeholders.
- **Innovations:** Improved/cost-effective new learning, ideas and approaches that address problems/opportunities faced by the rural poor. The "approaches" could be TIPO–packages, BBPs, networks, partnerships, ect.

Framework and processes for identification of the knowledge pathways, ground truthing, scaling-up, mainstreaming and scaling-out of priority outputs



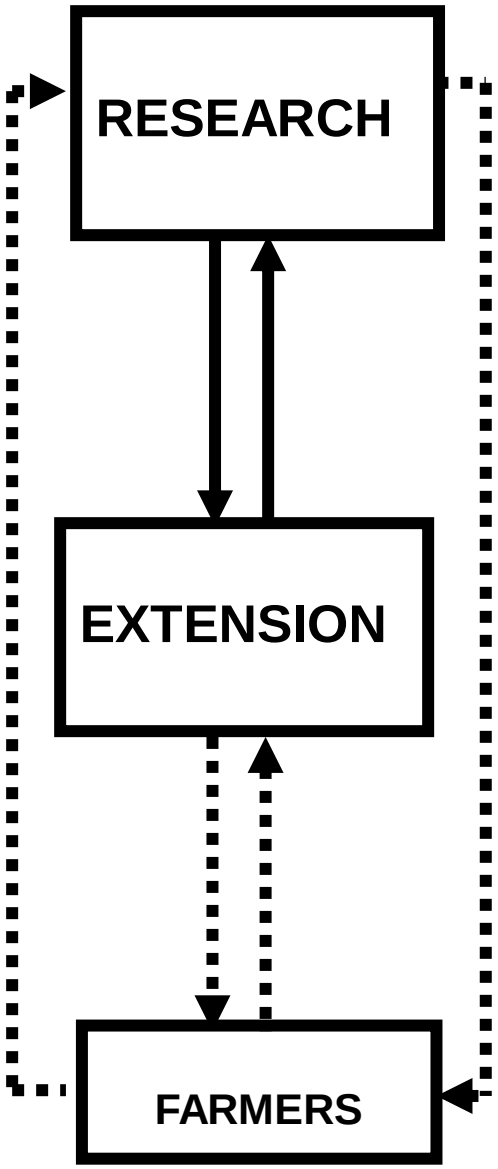
Rural Agricultural Network Model I

Virtual Extension and Research Communication Network (VERCON)

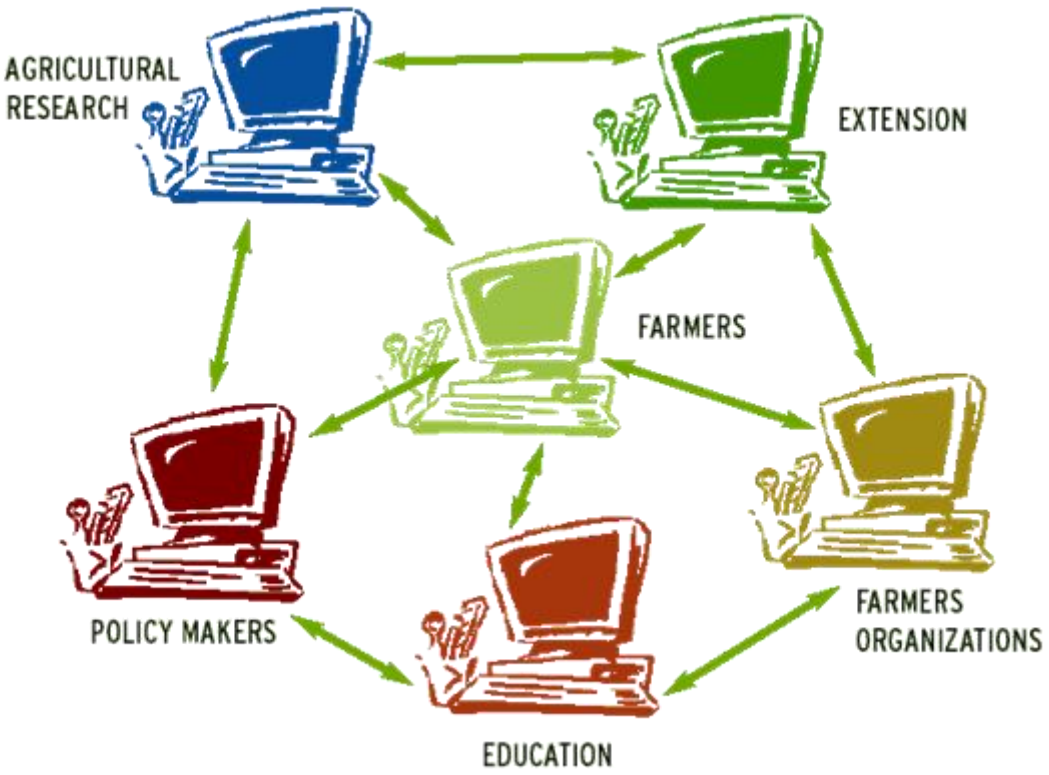
VERCON is an information and communication network that supports research/extension interaction and flow of information

- Provision of readily accessible information
- Management of large amounts of data, in real-time
- Two-way, horizontal and vertical communications

To improve the communication between extension, research, private and public sectors and institutions involved in rural and agricultural development for the benefit of farmers and agrarian businesses at rural and village level.



