

REPUBLIC OF THE SUDAN

SEED DEVELOPMENT PROJECT (SDP)

COMPLETION DESIGN REPORT

MAIN REPORT AND ANNEXES

Near East, North Africa and Europe Division

Programme Management Department

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**REPUBLIC OF THE SUDAN**  
**SEED DEVELOPMENT PROJECT**  
**PROJECT DESIGN: MAIN REPORT**

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## CURRENCY EQUIVALENTS

Currency Unit = Sudanese Pounds (SDG)  
USD 1.00 = 2.7 SDG  
SDG 1.00 = USD 0.37

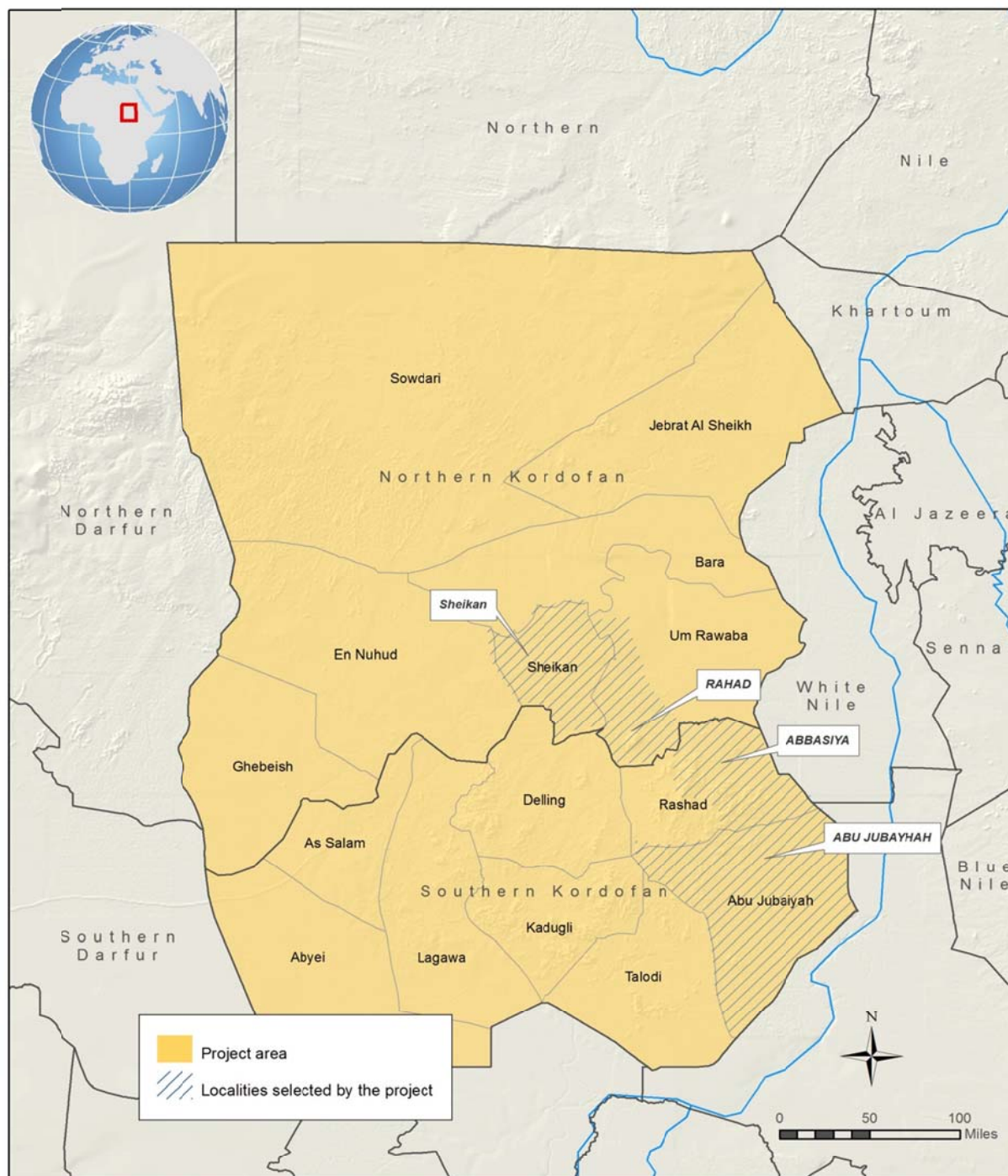
## WEIGHTS AND MEASURES

1 kilogram (kg)	=	2.204 pounds (lb)
1 000 kg	=	1 metric tonne (t)
1 kilometer (km)	=	0.62 miles (mi)
1 meter (m)	=	1.09 yards (yd)
1 square meter (m <sup>2</sup> )	=	10.76 square feet (ft <sup>2</sup> )
1 acre (ac)	=	0.405 ha
1 hectare (ha)	=	2.47 acres
1 feddan (fed)	=	0.42 ha = 1.03 acre

## Map 1: Project Area with State Boundaries

### Seeds Development Project

#### Design report



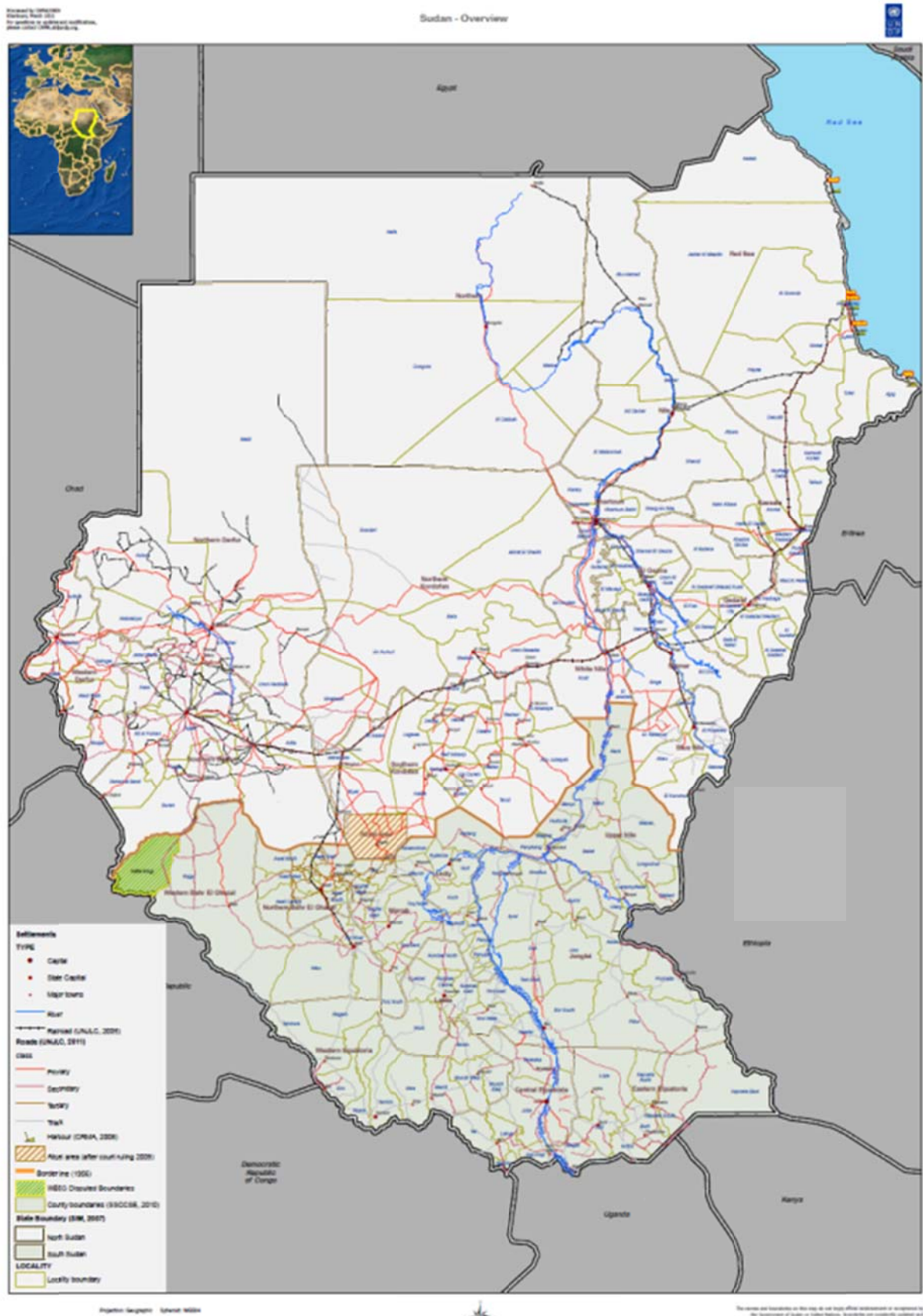
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The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.

IFAD Map compiled by IFAD

## Map 2: Locality Boundaries





## ABBREVIATIONS AND ACRONYMS

AAAID	Arab Authority for Agricultural Development and Investment
ABS	Agricultural Bank of Sudan
ARC	Agricultural Research Corporation
ARP	Agricultural Revival Programme
AWPB	Annual Work plan and Budget
ASARECA	The Association for Strengthening Agricultural Research in Eastern and Central Africa
CA	Conservation Agriculture
CDC	Community Development Committee
CF	Contact Farmer
COSOP	Country Strategy and Opportunities Paper
CPA	Comprehensive Peace Agreement
CPMT	Country Programme Management Team
DUS	Distinctness Uniformity and Stability test
EB	Executive Board
FAO	Food and Agricultural Organization of the United Nations
FMoA	Federal Ministry of Agriculture
GDP	Gross Domestic Product
GoS	Government of Sudan
HDI	Human Development Index
HPI	Human Poverty Index
ICARDA	International Centre for Agricultural Research in Dry Areas
IDP	Internally Displaced Persons
KMC	Information, Knowledge Management and Communication
IFAD	International Fund for Agricultural Development
ISTA	International Seed Testing Association
M&E	Monitoring and Evaluation
MOFNE	Federal Ministry of Finance and National Economy
MM	Millimeter
MTR	Mid Term Review
NEN	Near East, North Africa and Europe Division in IFAD
NSA	National Seed Administration
PCC	Programme Coordination Committee (already formed under WSRMP)
PCR	Project Completion Report
PME	Planning, Monitoring and Evaluation
PCU	Project Coordination Unit (already formed under WSRMP)
PPP	Public Private Partnership
PR	Participatory Research
PRC	Participatory Research Committee
PRSP	Poverty Reduction Strategy Paper
PSC	Private Seed Company
PY	Project Year
RAU	Rural Administrative Unit
RIMS	Results and Impact Management System
RFP	Request for Proposal
SCC	State Coordination Committees (already formed under WSRMP)
SKRDP	South Kordofan Rural Development Programme
SMoA	State Ministry of Agriculture (refers to North and South Kordofan)
SWC	Soil and water conservation (agricultural practices for managing moisture in soil)
TRIPS	Trade Related Aspects of Intellectual Property Rights
UN	United Nations
UNDP	United Nations Development Programme
UPOV	Union for Protection of Plant Varieties
WSRMP	Western Sudan Resources Management Project

GOVERNMENT OF SUDAN  
Fiscal Year

1<sup>st</sup> January to 31<sup>st</sup> December

**DEFINITIONS**

**Bildat** refers to the fields cultivated by smallholders that are near the villages.

**Haffirs:** earth excavation that is seasonally filled with water for domestic use and as drinking water for livestock.

**Gardud soil:** is hard setting clay loam, sandy clay or sandy loam with highly compacted surface and poor infiltration rate

**Jubraka:** home garden mostly cultivated by women to bridge the hunger period and situated in the backyard of their homes.

