Policy memo: scenario-guided recommendations for sound implementation of the Kenya Climate Smart Agriculture Strategy 2017-2026

29 November 2017

The purpose of this memorandum is to share scenario-guided recommendations for the implementation of the Kenya Climate Smart Agriculture (CSA) Strategy. During a workshop held on 18 and 19 October 2017 in Nairobi, representatives of the Ministry of Agriculture, Livestock and Fisheries, the Ministry of Environment, the Ministry of Water and Irrigation, as well as academia and NGOs met to assess the feasibility of the implementation framework of the CSA Strategy in the face of future uncertainty. To this end, they performed a scenario-guided review of the implementation framework, using a set of four scenarios developed by stakeholders from the East African region, a process that was led by the CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS). This scenario-guided review process was part of a UN Environment World Conservation Monitoring Centre (UNEP-WCMC) project on land-use related decision-making in the Lake Victoria Basin region, funded by the John D. and Catherine T. MacArthur Foundation. For more information on the project, visit: https://wcmc.io/commodities.

This memorandum gives an overview of the recommendations that were formulated during the scenario-guided review. The workshop participants prioritised four of the CSA Strategy's Strategic Issues, for which the recommendations are described below. These recommendations serve to strengthen the implementation of the CSA Strategy, both in the coming years, and in the long-term.

Strategic issue 1: Vulnerabilities due to changes in temperature regimes and precipitation patterns

- To **improve the network of weather stations countrywide**, it is recommended to
    i. Add a centralized data processing and dissemination centre (e.g. in Nairobi)
    ii. Enhance the performance of county-level weather stations by linking them to regional weather stations
        - Therefore, county capacity should be improved, for example in terms of equipment and personnel.
    iii. Invest in proper institutional arrangements/linkages for dissemination of weather information among central, county and regional centres
    iv. Improve network of weather stations countrywide, so smallholders can access information on their own
    v. Put in place functional governance structures form local to national level
    vi. Involve the international community
- To **integrate scientific and indigenous technical knowledge in weather forecasting**, it is recommended to
    i. Work with civil society and other actors in rural economy to mobilize resources and lobby government
    ii. Invest more in modern technology for weather date collection, to be linked with national weather management unit
    iii. Process real time weather data and provide feedback
- To **enhance human capacity in weather data collection, analysis and packaging**, it is recommended to
    i. Engage development partners to specifically focus on capacity building of actors, or to precondition their development financing to national and county-level government to include a component of capacity building of actors
    ii. Promote the formation of functional farmer organizations at grassroots level for information exchange and learning
    iii. Raise awareness of citizen's rights

iv.   Establish sub-county/ward-level units to relay weather information to beneficiaries

- To **provide early warning information on seasonal weather patterns**, it is recommended to
  i.   Involve civil society and farmers, pastoralists and fisherfolk in the prioritization of resource allocation for smallholders, focusing on early warning systems, packaging and dissemination
  ii.   Prepare and operationalize early warning systems
  iii. Prepare county land and water use master plans
- To **promote breeding of crop varieties, livestock and fish breeds, and tree species, that are adapted to weather variations and tolerant to pests and diseases**, it is recommended to
  i.   Enhance this with support to research centers to integrate indigenous technology such as germplasm selection adaptable to climate change and focused breeding
  ii.   Promote effective information packaging and dissemination
  iii. Strengthen and support research institutions to carry out both basic and adaptive research for crop varieties, livestock and fish breeds that can withstand extreme weather variations/conditions
  iv.   Establish germplasm conservation centres for both indigenous and improved crop varieties, livestock and fish breeds
  v.   Integrate use of harvested water for livestock, fish and crop farming
- To **conduct participatory research on improved technologies and practices informed by needs of users and agro-ecological zones along prioritized value chains**, it is recommended to
  i.   Mobilize other extension providers such as the private sector and NGOs to support, disseminate and upscale research findings by KALRO, ILRI, etc. and support participation of smallholders
- To **conduct on-farm research into low-cost appropriate technologies and practices and deliver them as packages**, it is recommended to
  i.   Engage non-state actors in on-farm research activities
  ii.   Operationalize national agricultural extension services up to grassroots level
- To **build the capacity of extension service providers, producers and other stakeholders in the use of existing/ new /improved CSA technologies and practices**, it is recommended to
  i.   Involve civil society to engage smallholders to mobilize demand driven extension services
  ii.   Support the formation of common interest community level advocacy groups
  iii. Establish stakeholder fora led by individuals who are able to advocate and lobby for stakeholders interests
  iv.   Establish knowledge management systems and build capacity of beneficiaries
  v.   Establish ICT centres in villages and distant smallholder communities
  vi.   Give financial support from national government resources to farmer organizations
  vii. Improve the extension service delivery system (in terms of content, funding, capacity and performance) at all levels
  viii. Develop and support a functional extension system with focus on adaptation and resilience
- To **promote integrated farming systems comprising crops, livestock, aquaculture and farm forestry**, it is recommended to
  i.   Engage civil society and other non-state actors