VERCON Structure



Communication for Innovation

- Successful agricultural innovation systems depend on effective communication of knowledge

- Extension is not just about transferring technology anymore but more about enhancing effective communication

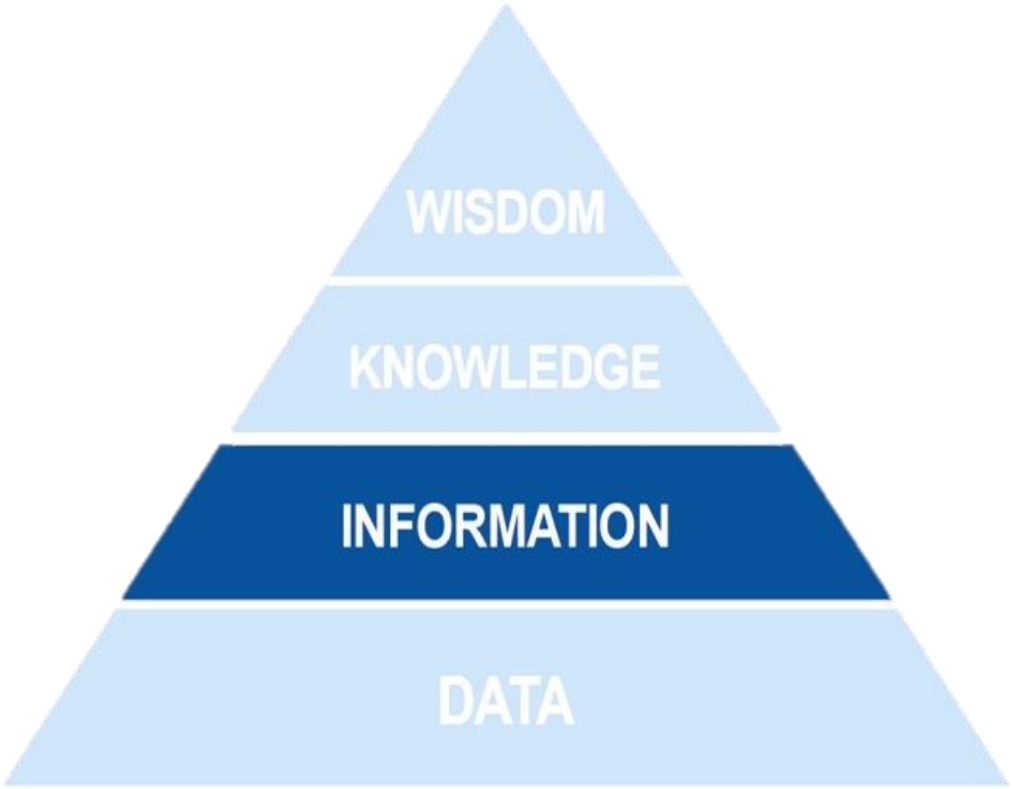
Components of knowledge

Components of knowledge

Data: Raw, unprocessed facts resulting from observation, experimentation or calculation

Components of Knowledge

Information: Data that has been given a meaning and context

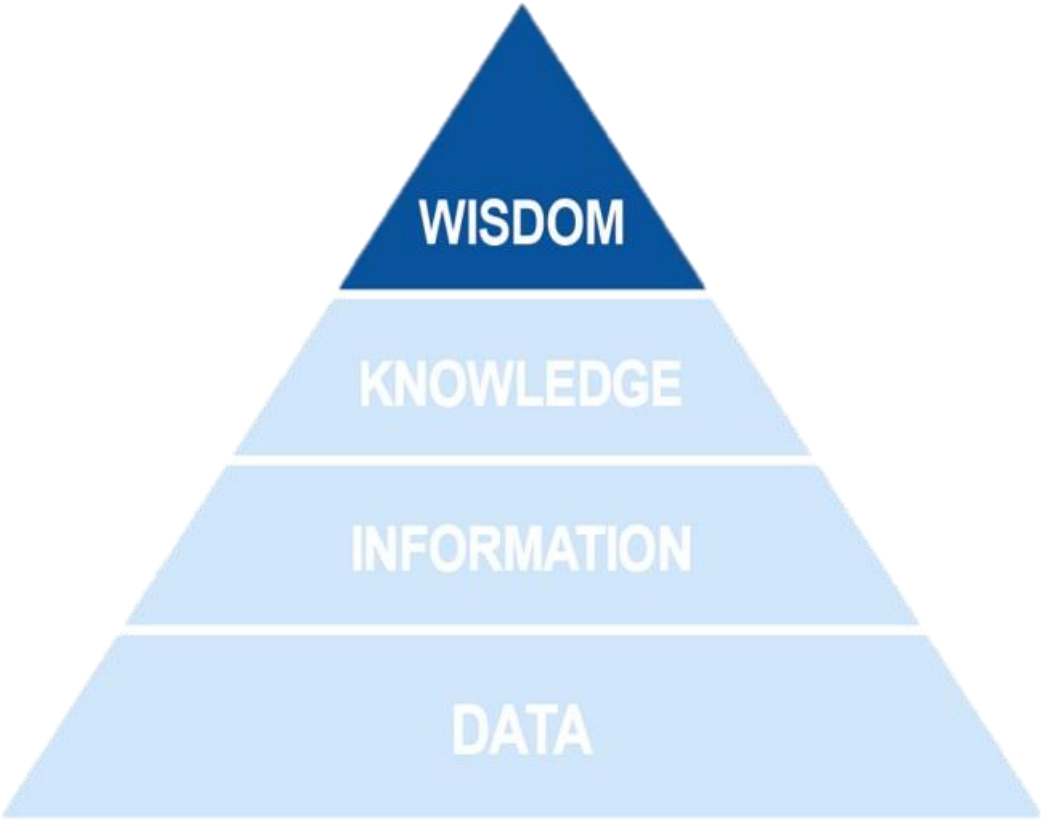


Components of knowledge

Knowledge: The practical and theoretical understanding of a subject

Components of knowledge

Wisdom: The ability to think and act using knowledge



Different Sources and Types of Knowledge

Formal knowledge

- Knowledge gained from an institution of learning
  - E.g. School, college, university

Experiential knowledge

- Knowledge gained through practice or experience
  - E.g. Apprenticeships, in-house training programmes

Explicit knowledge

- Knowledge that can easily be made visible or be written down
  - E.g. Books, training manuals, records, files

Tacit/Implicit knowledge

- Knowledge that is not easily captured with language and usually resides in people's minds
  - E.g. Experience, competence

What is knowledge management

- In today's information age knowledge can be viewed as a commodity
- **Knowledge management** is the process of capturing, developing, sharing, communicating and effectively using knowledge

Different areas of knowledge

- For innovation to be successful different areas of knowledge and skills have to be integrated
  - Knowledge about people and networks
  - Issue-related knowledge
  - Social process knowledge

Different areas of knowledge

- Knowledge about people and networks:
  - Knowing who all the relevant role players are and the relationships between them
  - E.g. Knowledge about past or present conflicts between different stakeholders

Different areas of knowledge

- Issue-related knowledge:
  - Knowledge of the characteristics and workings of different systems (biotic, abiotic and social)
  - E.g. Background knowledge of the social, cultural, political and economic situation of an area

Different areas of knowledge

- Social process knowledge:
  - Knowledge about different network building, social learning and negotiation processes in a specific area
  - E.g. Knowledge about local preferences regarding conflict resolution

How can Knowledge Management (KM) help the Agricultural Extension?