**Karkade:** Hibiscus

**Qoz soil:** sandy soils with high infiltration rates and reduced evaporation

**Wadi/Khor:** seasonal river stream

**Zakat:** Zakat is an Islamic religious tax payable, at different rates, on crops, harvests, herds, gold and silver, and merchandise. On liquid assets, the rate is 2.5 percent of the income above the subsistence requirements of an average person.

**Seed Classes:** Seed is classed as follows:

- Breeder Seed: Seed produced by the breeder. The highest (first generation) class – genetically the purest.
- Foundation Seed: Produced from breeder seed. This is the second generation. Used to produce registered seed.
- Registered Seed: A further multiplication of foundation seed. This is the third generation. Used to produce certified seed.
- Certified seed/Commercial Seed: Seed produced from above classes and sold to farmers for commercial/grain/commodity production. This is fourth generation.
- Improved/Good/Quality Declared Seed: Community based seed production system which promotes a class of seed that does not require full formal inspection by the National Seed Administration and quality is measured through field inspection, laboratory seed testing for purity and germination tests. This is a limited system of seed certification in which a fraction of the plot (about 10 percent) is inspected. The system is not an alternative to seed certification but a transit measure designed for countries with limited resources to carry out full seed certification.

## EXECUTIVE SUMMARY

1. **Introduction:** In the last decade, the supply of seed to the smallholder-farming sector in the Sudan has largely been driven by the free distribution of seeds financed by the Government of Sudan (GoS) and through initiatives by the FAO Emergency Unit and various national and international NGOs. The most recent government initiative was the Small-scale Farmer Seed Programme that was stopped in 2008, after six years of implementation, when the GoS realized that the programme was ineffective mainly because, the distributed seeds were of variable quality as the seeds were not systematically certified, were delivered in insufficient quantities and late in the planting season. Furthermore, farmers' indigenous knowledge, while widely recognized, was not fully exploited by research and its potential impact in improving production, productivity and food security for the intended beneficiaries of the project was therefore not explored.

2. As of 2010, the Ministry of Finance and National Economy decided to phase out free seed distribution by the government and support instead the development of a viable seed industry by allocating annually around SDG 8 million from its development budget for seed production. In support of the Government intention to develop the seed sector, IFAD approved the entry of the Seed Development Programme (SDP)<sup>2</sup> into the 2011 pipeline for the Republic of the Sudan. This project will contribute to the second strategic objective of the IFAD country programme (2009-2012) of increased access of poor rural people to agricultural services.

3. **Rationale:** The embryonic<sup>3</sup> seed industry in Sudan is characterized by: (i) subsistence agriculture<sup>4</sup>; (ii) varietal improvement of indigenous material is mostly in the hands of farmers<sup>5</sup>; (iii) inadequate quality control standards resulting from the limited human, technical and financial resources of the National Seed Administration (NSA); and (iv) a novice seed legislation in the form of the Seed Law of 2010<sup>6</sup>. The Government is fully aware of : (i) the importance of and the need for a dynamic seed industry endowed with an appropriate legal basis and regulatory framework through the application and enforcement of the Seed Law of 2010; (ii) for building the capacity of the National Seed Administration (NSA) to effectively and efficiently monitor the production, release and utilization of all seed classes<sup>7</sup>; (iii) the necessity to modernize and liberalize seed production and marketing through the promotion and the development of the nascent private sector and institutionalization of Public Private Partnerships and (iv) building on the previous IFAD co-financed experiences working with smallholder farmers in piloting certified seed production in the Western Sudan Resources Management Programme (WSRMP) and South Kordofan Rural Development Programme (SKRDP). As a result of these considerations, the proposed Seed Development project is designed to test the model of private public partnership between the private seed companies, the farmers, the public extension services to produce and market certified seeds for the smallholder farmers thereby expanding the retail market for certified seeds. This will take place within the regulatory framework of the Seed Act 2010 and the inspection, seed testing and certification conducted by the National Seed Administration. Furthermore, the project is designed as a top up to the WSRMP to benefit from its established management structure, experience in community based seed multiplication, farmer organization and gender mainstreaming. Crops selected for seed multiplication and marketing are sorghum, sesame, groundnut and cowpea.

4. **Target Group:** The primary target group will consist of smallholder, farmers who generally grow less than fifteen feddans (6.3 ha) of land, engaging in traditional rainfed agriculture as their main source of livelihood, cultivating<sup>8</sup> mainly sorghum, groundnuts, sesame, and cowpea, and having limited access to inputs, assets and services. The target group consists of two categories, Grain

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<sup>2</sup> This project was not part of the planned pipeline under RB-COSOP 2009-2012. However, given the importance of the subject, its entry into the 2011 pipeline was approved by OSC in December 2010.

<sup>3</sup> Promoting the Growth and Development of Smallholder Seed Enterprises for Food Security Crops; Best practices and options for decision making Paul J.H. Neate and Robert G. Guie (FAO)

<sup>4</sup> With traditional varieties or landraces grown from farmer saved seed or seed obtained through exchange with other farmers

<sup>5</sup> For example the groundnuts Ghubeish in North Kordofan and the Dimbi millet variety in South Kordofan

<sup>6</sup> The law was ratified in 2010

<sup>7</sup> Breeder, foundation, and registered/certified seeds

<sup>8</sup> They also grow watermelon, Karkade (hibiscus) and millet

Producers and potential users of certified seeds, and Seed Growers, who are business minded young farmers interested in seed multiplication as an income generating activity. Both groups of farmers will be organised into formal groups under the umbrella of Community Development Committees (CDCs) established by the ongoing IFAD co-financed projects in the area. These CDCs operate at the level of the village or village clusters. Inclusive measures<sup>9</sup> are envisaged by the project, to ensure that the poor smallholder farmers and the vulnerable segments of the population, mainly women and youth will be able to participate in and benefit from the project's activities. The project area is composed of 4 localities: Rahad and Sheikan in North Kordofan; Abbassiya and Abu Gubeiha in South Kordofan.

5. **Approach:** In its focus to address the main constraints hindering the development of an open market for the seed industry in the Sudan, the project will intervene at three interrelated levels of the seed production and marketing chain by: (i) improving the regulatory framework through the enforcement of the Seed Act, promulgation of Plant Variety Protection; and capacitating and empowering the National Seed Administration to carry out its seed-related inspection and control functions effectively and efficiently (ii) increase the supply of good quality and appropriate varieties of seeds of all classes<sup>10</sup>, and ensure its timely delivery to the end users; (iii) enhance the effective demand of certified seeds by small rainfed traditional producers.

6. **Project Goal:** The Project's overall goal is to improve food security, incomes and resilience to shocks of the smallholder producers (including youth and women) in rainfed areas of North and South Kordofan

7. **Project Development Objective:** The Project's development objective is to increase crop productivity for about 108 000 smallholders adopting certified seeds in North and South Kordofan.

8. **Project Description:** The Project has four components that are complementary and reinforcing. Component 1 primary focus is on the regulatory environment and institutional strengthening for the NSA. The aim of Component 2 is to provide necessary support for enhancing the performance of the seed production system. Component 3 is intended at supporting seed and market development, including support to farmers' groups and associations and the private sector providing relevant technologies, goods and services. The fourth component's aim is to set-up an effective organizational structure, which will ensure successful implementation and coordination of the project.

9. **Component I (USD 1.86 million): Institutional and Regulatory Environment Strengthening and Development.** *Outcome: Conducive policy and institutional environment for the Seed industry in place.* This component will work to introduce appropriate legislation for the seed industry particularly in relation to plant variety protection; improve the National Seed Administration's (NSA) capacity to carry out its legal mandate of monitoring the national seed system; and establish a multi-stakeholder dialogue forum that brings together Government, the private sector, NGOs and farmers to discuss seed policy issues on a regular basis.

10. **Component II (USD 3.10 million): Improvement of the Seed Production System.** *Outcome: An economically viable seed production system that meets farmers' demands and expectations in place.* This component will capacitate the Agricultural Research Corporation (ARC) to carry out demand driven participatory research to ensure that sufficient quantities of high quality breeder, foundation and registered seed is produced. The registered seeds will then be made available to the private companies who will contract small scale Seed Growers Groups (SGGs) operating at the grassroots level to multiply registered seeds and produce seeds which will be certified by NSA before commercialisation by private companies to final users. The extension services of the State Ministry of Agriculture will be provided with additional training on certified seeds-related aspects, as well as with necessary logistic and mobility to enable and empower them to provide the necessary and timely extension services to seed growers. Seed growers will be organised into registered groups to facilitate access to inputs, finance and crop insurance. Arrangement will be made to ensure that linkages are provided between seed growers, private seed companies, rural finance services and crop insurance services.

11. **Component III (USD 9.04 million): Support Seed Market Development.** *Outcome: Improved seed market delivery mechanisms in place.* This component will develop effective demand for certified

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<sup>9</sup> Notably the quota system is applied whereby women-headed households and youth are granted preference

<sup>10</sup> Breeder seed, foundation seed, registered seeds used to produce the certified seed which are made available to small holders.

seed; and link Grain Producer Groups (GPG) to financial institutions and input suppliers; enable the private sector to select the best option for marketing certified seeds at the retail level to producers in the project area; empowerment of existing Grain Producer Groups (GPGs) by acting on raising their awareness to adopt certified seeds and correct seed practices<sup>11</sup> through extension services (including on-farm demonstrations) and information campaigns; seed fairs; most importantly through the promotion of full agricultural packages (including, certified seeds, mechanized services, water harvesting, and crop insurance). Furthermore, the project will support the establishment of a Seed Market Database and assist microfinance institutions in improving their outreach in terms of logistic support and branch network.

**12. Component IV (USD 3.46 million)** Project Coordination and Management. *Outcome: Project efficiently and effectively managed to achieve Project results.* This component will ensure that the Project is efficiently managed and that the knowledge and best practices generated during implementation are properly documented, shared and disseminated so that the Project achieves its objectives. The project management structure will be mainstreamed within the Programme Coordination Unit of WSRMP. As the completion date of WSRMP is December 2013, the SDP will cover the additional staffing requirements from 2012 as well as the costs of PCU and other management set-ups at state level from 2014 to 2017.

**13. Implementation:** The Implementation of SDP will be integrated within the ongoing Project Coordination Unit of the IFAD co-financed WSRMP. This will allow SDP to take full advantage of the existing management and coordination hierarchy of the project, particularly the well-established fiduciary system, effective field presence and extension support and functional M&E system. Incremental staff comprising a Seed specialist either seconded from the NSA or competitively recruited, and an accountant will supplement the existing staff in the WSRMP. The Seed specialist will report to the Programme Coordinator of WSRMP in El Obeid, North Kordofan. WSRMP will coordinate SDP activities that are undertaken by the implementing agencies and the private sector, consolidate AWPBs; ensure that contract obligations are met; follows up and monitors component implementation; and ensures the integrity in the use of SDP funds, assets and financial systems. The project will be implemented over six years in three inter-linked phases: (i) a pre-effectiveness phase where activities necessary for the timely start-up of the project will need to be undertaken during the period October 2011 to declaration of effectiveness in February 2012; (ii) a calibration phase during 2012-2014, and (iii) an intensification/ up-scaling and consolidation phase during 2015-2017.