Strategic Issue 3: Vulnerabilities due to unsustainable natural resource management

- To **establish baselines and undertake inventory for natural resources (agricultural land, water, pastures, fisheries and forestry),** it is recommended to
  i.   8.3 Develop and maintain a database for natural resources at *Regional*, National and County levels (activity)
  ii.   8.3 Update the database at *regional*, national and county level (measure achievement)
- To **promote Sustainable Natural Resource Management,** it is recommended to
  i.   9.1 Develop a framework for *coordinated* sustainable natural resource management
  ii.   9.2 Promote integrated *land use management* (activities)

   iii.   9.2 Monitor no. and types of *Land use* technologies promoted and adopted (measure achievement)

   iv.   9.3 Restore degraded Land (activities)

   v.   9.3 Mainstream Sustainable Natural Resources Management into programmes and projects Develop and implement programmes and projects on sustainable land management and use of natural resources including alternative livelihoods (e.g. protection of riparian reserves, fish landing stations, wildlife corridors, stock routes and off-farm activities) (activities)

   vi.   9.3 Integrate Sustainable Natural Resources Management in CIDPs (country government responsibility)

   vii.   9.3 Seek technical support (Development partners and International Research Institutions) (other stakeholders responsibility)

- To **promote sustainable water catchment protection, harvesting and storage, and technologies for efficient water use**, it is recommended to

   i.   10.1 Incorporate components that enhance resilience (irrigation of crops, aquaculture, livestock watering and agroforestry) in designs and development of water harvesting and storage structures at regional and national levels, as well as household and community level (activities)

   ii.   10.3 Promote effective and efficient agricultural water use, including waste water management through community led governance (activities)

Strategic Issue 7: Inadequate capacities and weak coordination among institutions and stakeholders in climate smart agriculture

- To **establish CSA coordination structures**, it is recommended to

   i.   Strengthen technical and institutional capacity

   ii.   Create an inclusive environment for all stakeholders involved in the different aspects of CSA (production, service provision and environmental management)

   iii.   Adhere to international sustainability and environmental agreements

   iv.   Ensure all key actors are represented

   v.   Establish a clear monitoring framework to ensure no sectors are overlooked

   vi.   Involve civil society to ensure good leadership

   vii.   Establish regional structures to support coordination

   viii.   Create awareness/sensitize all stakeholder involved on their roles and responsibilities, through participatory planning, budgeting, implementation, monitoring & evaluation (for sustainability and ownership)

- **To promote partnerships between stakeholders to enhance joint planning and implementation of CSA,** it is recommended to

   i.   Ensure partnerships' focus towards CSA is maintained in the longer term

   ii.   Ensure progressive realization of strategic objectives of CSA

   iii.   Develop a clear monitoring system

   iv.   Advocate for a bottom-up approach

   v.   Strengthen institutions that ensure inclusivity and localized decision-making

   vi.   Ensure that public participation is setup in a way that safeguards the intended democratic process

   vii.   Seek partnerships with private sector actors

   viii.   Cascade/domesticate regionally agreed-upon protocols to the local level

   ix.   Put in place formalized agreements for engagements and partnerships (such as MoUS, legal committees)

