MINISTRY OF AGRICULTURE

DEPARTMENT OF AGRICULTURAL RESEARCH AND SPECIALIST SERVICES (DARSS)

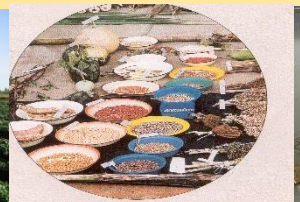
Presentation Outline

DARSS OVERVIEW

KM STRATEGY

Overview

- MoA's Agricultural Research wing - established in 1958
  - Consisting of **Commodity & Support Sections**
  - **New additions from 2000**: **Food Science & Technology**, **National Plant Genetic Resources Centre**, **National Plant Health & Inspectorate Services** transformed Agricultural Division to the DARSS in 2010.
- DARSS comprise 3 stations:
  - Malkerns Research Station - **RC 2704 (**Upper Middleveld)
  - Nhlangano Experimental Farm (Nhlangano), **RC 2705 (**Highveld**)**
  - Lowveld Experimental Station (Big Bend) **RC 2706 (**Lowveld**)**
- 3 substations namely:
  - Mangcongco and Hebron (Upper Highveld)
  - Luve (Lower Middleveld)
- In transition to a parastatal: pending resource allocation.



Vision

- Excellence in Innovative Research for Sustainable Agriculture and Economic Development

Mission

- Collaboratively conduct agricultural research through the application of science, technology, and innovation to stimulate sustainable growth and development in agriculture and value chains

Goal

- To contribute to the economic growth of the agricultural sector through research coordination and regulation; technology and innovation development; and catalyzing transfer and utilization of agricultural research outputs

Mandate

Carry out demand driven and market responsive agricultural research in order to generate and disseminate improved, climate adapted and environmentally sustainable agricultural production technologies for enhanced agricultural productivity while protecting and sustaining the natural resources heritage in collaboration with value chain players.

Provide sanitary and phytosanitary services in order to facilitate trade through import and export of plant and plant products.

Aim

- To promote, inclusive, demand driven Innovative Agricultural Research for Development and Technology transfer to stimulate economic growth, food and nutrition security through:
  - Increasing and sustaining the efficiency and productivity of crops and livestock value chains in favour of the Kingdom of Eswatini farmers,
  - Effectively managing the natural resource base, including sustainable management and utilization of forestry resources and products,
  - Enhancing the utilization base and safety of foods from crops and livestock commodities,
  - Providing information and advice to policy – makers, extension service, entrepreneurs and farmers.

Programmes---

- Crop Improvement
  - Breeding
  - Biotechnology
- Agronomy
- Horticulture
- Natural Resource Management
- Climate Smart Agriculture
- Food Science Nutrition and Technology
- Post Harvest
- Crop Protection
- Socio-economics

Proposed Thematic Areas---

- **Food and Nutrition Security/Crop productivity Enhancement**
  - Crop Improvement
    - Breeding
    - Biotechnology
    - Agronomy
    - Horticulture
    - Crop Protection
  - Post Harvest
    - Food Science Nutrition and Technology
    - Food Safety
  - Socio-economics
- **Climate Change and Climate Smart Agriculture**
  - Soil Health,
  - Land Management,
  - Water Management,
  - Genetic Resources Conservation
  - Crop protection
  - Climate Smart Agriculture
    - Green House Gas Inventory
    - Crop and Livestock Modelling

Proposed Thematic Areas---

- **Natural Resources Management**
  - Soil Health,
  - Land Management,
  - Water Management,
  - Genetic Resources Conservation/Biodiversity
  - Crop protection
- **Modern Innovative Technologies**
- **Cross cutting**
  - Agribusiness,
  - Market Access,
  - Gender Equality, Youth & Social Inclusion,
  - Knowledge Management
- **Accelerators**
  - Private Partnership

DARSS COMPOSITION

- Department of Agricultural Research and Specialist Services staff consists of two Divisions, namely the **Research Division** and **Specialist Services Division (NaPHIS, Gene Bank, Food safety).**
- Within the Divisions there are **Units** which are made up of **sections**.
- The staff in the Department consist of professional, operational and administration (support) personnel.

Strategic objectives

- To study and **evaluate farmers' socio-economic circumstances** in order to develop relevant and economically viable research programmes in order;
- To carryout **crop improvement research** using appropriate techniques in order to produce suitable varieties,
- To **develop and identify most efficient and cost effective**, climate resilient, user friendly and environmentally sustainable agronomic and crop protection technologies in order to enhance crop productivity and reduce pest related crop losses;
- To **develop appropriate crop handling, processing and utilization technologies** to enhance quality and safety of agricultural products throughout the value chain,
- To **provide information to all relevant stakeholders** in order to improve agricultural production and productivity in the country,
- To **promote conservation and sustainable use of plant genetic resources** for food and agriculture for the benefit of the current and future generations and,
- To **provide phytosanitary, plant quarantine and food quality control services** in order to facilitate trade

DARSS SERVICES

- Research Technology interventions & services are transferred through:
  - Extension planning meetings to understand farmers' priority needs and challenges/ circumstances;
  - On-station (field, green houses and laboratory) research experiments;
  - Technology transfer through on-farm research experiments in farmers' fields;
  - On-station and on-farm field days and research results in seminars presentations, production guides, radio programmes, pamphlets, posters, etc.
  - Undertaken in collaboration with DAE, and other relevant stakeholders especially NGOs, and seed companies.