14. During calibration phase, emphasis will be primarily on (i) setting up the regulatory framework and the upgrading of technical and administrative capacity of NSA, (ii) production of quality breeder and foundation seeds, (iii) the setting up of the Participatory Research structure, (iv) forming and training of a small number of Seed Grower Groups and (v) conclusion of seed multiplication contracts between the Seed Grower Groups and participating private seed companies to start seed multiplication on a limited scale. On the demand side, emphasis will be put on capacity building and empowerment of Grain Producer Groups and on promoting the use of certified seeds, and selection of a suitable retail marketing channel for certified seeds.

15. During intensification/scaling up phase, both supply and demand related interventions will be intensified. Passage from calibration phase to intensification phase will be contingent on fulfilment of seven triggers related to the profitability of the seed multiplication business model, the effectiveness of the legal and regulatory framework, the accreditation of the seed laboratory of NSA, the effectiveness of the production of breeder and registered seeds by ARC, and the adoption rate of certified seeds by the traditional rainfed smallholder farmers. The achievement of these triggers will be assessed at project mid-term review which will take place in the third year of project implementation.

**16. Overall Impact.** The Project would increase agricultural productivity, production and farm incomes through the use of improved varieties and quality certified seeds. A minimum of approximately 108 000 traditional rainfed smallholder farmers, of which at least 30 000 women, are expected to benefit from the Project through increased returns from the use of quality certified seed. Furthermore, around 1 280 seed Growers in approximately 32 groups are expected to benefit from the Project directly whereby preference will be given to experienced and dynamic young farmers. The establishment of participatory and well organised all-class seed production and multiplication system,

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<sup>11</sup> For example the need for renewing their cultivars every three years to renew the quality or adopting newly developed cultivars

accompanied with a private –sector driven processing, marketing and distribution system, will provide a sound foundation for future expansion of the seed industry in Sudan.

**17. Project Costs and Financing:** The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at USD 17.46 million. The foreign exchange component is estimated at USD 2.65 million. Duties and taxes make up approximately USD 1.46 million. The total baseline costs are USD 16.9 million, while price and physical contingencies account for USD 0.60 million.

18. The major investments lie in the Seed Market Development Support, which represents 52% (USD 8.8 million) of overall Project base costs. Project Coordination and Management constitutes 19% (USD 3.2 million), Improvement of the Seed Production System 18% (USD 3.0 million) and Institutional and Regulatory Environment Strengthening and Development 11% (USD 1.80 million).

19. The Project is technically sound, economically and financially viable. With modest adoption rates of certified seeds and yield improvements, the average gross margin for seed growers ranges between 1700-2800 SDG/ household/ year and for grain producers, it ranges from 1200-1900 SDG/household/year. The generated profit of the private sector is about 8-12%. The base rate of EIRR is 25% with sensitivity upper and lower bounds varying between 38% for best possible scenario and 16% for the worst possible scenario.

**20. Sustainability:** The project has adopted a number of mechanisms, best practices and safeguards to ensure the financial, technical and institutional sustainability of the project. On the institutional side, each regulatory and/or policy intervention of the project is expected to be backed by a legal instrument in form of a law as well as an appropriate enforcement mechanism. It is worth noting that the building blocks for institutional sustainability would be gradually put in place such as the enactment of the Seed Act of 2010, the establishment of the Seed Council in 2011 which is the highest consultative body and the Plant Variety Protection (PVP) legislation would be passed and enacted by end 2012. On the financial side, and at full development, all services provided by the project are expected to be on a fee basis, particularly the NSA's seed certification services, ARC's registered seed production as well as the extension services at locality level. The prices charged would be set at a level to recover the full operation and maintenance costs and depreciation of equipment and material, with the exception of extension services, where only the allowances and operation and maintenance cost of vehicles would be recovered. However and in an attempt to recover the full cost of the services rendered, the prices charged would be gradually adjusted upward as the demand for certified seeds increases and the prices of certified seeds are stabilised. Furthermore, the involvement of the private sector, as articulated in the Seed Act, at each level of the seed value chain (from the production of breeder seeds to the production and marketing of certified seeds), together with its participation in the policy dialogue through the multi stakeholder platform is likely to have a strong and lasting impact on the sustainability of the seed industry as envisaged under the project.

**21. Risks:** The Project is regarded as only moderately risky. The design draws on the lessons from previous and on-going IFAD Projects and programme initiatives in the country, as well as of best practices for the development of seed systems. It works on building seed enterprises housed in an enabling policy and regulatory environment. Specific risk mitigating measures associated with the three project components have been internalised in the project design. The risk associated with the continued unrest in South Kordofan has been minimised by concentrating on localities that are relatively calm and have been less affected by the civil conflict in South Kordofan.

## RESULTS-BASED LOGICAL FRAMEWORK OF THE PROJECT

Narrative Summary	Verifiable Indicators	Means of Verification	Assumptions
COSOP Goal			
Food security, incomes and resilience to shocks of the smallholder producers (including youth and women) in rainfed areas of North and South Kordofan improved.	<ul style="list-style-type: none"><li>▪ Prevalence of malnutrition in children under age of five years reduced : rate reduced from 3% to 2% (RIMS)</li><li>▪ Improved food security : food insecurity reduced from 55% to 40%.(RIMS)</li><li>▪ Increase in HH asset index : production 5 fed in qoz soils, 3 fed in gardud soils and 10 fed in clay soils doubles.</li></ul>	<ul style="list-style-type: none"><li>▪ RIMS baseline survey and impact survey</li><li>▪ Anthropometric and UNICEF periodic surveys</li><li>▪ Official gvt. statistical yearbooks; censuses</li><li>▪ HH income and expenditure surveys</li></ul>	<ul style="list-style-type: none"><li>▪ Macro-economic stability</li><li>▪ Contained insecurity events</li></ul>
Development Objective			
Increased crop productivity for about 100,000 smallholders using certified seeds in North and South Kordofan	<ul style="list-style-type: none"><li>▪ Increase in yields of sorghum from 280 to 540 Kg/fed; groundnut from 340 to 640 Kg/ fed; sesame from 140 to 270 Kg/fed; cowpea from 180 to 340 Kg/ fed.</li><li>▪ 70,000 smallholder men and 30,000 smallholder women reporting increase in yields for all crops disaggregated by gender (RIMS)</li></ul>	<ul style="list-style-type: none"><li>▪ Baseline survey, Mid Term Review (MTR) and completion assessments</li><li>▪ Ministry of Agriculture crop cutting surveys and annual crop assessment</li><li>▪ Agricultural Research Corporation (ARC) and National Seed Administration (NSA) reports</li></ul>	<ul style="list-style-type: none"><li>▪ Expanding access to input suppliers extension advisory services, credit and insurance</li></ul>
Component 1 – Strengthening and Development of Institutional and Regulatory Environment			
Outcome: Conducive policy and institutional environment for the seed industry in place	<ul style="list-style-type: none"><li>▪ By laws of Seed Act 2010 in place by mid-2012 and fully enforced by 2012</li><li>▪ Operational self-sufficiency for NSA by 2014 (RIMS)</li></ul>	Client survey Institutional performance assessment Record on law enforcement  .	<ul style="list-style-type: none"><li>▪ NSA operates in an autonomous way</li><li>▪ Gvt phases out distribution of free or subsidized seeds</li><li>▪ Seed policy for the UN agencies operating in Sudan is harmonized</li></ul>
Outputs			
1.1 Plant variety protection legislation drafted, approved and enforced.	<ul style="list-style-type: none"><li>▪ PVP legislation promulgated by end 2012.</li></ul>	<ul style="list-style-type: none"><li>▪ Legislation document</li></ul>	<ul style="list-style-type: none"><li>▪ Seed Council is timely appointed by the Government (target date: end 2011).</li></ul>
1.2 National Seed Administration (NSA) is capacitated to effectively monitor the multiplication and certification standards.	<ul style="list-style-type: none"><li>▪ 70 NSA staff and extension agents trained (RIMS), 30% women</li><li>▪ 1 central laboratory at the Federal level accredited to the International Seed Testing Association (ISTA) standards by 2014.</li><li>▪ 2 laboratories established and equipped in North and South Kordofan States.</li></ul>	<ul style="list-style-type: none"><li>▪ National Seed Administration activity report on number of seed crop fields certified per year, number of seed samples tested per year, no. staff trained per year</li></ul>	
1.3 Multi-stakeholder policy dialogue, with participation from youth and women in seed sector is established.	<ul style="list-style-type: none"><li>▪ Bi-annual forums convened regularly from 2012 at National and State levels.</li><li>▪ At least 50 persons attend each multi-stakeholder forum</li></ul>	<ul style="list-style-type: none"><li>▪ National seed policy document</li><li>▪ Proceedings of bi-annual meetings</li></ul>	
Component 2 - Improvement of the Seed Production System			
Outcome: An economically viable seed production system that meets farmers' expectations and demands in place	<ul style="list-style-type: none"><li>▪ Private sector generate about SDG 245,000 net profit from sale of certified seeds in 2014 and SDG 1 million net profit in 2017</li><li>▪ 8 SGG operational in 2014; 32 operational in 2017</li><li>▪ Cash returns per seed growing Hhd reach SDG 1700/Hhd/yr in 2014 and SDG 2800/HHd/ yr in 2017)</li></ul>	<ul style="list-style-type: none"><li>▪ Seed company activity report</li><li>▪ Surveys at MTR and completion</li></ul>	Interest of the seed companies to develop seed retail market for smallholders