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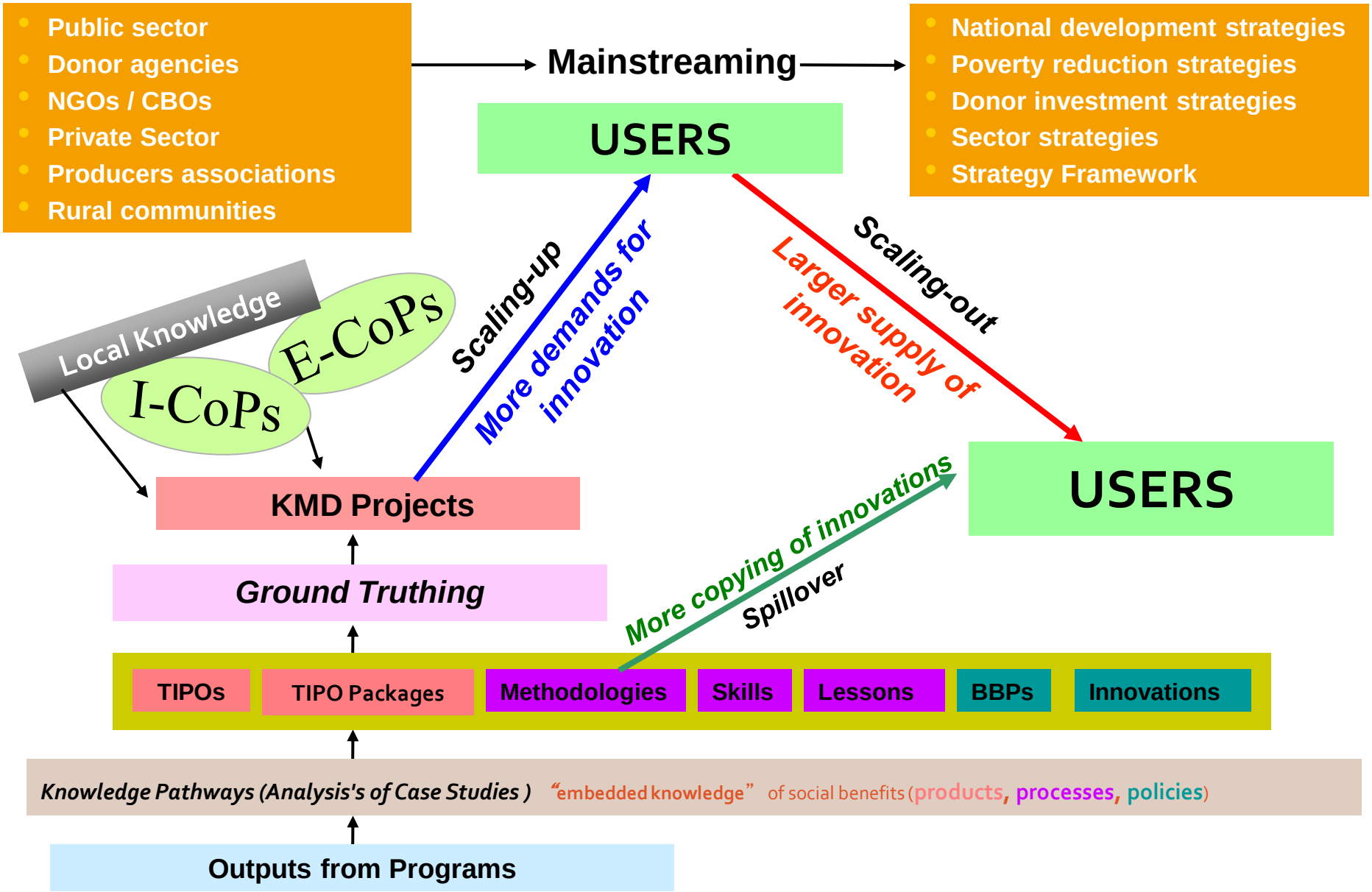

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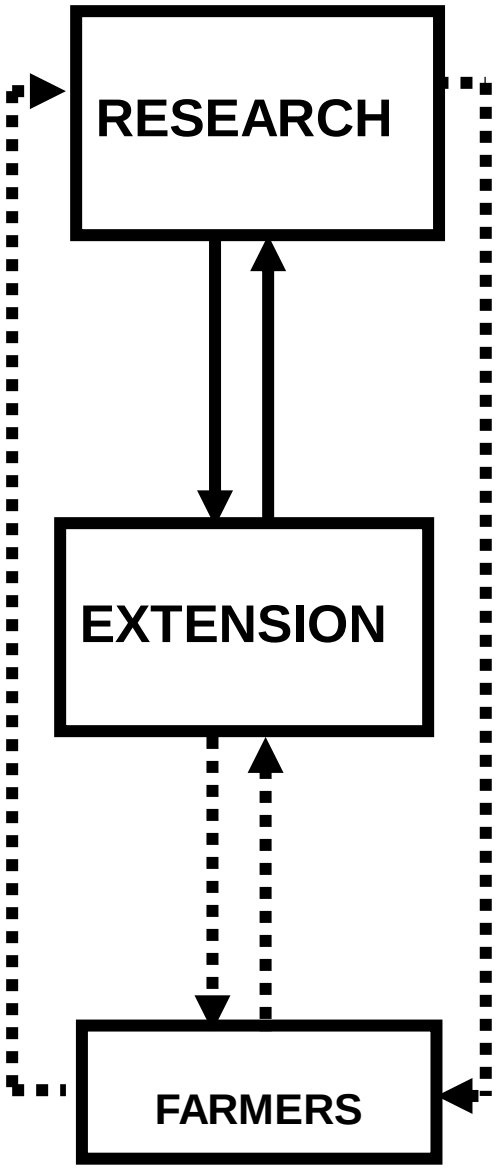