Crop Improvement Program interventions (1/2)

- Introduction and evaluation of crop varieties/ germplasm from seed companies and international research institutions for adaptation and suitability in the different agro-ecological zones and consumer preference.
- Identification of varieties for drought and low fertility tolerance Agronomy Sections:
  - **Cereals**:
    - **Maize, wheat** from CIMMYT & Seed companies
    - **Sorghum:** Some seed companies, other research centres & NPGRC.
  - **Grain Legumes:**
    - **Beans** from CIAT, **Cowpea, Pigeon** etc from ICRISAT
    - **Soybean** from Seed companies and NPGRC
  - **Root and Tuber crops**:
    - Cassava & Sweet potato (IITA & International Potato Center)
  - Industrial Crops:
    - Cotton from Zimbabwe & Cotton Breeding & Research Section
    - Sunflower: Seed companies
  - **Traditional African Vegetables (TAVs)**: WorldVeg & NPGRC
  - Bio-fortified beans (Zinc & Iron), QPM,
  - Yellow fleshed cassava & Orange fleshed sweet potato

Crop improvement interventions (2/2)

- Nutritional content analysis, and consumer preference according to taste, cooking quality and time and product development potential also evaluated in collaboration with **Food Science & Technology Section**.
- Good performing varieties **recommended** & **released** through National Variety Release Committee prior to marketing by dealers
  - e.g. **Lake 711**, Cambamanga, **Bio**fortified **Nua 45** beans & **4 x Orange-fleshed sweet potato** , Cotton (Alba) varieties.
- New introductions under screening:
  - Soybean varieties for food, oil content and feed
  - Wheat varieties for import substitution with new germplasm from CIMMYT
  - Cowpea Mutation Breeding lines initiated with IAEA support with NPGRC germplasm

Production techniques

TIME OF PLANTING

- Identification of best time of planting to ensure optimum yield

MIXED CROPPING

- Optimise use of space (plant population manipulation for yield maximisation)
- Water use efficiency
- Nitrogen fixation and soil health improvement

CONSERVATION AGRICULTURE

- Identification of the best planting methods in conservation agriculture
  - Effect of tillage methods
  - Best cover crops
  - Crop diversification

Climate smart agriculture Program

- **Crop nutrition, Soil fertility and Health interventions:**
- Evaluation / comparison of inorganic and organic (liquid and bio-fertilizers) sold by input suppliers/ & retailers.
- Mineral composition analysis,
- Identification of cost effective and environmentally sustainable soil management practices
  - Maize & legume intercropping
  - Infield water-harvesting
- **Pest management**
  - Exploration of Black Soldier-fly for bio-waste management
  - Evaluation of user friendly inorganic pesticides for problematic pest control: Fall Armyworm and *Tuta absoluta* control
  - Development of IPM technologies [cultural, biological, bio pesticide, conventional pesticides]
  - ➢ Identification of organic pesticides from plants such as neem, garlic, pepper
  - ➢ Closer plant spacing (weed reduction) for increased yield
  - ➢ Biological control: sterile male insect technique

Crop protection

- Identification of environmentally and user friendly plant protection technologies.
- Development of IPM technologies [cultural, biological, bio pesticide, conventional pesticides]
- Identification of organic pesticides from plants such as neem, garlic, pepper
- Closer plant spacing (weed reduction) for increased yield
- Biological control: sterile male technique

Irrigation & water use efficiency

- Development of technologies that ensures efficient water use as an adaptation to climate change
- Drip irrigation, hydroponics, calibration techniques, in situ water harvesting

Soil fertility and nutrition

- Identification of suitable soil amendments
- Evaluation of locally available material like compost, animal manure
- Identification of crop varieties that can adapt better to low soil fertility prone areas
- Enhancing legume crops for nitrogen fixation (use of inoculants and mycorrhizae)
- Evaluation of biofertilisers for enhancing soil health and crop nutrition

Post-harvest

FOOD TECHNOLOGY

- Identification of technologies for conservation and preservation of food products
- Identification of suitable food processing techniques
- Bean, vegetables soup powders and fruit jam processing

FOOD SCIENCE

- Testing for nutritional content and pesticides residues

Basic seed production

- Sources breeders seed from international organisations (CIAT, CIMMYT, IITA)
- Multiply basic seed of OPV Maize, and Legumes for certified seed producers:
  - 4.5 tons basic bean seed was produced and recently distributed to Seed growers producers:
  - Smiling Through (1 ton), Shiselweni Seed Growers (0.5 ton) and individuals etc, to produce certified seed.
  - Also produce and vegetative material (sweet potato and cassava cuttings.
- Some fortified (maize:protein), (beans:zinc and iron), (yellow cassava:beta carotene),
- Maize seed production of OPV (ZM 309, 521, 523, 721) currently not available

