

Sub-sector / Intervention Element Matrix (SIEM)

	Policy / Institutional	Infrastructure	Human resource capacity	Provision / support	Information / knowledge
Seed	<p>A-1</p> <ul style="list-style-type: none"> -Seed legislation / standard including institutional arrangements for variety release & mechanisms to regulate multiplication, phytosanitary & delivery -Policy on access to improved seed varieties - Seed multiplication associations created and registered 	<p>A-2</p> <ul style="list-style-type: none"> -Breeding facilities including Genebank, -Multiplication facilities -Storage facilities -Distribution facilities 	<p>A-3</p> <ul style="list-style-type: none"> - Farmers and seed inspectors trained on maintenance of pure seed, seed multiplication - Breeders trained - Multidisciplinary team specialists in agronomy, pathology, entomology 	<p>A-4</p> <ul style="list-style-type: none"> - Certified seeds provided at 50 – 60% subsidized rated through a voucher or other efficient mechanisms 	<p>A-5</p> <ul style="list-style-type: none"> - Factsheets (on use of quality seeds, seed quality maintenance, information on new varieties) - Annual seed requirement information established - New appropriate varieties
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Fertilizer	<p>B-1</p> <p>Fertilizer policy on:</p> <ul style="list-style-type: none"> - Use - Regulation - Standard - Delivery mechanism - Production - Procurement 	<p>B-2</p> <ul style="list-style-type: none"> -Production facilities -Storage and Distribution facilities - Soil testing laboratories 	<p>B-3</p> <ul style="list-style-type: none"> - Farmers, extension staff, input dealers trained on handling & storage, safe use and application of inorganic fertilizers - Farmers, extension staff and input dealers trained on production and use of organic fertilizers 	<p>B-4</p> <ul style="list-style-type: none"> - Fertilizers provided at least 30% subsidized rated through a voucher or other efficient mechanisms 	<p>B-5</p> <ul style="list-style-type: none"> - Factsheet on environmental impact of use of fertilizer - Factsheet on integrated soil fertility management - Annual fertilizer requirement for the different agro-ecologies established - Guidelines for fertilizer application rates for the different agro-ecologies provided
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Irrigation / water management	<p>C-1</p> <ul style="list-style-type: none"> -Policy on water use -Laws & regulations -Groups (Water use & management associations, WUA) 	<p>C-2</p> <ul style="list-style-type: none"> -Full irrigation facilities -Partial irrigation facilities in rainfed lowlands (Wells, Borehole, Canals, Dykes) -Meteo Station 	<p>C-3</p> <ul style="list-style-type: none"> -Farmers and extension staff trained on small scale irrigation -Technicians trained in water management meteorological data collection - Trained WUA on organization skills, water management and O&M skills - Trained farmers in aquaculture skills 	<p>C-4</p> <ul style="list-style-type: none"> -Water management associations provided with small farm tools, water pumps + accessories, water distribution pipes and technical assistance for feasibility studies and constructions. 	<p>C-5</p> <ul style="list-style-type: none"> - Guidelines and recommendations on water management disseminated through Factsheets and communication media
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On-farm technology dissemination (R&E)	<p>D-1</p> <ul style="list-style-type: none"> -Research & extension policy -Groups (farmers association) 	<p>D-2</p> <ul style="list-style-type: none"> -Facilities for research, extension and farmers training 	<p>D-3</p> <ul style="list-style-type: none"> - Farmers, research technicians and extension staff trained on improved technologies, good practices such as leveling, 	<p>D-4</p> <ul style="list-style-type: none"> -Technology packages for demonstration provided(seed, agro-chemicals, factsheets and guidelines) 	<p>D-5</p> <ul style="list-style-type: none"> -Factsheets on the appropriate (technically feasible, socially acceptable, economically viable) technologies for