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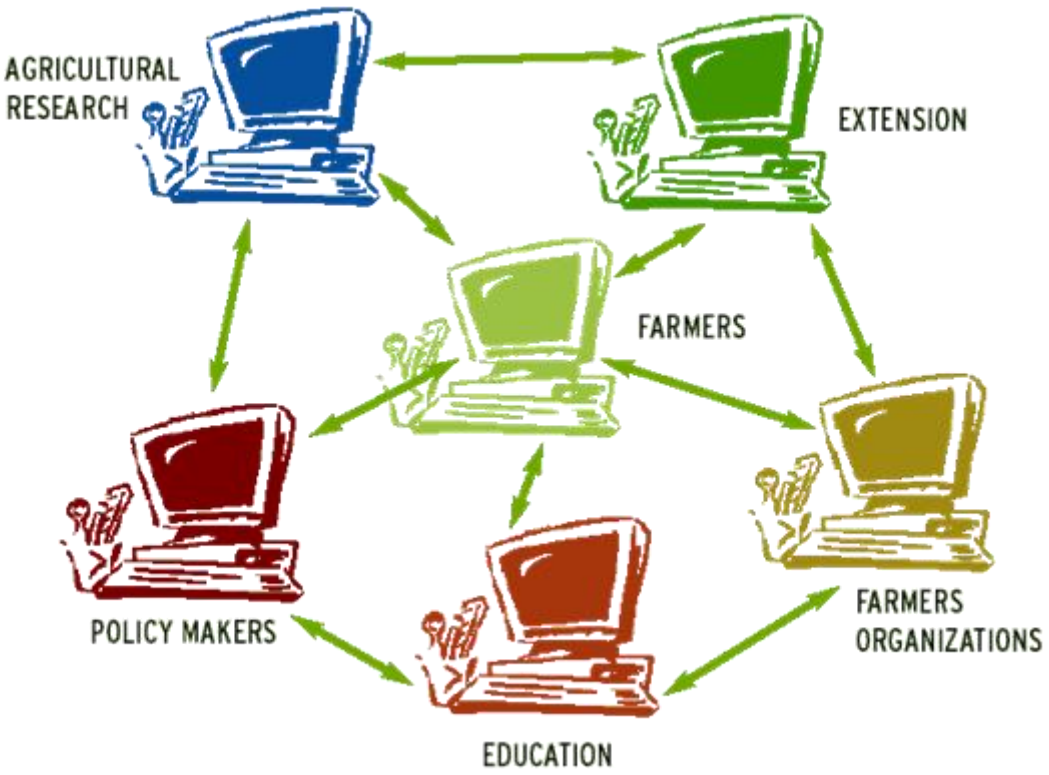

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Communication Barriers

- **Communication barriers** are any problems or limitations that prevent the flow of information from a sender to the intended receiver.
- **The message never reaches the target audience**
  - Inadequate choice of communication media
- **The message reaches the target audience but they do not pay attention**
  - Information overload or fatigue
  - Wavering attention
  - Relationship between the communicating parties is strained
- The message is not understood or correctly interpreted
  - Incorrect message content
- **The audience disagrees with the message**
  - Failed to consider the target audience's interests, aspirations, beliefs or culture.
- **The audience ignores the message**
  - Shortage of starting material (capital or labour)
  - Failed to consider audience's priorities, interests or pressures from the wider social or political environment
- **The audience abandons the advice contained in the message**
  - Based on the audience's experience or a change in circumstances, the innovation no longer suits or benefits them

Different levels of innovation complexity

- **As an extension agent the way you communicate knowledge and the intermediary role you play will depend on the level of innovation complexity**
- **The individual object or farming practice level**
  - Usually minor change in current practices/technologies
  - Issues usually well known
  - Sender-oriented, prescriptive knowledge transfer
  - Information intermediary role
  - E.g. A new piece of equipment, changing to a new crop variety
- **When changes become more complex**
  - Dialogue between sender and receiver needed
  - Reactive knowledge exchange
  - Knowledge broker and/or translator role
- **The level of the farming system/environment**
  - Typically involves changes to the whole system at various levels
  - Need changes from different players in the AIS
  - Negotiation approach is needed
  - Innovation broker
  - E.g. Supply chain arrangements, farming regulations.

Information Intermediary

- Enable access to information from different sources

Knowledge translator

- Helps to make sense of/interpret complex information

Innovation broker

- Enables innovation and facilitates social learning

Knowledge broker

- Builds relationships and improves the use of knowledge in decision-making processes

Different knowledge exchange encounters

Prescriptive	• Transfer of explicit knowledge • Extension agents proactive • Knowledge flows one way • Little interaction
Reactive	• Extension agents only provide answers to questions • Extension agents reactive • Farmers proactive
Facilitative	• Formation of partnerships • Extension agents and farmers combine knowledge and experience

Extensionists as knowledge managers for others

- **Extension agents need to:**
  - Manage networks of advisors and sources from the AIS
  - Act as a referral point for farmers to information and support
  - Liaise with colleagues to create a network of complementary advice
  - Form innovation hubs