Programmes

- **Fruit tree seedlings sales:**
- The Department through this programme produces and sell a wide range of fruit tree seedlings to farmers (Banana, strawberry, pitaya, pearl guava, peaches)
- Recently constructed tunnels and laboratory for this purpose,
- Initiative was supported by the Taiwanese Government,

Project Budget: US$ 2, 560,847

Taiwan Grant :	US$ 2,160,847
Eswatini Government:	US$ 400,000

Human Resource:	Taiwan :	1 Project manager, 2 Specialists
	Eswatini:	1 Project coordinator, 14 technicians

Project Achievements 2

Extended the seedling production facilities and equipment (Laboratory)

Laboratory

Tissue Culture Showroom

Sub-Culture Operation

Growth Room

Project Achievements 3

Establish a high-quality and healthy fruit tree seedling supply system

Rebuild a Greenhouse

516,093 Banana Seedlings

102,218 Pitaya Seedlings

7,736 Guava Seedlings

45,062 Strawberry
5,206 Passion Fruit

Project Achievements 4

168.17 ha Banana

12.0 ha Guava

Established a fruit tree production zone

8.5 ha Pitaya

1.0 ha Strawberry

Programmes

- **Seed potato production and sales:** The Department has a special program for seed potato.
- The seed is produce from tissue culture material by the Department and supplied to farmers directly or through local retailers.

Specialist services

1. NPPO

- **Phytosanitary Services:** These are services provided to importers and exporters of plant and plant products.
- It includes inspection and certification of consignment intended for export, issuance of import permits as well as transit permits.
  - As per the International Plant Protection Convention (IPPC)
  - Plant Health Protection Act 2020
  - Inspection and certification (NaPHIS)
  - Surveillance, Quarantine & Diagnostic
  - Fruit fly, Tuta, FAW
  - Pest Risk Analysis and Permits
  - American market for citrus
  - Information and Policy analysis
  - International standards
  - Stakeholder awareness
  - International notification

Specialist services

2. National Plant Genetic Resouces Centre (NPGRC or Genebank):

- The mandate of the NPGRC is to promote the ex situ and in situ conservation and sustainable utilization of Eswatini traditional seed heritage for the continued benefit of current and future generations.
- Genebank collects, characterize, multiply and document data and traditional knowledge
- Further exchange a wide diversity of traditional varieties with various stakeholders including farmers including farmers, researchers and academia for further characterization, evaluation and selection.
- Also promote on-farm conservation and management through establishment of community seed banks.
- Is the National Focal Point for the International Treaty on Plant Genetic Resources for Food and Agriculture of FAO to which Eswatini is a Party.
- Affiliated to SADC Regional Plant Genetic Resources Centre and keep safety duplicate samples at SPGRC and Svalbard Seed Vault in Norway.
- Current hard hit by staffing challenges, hence not much active/ currently following end of TAVI Project in December, despite recent massive upgrade and expansion.

Specialist services

- **Food safety analysis:**
- The Department runs two foods science laboratories.
- These are the food chemistry lab and the food micro biology lab.
- They conduct food chemical and microbial analysis respectively.
- The services are in demand from stakeholders who want to test their food products, and also has to nutritional content of foods in retailer outlets including biofortified foods.
- Needs accreditation line with CODEX Alimentarius
- Collaborates with Home Economics, UNESWA and International research institution in development of Food Recipes and Food composition table for traditional foods

DARSS Services-Cont

- **Conference Services:** Provided at Mphophoma Conference and training Centre.
- **Field Demonstrations:** Planting and monitoring seed demonstration, showcasing various seed varieties from different seed companies at the Mahlanya King's field.

KM ACTIVTIES IN ESWATINI

1. Agricultural Extension Officers Sensitization workshop, Tums George Hotel, 31 August 2020

KM ACTIVTIES IN ESWATINI

2. Eswatini Information, Communication and Knowledge Management (ICKM), consultative workshop 19 February 2021, Hilton Garden Inn, Mbabane

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KM ACTIVTIES IN ESWATINI

3. Eswatini Information, Communication and Knowledge Management, virtual training, 17 March 2022

African Knowledge Management for
Agricultural Development

Knowledge Management an Enabler for Agricultural Research for Development and Innovation Strategy
DARSS

April 18, 2024

Situational Analysis.....

- **Absence of nationwide KM coordination mechanisms and structures**
  - Despite presence of several agricultural stakeholders and potential donors, not much is known regarding implementation of KM in Eswatini and also the Department Agricultural Research, has no coordination mechanisms and structures exist for coordination of KM activities and plans. As such as it is, the department has it difficult to collect and share knowledge related to the CCARDESA themes, Malabo Declaration Commitments and SDGs.
- **Absence of policies on KM on indigenous knowledge**
  - KM of indigenous knowledge is not included in any of the policies and strategies. As such it is not clear as to how information on indigenous knowledge is captured and shared due to absence of guidelines and commitment. Therefore, KM mostly focus on scientifically generated information thereby creating gaps in indigenous knowledge which provides a basis for scientific discoveries

Situational Analysis .....