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Narrative Summary	Verifiable Indicators	Means of Verification	Assumptions
<b>Outputs</b>			
2.1 ARC capacitated for implementation of participatory breeding research	<ul style="list-style-type: none"> <li>Appropriate sorghum seed variety and cultivation practices for gardud soils tested and ready for dissemination by 2014</li> <li>At least 1 new variety of millet in NK, and sesame for NK and SK</li> <li>Number of participatory research committees in place for ARC stations in El Obeid and Kadugli.</li> </ul>	<ul style="list-style-type: none"> <li>ARC reports on number of varieties released per year and maintenance record of released varieties</li> </ul>	Procedures for ARC-ASARECA collaboration timely implemented
2.2 High quality and sufficient quantity of breeder/foundation/registered seeds produced by Agricultural Research Corporation (ARC).	<ul style="list-style-type: none"> <li>Production of 23 MT of registered seeds in 2012, 90 MT of registered seeds produced for 2013 and 2014.</li> </ul>	<ul style="list-style-type: none"> <li>ARC activity report on breeder/foundation/registered seed production statistics for the two States; frequency of varietal replacement in the national varietal catalogue; record of national seed standards in project years</li> </ul>	ARC adequately equipped to produce sufficient quantities of breeder & foundation/registered seed
2.3 The extension system is strengthened to support target seed producer enterprises.	<ul style="list-style-type: none"> <li>30 men and 15 women extension agents trained on seed production and marketing</li> <li>one operational/field manual developed and distributed to 32 seed grower groups</li> </ul>	<ul style="list-style-type: none"> <li>Project monitoring reports</li> </ul>	Sufficient human resources for two 4 member team mobilized
2.4 Community-based Seed Grower Groups enterprises are enabled to produce certified seeds of improved and traditional varieties.	<ul style="list-style-type: none"> <li>400 MT of certified seeds produced by 2014, and 2500 MT produced by 2017</li> <li>100 women and 220 men accessing advisory services for seed production by 2014; and 380 women and 900 men accessing advisory services for seed production by 2017 (RIMS)</li> </ul>	<ul style="list-style-type: none"> <li>Baseline survey, MTR and completion assessments</li> <li>Project monitoring reports on quantity and quality of seed produced by groups in project years</li> </ul>	SGG and seed companies adhere to respective contractual obligations
<b>Component 3 - Support Seed Market Development</b>			
<b>Outcome: Improved seed supply system with improved market delivery mechanisms in place.</b>	<ul style="list-style-type: none"> <li>105 000 fed cultivated with certified seeds in the project area in 2014; 690 000 fed in 2017 and 1 million by 2018 (RIMS)</li> <li>10 500 farmers use certified seeds and SWC by 2014 in project area and 69 000 farmers by 2017; 30% women (RIMS)</li> </ul>	<ul style="list-style-type: none"> <li>Baseline survey, MTR and completion assessments</li> </ul>	Seed companies able to mobilize SDG 6 million for scaling up phase
<b>Outputs</b>			
3.1 Marketing of certified seeds to smallholder producers established	<ul style="list-style-type: none"> <li>PSC develops proposal as part of its business plan</li> <li>Number of farmers reached through the PSC marketing: 10 500 in 2014 and 69 000 in 2017 ; with 30% women</li> </ul>	<ul style="list-style-type: none"> <li>Seed company reports</li> <li>Client survey for farmers</li> </ul>	Farmers satisfied with quality of seeds provided by licensed seed agents
3.2 Farmers empowered to use certified seeds and improved techniques.	<ul style="list-style-type: none"> <li>Demand for certified seeds reaches at least 300 MT in 2014 and at least 2200 MT in 2017</li> </ul>	<ul style="list-style-type: none"> <li>Baseline survey, MTR and completion assessments</li> </ul>	Farmers access to credit and insurance facilitate purchase of certified seeds
3.3. Seed Market Database in place	<ul style="list-style-type: none"> <li>No. users of the seed monitoring database, by type</li> <li>Frequency of data collection</li> </ul>	<ul style="list-style-type: none"> <li>Project monitoring reports</li> </ul>	SMoA and NSA agree on procedures for data collection and dissemination
3.4 Increased access of farmers/ grain producers to credit and microfinance	<ul style="list-style-type: none"> <li>ABSUMI branch operational in Sheikan in 2012</li> <li>Total borrowers are at least 3,000 in 2014 and at least 40,000 in 2017</li> </ul>	<ul style="list-style-type: none"> <li>Records from Bara'ah, ABSUMI, ABS and other banks</li> <li>Records from Sheikan Insurance Co.</li> </ul>	MoU signed between PCU and banks/ MFI to facilitate access of farmers/grain producers to micro-credit SDG 500-600/ loan



## I. STRATEGIC CONTEXT AND RATIONALE

### A. Country and Rural Development and Poverty Context

1. **Country context**<sup>12</sup>. With the declaration of independence of the Republic of South Sudan on July 9, 2011, the geography, the demography, and the economy of The Sudan underwent structural changes. The Sudan total area was reduced from 2,500,000 km<sup>2</sup> to 1,881,000 km<sup>2</sup>. The Sudan neighbouring countries were reduced from 9 to 7, Chad and Central African Republic to the West, South Sudan, Ethiopia and Eritrea to the South and East, and Egypt and Libya to the North. The border with the Republic of South Sudan is the longest at 2,000 km. The Sudan's population, according to 2008 census, is 33 million inhabitants down from 42 million. The arable agricultural land is 175 million feddans (representing 78% of the historical arable land of the unified Sudan) and the total cultivated area is 40 million feddan. The livestock population is estimated at 120 million heads representing 72% of the historical numbers. There is a very large reduction in the range resources and forest cover which now amounts to only 65% of the historical resources. The major agro-ecological change is that 90% of the Sudan land area is now classified as arid land; this is forcing the Government and the agriculture population to develop drought resilient production systems and livelihoods. The high agriculture potential areas are either suffering from conflict or they are at risk of insecurity. These areas are also referred to as the transition areas as they border the Republic of South Sudan and encompass the states of South Darfur, South Kordofan and South Blue Nile.

2. The largest impact of the secession of South Sudan on the economy is the loss of approximately 36.5 percent of total Government revenues as a result of the withdrawal of the production and export of oil from South Sudan. Sudan faces the challenge of balancing fiscal adjustment and deep reductions in public expenditures with the need for continued public investments for the development and growth of the country. It is worth mentioning that Sudan access to concessional lending is hindered by an unsustainable debt that stands at USD 36.8 billion at the end of 2010. This situation has prompted the Government to formulate a 3-year emergency plan (the "salvation program") to manage the gaps in the balance of payments and treasury and the decreasing GDP growth rate; to prepare a longer term 5-year strategic plan (2012-2016) that would guide Government expenditures over the medium term; and finally to prepare an Interim Poverty Reduction Strategy Paper (I-PRSP) and a road map for the development of a full-fledged Poverty Reduction Strategy<sup>13</sup> Paper that would pave the way for debt relief. The Government is considering the following options: (i) re-orienting the economy from oil to agriculture and industry as the main engines of growth; (ii) maintaining macro-economic stability, as reflected in a stable exchange rate and controlled inflation; (iii) bridging gaps in public investments by resorting to foreign investors through concluding private public partnerships and by resorting to deficit financing for productive uses.

3. **Rural Poverty**<sup>14</sup>. In The Sudan, poverty remains a rural phenomenon, and within the rural areas it is closely associated with the livelihood systems of rainfed agriculture. The I-PRSP revealed that 46.5 percent of the population of Sudan is found to fall below the poverty line, with 26.5 per cent of the urban population and 57.6 per cent of the rural population falling below the poverty line (CBS 2010). FAO/SIFSIA also reported that one of three Sudanese suffered from food deprivation in 2009. The prevalence of under nourishment was 31 and 34 percent for the urban and rural populations respectively.

4. **Characteristics of poor households**. Poor households are characterized by their physical assets, land and livestock; economic activity that relies on traditional rainfed agriculture with limited diversification of productive activities in the dry season; gender of the head of household; and displacement status, as indicated in annex 2 of the main report. Poor households include smallholders, women headed households and returnee households. Proxy methods are used to assess poverty given the dearth of data on the subject. Figure 3 summarizes the characteristics of rural poverty in Sudan.

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<sup>12</sup> See Annex I for more details

<sup>13</sup> A draft PRSP was released in August 2011 and shared for discussion with national and international stakeholders for comments. PRSP is expected to be finalized in 2012.

<sup>14</sup> See Annex II for more details

## Figure 1: Rural Poverty in Sudan<sup>15</sup>

### Who are the poor?

- Small scale farmers and herders (including women and youth) in the traditional rainfed farming and livestock sectors.
- Landless undertaking casual labor such as collecting firewood and making charcoal and or work as sharecroppers in mechanized farms.
- Settled nomads operating very small land holdings and a small flock of small ruminants.
- Internally displaced people from different parts of Sudan.
- Women headed households including widows and single mothers with young dependents and youth headed households.
- Displaced destitute women and youth.
- Elderly and the disabled people.

### Where are the rural poor?

- The rural poor are found throughout the rural areas and mainly in rainfed areas.
- Concentrated in dispersed settlements with inadequate services.
- Live in relatively remote, isolated settings.

### Why are they poor?

- Inadequate development strategies and policies by Government and the Development Partners (DPs).
- Slow adaptation to climatic change (volatility associated with unpredictable rainfall, dry spells during rainy season, and erosion of natural resources).
- Prolonged civil conflicts that have had a devastating effect on the rural population.
- Subsistence focus and lack of opportunities to shift to market-oriented activities.
- Inadequate access to markets and poor post-harvest management.
- Low index of social capital and ability to form effective groups and associations capable of collective actions.
- Inadequate access to extension services, input supply, and rural financial services (especially on specifically designed services for women and youth).

### What are their coping strategies?

- Reduce consumption of food and water.
- Borrow from family members, friends and moneylenders.
- Undertake temporary employment in urban centers, irrigation schemes or in the mechanized farms.
- Sale of livestock, fixed assets including usufruct rights to land.

5. Agriculture in its broad sense, covering crop/ livestock/ fisheries and forestry, is seen as the key sector for poverty reduction, for fuelling growth and replacing oil as the key engine of the economy. This strategic orientation is not new and was already promoted by the Government since the signature of the Comprehensive Peace Agreement in 2005. Agriculture at the time was seen as a key component of peace and development. The Agriculture Revival Programme (ARP) embodied this strategic orientation and was set to mobilize approximately SDG 10 billion for the development of the sector, particularly rainfed agriculture. Its main objectives for the period 2008-2011 were to achieve: (i) increased agricultural exports and decreased reliance on volatile oil exports; (ii) increased productivity; (iii) improved food security and agricultural incomes; (iv) reduced rural poverty; and (v) redressed regional imbalances. An evaluation of the ARP carried out in 2010 concludes that despite the budgetary constraints, the government fulfilled, to a large extent, its commitments to the programme funding. The evaluation stressed the physical achievements of the programme and provided no solid judgment on the programme real impact. Qualitatively, the assessment recorded positive results under the objectives of the ARP; however the magnitude of these positive changes was not well articulated. The evaluation recommended the extension of the ARP as the initial duration of four years proved insufficient to bring about the desired change in the sector. This second phase is

<sup>15</sup> Final Design Report, Support to the Small Scale Traditional Agriculture in Sinnar State (SUSTAIN) ; September 2010

currently being formulated and the focus is shifting from provision of civil works and equipment to building human resources and institutional capacity.

## B. Rationale for the Seed Development Project

6. **Background**<sup>16</sup>. The seed supply system for staple and cash crops, namely sorghum, millet, sesame, groundnut, cowpea, watermelon and Karkadeh for rainfed traditional smallholder producers in the Sudan, is at the embryonic<sup>17</sup> stage characterized by: (i) subsistence agriculture with traditional varieties or landraces grown from farm retained seed or seed obtained through exchange with other farmers; (ii) varietal improvement of native material is mostly in the hands of farmers<sup>18</sup>; (iii) the limited human, technical and financial capacity of the National Seed Administration compounded with an ineffective organizational set up are among the main reasons behind the inadequacy of the existing seed quality control standards; and (iv) the recently enacted Seed Act of 2010 is yet to be implemented and enforced.