Extensionists as knowledge managers for themselves

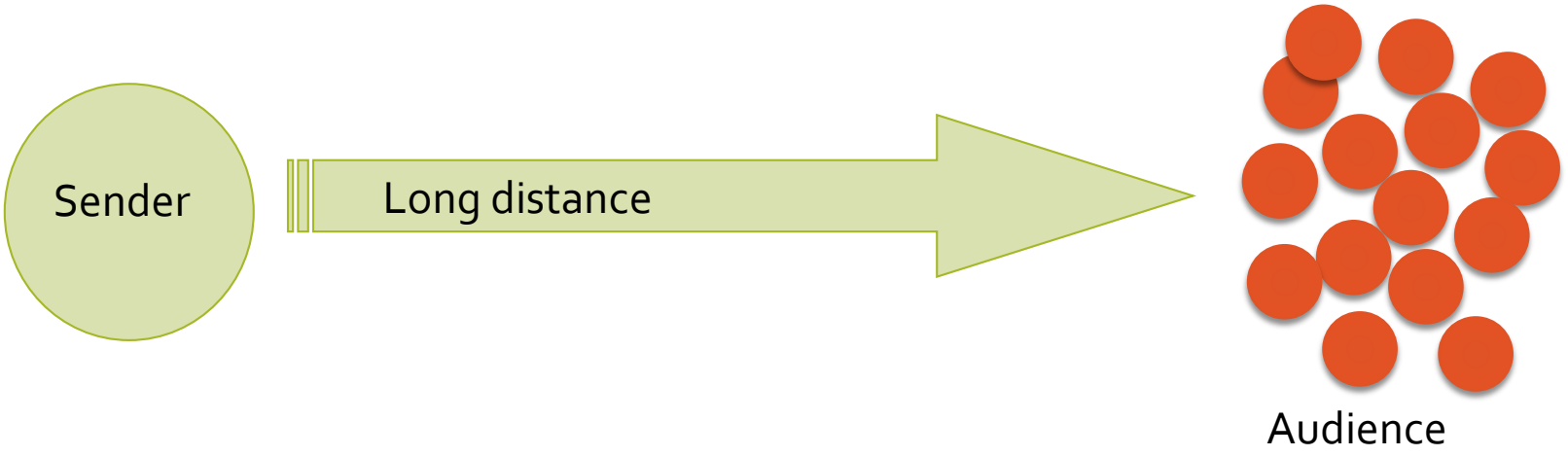
- Extension agents need to keep up to date and use different avenues to optimise their skills and expertise
  - Exchanging knowledge with colleagues from the same organisation
  - Interacting with farmers
  - Forming networks with colleagues from other organisations
  - Direct interaction and cooperation with researchers

Communication media and tools to support knowledge management

Mass media vs. interpersonal media

Mass media

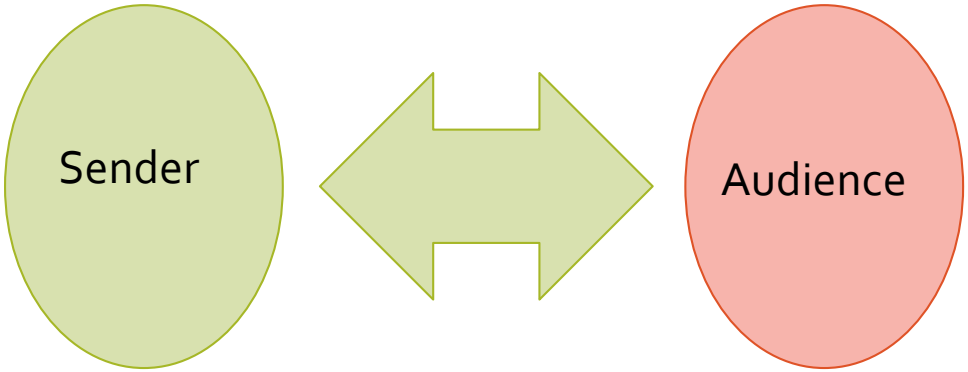
- A sender can reach a large number of people over a long distance without direct interaction
- E.g. Newspapers, radio, television



Mass media vs. interpersonal media

Interpersonal media

- A more direct process with a sender engaging with the audience directly and actively
- E.g. A face-to-face meeting



Mass media vs. interpersonal media

Mass media	Interpersonal media
High potential to reach a large target audience	Limited potential to reach a large target audience
Relatively high potential to attract attention to an issue	Relatively low potential to attract attention to an issue
Asynchronous communication	Synchronous communication
Relatively non-specific message	Relatively specific, tailor-made message
Differential spatial flexibility	High spatial flexibility
Differential time flexibility	Time flexibility within limits
Relatively low cost	Relatively high cost
High storage capacity	Low storage capacity
Low potential to stimulate experiential learning	High potential to stimulate experiential learning
Low potential to develop personal relationship with target audience	High potential to develop personal relationship with target audience

Different forms of communication media

- **Written communication**
  - Useful to communicate explicit knowledge
  - Suit the information intermediary and knowledge translator roles well
  - E.g. Newspaper articles, leaflets, technical notes, guides, brochures, factsheets
- **Verbal communication**
  - Useful to communicate explicit/implicit knowledge to groups/individuals
  - Can be more or less interactive
  - E.g. Presentations to groups, interactive theatre, one on one discussions, rural radio
- **Visual communication**
  - Useful for explaining complex ideas through images
  - E.g. Training videos, participatory videos, television shows, posters
- **Tactile/Olfactory communication**
  - Enhances experiential learning through the use of other senses
  - E.g. Field visits, field schools

Modern ICT media tools

- **Rapid development of information and communication technology**
  - Creation of new communication media
  - New ways of virtual knowledge transfer and sharing
  - E.g. Mobile phones, tablets, laptops
- **Different forms of ICT media**
  - Sharing/collaboration platforms
  - Online interconnected space where different people from different locations can interact in the same space.
  - E.g. dgCommunities, DGroups
- Social media
  - Web-based electronic tools that allow users to interact with each other in a more informal and personal way.
  - E.g. Facebook, Twitter, Myspace, YouTube
- Mobile phones
  - Smartphones (iPhone, Blackberry, Android phones) or low-tech cell phones with only voice dialling and texting functions.
  - E.g. Dedicated agricultural apps, WhatsApp groups, m-functions.

