

Summary of NRDS2 Concept Notes: Kenya

	Title, Location, Period	Overall Objective (Goal)	Specific Objectives	Components and Activities (excluding Project Management Component)	Budget (USD)
1	Expansion of area under rice cultivation through rehabilitation of existing irrigation infrastructures  - 23 rice growing counties  - 5 years	Increased rice production by expanding area under irrigation; through rehabilitation of infrastructure and increased water use efficiency	Rehabilitate and upgrade irrigation and drainage facilities of the existing schemes  Improve water transmission efficiencies by canal lining and adequate water management including operation and maintenance of all flow control and measurements structures  Install gravity intake irrigation systems in existing rice schemes	1. Conduct a Survey study on the existing irrigation and drainage systems 2. Upgrade the Designs, implementation frameworks and sustainability mechanisms 3. Contract and implement 4. Monitoring and evaluation  1. Establish operational options for increasing Water use efficiency in irrigation schemes 2. Designs upgrades of canal lining and sustainability mechanisms 3. Contract and implement 4. Monitoring and evaluation  1. Identify at least three schemes for gravity intake construction 2. Designs gravity uptakes, implementation frameworks and sustainability mechanisms 3. Contract and implement 4. Monitoring and evaluation	140 million  - Grant - National budget - Tech Coop/Assist - County budget
2	Expansion of area under rice cultivation through development of new irrigation infrastructures  - 23 rice growing counties  - 5 years	Develop new irrigation schemes with gravity intake irrigation systems in line with the Water Master Plan 2030 (MoWS&I)	Prioritize areas for new irrigation infrastructure development based on water plan 2030	1. Conduct a feasibility study on potential areas and prioritize 2. Develop designs, implementation frameworks and sustainability 3. Contract and implement 4. Monitoring and evaluation	500 million  - Grant - Tech Coop/Assist - National budget - County budget - Private sector

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3	Enhance market competitiveness by improving quality of locally produced rice  - 23 rice growing counties  - 5 years	Increase the market competitiveness of locally produced rice	Promotion of good harvesting and postharvest handling practices	<ol style="list-style-type: none"> <li>1. Conduct 1 baseline and 1 evaluation surveys on good husbandry, harvesting and post-harvest handling practices</li> <li>2. Establish 23 farmer field schools to train farmers on good agricultural practice</li> <li>3. Establish 230 demonstrations on good husbandry, harvesting and post-harvest handling practices</li> <li>4. Conduct 6 local exposure tours to learn good rice production/post-harvest practices</li> <li>5. Revise, print and disseminate production, harvest, and post-harvest practices guidelines</li> </ol>	<p style="text-align: right;"><b>5.5 million</b></p> <ul style="list-style-type: none"> <li>- Tech Coop/Assist</li> <li>- National budget</li> <li>- Private sector</li> <li>- County budget</li> </ul>
			Promotion of private sector investment in rice processing (promote series pass mills)	<ol style="list-style-type: none"> <li>1. Create inventory of private sector actors involved in trading, processing, and marketing of rice</li> <li>2. Carry out 46 trainings for the actors (2 trainings per county)</li> <li>3. Facilitate establishment of at least 46 rice aggregation centres (2 per county) to include pallets, tarpaulins, drying floors, weighing machines, moisture meters etc.</li> <li>4. Facilitate private sector to participate in rice value chain</li> </ol>	
4	Expansion of rain-fed rice production area in Counties with potential for rice growing  - 10 rice growing counties with potential for rice growing (Kwale, Bungoma, Busia, Migori, Kilifi, Kakamega, Isiolo, Meru, Siaya, Embu)  - 5 years	To increase rice production by expanding area under rainfed ecosystem	Expand the area under lowland rainfed and upland rainfed ecology	<ol style="list-style-type: none"> <li>1. Develop Kenya suitability atlas for upland and lowland rainfed rice</li> <li>2. Carry out training and demonstrations on upland and lowland rice in areas with potential</li> <li>3. Identification &amp; dissemination of rice technologies that are more appropriate to the newly established areas through participatory approach</li> <li>4. Monitoring and evaluation</li> </ol>	<p style="text-align: right;">160 million</p> <ul style="list-style-type: none"> <li>- Grant</li> <li>- Tech Coop/Assist</li> <li>- National budget</li> <li>- Private sector</li> <li>- County budget</li> </ul>
			Develop and promote water harvesting structures for supplementary irrigation for rainfed ecologies	<ol style="list-style-type: none"> <li>1. Identify and design at least three appropriate rainwater harvesting structures and sustainability mechanism</li> <li>2. Contract and implement</li> <li>3. Monitoring and evaluation</li> </ol>	
			Promote in situ water management technologies	<ol style="list-style-type: none"> <li>1. Identify, design three appropriate in situ water management structures and sustainability mechanisms</li> <li>2. Validate and upscale at least three in situ water management and sustainability mechanisms</li> <li>3. Contract and implement</li> <li>4. Monitoring and evaluation</li> </ol>	
5	Promoting adoption of quality inputs and	Raise on-farm rice productivity	Promotion of double cropping and ratooning	<ol style="list-style-type: none"> <li>1. Conduct demonstrations on double cropping and ratoon management</li> </ol>	84.06 million

