

KENYA

Report on 2012 National Agricultural Innovation System Assessment



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Sponsored by



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Acronyms

AATF	African Agricultural Technology Foundation
ACTS	African Centre for Technology Studies
AIRC	Agricultural Information Resource Centre
BEACoN	Building Eastern African Community Networks
JKUAT	Jomo Kenyatta University of Agriculture & Technology
KARI	Kenya Agricultural Research Institute
KFRI	Kenya Forestry Research Institute
KPSA	Kenya Private Sector Alliance
MoA	Ministry of Agriculture
MoFD	Ministry of Fisheries Development
NASENO	NASENO University
STAK	Seed Trade Association of Kenya

Table 1: Sector Affiliation of Participating Organizations in NAIS 2012 Study in Kenya

Sectors	Number of Participating Organizations
Agric Extension (Public Funded)	1
Agric Extension (Independent Funded)	
Agric Research (Public Funded)	2
Agric Research (Independent Funded)	2
Agric Education/Training (Public Funded)	3
Agric Education/Training (Independent Funded)	1
Civil Society	1
Agro-Business (Public Funded)	
Agro-Business (Independent Funded)	1
NGO/Non-profit	
Policy (Public Funded)	1
Policy (Independent Funded)	
Total	12

Chart 1:

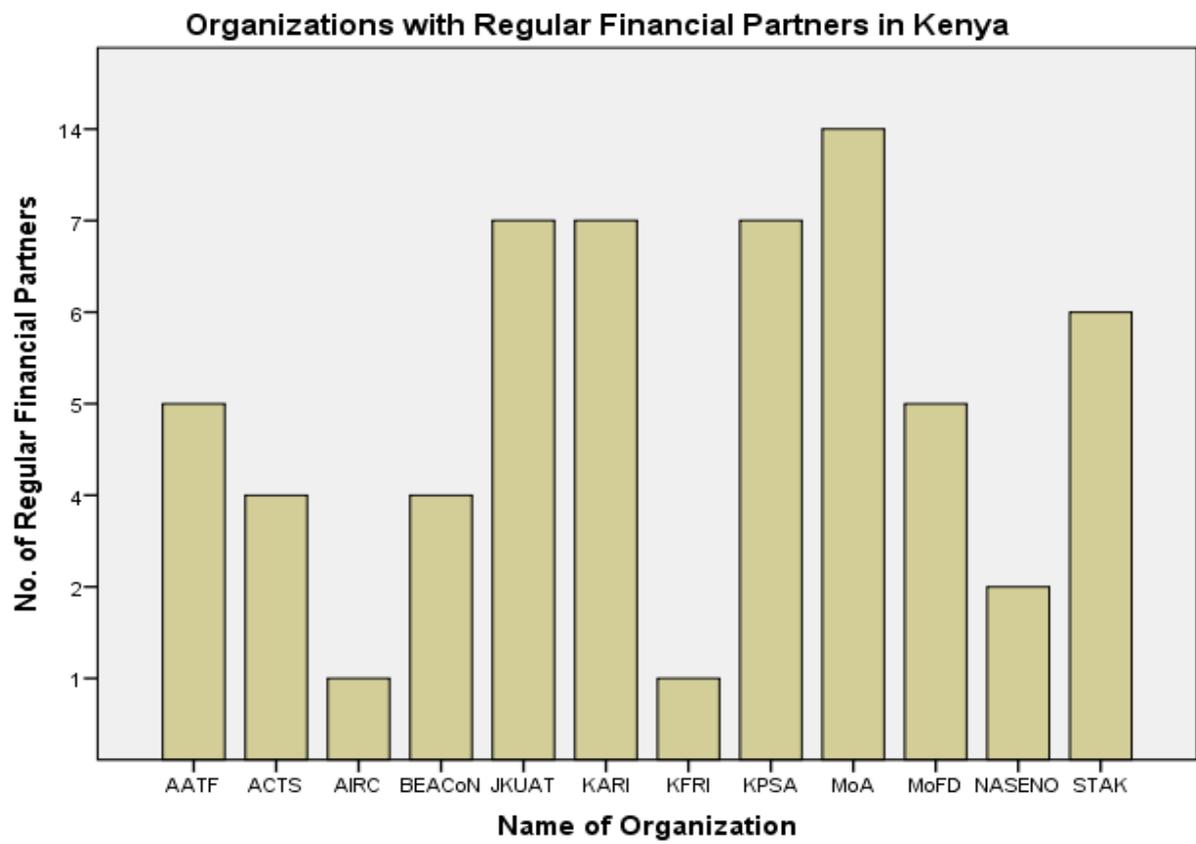


Chart 2:

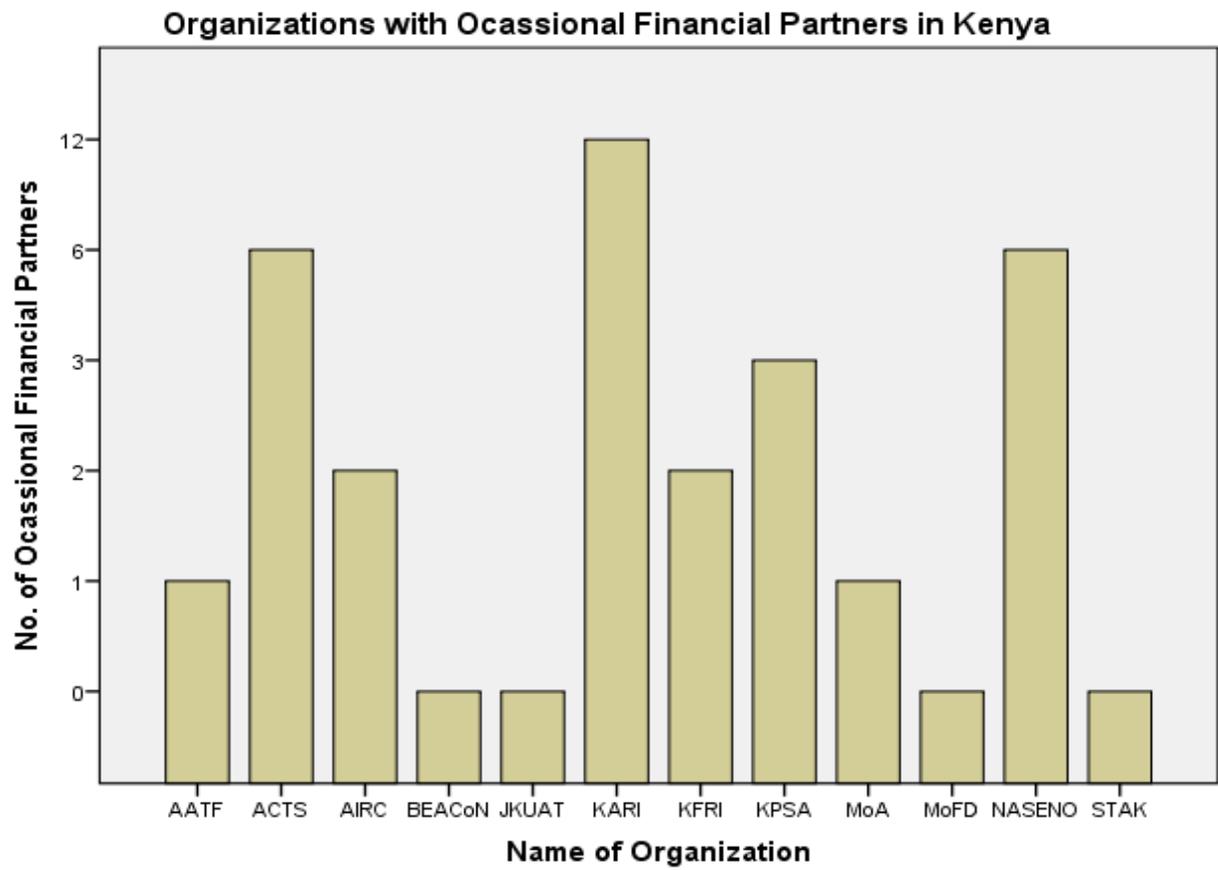


Chart 3:

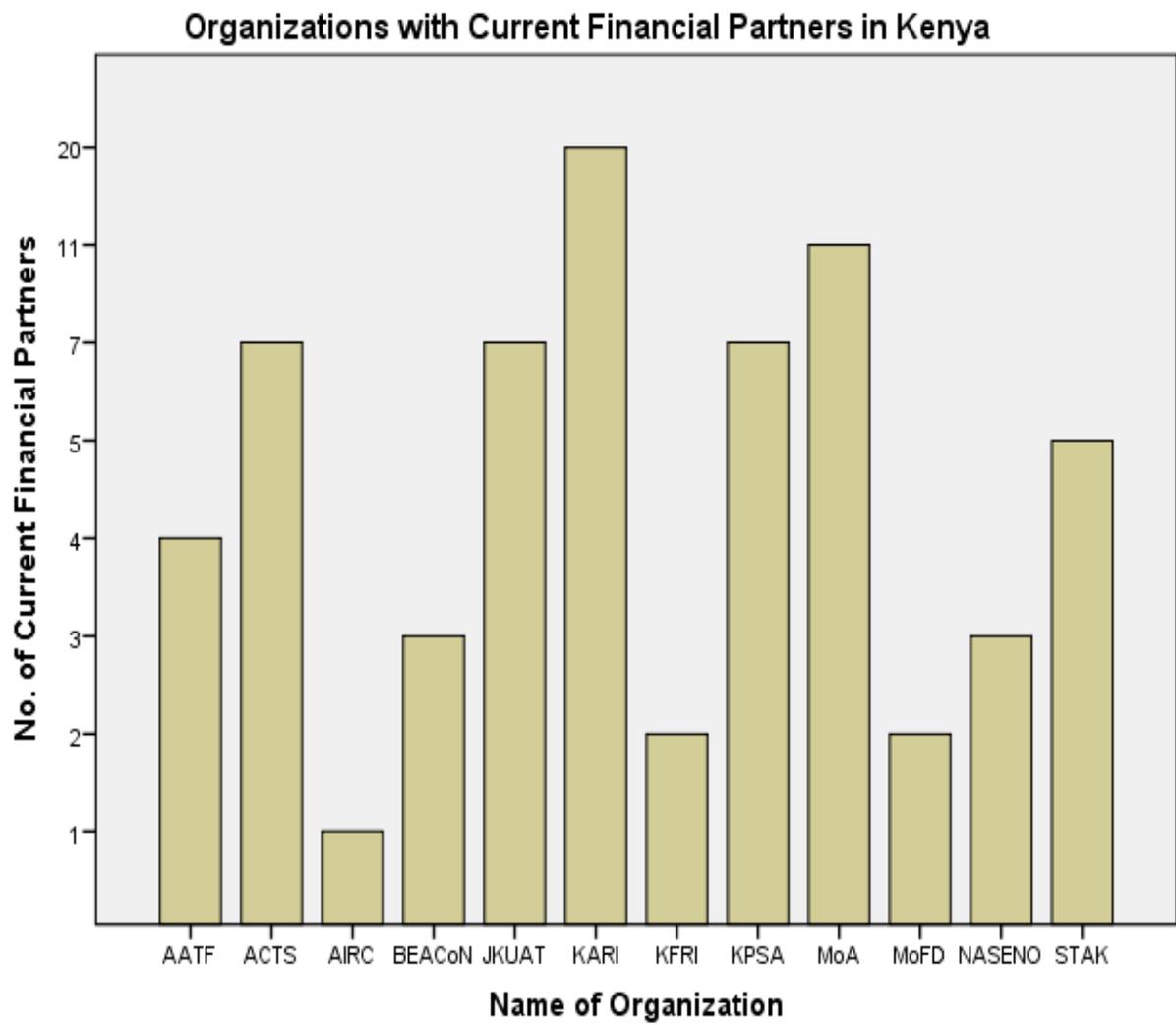


Chart 4:

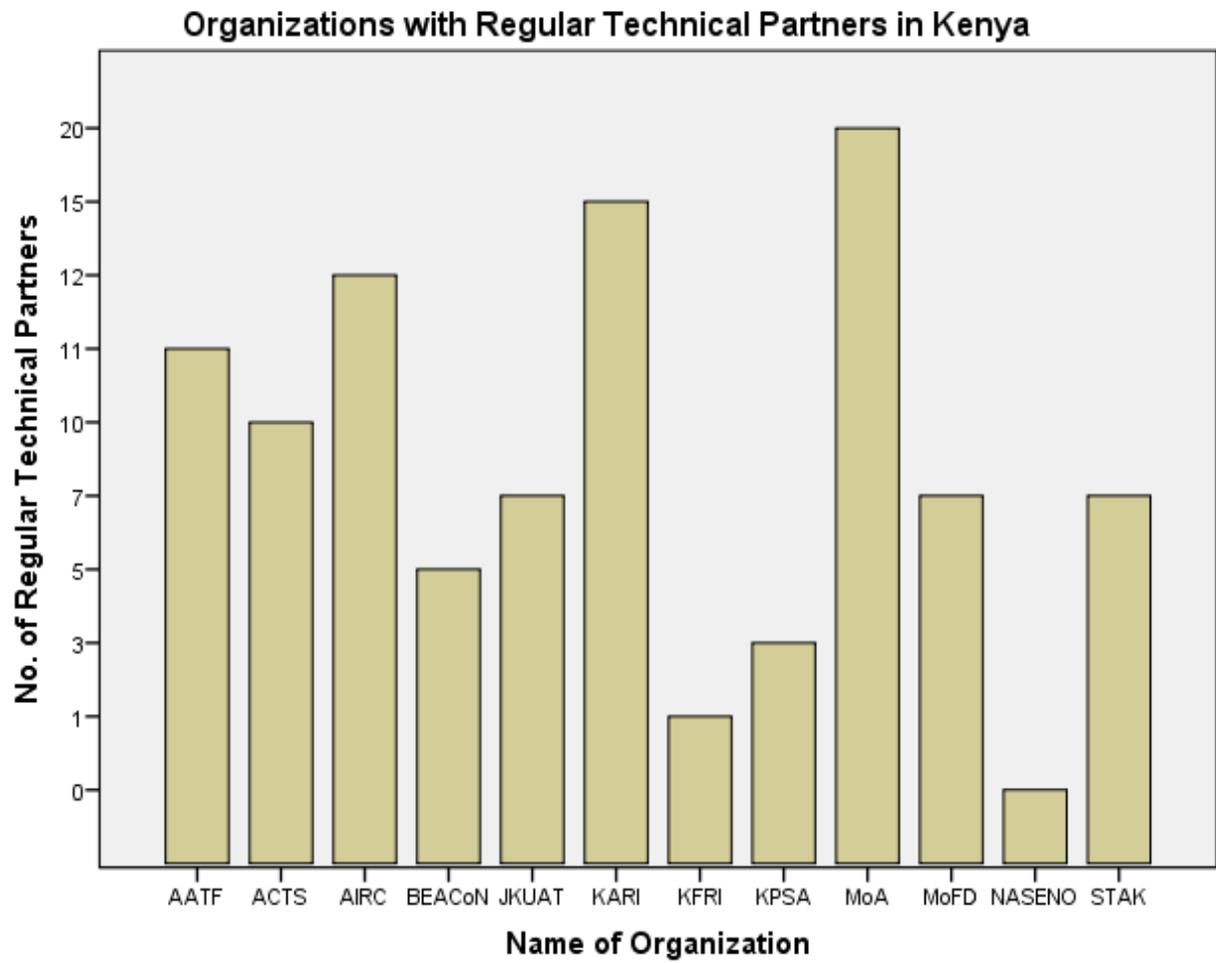


Chart 5:

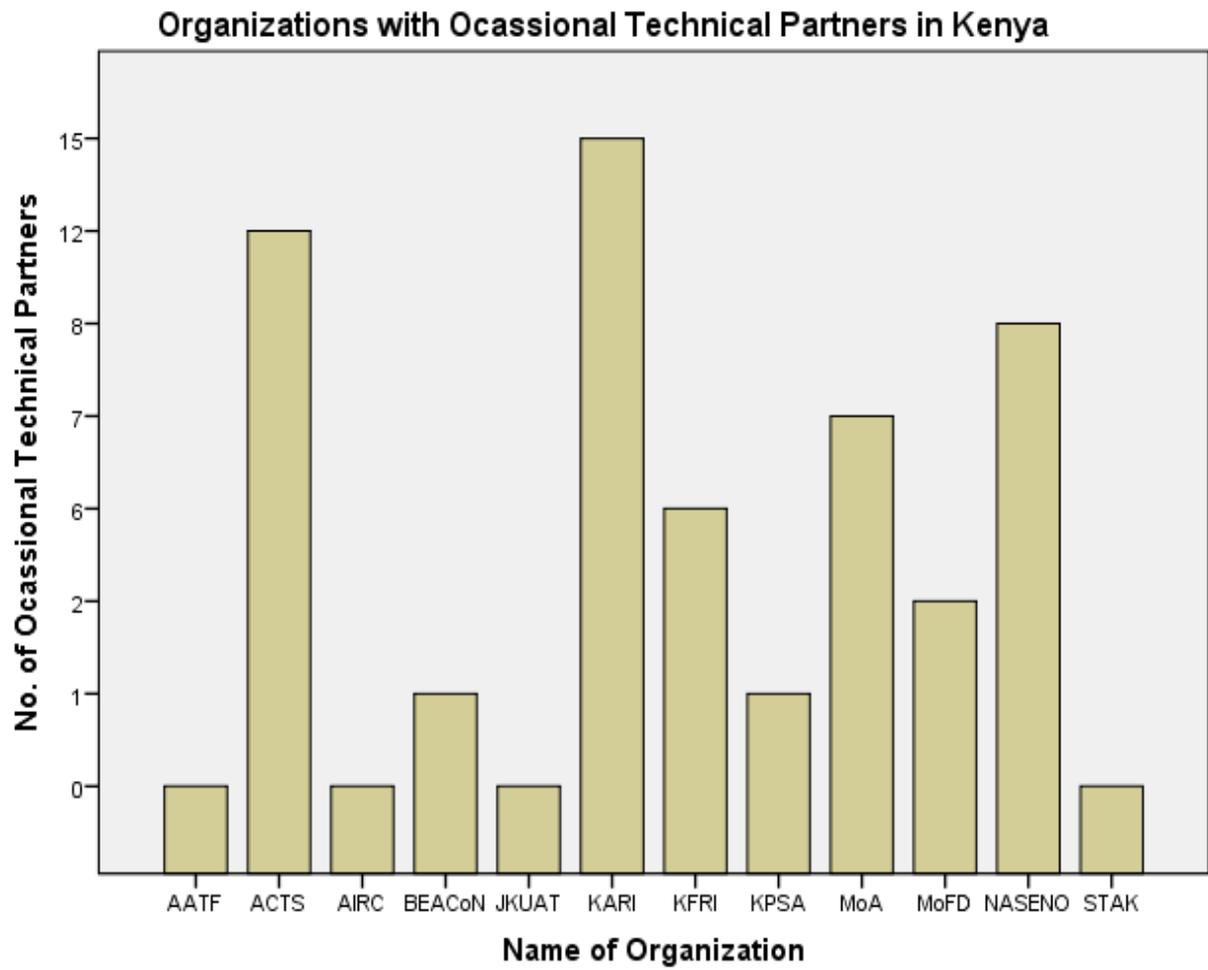
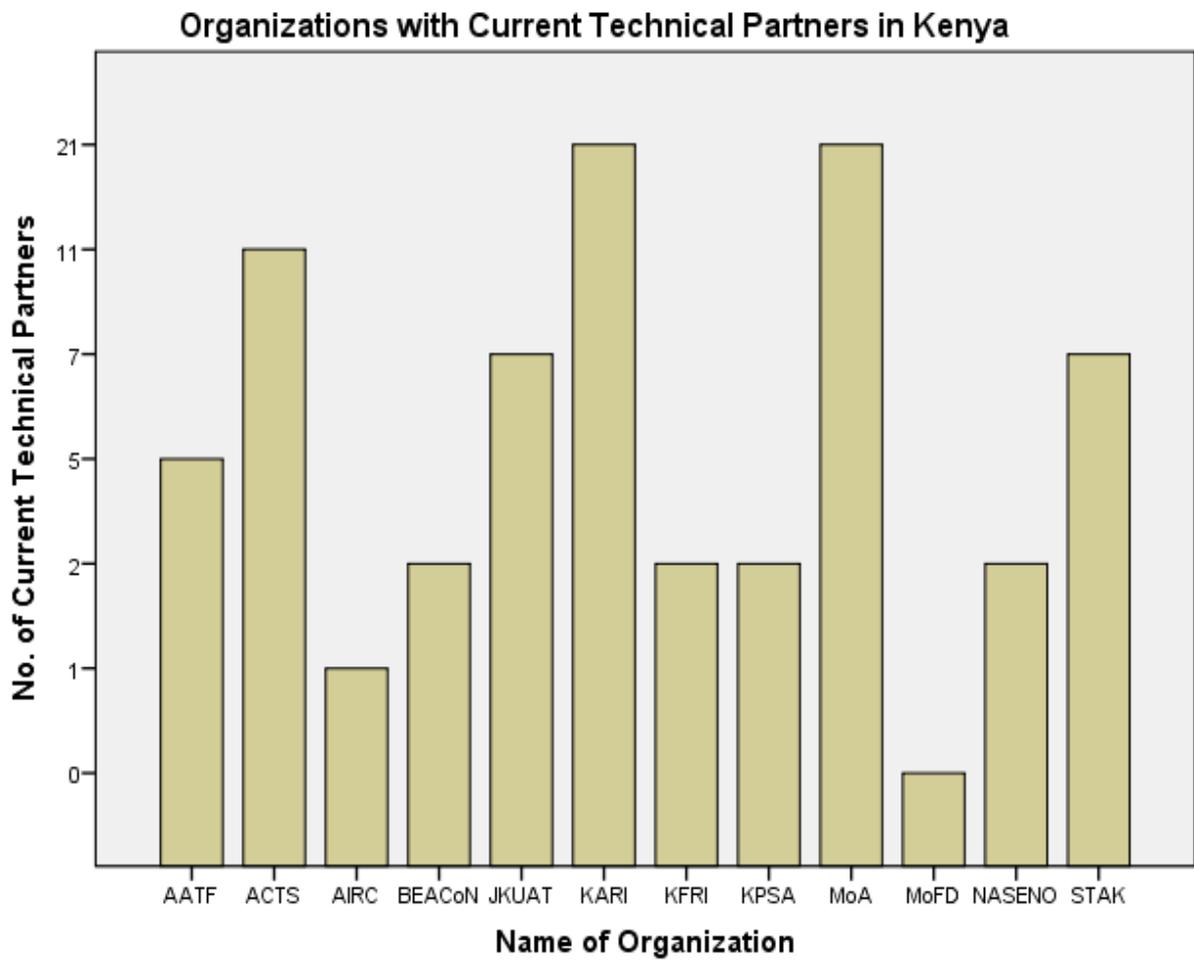