7. Over the past few years and up to 2009, the Government undertook a large-scale distribution of subsidized seed to provide improved seeds to traditional farmers. The quantities procured by the Government reached on average 10 000 MT over the period 2003-2008. The programme proved to be ineffective mainly because: (i) the distributed seeds were of varying quality as the seeds were not systematically certified; (ii) the quantities were insufficient and their delivery was ill-timed (delivered late in the planting season). As a result, such support yielded limited results in terms of adoption and increase in crop productivity. In 2010, the Ministry of Finance and National Economy (MOFNE) decided to phase out such distribution, and instead opted to support investment costs for the development of the seed industry. As a first step, it allocated approximately SDG 8 million in 2011 budget. In this regard, MOFNE is considering the privatization of the largest seed company, the Arab Sudanese Seed Company (ASSCO).

8. The government is fully committed to the liberalization of the seed industry and shifting the market from bulk-sale to Government and humanitarian NGOs, to retail sale to producers in the areas where they are located. Currently, the smallholder sector represents 11% of the seed market. The development of the seed industry and enabling smallholders to access quality seeds in a way that is timely, affordable and sustainable would require a number of measures to develop the supply and marketing models of the existing seed companies, improve the regulatory environment in terms of enforcement of seed certification and inspection, protection of plant breeder's rights, and encourage effective demand among smallholders to purchase certified seeds on a regular basis.

9. **Situation analysis**<sup>19</sup>. The seed supply and marketing is currently dominated by Government agencies and parastatals. The major entities are the NSA as a regulatory body responsible for seed certification and inspection; the Agriculture Research Corporation which holds more than 90% of the breeder seeds and carries out its own programme for seed multiplication to registered and certified seeds; the Arab Sudanese Seed Company<sup>20</sup> (ASSCO) which controlled about 54% on average of all supplies to the Government smallholder seed programme over the period 2003-2008. A total of 24 companies are registered with the Seed Traders Association, however, the mission was informed that only 5 companies in addition to ASSCO are active in the seed business. These are Nectar, Agri-business, Droat Agricultural Services, Nile Sun and Zas. All these companies are private, except ASSCO, which is government owned (parastatal) but adopts private management systems. Working paper 2 presents an assessment of the capacity of the 6 seed companies and concludes that 5 companies have presence in the project area in the form of operational office or a representing agent. ASSCO and Agri-Business have a processing unit as well as packing and storage facilities in the project area (in El Obeid and UmRuwaba). All the companies practice contract farming for the

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<sup>16</sup> Further details are available in working paper 1.

<sup>17</sup> Promoting the Growth and Development of Smallholder Seed Enterprises for Food Security Crops; Best practices and options for decision making Paul J.H. Neate and Rovers G. Guie (FAO).

<sup>18</sup> For example the groundnuts in North Kordofan and the Dimbi sorghum variety in South Kordofan.

<sup>19</sup> Working Paper 2 summarises the information, which was made available to the design mission additional, and detailed information will be collected during the pre-effectiveness. Working paper 1 provides in detail the Seed Act 2010 and outlines its strengths and weaknesses.

<sup>20</sup> ASSCO was formed in 1997 when the Government transferred all Plant Propagation Administration assets from the dismantled National Seed Authority and combined them with investment from the Arab Authority for Agricultural Investment and Development.

production of certified seeds with both large holders and smallholders. It is worth noting that the companies also have research farms for breeding, and production of foundation and registered seeds and carry out varietal maintenance.

10. The Government is fully aware of the importance of the seed industry for improving the productivity of agriculture, and recognizes the need and the urgency for intervention in the sector. The Federal Ministry of Agriculture (FMOA) enacted the Seed Act in 2010 and is in the process of establishing the Seed Council. The main weakness of the Seed Act of 2010 as outlined in working paper 1 is that the plant breeders' rights section in the Seed Act 2010 omitted a reference to : (i) a registrar of plant breeders rights (separate from the registrar of seeds); (ii) conditions for grant of rights; (iii) application procedures; (iv) royalties; (v) new types of varieties that are produced from modern technology such as genetically modified varieties which can be varieties derived from pre-existing varieties by insertion of a gene. The mission recommended to the Government and included in the design the formulation of a Plant Variety Protection legislation that would adhere to international acceptable standards and encourage the development of the seed industry.

11. The effective demand among smallholders is limited. According to current research at the ARC research station in El Obeid, preliminary results are showing that adoption rate across all varieties is 24% and accessibility of new varieties to smallholder farmers is 19%. The data provided by the SKRDP show that following technology transfer on improved agricultural practices, smallholders can apply such techniques to more than 50% of their cultivated area. Among poorer households, the SKRDP data shows that 34% households apply improved techniques on more than 50% of the cultivated area. The main factors hindering farmers from accessing certified seeds are: (i) the practice of retaining seeds; (ii) the improved seed varieties - apart from sorghum *yarwasha*, groundnut *ghubeish*, and cowpea *ein al ghazal* - do not clearly outperform traditional landraces. Although early maturing, the planting of these improved varieties requires mechanized land preparation due to heavy weed infestation; moreover, the early maturation attracts birds and the crop is therefore more vulnerable to pre-harvest losses; and finally the new varieties may not have the required taste or by-products (namely fodder). Factors such as climatic variability, increased labor costs for traditional varieties, (long stems which make it time consuming and expensive to harvest) and improved infrastructure (which brings production areas closer to the main markets), force farmers to look for more suitable landraces and varieties that respond to the new climatic and economic changes. Farmers also complain about the price of certified seeds which is twice as the price of grain<sup>21</sup> and about the unreliability of the quality of certified seed.

12. **Piloting seed supply and retail sale.** There are different models that can be considered to retail seeds to smallholders. Such models include private sector production, state farm production or community-based production. Under the on-going IFAD co-financed projects South Kordofan Rural Development Programme (SKRDP) and Western Sudan Resources Management Programme, two seed production models were piloted, the state farm production and the community-based production. The results, described in working paper 1, demonstrate that the community-based model achieved higher yields, was more cost efficient, and provided an effective farmer-to-farmer learning about the performance of certified seed.

13. By the end of 2010, IFAD agreed with the MOFNE and FMOA that the best location to pilot the development of the seed industry and enabling smallholders to access quality seeds in a way that is timely, affordable and sustainable, would be in the two states of North and South Kordofan. In these two states, farmers have been exposed through Government and NGO programmes to technology transfer on certified seeds, to organization of producers for collective action and to access inputs and credit, and have comparatively higher contact with extension services. Furthermore, the extension services in these two states are better equipped and trained than in other parts of the country. Finally, the seed companies maintain a production base and processing facilities in North and South Kordofan, as presented in working paper 2.

14. SDP will capitalize on the achievements of the two on-going IFAD co-financed projects, SKRDP and WSRMP, which are operating in the two states of North and South Kordofan. Basic data about the two programmes are provided in table 1 below.

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<sup>21</sup> This is based on information obtained from farmers during the final design mission and confirmed by extension staff and seed companies.

**Table 1. Basic data about SKRDP and WSRMP**

Indicators	SKRDP	WSRMP
Date of EB approval	14 September 2000	2 December 2004
Date of Effectiveness	12 February 2001	15 December 2005
Date of Completion	31 December 2013	31 December 2013
Date of Closing	30 June 2014	30 June 2014
Total cost in million USD	39.14	48.95
IFAD financing in million USD	17.87	25.46
Disbursement rate (%)	96.55	75.05
Geographic coverage	Under the IFAD loan, the localities of Kadugli, Dilling, Rashad, Abu Gubeiha and Kalogi Under the EKN grant, the RAUs of Julud, Heiban, Um Dorein, Talodi, Kalogi, Liri	Communities along 3 stock routes (Western, Central and Eastern)
Outreach in households	Total: 39 000 households in 195 communities 594 men and 346 women trained in crop production 37 500 men and 19 500 women access advisory services	Total: 38 000 in 368 communities 3868 men and 2952 women trained in crop production 6309 men and 5803 women access advisory services
Experience in seed production and use	Plan for privatization of the seed production unit of the State Ministry of Agriculture Support to seed multiplication on state farm of Habila in 2010 Demonstration plots and training of contact farmers on the use of improved seeds	Demonstration plots and training of contact farmers on the use of improved seeds Seed revolving fund at community level Seed multiplication by farmers groups in Abu Zabad locality in North Kordofan and Abbassiya locality in South Kordofan
Number of communities covered in SDP project area	123	99

15. The main **achievements** of the SKRDP and WSRMP that are relevant to the Seed Development Project are: (i) the organization of communities into community development committees (CDCs); (ii) the establishment of multi-disciplinary extension teams; (iii) the establishment of microfinance initiatives that facilitate the access of the poor and smallholders to credit. Each of these achievements is described below.

16. **Community development committees.** SKRDP and WSRMP formed 563 community development committees in North and South Kordofan states whereby 361 are registered. The Community Development Committees have an executive committee that is composed of up to 15 members, of whom 30% are women. There is on average 400 members in each CDC, drawn from a community or cluster of communities. Members of the CDCs join interest groups such as the farming group, the livestock group, the natural resources management group and the women's income generating group. The farmers' groups and the women income generating groups are usually the largest with on average 180-200 members and 130-200 members respectively; they are also the more active groups as they benefit from a larger menu of activities such as training of contact farmers, demonstration on technological packages, development of small scale irrigation for women gardens, vocational training for women, etc... Each CDC has a number of trained community extension workers including contact farmers, pest control agents, paravets, women trainers on vocational skills. In both North and South Kordofan, there are 2347 trained community workers, 1142 men and 1205 women.

17. **Multi-disciplinary extension teams.** In North and South Kordofan states, there is a total of 32 multi-disciplinary extension teams. An assessment shows that 90% of the members of the extension teams are university graduates and 37% are women. The extension teams whether in North or South Kordofan have received training on participatory techniques for community mobilization, extension and natural resources management; on group organization; on technical training in the area of their specialization; and on savings and credit. The extension teams are equipped with an office,

rest houses for the men and women members of the team; and a vehicle, plus 1-2 motorcycles. Each extension team can cover 20-25 communities, and conducts 4 visits/ community/month.

18. **Access to finance.** SKRDP and WSRMP are supporting 3 microfinance initiatives: Bara'ah, ABSUMI and the savings and credit groups. **Bara'ah** is a licensed microfinance institution currently serving 45 villages in the Al Rashad locality in the South Kordofan state. In 2011, Bara'ah was funded by a Swedish contribution through IFAD for USD 2.1 million to support its expansion and scaling up in the region, to about 15 000 members in the localities of Al Rashad, Abu Gubeiha and Abbassiya over the next 4-5 years. Currently Bara'ah has about 1300 members; an average loan size of SDG 870/ loan; and a portfolio at risk (PAR) > 0 days of 8% and the repayment rate at 94%. The situation the portfolio deteriorated as a result of the insecurity in South Kordofan but Bara'ah succeeded in isolating the delinquency problem and has undertaken efforts to restore the livelihoods of the delinquent members.

19. WSRMP partnered with the Microfinance Unit of Central Bank of Sudan (CBS-MFU) and assisted the Agriculture Bank of Sudan (ABS) to develop a specialized microfinance programme called ABS Microfinance Initiative or ABSUMI for short. **ABSUMI** was launched in March 2011 in Um Ruwaba locality and covers also Rahad locality; it has reached 1 000 clients within 3 months, with an average loan size of SDG 350. It has secured 100% repayment rate and 0% Portfolio at Risk. Within 3-4 years, ABSUMI is planning to reach 15 000-20 000 clients, through expanding its presence to 5 new localities in North and South Kordofan. The expansion is set to start in 2012.