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	improved technologies in the rice value chain in Kenya  - Kisumu, Busia, Kirinyaga Counties  - 5 years	through adoption of quality inputs and improved technologies		2. Conduct M&E on the levels of adoption of double cropping	- Tech Coop/Assist - Grant - Loan - National budget - Private sector
			Provide subsidies and improve access to affordable credit	1. Link beneficiaries with subsidy and affordable credit programmes 2. Conduct M&E on the number of beneficiaries accessing subsidies and affordable credit programmes in the 3 counties	
			Develop and promote high yielding, stress tolerant, market-oriented varieties	1. Develop 5 rice varieties with consumer preferred traits 2. Conduct demonstrations on 18 rice varieties on good crop husbandry 3. Conduct M&E on the number of rice varieties developed, promoted, and commercialized	
			Facilitate and create linkages to private investments in production and agro-dealership	1. Create awareness on available investment opportunities in production and agro-dealerships among SMAEs established 2. Conduct M&E on the number of SMAEs established	
			Increase the adoption of certified seeds, fertilizers, and agro-chemicals in irrigated and rain-fed ecologies	1. Conduct demonstrations on the benefits of using certified rice seeds, fertilizers, and agrochemicals in irrigated and rainfed ecologies 2. Conduct M&E on the adoption of certified rice seeds, fertilizers, and agro-chemicals in irrigated and rain-fed ecologies	
			Facilitate management of migratory and invasive pests	1. Continuous surveillance and forecasting of migratory and invasive pests 2. Determine threshold of migratory and invasive pests 3. Engage relevant authorities in implementing mitigation measures for management of migratory and invasive pests 4. Continuous M&E of effectiveness of mitigation measures taken	
6	Promotion of appropriate mechanization options in the rice value chain in Kenya  - Kisumu, Busia, Kwale Counties  - 5 years	Raise on-farm rice productivity by use of appropriate mechanization	Promote appropriate cost-efficient machineries for sowing, transplanting, weeding, harvesting, drying and milling	1. Procure identified appropriate cost-efficient machinery for the preceding operations for the 3 counties 2. Conduct adaptation tests of the procured machinery in each of the counties 3. Conduct on-farm/field trials on use of the machinery in the 3 counties 4. Demonstrate/train on operation, repair, and maintenance of the machinery 5. Conduct M&E on the adaptation and adoption of the machinery	37.2 million  - Tech Coop/Assist - Grant - Loan - National budget - Private sector
			Promote private investments and participation of youth and women in provision of hiring services, sales, and	1. Sensitize private investors, youth and women on investment opportunities and provision of mechanisation services 2. Link at least 30 agricultural enterprises to the machinery supplies and consumers 3. Conduct M&E on the levels of investments, and participation of youth	