- **Limited presence of institutional support for KM**
  - KM activities are considered to be of CCARDESA, hence not included in the department's work plan and budget.
  - Dependency on donor funding to support KM, which contributes towards documentation and sharing of information related specific project activities thereby leaving aside some information.
  - Lack of proper planning and implementation of KM interventions. It was observed that in most cases the KM activities are driven by CCARDESA secretariat as such the focal point persons do not have work plans or budgets. Absence of the work plans and budgets has led to implementation of KM activities as ad hoc activities
  - Absence of KM monitoring and evaluation mechanisms: The focal point persons are not obligated to report progress on KM activities to their department, government as such does not have monitoring and evaluation programs aimed at tracking KM interventions.

Situational Analysis.....

- **Limited human capacity in KM**
  - KM is not part of the courses or curriculum in higher education in Eswatini, as such staff lack relevant KM knowledge and skills. The focal point persons do not have any background in KM or communication as such, the only communication, KM knowledge and skills that they possess is based on the short-term workshops provided by CCARDESA and FARA. Therefore, in most cases the staff only focus on activities in which they received training from CCARDESA and FARA

Recommendations.....

- Formation of Eswatini KM Community of Practice for:
  - Conducting awareness workshops within MoA departments and with other stakeholders,
  - Coordinating the harmonization of KM activities in the department and strengthening collaboration with stakeholders,
  - Developing templates, tools, and instruments for capturing, storing and sharing information,
  - Setting up standards and timelines for the collection, documentation and sharing of information
- Provision of funding for KM activities
  - Ministry of Agriculture's Department of Agricultural Research and Specialist Services, should set aside financial resources to support KM interventions, programs, as opposed to them being project-driven or donor funded.

Recommendations.....

- Capacity-building of staff in KM
  - To improve KM in the MoA (DARSS), the department should invest in capacity building of their staff in these areas.
  - Also recommended that the Ministry of Agriculture, should work together with the academia, regional and continental organisations to build capacity of the ICKM focal point persons and DARSS staff in KM training.
  - At national level, the government should work with higher education institutions review the curriculum and introduce KM programme to build capacity of staff as well as train degree students in KM.
- Promote Collection and Dissemination of Indigenous Knowledge
  - The ICKM focal point persons should be intentional and include collection of indigenous knowledge as part of their agenda. Such knowledge should include local, traditional land management, pest, and disease control as well as climate change mitigation measures. Such information can be collected through video or audio interviews and newspaper articles.

Why KMS matters…

- KMS is expected to improve, strengthen DARSS documentation and sharing of information related to the KM themes, that address the Malabo Declaration Commitments, SDGs.
- KM is crucial in enabling the DARSS to deliver on their specific mandate to increase efficiency of:
  - ✓ Management of research activities,
  - ✓ The design and monitoring of research programs,
  - ✓ The formulation and implementation of policies using robust science, technology indicators,
  - ✓ Support knowledge transfer to the knowledge end users (farmers, private sector) and
  - ✓ Systematize the sharing of knowledge expertise and skills in Eswatini

Knowledge Management gaps…

- Low visibility of the research findings.
- Low trust between the private sector and research firms and institutions.
- Insufficient collaboration between universities and research centres, extension, farmers, private sector, policy makers, agro-processers, traders and agro-dealers.
- Challenges of utilizing, disseminating and commercializing research results.
- Inability of the local private sector to have access to research findings.
- Lack of incentives mechanisms to promote research in all forms of collaboration between the public and private sector.

Theme…

- *Theme 1. Knowledge Management in the Management System*
- *Theme 2. Knowledge Products and Services*
- *Theme 3. Knowledge Agents (strengthening human knowledge assets)*
- *Theme 4. Knowledge Hub (strengthening structural knowledge assets)*
- *Theme 5. Knowledge Communities (strengthening knowledge networks)*
- *Theme 6. Knowledge Processes (strengthening collaboration)*
- *Theme 7. National Knowledge Partnership for Agricultural Development*

Components of Knowledge Management…

- **Roles:** These are the roles of various stakeholders which are crucial for collecting, documenting, and sharing information. For examples, the roles specify who coordinates, manages, assign activities for collecting, documenting, and sharing information.
- **Processes**: These are processes required to collect and manage information and knowledge effectively. It is important to set up structures for collecting the information, mechanisms, and strategies for capturing knowledge, and sharing and updating the knowledge.
- **Technologies:** Technologies form a critical component of the KM. There are different technologies and tools that are used for capturing knowledge.
- **Governance:** KM require presence of governance structures. These structures include policies, strategies and guidelines.

SWOT analysis…

Roles

Strengths/ Opportunities

- ✓ **The focal point persons are responsible for documenting and sharing information on the CCARDESA themes, the Malabo Declaration Commitments, and the SDGs.**
- ✓ They serve as KM specialists on voluntary basis.
- ✓ In addition, these focal point persons document and share information from activities implemented by the Department.
- ✓ The presence of various stakeholders and departments involved in agriculture provides an opportunity for strengthen and improving KM.
- ✓ In addition, these stakeholders have support from donors to support KM which facilitates KM activities in the country.