20. WSRMP established 237 **savings and credit groups** with a total membership of 243 men and 3 443 women. Average savings per group reached SDG 3 300. Average loan size is SDG 150 for women and SDG 320 for men and these loans are mainly used for storage of crops; animal fattening; petty trade (in forestry products, dried okra, etc...)

21. **Topping up WSRMP.** The design missions and the Government agreed to consider the Seed Development Project as a top up of the WSRMP. It contributes to WSRMP third specific objective of "improve the livelihoods of rural poor male headed and female-headed households and their access to productive and social services". The Seed Development Project will consolidate the achievements of the technology transfer activities in the areas with the highest potential for crop production which are the selected localities of Rahad, Sheikan, Abbassiya and Abu Gubeiha. It is also expected that the SDP through increasing land productivity will help stem horizontal expansion of cultivated areas and decrease the encroachment on pastoral land and on the demarcated Eastern stock route, thus also contributing to WSRMP planned outcomes.

## II. PROJECT DESCRIPTION

### A. Project Area and Target Group<sup>22</sup>

22. **Project area.** The Project area was determined in close consultation with Government and Project staff of the on-going IFAD supported WSRMP and SKRDP, based on the following considerations and criteria: (i) agro-ecological suitability to seed production, particularly in terms of availability of land and reliable rainfall, and economic viability; (ii) coverage under the on-going IFAD co-financed projects so as to capitalize on successful approaches and take full advantage of the already trained staff including experienced extension agents; (iii) farmers' experience with the target crops and/or possibly with multiplication pilot initiatives under IFAD and other donors' interventions; and (iv) high adoption rates of the improved varieties by the communities, where seed multiplication schemes, have been implemented and (v) relatively conflict free areas. This has resulted in the selection of 4 localities, two in each state as follows: (i) in North Kordofan, Rahad and Sheikan; (ii) in South Kordofan, Abbassiya and Abu Gubeiha. These 4 localities are contiguous, easily accessible by road and have diversified production system.

23. The characteristics of the localities are available in annex 2 of the main report and working paper 2.

24. **Target Group:** The target group for this project is composed of smallholders, traders/ agro-dealers, women and women headed households, youth. Smallholders operate land holdings less than 15 feddans, cultivate sorghum and millet as food crops and groundnuts, sesame, watermelon, and

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<sup>22</sup> See Annex 2 for more detailed information

Karkadeh as cash crops. Most of the smallholders have limited access to inputs, assets and services. The traders/ agro-dealers operate at primary and secondary markets and face a number of challenges and constraints that make them averse to engaging in the seed business, including limited access to credit, low margins in the seed trade, unreliable seed market, lack of storage facilities, poorly developed business skills, and high rentals for their shops. The women and women headed households are active in farming especially among the poorer households. They cultivate early maturing varieties in their home gardens and the traditional field crop varieties in larger plots. Women headed households suffer more acutely from labor shortage and are more vulnerable to food insecurity. Rural youth will also be targeted in this project as the seed business whether at production or trade level would offer them remunerative opportunities. Targeted youth are between eighteen to thirty years of age, run a small trader business and are interested in developing it, or cultivate land and are interested to take up more market oriented production.

25. **Targeting strategy.** As WSRMP and SKRDP are already covering 222 communities in the project area, the starting point for the implementation of the seed production and seed demand activities of the project will be in these communities. The criteria for the selection of the communities are summarized in table 2 below. The details are provided in annex 2.

**Table 2: Summary of targeting criteria of communities and households involved in seed supply and seed demand activities.**

	Seed supply	Seed demand
Targeting of communities	<ul style="list-style-type: none"> <li>• Experience in seed multiplication or with farmers trained in seed multiplication;</li> <li>• Active contact farmers and pest control agents;</li> <li>• Appropriate soils and acceptable average rainfall;</li> <li>• Agricultural land under the command of the community sufficient for the allocation of 200 feddan for seed multiplication, and meets requirements for isolation;</li> <li>• Community Development Committees (CDCs) are interested in the commercial growing of certified seeds</li> </ul>	<ul style="list-style-type: none"> <li>• Rate of adoption of improved technical practices,</li> <li>• CDC willing to organize producers to better plan for the agricultural season</li> </ul>
Targeting of smallholders, agro-dealers, women and youth	<ul style="list-style-type: none"> <li>• Target: 40% of seed growers are from the poorer households</li> <li>• Voluntary targeting using the following incentives: (i) partial subsidy of insurance; (ii) contract farming for production of certified seed with seed company purchasing at a mark-up and at harvest.</li> </ul>	<ul style="list-style-type: none"> <li>• Target: 60% of the grain producers are from the poorer households</li> <li>• Voluntary targeting using the following incentives: (i) partial subsidy of insurance; (ii) access to machinery early on in the season to complete land preparation.</li> </ul>
Gender mainstreaming	Setting a quota for the participation of women at 30%	
Youth mainstreaming	Setting a quota for the participation of youth at 20%, and applied to activities related to seed multiplication and to seed marketing	

26. **Gender and youth mainstreaming.** The objective of gender mainstreaming is to ensure equitable access of women and youth to more remunerative opportunities in seed production, as well as to access certified seeds and agricultural services to improve the productivity of cultivated land and to increase their incomes. The project sets: (i) a quota for the participation of women and youth in various project activities; (ii) periodic monitoring of the profile of participants to ensure that women and youth are equitably benefiting from the project; (iii) training on gender mainstreaming in agriculture targeting producer groups and extension staff. It is worth noting here that the extension teams all include women extension agents which facilitate the mobilization and organization of women and their involvement in agricultural production activities. The PCU, through its existing women and community development officer, will be responsible for the implementation of the gender and youth mainstreaming strategy.

## **B. Project Development Objective and Key Indicators<sup>23</sup>**

27. **Project Goal.** The Project's overall goal is to improve food security, incomes and resilience to shocks of the smallholder producers (including youth and women) in North and South Kordofan.

28. **Project Objective.** The Project's development objective is to increase crop productivity for about 108 000 rainfed traditional smallholder farmers, using certified seeds in North and South Kordofan. The project will work with the following crops: sorghum, groundnut, cowpea and sesame.

## **C. Components/Outcomes<sup>24</sup>**

29. The Project has four complementary and reinforcing components. Component I is concerned primarily with the regulatory environment and institutional strengthening for the public sector pertaining to seed value chain; Component II is intended to provide critical support for enhancing the implementation of the seed production system; Component III will focus on supporting seed market development, through supporting farmers' groups; and Component IV provides the functional set up and the necessary logistics and technical support to ensure successful management and coordination of the project implementation. Each component is described in detail below and its total costs indicated in brackets.

30. **Component I (USD 1.86 million):** Institutional and Regulatory Environment Strengthening and Development. *Outcome: Conducive policy and institutional environment for the seed industry in place.* There are three outputs

- Drafting and enforcing a plant variety protection legislation, which will encourage private sector investment in plant breeding, seed production and other agricultural activities that exploit plant varietal uniqueness. The terms of reference for the development of the plant variety protection legislation and the breeding strategy are in annex 5 of the main report;
- Improving the National Seed Administration's (NSA) capacity to carry out its legal mandate of monitoring the national seed system by providing resources for human capacity development, mobility, out posting of staff and upgrading of laboratories. The list of training activities is available in working paper 2; and
- Establishing a multi-stakeholder dialogue forum that brings together Government, the private sector, NGOs and farmers to discuss seed issues on a regular basis.

31. **Output 1.1 Plant variety protection legislation drafted and enforced.** This output is expected to contribute to the Government's objective of creating an enabling environment for sustainable development of agricultural production through laws, regulations and policy reforms. The main activities include:

- (i) Drafting and enactment of a separate Plant Breeders' Rights Act in line with international norms and conventions.<sup>25</sup> The enactment of a comprehensive plant

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<sup>23</sup> See logframe of the project

<sup>24</sup> See Annex 4 for detailed description of the project.

<sup>25</sup> The conventions of the Union for Protection of Plant Varieties (UPOV), The World Trade Organisation, to which Sudan is a member, through the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement required all member countries to have in place by 1 January 2006 a plant variety protection system that is similar



variety protection legislation and its effective enforcement will increase the attractiveness of and promote private investments in the seed business in Sudan. While the Seed Act of 2010 has a section on plant breeders' rights, the project will raise a letter of agreement with UPOV to assist in drafting the plant variety protection (PVP) legislation, which will reflect the specificities of the Sudanese agriculture and adhere to the international conventions and norms<sup>26</sup>. The UPOV expert will hold stakeholder consultations that will include breeders, researchers, seed companies, parliamentarians and NGOs. The legislation should clearly address the issue of farmers breeder rights<sup>27</sup> and be ratified and enforced by end 2012 ; and

(ii) Procurement of DNA testing equipment that will be used in resolving breeder's rights disputes and help in the enforcement of the proposed legislation. The plant breeders' rights legislation and laboratory equipment will be the responsibility of the NSA.

32. **Output 1.2 NSA is capacitated to effectively monitor the multiplication and certification standards.** The NSA is the principal Government institution with the responsibility of managing the national seed supply system. Consequently, the quality of seed produced and marketed depends to a large extent, on the effectiveness of NSA's monitoring functions. Presently, NSA is very weak and there are several reports of seed of uncertain quality and denomination. The situation is impaired further by the lack of NSA's presence outside the State of Khartoum. Therefore, to improve the effectiveness of NSA in carrying out its mandate, the Project intends to carry out the following activities:

- (i) Providing the NSA with the appropriate equipment to conduct their quality control, regulatory and enforcement functions.
- (ii) Accreditation of NSA by the International Seed Testing Association (ISTA) and ensure that the central testing laboratory meets ISTA accreditation standards. The project will cover the costs related to the accreditation process, staff laboratory testing proficiency, and visits by ISTA experts;
- (iii) Drafting of standard operating manuals for the laboratory, accreditation fees, payment for seals and orange international certificates.

33. **Output 1.3: Support to Policy Dialogue.** The FMoA, through NSA, will convene at the federal level bi-annual forums involving the main seed industry stakeholders. The purpose of these forums is to discuss policy issues required to improve national seed supply. The participants will be Government officials from FMoA/SMoA, ARC, NSA, Extension Department, Farmer Unions, interested donors and sister UN organizations, NGOs, seed companies, agro dealer representatives and agrochemical/fertilizer companies. Similar forums will be held every two years at state level in North and South Kordofan.

34. **Component II (USD 3.10 million): Improvement of the Seed Production System;** *Outcome: An economically viable seed production system that meets farmers' demands and expectations in place.* Three outputs are expected:

- 2.1 The Agricultural Research Corporation's (ARC) capacity to carry out demand driven research through participatory methodology is improved and the participatory research (PR) programme is implemented;
- 2.2 High quality and sufficient quantity of breeder, foundation and registered seed for the Project are produced by ARC; ARC will also ensure varietal maintenance;
- 2.3 Public extension system to provide technical support to seed producer enterprises and other community farmers is empowered.

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to the UPOV Convention Furthermore, if the Government expects the private sector to invest in plant breeding in the country, there has to be a legislation that guarantees the security of their germplasm.