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			after-sales services	and women in provision of the mechanization services	
			Increase adoption of locally developed and improved harvest and postharvest technologies	<ol style="list-style-type: none"> <li>1. Create awareness on locally developed and improved rice technologies for harvest and postharvest handling practices</li> <li>2. Conduct demonstrations on at least 3 locally developed and improved rice technologies for harvest and postharvest handling practices in each county</li> <li>3. Conduct M&amp;E on the levels of adoption of locally developed and improved rice technologies for improved harvest and postharvest handling practice</li> </ol>	
			Improve artisan and operator skills on emerging technologies in mechanization	<ol style="list-style-type: none"> <li>1. Capacity build at least 5 artisans and 10 operators on emerging technologies in rice mechanisation in each of the target counties</li> <li>2. Conduct M&amp;E on impact of training of the artisans and operators on adoption of emerging technologies in mechanization</li> </ol>	
			Enhanced multi-stakeholder engagement, dissemination, and knowledge transfer on appropriate mechanization	<ol style="list-style-type: none"> <li>1. Conduct baseline survey on use of appropriate machinery in the rice value chain in the selected 3 counties</li> <li>2. Hold 3 multi-sectorial stakeholders' meetings on appropriate mechanization in rice value chain</li> </ol>	
7	<p>Enhance Market competitiveness of locally produced rice by reducing production cost production</p> <p>- Mwea, Bunyala, Ahero, West Kano, Southwest Kano, Perkerra, Bura irrigation</p> <p>- 5 years</p>	Increase the competitiveness of locally produced rice	Increase on-farm mechanization	<ol style="list-style-type: none"> <li>1. Carry out a Survey to identify farm machinery requirements</li> <li>2. Procure farm machinery demonstration kits (Transplanter, reapers, weeders, tillers, threshers etc)</li> <li>3. Capacity building on rice machinery Mwea, Bunyala, Ahero, West Kano, South West Kano, Perkerra, Bura irrigation schemes (8 demos per area)</li> </ol>	<p>105 million</p> <p>- Tech Coop/Assist</p> <p>- National budget</p> <p>- Private sector</p>
			Promote adoption of recommended guidelines for optimal application of farm-inputs	<ol style="list-style-type: none"> <li>1. Capacity building on cost drivers and appropriate use of farm inputs</li> <li>2. Develop and disseminate farm input</li> </ol>	
			Organize agribusiness development groups for bulk procurements (SMAEs),	<ol style="list-style-type: none"> <li>1. Facilitate formation of groups for bulk procurement of farm</li> <li>2. Capacity build groups dynamics, entrepreneurship</li> <li>3. Organize 7 local and 5 exchange tours to enhance skills on group management</li> </ol>	
			Promote private sector investment in local sourcing/manufacturing of inputs	<ol style="list-style-type: none"> <li>1. Convene 10 National stakeholders workshops</li> <li>2. Convene 7 regional private sector meetings</li> <li>3. Organise 2 local exchange tours</li> <li>4. Sensitizations meetings for local manufacturing and inputs for</li> </ol>	

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				new/emerging schemes (including publicity materials)	
8	Promotion of efficient rice marketing and trading  - Kisumu, Busia, Kirinyaga, Kwale, Taita Taveta, Migori, Homa Bay Counties  - 5 years	Increase the competitiveness of locally produced rice through promotion of efficient rice marketing and trading	Increase accessibility, availability, and preference of local rice to consumers  promote linkages between farmers, farmer-based organizations, millers, and markets  Facilitate procurement of locally produced rice by public and private institutions	1. Conduct consumer survey on pricing, accessibility, availability 2. Undertake advertisement, marketing, and distribution of locally produced rice 3. Conduct promotional campaigns for consumption of locally produced rice 4. Conduct M&E on accessibility, availability, and consumer preference  1. Create fora and ICT platforms for linking farmers, farmer-based organizations, millers, and markets 2. Conduct M&E on the number of fora and linkages created  1. Develop policy to promote procurement of locally produced rice by public and private institutions 2. Organize farmers-based organizations and link them to public and private institutions 3. Conduct M&E on the number of farmer organizations selling their produce to public and private institutions	27 million  - Grant - Loan - Tech Coop/Assist - National budget - Private sector
9	Enhancement of input supply and use-through Agribusiness promotion along rice value chain  - 23 rice growing counties  - 5 years	Enhancement of input supply and use in the rice value chain to increase productivity	Capacity build farmers and agro-dealers or rice value chain development in collaboration with private sector  Increase demand for inputs through demonstrations and other extension services in collaboration with private sector	1. Review of rice production technical handbook 2. Continuous on farm soil nutrient and pathology analysis 3. Promote use of emerging technologies and innovations (drones, satellite imagery etc) in rice production 4. Promote acquisition of credit for bulk inputs procurement by organized groups through networking with the private sector 5. Carry out continuous research and development of appropriate farm inputs  1. Create rice stakeholders fora, thematic working groups and common interest groups 2. Create awareness on existing rice knowledge banks among all rice stakeholders for information sourcing 3. Promote linkages among rice value chain actors for synergy creation and sustainability in inputs usage 4. Create awareness on public private partnerships benefits among the rice stakeholders 5. Provide technical support to common interest groups growth plans	6 million  - Grant - Tech Coop/Assist - National budget - Private sector - County budget