Unique limitations of modern ICT media

- Insufficient connectivity
- Limited access to hardware tools
- Cultural barriers

ICT media vs. traditional communication media

Comparison with mass media or interpersonal media	
Potential to reach a large target audience	Similar to mass media
Potential to attract attention to an issue	Similar to mass media
Asynchronous/synchronous	Can be both depending on specific tools
Specificity of message	In between mass media and interpersonal media
Spatial flexibility	Similar to mass media
Time flexibility	Similar to mass media
Relative cost	In between mass media and interpersonal media
Storage capacity	Similar to mass media
Potential to stimulate experiential learning	In between mass media and interpersonal media
Potential to develop personal relationship with target audience	In between mass media and interpersonal media

Knowledge Management & Sharing Systems

- Modern Information and Communication Technologies (ICTs) have introduced a new dimension and, if properly applied, can help in promoting knowledge and information exchange.
- Knowledge-based systems and decision support technologies can be used to allow the various stakeholder groups to encapsulate technical information that they generate in a suitable form to make it available to others.
- Web-based technologies can be used to create platform-independent systems that can be accessed remotely, either interactively online or in passive mode offline.
- Internet connectivity allows dissemination of information and knowledge within country and with regions, and can give instant access to global information and knowledge resources.

The KariaNet

- The National Knowledge Access for Inter-Connected Rural Areas Network (KariaNet) for knowledge management and knowledge sharing was established as collaboration platform was officially launched in August 2011 in Sudan.
- KariaNet objectives:
  - Promote adoption of Knowledge management and knowledge sharing in rural development practices and policies from project level to national policies
  - Capacity building to create the first generation of KM- KS experts
  - Applied research to innovate and contextualize
  - Networking activities to sustain the network after project completion.
- The main activities were conducting training workshops on building national capacities in information and knowledge management in support of agricultural development for strengthening the capacities in information management and knowledge exchange using KM/KS tool/system developed for information management and knowledge exchange.

KariaNet Approach

- **Technical Dimension**: enhancing technical infrastructure & skills for improved information management.
- **Encouragement Communities**: introducing tools and improving skills to facilitate exchange of knowledge among mutually-supportive projects & raising awareness.
- **Content Development**: developing relevant "content", or knowledge that is codified, using new communication tools, including websites.

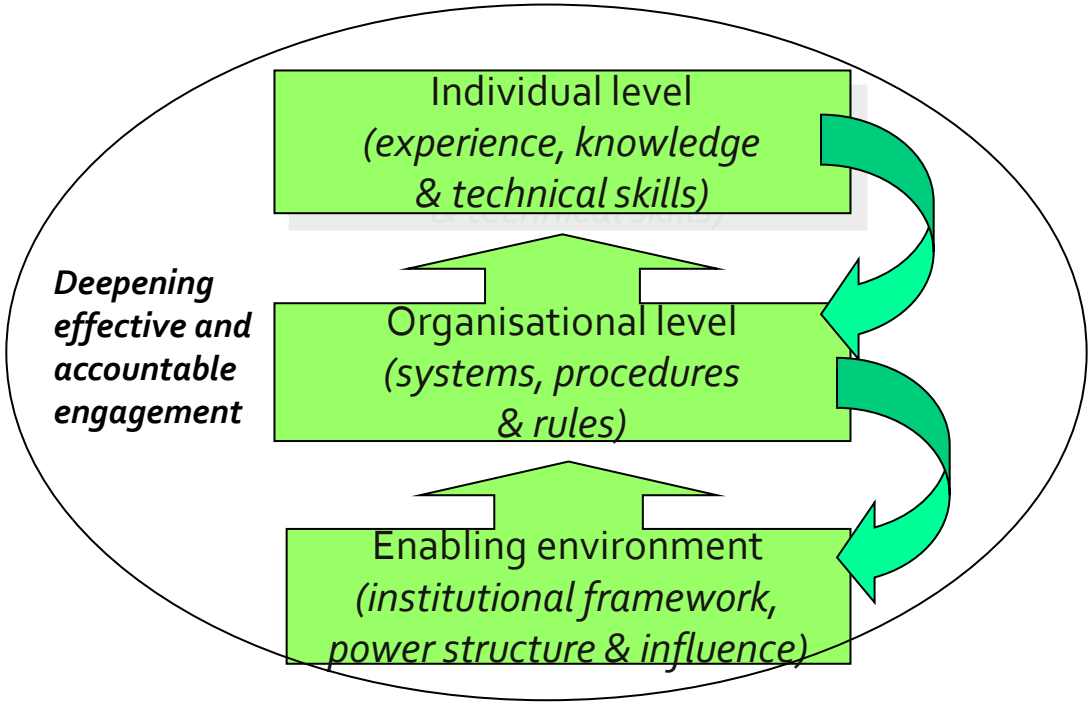
KariaNet approach (cont'd)

- **Incremental**: phased approach to build capacity and develop community of practice & practitioners.
- **Small is beautiful**: Focus.
- **Expansion and replication**: Publicising websites and other information resources for use, and expansion of programmed support to other once lessons are learnt and successes are registered.
- **Bridging the digital divide**: Piloting Community Knowledge Exchange through an action-research exploring closer involvement with target groups.

Principles

1. KariaNet is not a project (for funding only) but a network.
2. KariaNet and a given IFAD-funded project develop a partnership for the benefit of the latter.
3. Participation in KariaNet is voluntary.
4. Partnership and voluntary participation mean shared responsibilities, shared benefits, and cost-sharing.
5. Shared responsibilities and partnership need the adoption of a Memorandum of Understanding to clarify responsibilities and obligations of both parties.
6. Annual Work Plans and Budgets are the right tools to implement the clauses of the MoU.
7. Whenever possible, developing cost-recovery opportunities, including sponsorships and joint projects with private sector, will be encouraged, as well as strategic alliances.
8. Selection of KariaNet "focal point" at project level to be trained and motivated to play the role of a Project Knowledge Facilitator.