<sup>26</sup> It is worth mentioning that during the mission's discussions with the Federal Ministry of Finance, the Ministry was in favour of a strong legislation to protect breeder's rights and recognises its importance for sustained growth of the private seed industry in Sudan.

<sup>27</sup> Taking into account the fact that Sudan is a centre of diversity for such crops as sorghum, sesame and watermelon which generations of farmers have maintained and is the source of modern breeding in the development of improved varieties.

2.4 Community-based Seed Growers Groups are enabled to produce certified seeds of improved and traditional varieties

35. **Output 2.1 Participatory Research; (PR) for identification of suitable cultivars implemented.** Participatory plant breeding is an empowerment measure, which offers farmers the opportunity and the means to choose the varieties that better suit their needs and conditions. PR has psychological, moral and ethical benefits to farmers because it gives them voice and acknowledges local knowledge. The variety release process and subsequent seed multiplication will be more efficient as ARC will concentrate its resources on varieties known to be acceptable to farmers. It is expected that ARC will also include other technology based research in the same plots such as fertilizer use, weed control using herbicides and integrated pest management. The key activities which will be implemented in support of this innovative and important initiative are as follows:

(i) Given the novelty of the approach in Sudan, the Project will seek expert assistance from the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) to develop the concept further and the implementation modalities.

(ii) Formation of a participatory research committee (PRC) at locality level comprised of an ARC breeder, extension staff and farmer representatives (women to be represented) whose primary functions will be to identify and discuss crop performance problems needing attention and identify the site for the research plot(s) and the varieties to be tested. The suggested PR implementation steps include:

- ARC will select advanced material from its programme, farmer landraces and material from international research institutes if applicable to the local conditions (CGIAR such as ICRISAT, ICARDA).
- The extension team will demonstrate and facilitate the adoption of the appropriate cropping patterns within the farmers' context with the appropriate crop husbandry practices and inputs.
- The PRC will evaluate the varieties throughout the growing season using agreed guidelines.
- At the end of the season, the PRC will choose the best varieties using agreed criteria.
- The chosen varieties will undergo a second season of evaluation and at the same time ARC will start multiplying breeder seed of the varieties. Other value-for-use tests such as taste, cooking quality, milling quality and storability will be evaluated during the second season.
- At the end of the second season, the PRC will agree on the variety (ies) to be released and ARC will submit the application for variety release; ARC will also put in place a varietal maintenance programme for the released varieties.
- The variety (ies) will then be introduced to the certified seed producer enterprises for multiplication.

(iii) The subject of the PR will address as a matter of priority: (i) appropriate sorghum seed varieties and land preparation on gardud soils; (ii) improved millet varieties; (iii) improved sesame varieties. These research priorities are based on the results of the financial analysis which show low returns for the gardud soil types and generally for millet and sesame. An understanding will be reached with GoS that no investment aimed at intensifying/expanding the production of sorghum on gardud soils will be undertaken until the project has generated adequate research results on appropriate varieties, cropping pattern, and agricultural practices.

36. **Output 2.2 Sufficient quantity of breeder/foundation/registered seeds produced by ARC;** the starting point before the production process of breeder/foundation seed begins will be to:

(i) Collect, screen and analyze available secondary data, baseline survey, and implement a market research during the pre-effectiveness period of the project in order to establish and fine tune existing estimates for effective demand of seed<sup>28</sup>. In addition, ARC will consult the seed producer enterprises and extension department in each state on the varieties for which registered seeds should be produced. Only varieties in high demand by farmers should be produced.<sup>29</sup>

(ii) To secure continued seed production, ARC will produce the total registered seed requirements for first and the second years of the project in PY1. The quantities that should be produced are presented in working paper 2. The varieties presented in working paper 2 for seed multiplication are indicative and their selection will need to be confirmed with the Participatory Research Committees, with the SGG, and with the GPG.<sup>30</sup> It is worth noting that ARC should produce registered seeds in sufficient quantities for a two years supply of seed at the start of each season, as security in case of any calamity. All registered seed production will be produced under supplementary irrigation conditions to ensure optimum yields. The Project support to ARC for the production of the required registered seed consists of the following: (a) renovation of the breeder/ foundation seed store at El Obeid to ensure that such seed can be stored for long periods with minimum deterioration in quality; and (b) provide logistic support, inputs. The ARC recurrent costs for the production of registered seeds are expected to be covered from the proceeds of the sale of registered seeds to the seed company.

**37. Output 2.3 the extension system is capacitated to support target seed producer enterprises.** The Project will work with two sub-teams of the existing locality extension teams in Abbassiya and Rahad to extend advisory services to the seed grower groups. The SDP will improve the capacity of these extension sub-teams so that they can interact more intensively with research in the participatory breeding programme, and seed producer enterprises. They will be the primary contact with the seed growing farmers. The Project will support this sub-team with training to undertake the process of selecting the members of new seed producer enterprises, group formation, training of the members of the seed grower groups (SGG) in bookkeeping, study tours and exchange visits and to interact with the village based institutions. Specifically, the project will provide training, logistic support (vehicles, motorcycles and bikes) and extension materials for both Government Extension Agents and community based Contact Farmers.

**38. Output 2.4 Community-based Seed Growers Groups are enabled to produce certified seeds of improved and traditional varieties.** This component provides the core development of smallholder Seed Grower Groups. This activity capitalizes on the experiences and lessons learned from small-scale pilots that have been either implemented through IFAD on-going operations in the two States or by other donors. The Project will establish and support 32 SGGs averaging 40 households per group to make an estimated total of 1 280 households (14 groups in North Kordofan and 18 groups in South Kordofan). Group membership will be based on one registered member per household. Each group will specialize in a given season in the production of the certified seeds of one crop.

39. The groups will multiply certified seeds using registered seeds produced by the ARC. Since certified seed production is a specialized activity that requires a certain degree of skills and resources, the group composition would be based on the willingness of members to take the financial risk in becoming seed growers as this Project is based on cost recovery of all inputs. The Project's aim is that at least 30 percent of the registered members are women. Priority will be given to women headed households willing to engage in seed production.

40. The Project is adopting a business model in which private seed companies contract seed growers for the multiplication of registered seeds to produce fully certified seeds. The private seed companies will be selected to enter into contractual arrangement with the SGG: the seed company

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<sup>28</sup> See detailed demand estimates in working paper 2.

<sup>29</sup> Details of the calculation of the preliminary estimate of registered seed that ARC should produce to supply the certified seed producer enterprises based on the most popular crops within the two States is presented in working paper 2.

<sup>30</sup> may select varieties in order to start up Project activities for the first year. However, selection of the varieties to be produced in the following years, must be based on the recommendations of the PRC.

will pre-finance the SGGs with all the necessary financial and input supplies which would be recovered at harvesting time. Necessary inputs would be provided directly by the private company or through a bank. The private company is expected to treat each SGG as an enterprise providing it with the training required to run the seed production as a business venture.

41. **Component III (USD 9.04 million): Seed market development support** *Outcome: Certified seed marketing channels at the grassroots level developed.* Four outputs are expected.

42. **Output 3.1: Creation of a marketing channel of certified seeds.** The PSC will specify in their business plans the model they plan to adopt for marketing seeds to smallholders in the project area. One option that can be considered by the PSC is to select agents for certified seeds among existing dynamic traders, having access to shops, good experience, and strong interest in the business, with preference to youth.

3.1.1 Selection of the appropriate marketing channel for certified seeds to smallholders in the project area will be determined by the PSC.

3.1.2 PSCs will provide technical and logistical support to operate the marketing channel selected.

3.1.3 The project has made provisions for training PSC agents or staff involved in seed retail markets.

43. **Output 3.2: Empowerment of the existing producers (Grain Producers Groups).** The project aims to build 105 GPG in the calibration phase and 200 GPG in the intensification/ scaling up phase as models for how communities can plan their farming business, and avail inputs including seeds, machinery hire, credit and insurance to their members to establish their crops. These GPG will be selected in communities where there are established Community Development Committees and farming interest groups. The 6 extension teams who are already in the project area will provide:

3.2 Intensive extension support of equivalent quality and extent as that provided to the SGGs. This includes training on group management, on business planning for agriculture activities, and on financing of agriculture operations (access to credit and insurance).

3.3 Demonstration on the full technological package composed of certified seeds, soil and water conservation techniques and micro-fertilization as described in working paper 2. The extension agents will facilitate the access of the GPGs to agricultural machinery services, working capital to pay for the labor, weeding and harvesting costs. These inputs will be provided through credit from the banks or from Bara'ah or from ABSUMI<sup>31</sup>, all of which are operating in the project area.

3.4 The extension teams will facilitate the access of GPG to crop insurance whereby the grain producers will be encouraged to ensure their crops at 50% of the insurance cost as the other 50% is subsidized by the Government.

3.5 Information campaigns through different and accessible audio-visual means and through locality-based seed fairs organized especially after harvesting and before planting.

44. **Output 3.3: Development of Seed Market Information System** through collection of market-related seed data (quantities, varieties, crops, prices, location etc., growers, traders, agents), as explained in annex 6. This information will be processed and analyzed and disseminated regularly and in appropriate formats such as special bulletins and newsletters, and broadcasted through local television and radio as well as mobile phones and internet. This should be the responsibility of the State Ministries of Agriculture in North and South Kordofan in coordination with the NSA. This information could also be made available during seed fairs. There is a number of custom-made Seed Management Information Systems software, in the market, which could be purchased on demand. Possibilities to acquire such software will be explored through similar IFAD financed projects within or outside NENA region or through sister UN organizations such as FAO.

45. **Output 3.4: Expand access of the grain producers to microfinance services.** The project will support ABSUMI expansion to Sheikan locality in 2012 and this includes rehabilitation of ABSUMI offices, logistic support in terms of vehicles and office equipment. A lump-sum allocation was earmarked for this purpose. It is expected that the expansion of the various microfinance initiatives in the project area would enable approximately 20 000 smallholder farmers access microfinance. For the purpose of the SDP, smallholder farmers will access loans from MFIs such as Bara'ah and ABSUMI or from banks with established branches in the project area, such as the Agriculture Bank of Sudan.

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<sup>31</sup> ABSUMI stands for Agricultural Bank of Sudan Microfinance Initiative.

46. **Component IV (USD 3.46 million): Project Management and Coordination.** *Outcome: Project efficiently and effectively managed to achieve Project results with knowledge management in the seed industry.* The component has three outputs namely: (i) establish a Project management and coordination structure; (ii) systematize the financial management, audit and procurement procedures and (iii) reinforce the existing M&E and Knowledge Management (KM) system. See Section III for detailed implementation arrangements.