Roles…

Weaknesses/Threats

- ✓ **There is a no coordination between the public and private sector institutions.**
- ✓ Information documented by various stakeholders is not accessible publicly as it requires approval of the coordinating institutions to release the information upon a formal written request.
- ✓ Exclusion of farmers as stakeholders poses a threat towards collection, documentation and sharing of indigenous and local knowledge.
- ✓ **KM activities implemented by the focal point persons are not included in the annual work plans hence no budget.**
- ✓ As such most KM activities are supported by external donors hence Increased dependency on donor funding.

Processes…

Strengths/ Opportunities

- ✓ **The presence of the Department of Information within the MoA provides an opportunity for improving documentation and sharing of information in the agricultural sector hence improving KM**.
- ✓ The presence of focal point persons as KM coordinators who are part of the MoA alongside the presence of CCARDESA secretariat at regional level as a coordinating unit for KM, provides an opportunity for improving KM in DARSS.

Processes…

Weaknesses/Threats

- ✓ Despite the MoA's responsibility for coordinating all agricultural interventions in Eswatini, there are no guidelines for KM hence have a negative impact on DARSS.
- ✓ **Department of Information Section is responsible for obtaining information from other departments from the MoA but there is no proper coordination with DARSS**
- ✓ In addition, despite presence of the focal point persons and the support from the CCARDESA secretariat the work of the focal point persons is not aligned with the DARSS as the focal point persons work independently as CCARDESA representatives in the country

Technology…

Strengths/ Opportunities

- ✓ The presence of a functional MoA website, departmental websites and institutional websites provide an opportunity for setting up and operation.
- ✓ The presence of internet infrastructure and access to internet services such as emails coupled with the ability of the focal persons and most stakeholders in the country to use technologies such as google applications WhatsApp and ZOOM provides an opportunity for improving KM in the DARSS

Technology…

Weaknesses/ Threats

- ✓ **Internet infrastructure is not well-established**
- ✓ The use of personal email addresses poses a threat towards information sharing and management as well as security.
- ✓ There are no internal servers for storing and managing information
- ✓ **Officers use of personal electronic devices and that poses a threat to KM as it puts the organisation at risk of losing the knowledge once the owner of the devices leaves the organisation**
- ✓ In other cases electronic devices used for KM activities belong to different projects as such once the project ends, the devices are returned, hence information is lost.
- ✓ .

Governance…

Strengths/ Opportunities

- ✓ Institutional Strengthening and Knowledge Management is one of the areas of investments highlighted in the SNAIP.
- ✓ Inclusion of KM in the plan serves as a strength and opportunity for implementation of KM interventions in the country and at DARSS.
- ✓ In addition, there are various policies, Acts,
- ✓ **Bills, and strategies to guide KM in the country such as the Draft National Record Management and the Draft National Library Documentation and Information Policy, the Statistical Act as well as the Access to Information and Data Protection Bill.**
- ✓ The presence of the various policies, bills and Acts provides an opportunity for improving research, information and KM.

Governance…

Weaknesses/ Threats

- ✓ Stakeholder involvement is one of the guiding principles for successful operationalization of the policy.
- ✓ There is no specific objective highlighted in the National Agricultural Policy and the National Research Coordination Mechanism that focuses on harmonization and coordination in planning and implementation of agricultural KM activities.
- ✓ In addition, MoA, DARSS does not have a KM strategy.
- ✓ CCARDESA, FARA ICKM activities are implemented on ad hoc basis and are not included in the MoA's, DARSS workplans and budgets.

Vision…

- To achieve harmonization and coordination in implementation of agricultural interventions through establishment of improved, efficient, and effective KM systems for sustainable agricultural production and productivity by 2026.

Mission…

- To create a conducive environment for promoting meaningful and productive KM among and between various stakeholders in line with the CCARDESA themes, Malabo declaration commitments and the SDGs.

Specific objectives …

- Based on the situational analysis and the model for implementation of a successful KM strategy the following are the objectives of the strategy:
  - Mobilise resources both human and financial resources for improving KM in the country.
  - Strengthen coordination in implementation KM interventions.
  - Support establishment of a functional and user focused ICKM system for use by all stakeholders.
  - Support capturing of indigenous knowledge for use by various stakeholders.
  - Improve capacity of agricultural KM stakeholders in the country.

Rationale…

- Existing agricultural knowledge, data and statistics are spotty and unreliable in the DARSS despite the amount of information generated by Research Officers
- This situation has substantially hampered efforts to ground agricultural planning and policy making in evidence in Eswatini.
- The case poses a substantial challenge to CCARDESA themes, Malabo Indicators and the monitoring of progress towards the biennial targets of these indicators which is tracked through Biennial Reviews (BR) at country level.
- This situation also poses challenges in achieving the Sustainable Development Goals (SDGs).