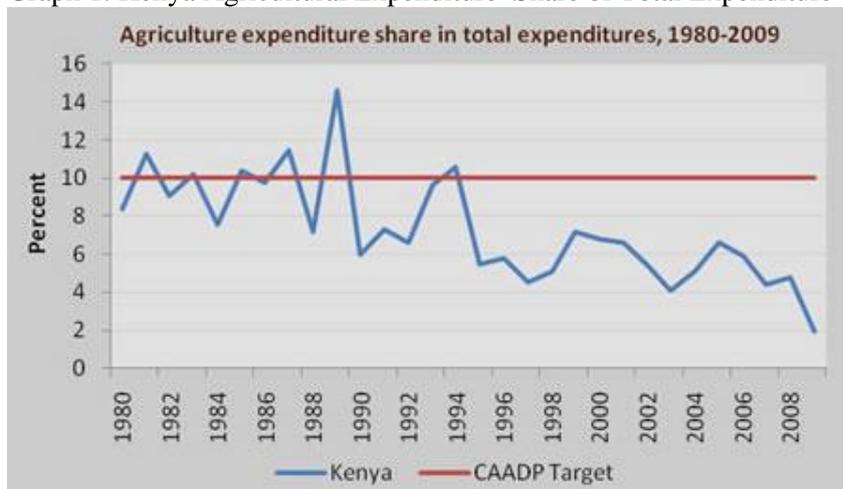