A Systems Approach:
The Three Layers of Capacity Development



Successful capacity development requires not only skills & organizational procedures, but also incentives & good governance

The Dimensions of Capacity Development (CD)

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- CD often involves the enhancement of knowledge of individuals, although the output of individuals greatly relies on the quality of the organizations in which they work.
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Individual Knowledge, Skills, and Attitude	**Understanding of:** – tasks – roles and responsibilities
	Social & Technical skills
	Know-how: – knowledge of how the task can be carried out successfully – professional experience

Knowledge Management & Sharing Systems

- The establishment of **National Integrated Agricultural Extension Information and Knowledge Management & Sharing Network (NIAEIKMSN)** are crucial.
- The **NIAEIKMSN** serves as an information source and exchange mechanism at the national level, aiming to strengthen, coordinate, and add value to initiatives by national programs and those coordinated by regional and international organizations.
- The **NIAEIKMSN** stakeholders included Ministry of Agriculture and Irrigation and other related ministries, National Agriculture Research Systems (NARSs), Advanced Research Institutions (ARIs), Non-Governmental Organizations (NGOs), International Agriculture Research Centers, the private sector, farmers' organizations, and development assistance agencies.

Knowledge Management & Sharing Systems

- In collaboration with the Food and Agriculture Organization (FAO), the work established in the **NIAEIKMSN** through a series of technical consultations and workshops.
- Approval of the National Agricultural Investment Plan 2016-2020.
- Followed by Using Information and Communication Technologies in Agriculture Strategy and Action Plan 2018-2020 (E-Agriculture 2018-2020) through expert consultation Process.
- The plan included preparation of a steps proposal to develop the **NIAEIKMSN** and establishment of a web site with Arabic/English to be enhanced in collaboration with FAO/RNE.

Knowledge Management & Sharing Systems

- In ICT meeting recognized the **NIAEIKMSN** as the building blocks of providing information on institutions, experts, research projects and, research outputs, as well as contributing to international systems.
- The main constraints affecting the building of an efficient **NIAEIKMSN** identified as being weak national capacities in information and communication management and technology (ICM/T) in many states and departments, and a lack of cooperation and coordination between partners.
- There is need to strengthen the capabilities of representatives of departments and partners for analyzing the situations of the **NIAEIKMSN**, and to use their national experiences to identify strengths, weaknesses, and threats/challenges.

Knowledge Management & Sharing Systems

- There are affecting seven key areas influencing development of **NIAEIKMSN**, namely: (i) strategy/policy, (ii) institutional aspects, (iii) stakeholders, (iv) content, (v) people, (vi) infrastructure, and (vii) financial aspects.
- Possible solutions for the key weaknesses and threats/challenges were defined by participants.
- Finally, the country's priorities for early implementation were identified drawing on the list of solutions/ recommendations in their own contexts.

Knowledge Management & Sharing Systems

- The need to continue building the capacity of participants representing different partners in the following:
  - Awareness of strategic aspects of information and knowledge in the context of development of **NIAEIKMSN**, the Regional Agricultural Information System (RAIS), and the Global CIARD Initiative;
  - Awareness of the potential for improving linkages and sharing information and knowledge between stakeholders using ICM tools;
  - Ability to identify priorities for early implementation in support of the development of their **NIAEIKMSN**;
  - Understanding and skills in the application of information management systems and tools, featuring to facilitate development of **NIAEIKMSN**, including identification of changes to adapt it to the needs of participating stakeholders.

FSAIKMSS Objectives:

- **NIAEIKMSN** is a national platform for Information and knowledge management for target groups and stakeholders at a country level.
- The Objectives of **NIAEIKMSN** are:
  - To strengthen the capacity of the Ministry of Agriculture and other stakeholders to establish an effective and efficient information system that will support agricultural development and ensure food security at a country level, based on the needs and demands of its stakeholders and integrating the various resources.
  - To serve as an information and knowledge repository/exchange mechanism at the national level and a gateway to the national knowledge systems for agricultural sector at a country level, aiming for strengthening, coordinating, and adding value to initiatives by national programs and regional organizations in order to increase agricultural production and improve food security for the benefit of improving performance of farmers and agrarian businesses.

Outcome:

- The development of a relevant, effective and harmonized **NIAEIKMSN** is expected to lead Ministry of Agriculture and other ministries/ stakeholders to the following outcome:
  - Improve the capacity to access and exchange information, and to convert it into useful knowledge, as it is very essential for the development objectives of poverty eradication, food security, sustainable development and increased productivity and competitiveness; and
  - Preserve needed resources, make maximize use of the results of other projects and database applications, prevent redundancy and duplication of data and efforts, and ensure maximum co-ordination among various agricultural institutes, programmes and personnel for the benefit of agricultural development and food security

Stakeholders:

- The following groups of stakeholders in the **NIAEIKMSN** are identified in a preliminary way, and it is recognized that these groups and their needs and demands needed to be further defined:
  - Policy-makers in agriculture and rural development, especially in the Ministry of Agriculture and States.
  - Agricultural Research Corporation, department heads and professional technical officers within the Ministry of Agriculture and Irrigation and States.
  - Other Ministries related to rural development.
  - Universities and colleges with agriculturally-related faculties and departments.
  - Farmers' and producers' organizations.
  - Credit and marketing associations and Chambers of Commerce.
  - Private sector involved in agricultural and rural development.
  - Non-Governmental Organizations involved in agricultural development and food security.
  - Regional and International Organizations involved in agricultural development and food security.
  - General Public.

Main Constraints:

- The **NIAEIKMSN** are recognized as the building blocks of the National Rural & Agricultural Knowledge and Information Networks to provide information on institutions, experts, research projects and research outputs, as well as contributing to international systems.
- The main constraints affecting the building of an efficient **NIAEIKMSN** were identified as being weak national capacities in information and communication management and technology (ICM/ICT), and a lack of cooperation and coordination between different departments and partners at all levels.
- The need to strengthen **NIAEIKMSN** was also identified as a prerequisite to strengthening the Regional Agricultural Information Systems.