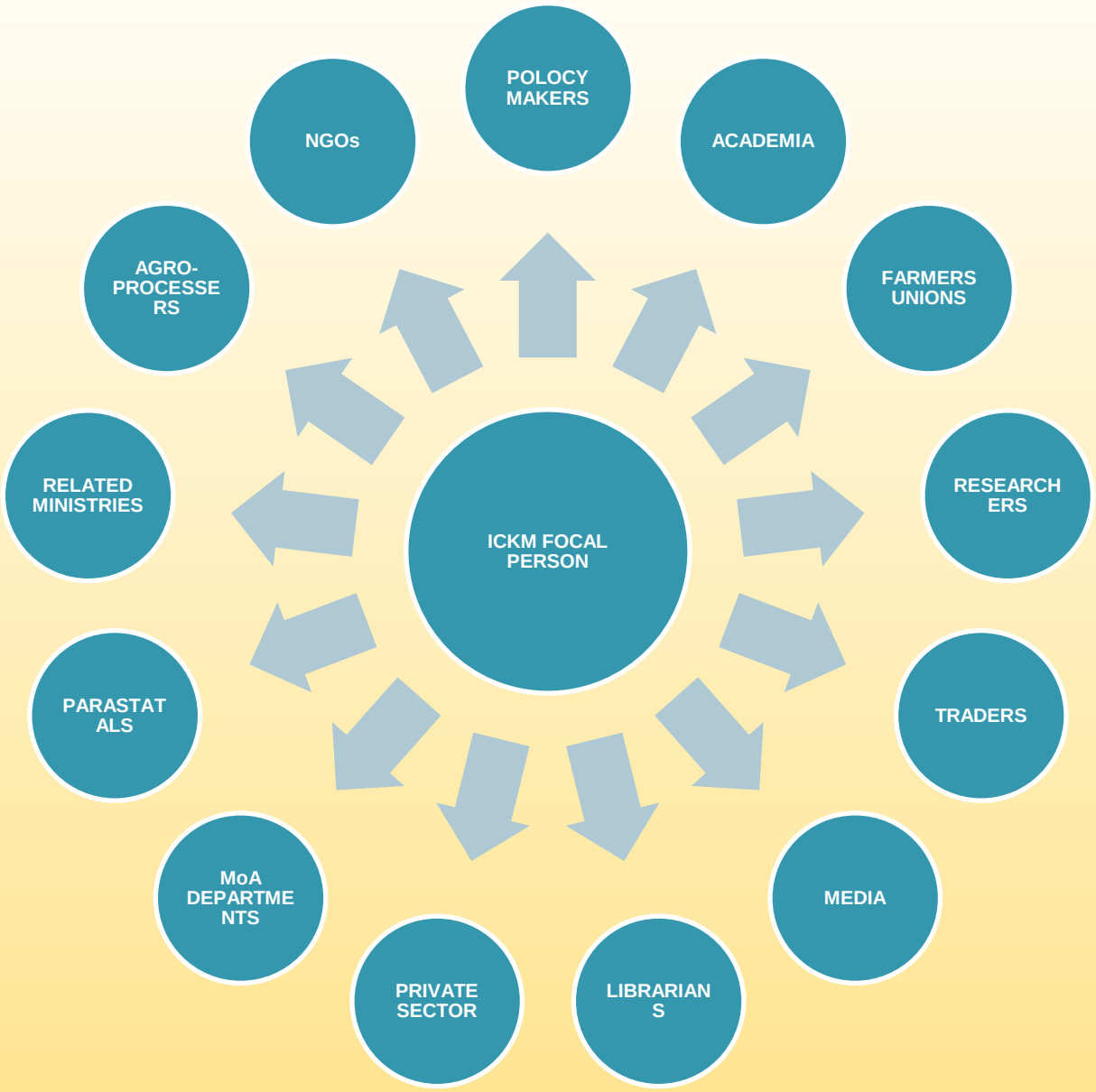
Duties of Eswatini KM Community of partnership…

- Creating awareness about the regional KM guidelines within the DARSS and among various stakeholders. This will ensure that all role players follow the guidelines which will promote documentation and sharing of information on the CCARDESA themes, the Malabo Declaration Commitments and SDGs.
- Promote KM activities in the DARSS by organizing and hosting workshops as well as meetings for sharing best practices.
- Conducting sensitization and awareness workshops regarding the CCARDESA themes, the Malabo Declaration Commitments and SDGs.
- Coordinating, harmonization KM activities in the DARSS, in line with the CCARDESA themes, the Malabo Declaration Commitments and SDGs.

Duties of Eswatini KM Community of partnership…

- Developing templates, tools and instruments for capturing and sharing information, in line with the CCARDESA themes, Malabo Declaration Commitments and SDGs.
- Setting up standards and timelines for collection, documentation and sharing of information, in line with the CCARDESA themes, the Malabo Declaration Commitments and SDGs.
- Coordinate KM capacity building activities in the DARSS and stakeholders. The community of partnership will serve as hub for various resources such as training materials on KM as well as serve as a space where various KM experts in the country will share their knowledge and skills as well experiences.