Chart 6:



Graph 1: Kenya Agricultural Expenditure Share of Total Expenditure 1980 - 2009



Source: ReSAKSS 2010.

1. National Agricultural Profile

Kenya has 10 full-fledged Ministries in the agriculture sector. These are (1) Ministry of Agriculture; (2) Ministry of Livestock Development; (3) Ministry of Cooperative Development and Marketing; (4) Ministry of Fisheries Development; (5) Ministry of Water and Irrigation; (6) Ministry of Lands; (7) Ministry of Regional Development Authorities; (8) Ministry of Environment and Mineral Resources; (9) Ministry of Forestry and Wildlife; and (10) Ministry of the Development of Northern Kenya and other Arid Lands.

To ensure that the work of these 10 sector Ministries are synchronized with each other and with the overall national development plans and processes, an Agricultural Sector Coordinating Unit (ASCU), serves as the clearing house for information as well as the country's CAADP Focal Point (the link-office between the national and the continental levels of agricultural policy in the country).

Agricultural research is centrally governed by the Kenya Agricultural Research Institute (KARI), which has 22 centres and a network of sub-centres and stations across the country. The respective mandates of these centres align with the crop subsectors prevalent in the respective agro-ecological zones of the country.

Under the East Africa Agricultural Productivity Programme (EAAPP), Kenya is implementing a mandate on dairy. The mandate is aimed at establishing Kenya as the regional leader in dairy research, production technology, productivity, packaging, branding and marketing in the region. In addition to KARI various universities have schools or faculties of agriculture which conduct formal educational training in agriculture or related disciplines, and targeted research and extension services. These include the Jomo Kenyatta University of Agriculture and Technology (JKUAT) and the Kenyatta University's School of Agriculture and Enterprise Development, both of which participated in the NAIS study.

Other key organizations in Kenya's agriculture sector include the Kenya National Federation of Agricultural Producers (KENFAP), Kenya Private Sector Alliance (KPSA) and various service-provider organizations, such as the African Centre for Technology Studies (ACTS), the World Agroforestry Centre (ICRAF) and other international policy organizations based in the country. Among African countries, Kenya perhaps demonstrates the highest exposure and familiarity with global and continental agricultural policy trends and agendas, due partially to its being a host country and a hub for many of the organizations that are leading these agendas.

KENFAP, through its commercial subsidiary (KENFAP Services Limited), engages in agribusiness and agro-tourism ventures. These strategic operations enable KENFAP to (i) broker the supply of needed agro-inputs to farmers; (ii) provide feedback from farmers to agro-input manufacturers on the quality and performance of the inputs used; (iii) minimize the proliferation of fake or adulterated agro-inputs; (iv) broker linkages to produce markets thereby enabling farmers to sell after harvest; (v) provide extension and advisory services to farmers across the country, both on export crops and on food crops; (vi) represent and advocate for Kenyan farmers at local, national and international levels; and (vii) strengthen the voice of Kenyan farmers in their interactions with policymakers on agriculture.

These innovations by KENFAP have helped to catalyze the commercial viability of small-scale agriculture in the country and, at the same time, complemented public-funded agricultural extension services in non-export crop sectors.

Regional agricultural productivity programmes: Two major World Bank-funded regional agricultural productivity programmes (RAPPs) are currently being implemented in East Africa (EAAPP) and West Africa (WAAPP), under the coordination of FARA’s sub-regional partner-organizations (ASARECA & CORAF-WECARD). Kenya is implementing the EAAPP intervention with a focus on dairy, envisaged to make Kenya the regional innovation leader in the dairy subsector.

These regional-scale interventions have the potential to permanently shape the trajectory of agricultural innovation in the participating countries and regionally. The achievement of competitive advantage and leadership in designated subsectors by each member country is envisaged to place each member country in a position to actively engage with other member countries in intra-regional agricultural trade, as well as achieve some of its national food security objectives. This is part of the expressed strategy of regional economic integration which African countries have struggled with for nearly four decades now, in the form of COMESA, ECECA, ECOWAS and SADC. However, the underlying, even if unstated, assumptions upon which this grand vision is based may not have been fully understood.

2. Institutional Arrangements

Kenya has well-developed national policy documents covering (1) Agriculture Sector Development Strategy 2010–2020¹; (2) National Agricultural Research System Policy²; and (3) National Agricultural Sector Extension Policy³. The recognition of, and provisions for, the roles of the formal and informal private sector are expressed in each of these policy documents. The National Agricultural Sector Extension Policy, for example, identifies three models, namely (i) fully state-sponsored, free of cost to users; (ii) co-pay or cost-sharing model which partially subsidizes in subsectors that have limited commercialization; and (iii) fully private sector-led model in highly commercialized subsectors e.g. tea, tobacco, dairy and horticulture.

All these policy documents express an alignment of objectives with Kenya’s macroeconomic policies and as embodied in the Vision 2030 document. Other national policies address important issues such as land use, Bio safety and the use of Genetic Resources in the country.

***“If you have a clear vision and a healthy body,
your feet will take you there⁴***

Essentially, these configuration of organizations, institutional arrangements, collaborations (at the local, national, sub-regional and global levels), and the organizational transformation that has occurred within the Ministry of Agriculture (ISO 9001:2008 Certification was achieved in March 2011) are indicative of the innovation that has already occurred at the philosophical, policy, political, organizational and enforcement levels. At the time of data collection for 2012 NAIS Assessment, a National Agricultural Census, with technical assistance from the FAO, was underway in Kenya. An interview participant observed that *“we see the Ministry of Agriculture operating as a business organization . . . and the rest of the sector can only follow this direction.”*⁵

¹ Government of Kenya (2010). 3rd Reprint. Agriculture Sector Development Strategy (ASDS) 2010-2020

² Government of Kenya (2012). National Agricultural Research System Policy. July 2012.

³ Government of Kenya (2012). National Agricultural Sector Extension Policy. June 2012.