NIAEIKMSN Feature:

The NIAEIKMSN Network is expected to produce the following specific outputs:

- A Rural and Agricultural Knowledge and Information Network through building a National Gateway function and a collaborative network of technical institutions and organizations committed to capacity building in this area.
- A NIAEIKMSN components including modules (information systems) on documents, institutions, experts and projects; facilitating access to other agricultural information services and databases relevant to the rural and agricultural sector; and enabling the exchange of information and knowledge among stakeholder groups.
- Networked all ARC stations and centers through a regional portal as well as through national portals.

NIAEIKMSN Feature:

- **NIAEIKMSN** is a SMS-web-based integrated, multilingual national information and communication system.
- The immediate objective of the Network is to strengthen the capacity of the Ministries of Agriculture and Agricultural and Rural Research Institutions for effective information management and knowledge exchange in support of rural and agricultural development in the Sudan.
- The ultimate development objective is to enhance information and knowledge access and exchange within the country, and at the regional and global level.
- This network would provide mechanisms to strengthen, coordinate, and add value to national, regional and international initiatives in order to increase agricultural production and improve food security, and for the benefit of improving performance of farmers and agrarian businesses.

FSAIKMSS Feature:

- A team of nationally selected focal points and technical staff at the different agricultural institutions trained on how to adopt and integrate information from their institutions into the **NIAEIKMSN** and to maintain it as a high-quality information and communication resource using **NIAEIKMSN** content management system and modern information management. These trained staff will be expected to train others in the future.
- Development of operational plans for the network that would strengthen knowledge-sharing and learning process and foster partnerships for broader knowledge-sharing and learning at national and regional levels.
- Development of an operational framework that would define the roles and responsibilities of all the stakeholders at the national level.

Key Observations of SWOT Analysis Results

The currently available agricultural information in Sudan is inadequate as a result of many factors, in particular:

- Lack of coordination and collaboration between institutions concerned with data collection and information provision on the one hand, and information users in the public and private sectors on the other.
- Lack of certain types of data and information required in support of the development of the agricultural sector.
- Urgent need to establish virtual network of agricultural institutions including HQ and Regional offices accessible through a national portal.
- Imperative needs for institutional and human capacity development in the field of information management and knowledge exchange.

The Common Vision

The common vision derived from the above-mentioned observations, is to establish and strengthen an Agriculture Information Centre, acting as the Coordinating Unit of a National Agricultural Knowledge and Information Systems, which will be developed to assemble and make accessible all information and knowledge that will:

- Support policy and decision-making in relation to national planning;
- Support research and development, and disseminate the outputs;
- Support extension services;
- Highly support the innovation platform initiative.
- Provide an institutional memory for the MOAI.

Key Components of NIAEIKMSN

What is NIAEIKMSN Designed for?

- Preserve needed resources,
- Prevent redundancy and duplication,
- Create access to agricultural, rural and Marine information, knowledge and innovations,
- Ensure maximum knowledge sharing among various agricultural institutes, programs and personnel on institutional, national and regional levels,
- Provide enable environment for good coordination.

NIAEIKMSN

Development Process

- Definitions
  - Problem/Purpose/Benefits
- Guidelines
  - Categories
  - Functions
  - Resources: NIAEIKMSN
  - Support Group
- Work plan
  - Tools and methodologies
  - Pilot network selection
  - Training
  - Implementation and analysis
  - Up scaling

Functions

- Share (one-many)
- Store / Retrieve
- Collaborate / Interact
- Decide
- Learn
- Notify
- Support
- Monitor

Benefits of NIAEIKMSN

- **Connect people** who might not otherwise have the opportunity to interact, either as frequently or at all.
- **Provide a shared context** for people to communicate and share information, stories, and personal experiences in a way that builds understanding and insight.
- **Stimulate learning** by serving as a vehicle for authentic communication, mentoring, coaching, and self-reflection.
- **Capture and diffuse existing knowledge** to help people improve their practice by providing a forum to identify solutions to common problems and a process to collect and evaluate best practices.
- **Introduce collaborative processes** to groups and organizations as well as between organizations to encourage the free flow of ideas and exchange of information.
- **Help people organize** around purposeful actions that deliver tangible results.
- **Generate new knowledge** to help people transform their practice to accommodate changes in needs and technologies.

Benefits of NIAEIKMSN

- Address stakeholders' needs more effectively,
- **Coherence** and **Synergies** in information management,
- Use of agreed **standards, methodologies** and **tools**.
- **Sharing** and **Exchange** of information and knowledge,
- A **collaborative** system and effective communication,
- Enhanced technical **cooperation and collaboration,**
- **Reduced cost** of operation, Reduced time/cost/effort of developing national information systems/networks,

NIAEIKMSN

Multilingual (Arabic and English) knowledge management system for Agriculture

- Capacity Development for institutes in the Ministry of Agriculture and Irrigation and Other Stakeholders
- Development and management of relevant and effective national agricultural knowledge management system in support of agricultural and food security

Achievements:

- *Networked all agriculture institutions through a National gateway*

  Using Web-Based Platform and Mobile Technology.

Sudan NIAEIKMSN Interfaces

1. **Frontend Interface**
   The frontend components provide the information retrieval/browsing functionalities, and are available to any site user.
2. **Backend Interface**
   The backend components provide the data management functionalities that enable system administrators to Add/update/delete data items into the NAKIS Network database.

Success Factors for NIAEIKMSN Network

1. Commitment for contribution/collaboration at national level;
2. Focus on capacity building at national level;
3. Existence of a national information strategy;
4. Development of a Secretariat role for national activities;
5. Focus on community of practice amongst the info specialists;
6. Raising awareness of ICM issues at Manager./political levels;
7. Formation of strategic partnerships amongst the major stakeholder organizations.

KM-KS is an advantage…

- If we are convinced that KM-KS is beneficial to everyone, both the one that *knows*, and the other that *needs to know*…
- If we can work for setting a voluntary communication…
- If we dare to declare our needs of information…
- Then the forces of each of us in our community will overcome the weaknesses of each of our members.

Capacity Building

Today

Towards National Integrated Agricultural Extension Information and Knowledge Management & Sharing Network (NIAEIKMSN)

For a Better Food and Agricultural Sector

Tomorrow

Information is knowledge

Information is security

Information is power

Thank You for Your Attention