Structure of the Community of partnership…



Strategy implementation plan…

- Drivers for KM information capture namely roles, processes, technology, and governance
- It is important to have a specifically laid out vision, mission, purpose, and specific objectives, activities and expected outcomes for KM hence the strategy
- There is need for the focal point persons to ensure that DARSS state well each and everyone's responsibility to promote and strengthening KM in the department.
- To ensure that relevant knowledge is captured there is need for all stakeholders to use/ follow standard procedures and routines tools for collecting, documenting, managing, and sharing information with the department hence CoP

Strategy implementation plan…

Roles

- Strengthen coordination of KM activities
- Creation of an Eswatini KM Community of partnership
- Creation of an inventory of agricultural KM stakeholders in the linked to DARSS
- Incorporation of KM activities in DARSS's work plans and budgets
- Promote KM monitoring and evaluation activities
- Inclusion Indigenous Knowledge
- Organise and conduct KM planning
- Development of a KM plan
- Setting up KM metrics
- Set up KM performance management

Strategy implementation plan…

Processes

- Information Capturing
  - The focal point person should be responsible for providing detailed information on how tacit and explicit knowledge is captured and shared
- Sharing Information
  - The focal point person should provide clear descriptions in writing of the various platforms and formats for sharing the content to users and other experts
- Information Update
  - The focal point person should have clear and standard procedures and timelines for updating knowledge

Strategy implementation plan…

Technology

- **Inclusion of KM activities on the DARSS slot on the MoA website.**
- **Strengthen linkages between the CCARDESA hub and DARSS website.**
- **Provide support towards establishments of Intranet infrastructures.**
- **Support the use of groupware and collaboration software. D-Groups, Microsoft teams, Dropbox, google drive, Skype, and ZOOM.**
- **Incorporation of E-Learning systems.**

Strategy implementation plan…

Governance

- **Inclusion of KM activities on the DARSS slot on the MoA website.**
- **Strengthen linkages between the CCARDESA hub and DARSS website.**
- **Provide support towards establishments of Intranet infrastructures.**
- **Support the use of groupware and collaboration software. D-Groups, Microsoft teams, Dropbox, google drive, Skype, and ZOOM.**
- **Incorporation of E-Learning systems.**

CAADP XP4 PROGRAMME

KM4AgD CHALLENGE

Knowledge Management for Agricultural Development Agenda

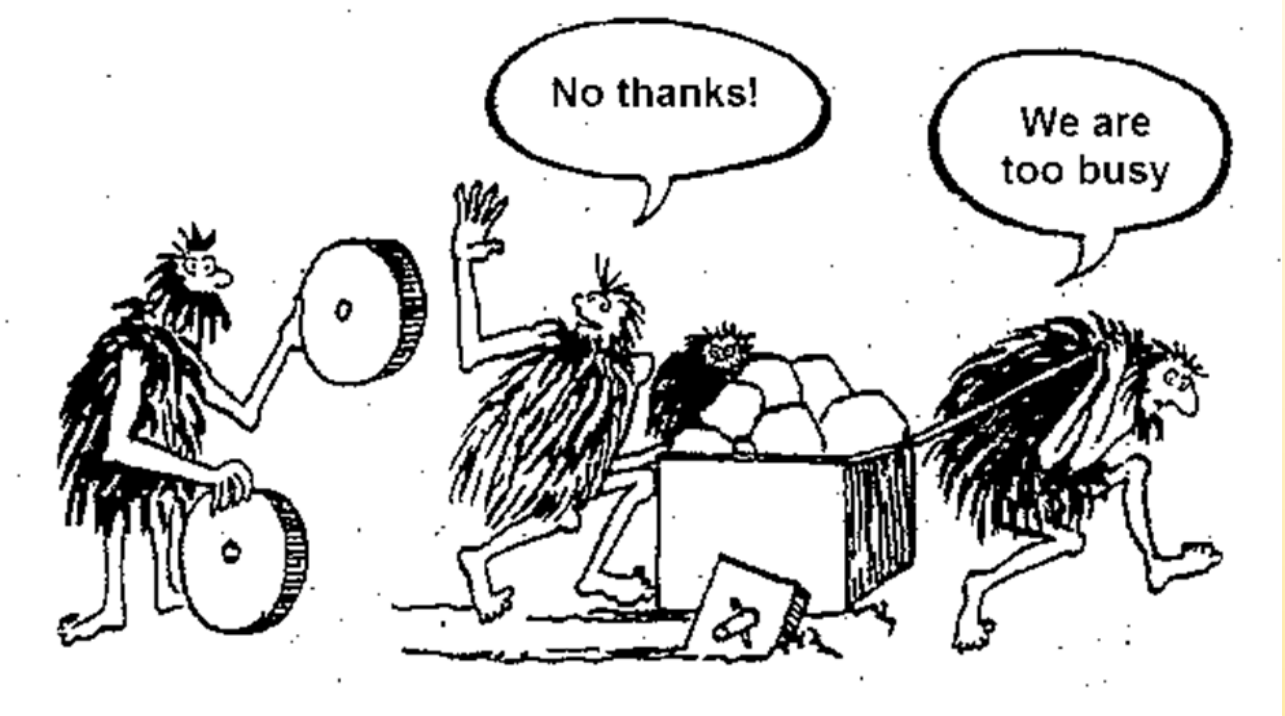
IFAD FARA ASARECA CORAF CCARDESA GFAR K4DP