⁴ Mrs. Agnes Kyalo, National Coordinator, FARA-sponsored 2012 NAIS Assessment, Nairobi

⁵ Dr. John Mutunga, CEO, Kenya National Federation of Agricultural Producers (KENFAP)

3. New Constitution

Kenya was scheduled to have general elections in March, 2013, and a new Constitution, earlier approved by a national referendum, was to come into effect. This will involve decentralization and devolution of administrative authorities across the country. The current 10 Ministries in the agriculture sector will likely be merged into a fewer number of entities, the bureaucracy streamlined and many of the personnel deployed to the new administrative structures which are aimed at taking the government closer to the people in the countryside. These will be very significant changes, and the extent to which the various organizations, policies and collaborations will be impacted remains to be seen.

The principle of bringing government closer to the citizens to enhance citizen participation in governance and socioeconomic activities seems certain to (i) stimulate local economies through employment in the public sector; and (ii) benefit the agriculture sector and all of its stakeholders.

4. Analysis of Responses in Kenya

Almost every respondent in Kenya suggested public-private-partnership initiatives as a strategy for increasing private sector participation in agriculture. KARI, for example, called for private sector organizations to be proactive in commissioning research projects on specific topics or themes of interest, rather than waiting for KARI to initiate research and bear the responsibility of convincing businesses on the commercial viability of the research output.

Unlike the other 3 countries that participated in the 2012 NAIS assessment, Kenya had (i) a national policy on agriculture, (ii) a national policy on agricultural extension and rural advisory services, and (iii) a national policy on agricultural research. Each and all of these policy documents make explicit provisions for private sector participation, thereby providing institutional guarantees for private investment in these key areas of agriculture.

Public expenditure on agriculture: As indicated in Graph 1, Kenya had not achieved the continental benchmark of spending on agriculture at least 10% of the total national public expenditure (based on the years for which data was available). However the continental benchmark has helped to create awareness and focus a national debate and the aspirations of the stakeholders. One of the issues related to public spending on agriculture in African countries is that most of the allocated public funds to the sector are spent on recurrent commitments such as staff salaries and maintenance, leaving little if any for new research initiatives. Therefore, irrespective of the whether Kenya has met the continental benchmark or not, there was a general dissatisfaction with the low level of funding available for new research and innovation in key subsectors.

Funding and technical assistance are essential to the generation of innovations in an agriculture system. As indicated in Charts 1 to 6 in this report, the organizations that participated in the 2012 NAIS assessment in Kenya had diverse financial and technical partners, both regular and occasional over a 10-year period. This illustrates the importance of sustained long-term investment as a requirement for building a national agricultural innovation system, backed by effective policy and strategy.

5. Recommendations

- 5.1 Kenya was in the midst of positive events and changes, and unfortunately, the high level of organization and innovation already achieved at the policy level could likely be unsettled by the devolution of administrative structures as the implementation of the new constitution took effect.
- 5.2 As shown in Graph 1 above, Kenya's public expenditure on agriculture has been shrinking rather than increasing since 1990. However, it is unclear whether the ReSAKSS data in Graph 1 were based on budgetary allocations to only one Ministry or to all the ten Ministries in the agricultural sector in Kenya. It is hereby recommended that the national expenditure on agriculture should be increased to meet the continental benchmark of at least 10% share of total national expenditure. The ASCU office should also work with ReSAKSS to clarify whether the data applies to only one Ministry or to all the Ministries in the agriculture sector.
- 5.3 While this situation in Kenya might still be in flux due to ongoing devolution of administrative structures, it is recommended that the National Coordinator for the 2012 NAIS Assessment in Kenya should be supported by FARA to document any changes that might be taking place due to the impact of the ongoing reorganization. Of particular note would be whether the number of Ministries in the agriculture sector will increase or decrease and how that will impact the sector as a whole.
- 5.4 FARA should encourage and support other sub-Saharan African countries to send a team of policymakers to learn from Kenya's policy approaches and organization of its agricultural sector. One of the elements that other countries could learn from Kenya is the organization and implementation of its national agricultural census which was ongoing at the time of the 2012 NAIS study. The study tour to Kenya should include representatives of SROs and high level national delegations. Of course, Kenya's consent should be solicited and obtained before such a study tour is proposed to the regions. Kenya is clearly in a position to "show and tell" some of its organizational advancements and innovations to encourage other African countries in their effort to innovate at the level of policy; this is where the pace of change appears to be the slowest.
- 5.5 It is recommended that FARA as part of its continental leadership in agricultural research, initiates exploratory studies on the possible future impact of the EAAPP interventions on the such issues as subsistence farming which supports rural household food security, and the possibility of trade wars resulting from each country having supremacy over a designated crop subsector.
- 5.6 Furthermore, it is evident that post-colonial African countries have a stronger tradition of exporting agricultural produce to countries in other continents than within Africa. Hence the financial settlement mechanisms for intra-regional trade might need to be developed to accommodate the envisaged intra-regional trade. For example, under the DFID-funded RIU programme, a transaction in which Sierra Leone and Nigeria exchanged industry resources (poultry feed concentrates and training) encountered a six-month delay in the settlement of the financial terms due to the remittance being routed through a European bank which had never handled a payment transaction between two African countries. This points to the institutional innovations that need to occur before EAAPP could significantly contribute to economic integration in the region. Botswana's success in exporting 95% of its beef production to South Africa,

and its regional leadership in innovation in the livestock sector, offers useful lessons on the feasibility and potential benefits of the envisaged regional economic integration. FARA should consider supporting exploratory studies on financial settlement mechanisms involving agricultural trade in Central Africa.