- To s**upport linkage between National and County CSA institutions with National Climatic Change Council (NCCC) and Climate Change Directorate,** it is recommended to
    i. Establish a system to facilitate the linkage between national and county level structures
    ii. Mobilize private sector financing to facilitate the planning and implementation
    iii. Ensure accountability and transparency
    iv. Strengthen PPP models
    v. Strengthen and involve intergovernmental institutions by ensuring CSA is part of their agenda
    vi. Ensure priorities are first set at the county level
    vii. Harmonize and coordinate national and county priorities
    viii. Ensure a strong presence and participation of CSOs and NGOs
    ix. Establish a system to facilitate linkage with regional CSA organizations
    x. Establish an ombudsman office
    xi. Review and monitor continuously to address emerging issues
- **To strengthen institutions involved in CSA by providing support (technical, financial, human resource) to CSA institutions at National and County level,** it is recommended to
    i. Allocate funds from the ex-checker (national budgets)
    ii. Ecosystem services should be 'price-tagged' to enhance natural resources management in CSA
    iii. 'Ring fence' government allocations to ensure the allocations are strictly spent on what is planned for and also develop regulations on ring fencing
    iv. Incentivize the private sector to invest in supporting institutions on CSA
    v. Involve civil society as a key actor to ensure aspects of accountability
    vi. Consider global frameworks such as SDGs in support to national and county level CSA institutions
    vii. Ensure support goes to CSA priority areas
    viii. Involve global CSA proponents such as World Bank, CGIAR and FAO
- To **capacity build institutions,** it is recommended to
    i. Focus on both technical and financial capacity
    ii. Focus on capacity building of both private, NGO and public institutions
    iii. Sensitize institutions to international agreements
    iv. Concentrate on capacity building at county level, as they are the main implementers

Strategic issue 12: Inadequate data and information on Climate Smart Agriculture

- To **establish and maintain a data and information management system,** it is recommended to
    i. Bring on board the KNBS, Meteorological Department and WARMA
    ii. Assign **clear** roles to county governments
    iii. Strengthen KALRO to establish website portal
    iv. Let ICT Authority implement an open data policy
    v. Gather adequate data on quality and quantity of water, land productivity, soil carbon, plant uptake (of nutrients, water), efficient use of water per crop variety, and residue levels in crops
    vi. Provide data on value addition: quantity and quality of commercial products
    vii. Develop information link with KEINVEST to provide data and information for exports.
    viii. Work with institutions that undertake agricultural exports
    ix. Promote non-mainstream crops for industrial use e.g. sorghum
    x. Market Access provides opportunities for value addition
    xi. Government open data policy should provide the opportunity for data sharing.
    xii. Develop an effective and efficient regional food balance sheet
    xiii. Devolution provides opportunity for County Government to undertake capacity needs (TNA).
    xiv. Promote e-market among the regional countries
    xv. Because of demand, warehouse receipting system becomes key

- To **Build capacities on data collection and information management**, it is recommended to
  i. Develop consumer and customer friendly websites
  ii. Link the CSA info management system to the indigenous/local communities' gene bak for their local varieties, to address issues of adaptation and climate change, e.g. local maize varieties, pumpkin and vegetables
  iii. Document and record the indigenous knowledge to update the existing mechanisms
  iv. Document information on water usage, traditional water harvesting technologies and scenarios, and indigenous irrigation technologies and systems
- To **Promote data management, information generation and dissemination,** it is recommended to
  i. Recruit professional staff
  ii. Establish, strengthen and upgrade ICT infrastructure
  iii. Build capacity and exchange programmes and standardization of data collection methodologies
  iv. Increase number of exchange programmes for learning
  v. Strengthen the link between local communities and researchers
  vi. Information packaging to be accessible to farmers
  vii. Use mobile phone technology in dissemination of information
  viii. Organize demos and show to enhance farmers' knowledge and skills
  ix. Translate information to local languages
  x. Assign county governments to allocate funds for these activities