Roles and responsibilities	M	KMG	KM	FC	SME	KW
Theme 1: Knowledge Management in the Management System						
Activity 1 **Provision of leadership support**	✓✓✓		✓✓		✓✓	✓
Activity 2 **Technical guides, coordination of activities**	✓	✓	✓✓✓		✓✓✓	✓
Activity 3 **Knowledge Development Goals**	✓	✓	✓✓✓	✓		
Theme 2: Knowledge Products and Services						
Activity 1 **Generation of knowledge products**		✓✓✓	✓✓✓	✓	✓✓	✓
Activity 2 **Provision of knowledge services**		✓✓✓	✓✓		✓✓✓	
Theme 3: Knowledge Agents (strengthening human knowledge assets)						
Activity 1 **Knowledge sharing & coordination of KM groups**	✓	✓✓✓	✓✓	✓✓✓	✓	
Activity 2 **Dissemination of knowledge**		✓✓	✓✓✓		✓	✓✓
Theme 4: Knowledge Hub (strengthening structural knowledge assets)						
Activity 1 **Knowledge Systems and Data Integration**	✓	✓✓✓	✓✓		✓	✓
Activity 2 **Coordinate knowledge sharing activities**	✓	✓✓	✓✓✓	✓✓	✓✓	
Activity 3 **Knowledge Skills Programme**	✓	✓✓	✓✓✓		✓✓	
Activity 4 **Capturing knowledge from projects**	✓	✓✓	✓✓✓		✓✓✓	

Theme 5: Knowledge Communities (strengthening knowledge networks)						
Activity 1 **Experiences sharing**		✓✓	✓✓✓	✓✓	✓✓✓	✓
Activity 2 **Training and support**	✓✓	✓✓	✓✓✓	✓	✓✓✓	✓
Activity 3 **Capturing knowledge from Knowledge Communities** üüü=Lead or major role; üü=Significant role; ü=Involved		✓✓	✓✓	✓✓✓	✓✓	✓
Activity 4 **Capturing knowledge from social media and apps**		✓✓	✓✓	✓✓✓	✓✓	✓
Activity 5 **Capturing knowledge from extension services**		✓✓	✓✓✓	✓✓✓	✓✓	✓
Activity 6 **Capturing knowledge from donors and other AR4D partners**		✓✓	✓✓✓	✓✓✓	✓✓	✓
Theme 6: Knowledge Processes (strengthening collaboration)						
Activity 1 **Provides training and support**	✓	✓✓	✓✓✓	✓✓✓	✓✓	✓
Activity 2 **Sharing experiences**	✓	✓✓	✓✓✓	✓✓✓	✓✓	✓
Theme 7: National Knowledge Partnership for Agricultural Development						
Activity 1 **Setting up CoP**	✓	✓✓	✓✓✓	✓✓✓	✓✓	✓
Activity 2 **Coordination of CoP**	✓	✓✓	✓✓✓	✓✓✓	✓✓	✓

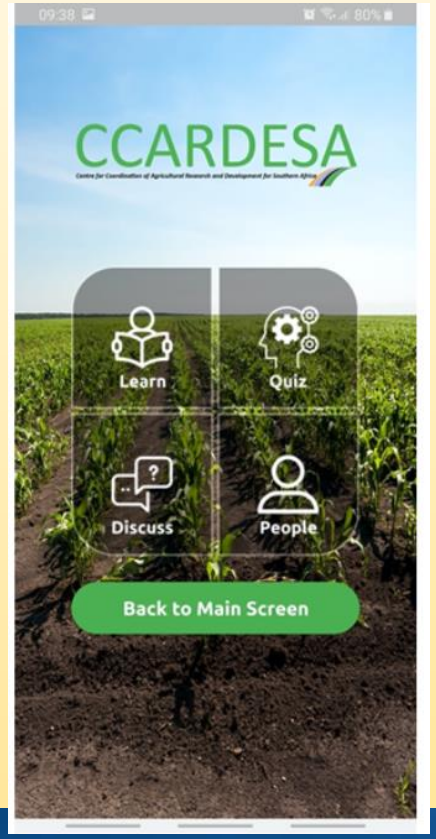
Implementation Period	Y1: Q1-4				Years 2-10								
	1	2	3	4	2	3	4	5	6	7	8	9	10
KM conceptualization, awareness and goal setting													
Creation of an inventory of agricultural research KM stakeholders and engagement													
Creation of an Eswatini KM Community of partnership													
Strengthen coordination of KM activities, products and services													
Knowledge systems and data integration													
Capturing knowledge from projects, events and leaving expects													
Incorporation of KM activities in the DARSS's work plans and budgets													
Linking academia and the industry													
Organise and develop KM plan													
Set up KM performance management													
Establish an information system for wider dissemination of research and innovation results													
Promote KM monitoring and evaluation activities													
Establish an awareness and Intellectual Property support framework for researchers to ensure KM and innovations is shared with industry													

Don’t be afraid to try new things…



CCARDESA Learning Mobile Application

Kindly go to Google Play Store, and look for CCARDESA app, then download it or type the link below



- https://play.google.com/store/apps/details?id=com.ccardesa.ccardesa

Apple App Store

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