- 5.7 It is recommended that FARA should urgently propose to the Africa Union, a reasonable benchmark which should be established specifically on public expenditure on agricultural research by member countries.

SUMMARY VIEWS OF PARTICIPATING ORGANIZATIONS

NAIS 2012 STUDY – KENYA

Table 2: Views on Agricultural Innovations by Participating Organizations

	Agricultural Innovation Defined in terms of	Indicators of Agricultural Innovation	How to achieve envisaged Agric Innovation	How to achieve Private sector strong participation
Min of Fisheries	Any activity that makes agricultural extension effective & efficient	Increased agricultural production; new agricultural practices; improved livelihood of farmers; increased food security in the country	Provision of incentives for innovations; provide funds for competition on innovation; create a national innovation department to encourage & guide innovation directions	Educate & encourage agricultural players to invest in extension and advisory services; Make agriculture profitable
BEACoN Education & training	are creative ways in which various stakeholders in the agriculture sector use either in scientific research in producing high quality seed, pesticides etc: ways or methods used by various stakeholders in the sector either to increase food production or resistance of certain varieties to the vagaries of weather. It can also be termed as the use of technologies that enhance production, control pests and weeds etc	Increased food production per acreage; Percentage reduction of post harvest losses; Increased food storage in the national reserves; Decreased famine disasters; No community, peoples dying of hunger; Percentage of communities using irrigation to produce food; Reduced prices of food; Increased number of farmers accessing farm inputs; Increased level of funding to agricultural sector; Increased extension workers and services to the small scale farmers	Increase funding for local agricultural adaptable research & extension services to sensitize farmers on best practices	Nil
KARI	New or old method used to solve current agricultural problem	Number of: farmers using the said agricultural innovation by time; agricultural innovations out there with farmers by time; farmers aware of agricultural innovation by time.	Invest in farmer awareness & access to the innovation; show advantages of the innovation above the current farmer practices; Make the innovation affordable	Show them that they can make money by participating in research.

KPSA	There is no commonly agreed definition but one can broadly consider agric innovation to be the successful application of agric discoveries, formulations, or developments that are purposed to increase food production as well as enhance quality of produce, production process and growing conditions	Rise in total yield of grains and farmer per capita income; Steady income growth for livestock farmers and improved animal husbandry; Proportional rise in agricultural infrastructure investment; Significant growth in farm products processing industry, spurring rapid development of township enterprises.	Endure strong policy support including implementing a careful subsidy policy; Invest in major water projects and irrigation improvement/ expansion; support the development and nurturing of professional cooperative organizations,	We lay emphasis on public-private partnerships model in funding, research and development and development of appropriate curricula
MoA	Technology or method designed to efficiently and effectively address a challenge/ need to enhance production or a process. <i>Chepkube-brooder commonly used in north rift to rear day chicks</i>	Enhanced production, reduced production costs, improved quality	Carry out inventory of existing technologies, validate, support and priorities technologies that can upscale	Support private and public partnership. Evaluate existing partnership on the basis of SWOT, strengthen platforms for interaction
KARI	A continuous process of change, usually a change in one practice often stimulates or requires changes in others; When the focus is on the way: of doing things (practices) and change over time, we tend to talk about the “innovation processes”; people relate to each other (in terms of knowledge, power, function), we tend to talk about the ‘innovation system’ or ‘innovation network’ An innovation system is therefore a social system, “constituted by elements and relationships which interact in the production, diffusion, and use of new knowledge.	Increased: productivity; Enhanced food security, nutrition and health; employment rates – due to growth of agri-business; income accruing to value chain players; competitiveness of Kenya’s products; Sustainable environment management	Enhance the technical capacity of the scientists and technical staff for research/innovation for development and respond to emerging issues. Enhance the managerial skills of the managers in the various research institutions aimed at improving efficiency & effectiveness. Improve industry linkages to promote demand-driven research and support for research/innovation. Identify suitable strategies for scaling-up & scaling out best practice and successful innovations; ensure that business development services (finance, extension, markets) are available; and policy incentives that	Improving the linkages and partnerships between the research institutions and private sector organizations (PSO) through:- Formation and management partnerships to ensure both parties benefit from the engagement. Institutionalization of partnerships as a mode to technology development and transfer. The value chain approach is among the strategies that could be adopted to promote partnerships and engagement.

			promote adoption of the innovations.	Adoption of suitable legal instruments to facilitate the partnerships and ensure commitment. Identifying resources for management of the partnerships
Min of Fisheries	Any activity that makes agriculture profitable/ enjoyable, venture/ solves problems/ increases, production/ reduces post harvest losses etc	Cheap agricultural products; Cheap agricultural inputs; New agricultural practices	Provision of incentives for innovations and funds for competition on innovation; Create a national innovation department to encourage and guide innovation directions	Educate and encourage agricultural players to invest in extension and advisory services; Make agriculture profitable-this will encourage private sector engagement.