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10	Promote hiring machinery/service provision and support services for increased rice production  - 23 rice growing counties  - 5 years	Increase access to farm machinery	Promote setting of machinery hiring hubs in rice growing areas	<ol style="list-style-type: none"> <li>1. Identify machinery hire needs and establish an inventory in the 23 rice growing counties</li> <li>2. Identify the 23 sites where machinery hubs will be established</li> <li>3. Facilitate personnel establishment (3 management units)</li> <li>4. Carry out training for the 23 management units</li> </ol>	20.5 million  - Loan - National budget - Private sector - County budget
			Facilitate access to finance (low interest schemes) for investments, especially by youth and women	<ol style="list-style-type: none"> <li>1. Conduct 5 surveys to establish financial needs</li> <li>2. Hold 23 meetings between beneficiaries and financial service providers</li> <li>3. Support the financial institution e.g., provide loans from development partners and government budgets</li> </ol>	
			Capacity build operators, artisans and technicians	<ol style="list-style-type: none"> <li>1. Identify and inventorize operators, artisans and technicians in the 23 rice growing counties</li> <li>2. Conduct 23 trainings for the operators, artisans, and technicians</li> <li>3. Organize 3 local exposure tours to improve competence and skills</li> </ol>	
11	Promoting and upscaling value addition (Rice products, by-products, packaging, branding and nutrition security)  - Mwea, Ahero, Bunyala  - 5 years	Agribusiness promotion along rice value chain	Build capacities of stakeholders in technology support towards innovative products and services. value addition	<ol style="list-style-type: none"> <li>1. Conduct of training workshops for rice stakeholders on value addition in rice and rice by-products</li> <li>2. Promote development and upscaling of new innovative rice products</li> </ol>	1.2 million  - Grant - Loan - Tech Coop/Assist - National budget
			Promote and upscale entrepreneurship (especially youth and women in animal feed production from rice by-products e.g., baling of rice straws, use of bran among other products)	<ol style="list-style-type: none"> <li>1. Promote and upscale women and youth enterprises utilizing rice by-products for animal feed production.</li> <li>2. Conduct demonstrations on use of rice by-products for animal feed manufacturing</li> </ol>	
			Promote diversification of "rice diets" for nutrition security through improving availability of nutrient dense crops in rice growing areas	<ol style="list-style-type: none"> <li>1. Demonstrate and promote consumption of nutrient enhanced rice recipes</li> <li>2. Promote production and utilization of nutrient dense crops in rice growing areas</li> </ol>	

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12	Human Resource Development, coordination and, Monitoring & evaluation  - 23 rice growing counties  - 10 years	Human resource development in the rice value chain	Capacity build research institutions, policy makers, extension agents and other rice value chain actors on technical areas	<ol style="list-style-type: none"> <li>1. Carry out Training needs assessment within the rice value chain</li> <li>2. Identify the potential trainees and relevant training institutions</li> <li>3. Prioritize the trainings and implement</li> <li>4. Monitoring and evaluation the impact of training programmes</li> </ol>	52 million  - Grant - Tech Coop/Assist - National budget - County government
			Capacity build extension staff and actors on alternate online rice knowledge platforms	<ol style="list-style-type: none"> <li>1. Inventorize and prioritize relevant rice knowledge platforms</li> <li>2. Carry out a training of trainers training on the relevant rice knowledge platforms</li> <li>3. Monitor and evaluate use of rice knowledge platforms</li> </ol>	
13	Promotion of human resource development and coordination through rice research  - Kisumu, Busia, Kirinyaga, National, international  - 5 years	Promote human resource development and coordination through rice research system	Establish a Rice Research and Training Institute (RRTI)	<ol style="list-style-type: none"> <li>1. Prepare proposal development of RRTI</li> <li>2. Submit proposal for funding consideration</li> <li>3. Conduct feasibility studies at selected site</li> <li>4. Develop relevant designs and bills of quantities</li> <li>5. Forward designs for approval to relevant authorities</li> <li>6. Conduct tendering and procurement</li> <li>7. Construct and equip the RRTI</li> <li>8. Conduct continuous M&amp;E for quality assurance and maintenance</li> </ol>	15.1 million  - Grant - Tech Coop/Assist - National budget - Private sector
			Equip Rice Research labs in KALRO Kibos and KALRO Mwea,	<ol style="list-style-type: none"> <li>1. Prepare proposal for equipping the labs at KALRO Kibos and KALRO Mwea</li> <li>2. Submit proposal for funding consideration</li> <li>3. Conduct tendering and procurement</li> <li>4. Equip the 2 KALRO institutes</li> <li>5. Conduct continuous user training</li> <li>6. Conduct continuous M&amp;E for quality assurance and maintenance</li> </ol>	
			Organize/ participate in local and international rice research fora	<ol style="list-style-type: none"> <li>1. Organize 2 rice fora through Rice Promotion Programme as the secretariat</li> <li>2. Organize 3 rice research forum through research institutions and universities</li> <li>3. Facilitate participation in at least 1 regional rice research forum</li> <li>4. Facilitate participation in at least 1 rice research forum beyond the region</li> <li>5. Conduct M&amp;E on the number and impact of the research area</li> </ol>	