			soil fertility management, etc via demonstration farms/plots, - Sufficient number of extension agents recruited		demonstration/adoption by farmers
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Mechanization	E-1 1. Policy on test code and certification, promotion, Research and development 2. Mechanization Policy (formulated, reviewed or strategy updated) 3. African Network for Agric. Mechanization	E-2 1. Machine testing/certification center 2. Maintenance Workshop Assembly Workshop (public/private) 3. Small industry (local artisan, fabricators) 4. Mechanization training centers	E-3 Trained 1. Dealers 2. Operators 3. Farmers 4. Artisans 5. R&D Engineers 6. Extension 7. Technicians	E-4 1. Tax exemption 2. Import tariff exemption 3. Appropriate subsidy 4. Guarantee /warranty 5. Provision of spare-parts 6. After sales service 7. Low interest credit	E-5 1. Research on mechanization 2. News bulletins 3. Operation manuals 4. Exhibitions 5. Demonstrations 6. Information sharing
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Quality improvement	F-1 - Policy to promote and facilitate milling business - Tax Exemption (mills, spare parts and engines) - Subsidies on installation of machinery - Milling machine standards - Grain quality standards	F-2 - Sufficient number of Rice mills (small (custom), medium & large scale) in each rice growing areas - Drying yards/ facilities - Storage facilities	F-3 - Well-trained rice millers - Farmers trained and encouraged to sell milled rice instead of paddy - Rice value chain actors trained on milled rice standards (and their incentives)	F-4 - Parboiling equipment - Rice mills - Weigh scales (for village rice mills) - Subsidies, credits, grants provided when necessary	F-5 - Knowledge on applicable technologies related to transportation, handling, processing, standards & storage available through factsheets and communication media - Appropriate custom mills for local adoption (case studies & location) through applied research
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Access to market	G-1 - Regulations to protect the rice market. - Information network for promotion (place, ways & means) - Enable environment for private sector - Introduce import tariffs if necessary - Modality on promoting market-oriented profitable rice-based system - Legal back-stopping policy - Buffer stocking policy	G-2 - Market infrastructures - Rehabilitation access roads, railways, water ways - ICT	G-3 - Entrepreneurship skills training - Training of the value chain actors based on their needs according to demand driven market oriented	G-4 - Agric. funding from tariff revenue in the form of subsidies, grant to PPP - Grant to support farmers associations for collective marketing	G-5 - Market information survey (type of rice preferred by the major consumers, its quality and price) - Market information system - Knowledge on cost / benefit analysis on rice value chain.
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Access to credit	H-1 - Facilitate agro-financing through microfinance institutions - Sensitization on ROSCA (Rotating Savings and Credit Associations) - Policy on efficient cooperatives implementation, M&E &	H-2 - Infrastructures for rural financial institutions	H-3 - business plans to access credit in financial institutions	H-4 - Provision of financial capital for credit schemes	H-5 - Information on financial institutions offering agricultural credit

	auditing of cooperatives operations				
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Overall policy tools	I-1 -Food Policy ¹ , -Production Policy ² , -Trade Policy, ³ -Agricultural Land Policy ⁴ -Rural Area Policy ⁵ -Land Tenure	I-2 -Cross cutting infrastructure policy to facilitate agricultural production	I-3 -Policy Analysts (existing to reinforce or new ones) -Policy Analysts to review rice related policies	I-4 -Specific support policy to small scale farmers	I-5 -Reliable rice related data
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Unclassified: -Other Agro-chemicals	Other agro-chemical policy on: - Use - Regulation - Standard - Delivery mechanism - Production	-Production facilities -Distribution facilities	- Training on safe use and application of other agro-chemicals - Training on production and use of other agro-chemicals	- Subsidy - Timely delivery of other agro-chemicals	- Environmental impact on the use of other agro-chemicals

¹Food Policy: (stability of food supply and price, effective food distribution, food safety, promotion of food export & import).

² Production Policy: (technological innovation, capacity development of farmers, extension service, agricultural banking).

³ Trade Policy: related to the marketing of products (imported, exported and locally produced).

⁴ Agricultural Land Policy: (land reform, agricultural infrastructure improvement).

⁵ Rural Area Policy: encouragement of community activities.