#### **D. Lessons Learned and Adherence to IFAD Policies Reflected In Project Design<sup>32</sup>**

47. This section summarizes the main lessons learned while alignment of the project to IFAD policies is presented in annex 12. The implementation of different IFAD<sup>33</sup> and other financiers' co-funded projects and programmes, have generated a series of lessons that guided the present project design and implementation. The key lessons of relevance to SDP have been incorporated in the design process and are summarized below:

- **Extension services.** There are 32 multi-disciplinary extension teams supported by the SKRDP and WSRMP in North and South Kordofan states. About 90% of the members of the extension teams are university graduates and 37% are women. There are currently 6 teams, 2 in North Kordofan and 4 in South Kordofan covering the 4 localities of the SDP. The performance of the extension teams is rated as satisfactory by the beneficiaries for whom the extension team has become the main source of technical knowledge. These extension agents have been trained and capacitated under the on-going IFAD projects in North and South Kordofan and will be in the frontline of SDP implementation. They will be further equipped to do their tasks, building on the existing structures and resources. They will receive both general and specialized training for group development and seed production.
- **Ensuring technological adoption.** SDP is taking a very conservative implementation approach keeping the Project small and focused in two localities per State. Seed production will start in one locality Abbassiya with limited production of certified seeds by a small number of seed growers, to effectively monitor the certified seed production process. The scale of seed production is also kept small to focus efforts on the adoption of certified seed among producers who have been formed, trained and capacitated under previous projects in the area. The project will capitalize on these groups of farmers, who are fully acquainted with the full range of technical packages suitable for crop production in traditional rain-fed areas, and who can serve as model to the rest of the farming communities in an effort to increase general awareness about the benefits of certified seeds and consequently increase the effective demand for certified seeds.
- **Capacity for policy dialogue.** The main lesson learned is that at the policy level, there is a need to present to stakeholders compelling evidence about the negative impact of current seed production and marketing practices in both the short and long term on the sustainability of the agricultural sector and on the environment. The focus should be on the market distortion effect resulting from the distribution of free seeds on one hand, and the near absence of a coherent seed policy and ineffective regulatory framework on the other hand. The proposed bi-annual stakeholder fora (under component 1) will serve as a venue to discuss the enabling policies for the development of the seed sector. In addition, the project adopts a phased approach whereby the achievement of a set of triggers determines the continuation of the project. The achievement of these triggers is contingent on the enforcement of an effective regulatory environment.
- **Institutional arrangements.** Existing Projects are hampered by institutional constraints, ineffective inter-agency coordination, inadequate implementation capacity, and poor communication. It is the intent of SDP to create efficient and effective institutional arrangements for Project implementation to avoid lengthy and complex bureaucratic procedures. For this reason, the Project management will be fully assimilated within the existing WSRMP which operates in both North and South Kordofan and which has long-term experience with managing IFAD and Government funds. The Project will provide necessary incremental staff, in form of a seed specialist and accountant (their terms of reference are in

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<sup>32</sup> See Annex 3 for more information

<sup>33</sup> Similar IFAD co-financed projects are the North Kordofan Rural Development Project, the South Kordofan Rural Development Programme, the Western Sudan Resources Management Programme. These projects emphasize capacity building for decentralized and community based extension, technology transfer and a combination of extension methods based on farmer field schools and contact farmers.

annex 5 of the main report) who will work with the existing WSRMP staff. The different coordination committees of the WSRMP will be amended to include relevant representatives from the implementing partners and stakeholders.

- **Post-completion and sustainability of the project.** The arrangements for project sustainability depend on the project design, the political will of the government and its commitment to the project sustainability, availability of financial and human resources to secure operation and maintenance of the project assets and guarantee the continuity and scaling up of its interventions within and outside the project area. The project design optimizes the likelihood of achieving sustainability as it invests in building the capacity at the regulatory level, as well as at the seed production and seed demand levels. It adopts the principle of cost recovery for the financing of extension services or inputs. The mission carried out an ex-ante validation of the profitability of the model proposed for the supply and marketing of seeds and found it to be robust (section IV.C of main report).
- **Producers' associations.** The formation and/or strengthening of institutions such as the community-based Seed Growers Groups (SGGs) and Grain Producers Groups (GPGs) are critical to creating a sustainable supply and demand for certified seeds. The design of the project provides activities to empower these groups to exploit fully the different opportunities provided under the project and a comprehensive training programme for these groups has been formulated (see working paper 2).
- **Result-based monitoring.** An activity based budgeting and accounting system and progress reporting arrangement should be put in place as early as possible and output/outcome oriented annual planning and budgeting processes adopted at the beginning of the Project implementation. SDP's budget, the component matrix and all the other matrixes are output and outcomes based ensuring that the Project responds to the result based monitoring systems.
- **Financial management and procurement.** Weak capacities in financial management and extensive delays in procurement proved to be important constraints for the smooth start-up of the project. In the case of the present Project, this challenge is overcome, as the existing WSRMP has made very good progress in developing a sound financial management system, and has adopted measures to overcome the procurement delays. Annexes 7 and 8 provide further details on these points.

48. As a result of the lessons learned above, the proposed project interventions rest on the following considerations:

- Address critical policy concerns pertaining to seed industry through the promulgation of appropriate laws and regulations to create an enabling environment that promotes investments in agriculture, active involvement of the private sector and high adoption of community based seed multiplication and cultivation.
- Delegate the implementation of key project interventions to specialized government agencies through contractual agreements (production of breeder and foundation seeds by ARC for example and NSA for the regulatory and oversight aspects), private sector for production and marketing of seeds.
- Support the continuing efforts in developing further the capacity of the locality extension services to ensure smooth post completion and sustainability of the project activity.

### III. PROJECT IMPLEMENTATION<sup>34</sup>

#### A. Approach

49. The project approach is characterized by: (i) capitalizing on the experiences and achievements of the SKRDP and WSRMP; (ii) promoting a private public partnership model for the supply and production of seeds between the private sector, the community organizations (CDCs, SGGs, GPGs), and the extension teams; (iii) promoting cost recovery of services; (iv) a phased approach that allows to test the production and marketing model and adjust it to the changes in the regulatory environment.

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<sup>34</sup> See Annex 5 for institutional and technical aspects of project implementation.

50. The implementation of SDP will start in the communities where SKRDP and WSRMP are operating and where there would be demand and interest in the project activities. SDP will introduce a new level of organization in form of the SGG and the GPG with the objective of enabling communities to take up and manage market oriented activities (in the case of SGG) and to focus on using collective action to better plan the farming season at community level (in the case of GPG).

51. *Promoting a private public partnership model for the supply, production and marketing of certified seeds.* The private public partnership is between the private sector, the community organizations (CDCs, SGGs, GPGs), and the extension teams. This model was retained by the final design team for the following reasons: (i) community based production of certified seeds proved to be more cost efficient; (ii) the diffusion of certified seeds is larger when produced at community level; (iii) retailing certified seeds to smallholders require the seed companies to change their business model and work more at grassroots level hence the need to work through the extension teams, community organizations and a local network for the marketing of certified seeds. Indeed, the design team is of the opinion that the critical challenge to this project is effective demand and that the model proposed responds to this challenge.

52. *Promoting the cost recovery of services.* It is expected that the NSA will recover its incremental operational costs from the fees it levies from the seed companies for the inspection and certification of seed production on contracted plots. With regards ARC, it is also expected that the sale of registered seeds to the project or the seed companies will enable it to cover the annual costs of production of registered seeds. The PSC will contract the extension teams to provide technical training and backstopping services to the SGGs. The PSC will cover the incremental costs of the extension team in terms of vehicle operational costs and field allowances. The PCU will contract the services of the extension teams to train and backstop the GPGs. The incremental costs of the extension teams will be covered by the project during the calibration phase. At mid-term, the project will negotiate with producer organizations, the payment of this cost by the GPG.

53. The project will be implemented over six years in three inter-linked stages: (i) a pre-effectiveness phase where activities necessary for the timely start-up of the project will need to be undertaken during the period October 2011 to declaration of effectiveness in February 2012; (ii) a calibration phase during 2012-2014, and (iii) Intensification/ up-scaling stage and consolidation phase during 2015-2017.

54. The activities that should be financed in the pre-effectiveness phase include the recruitment of the seed specialist, the preparation of contract and bid documents, the completion of technical studies, drafting the management agreements and preparing the baseline survey. Table 3 below summarizes the key activities and their costs.

**Table 3: Pre-effectiveness activities**

Component and Activity Description	Unit	Quantity	Cost in USD	Disbursement Category
<b>Table 1. Institutional and Regulatory Environment Strengthening and Development</b>				
<b>National Seed Administration capacitated</b>				
Rehabilitate offices and staff accommodation	lumpsum		50	Civil Works
Outpost Inspector and Seed Analyst	lumpsum		3	Equipment & Materials
<b>Sub-total Table 1. Institutional and Regulatory Environment Strengthening and Development</b>			<b>53</b>	
<b>Table 2. Improvement of the Seed Production System</b>				
<b>Sufficient quantity of breeder/foundation/registered seed produced</b>				
<b>NK Equipment and Materials</b>				
Renovate breeders' seed storage at ARC	facility	1	25	Civil Works
Laboratory equipment for EI Obeid	lumpsum		38	Equipment & Materials
4WD 3-door hardtop	number	1	52	Vehicles
<b>Sub-total NK Equipment and Materials</b>			<b>114</b>	
<b>SK Equipment and Materials</b>				
Renovate breeders' seed storage at ARC	facility	1	50	Civil Works
Laboratory equipment for EI Obeid	lumpsum		63	Equipment & Materials
4WD 3-door hardtop	number	1	52	Vehicles
<b>Sub-total SK Equipment and Materials</b>			<b>164</b>	
Registered Seed purchased from ARC	per annum		88	Equipment & Materials
<b>Sub-total Table 2. Improvement of the Seed Production System</b>			<b>366</b>	
<b>Table 3. Seed Market Development Support</b>				
<b>Market channels established and operational for certified seed</b>				
<b>Assessment of Private Seed Companies</b>				
Market systems/market research study (IC)	personmonth	1	15	Contracted Services
Market systems/market research study (NC)	personmonth	2	30	Contracted Services
<b>Sub-total Table 3. Seed Market Development Support</b>			<b>45</b>	
<b>Table 4. Project Coordination and Management</b>				
<b>M &amp; E Knowledge Management (KM) system established</b>				
Project Start Up and PIM	lumpsum		10	Contracted Services
<b>Sub-total Table 4. Project Coordination and Management</b>			<b>10</b>	
<b>Total Proposed Financing</b>			<b>473</b>	

55. During the calibration phase (2012-2014), the project will cover the entire spectrum of the project intervention involving capacity building, certified seed production and commercialization. On the institutional development side, the key interventions such as the enforcement of the Seed Act, drafting and approval of Plant Variety Legislation, constitution of Seed Council, and empowerment of NSA will be completed; on the supply side, the outreach will be restricted to a small number of carefully selected villages, where in each village, the animation and mobilization campaigns would lead to formation and training of 8 SGGs with about 40 farmers/SGG operating an average area of 200 feddans/ SGG. It is envisaged that at least 30% of participants will be women. The SGG will be selected according to strict agronomical and technical criteria and trained on technical and economic aspects of certified seed multiplication. SGGs will engage in contractual arrangement with the participating seed company; the latter will provide SGGs with certified seeds accompanied with a complete technical package and extension services. In return, the private company purchases part or the total production of certified seeds produced and completes the processing, certification and packing before commercialization. Highly qualified seed inspectors from NSA will perform the seed inspection process at planting, flowering and harvesting as well as during processing and packaging. During the calibration stage, about 1300 MT of certified seeds (sorghum, sesame, groundnut and cowpea) will have been produced by 8 SGGs involving 320 farmers and covering an area of 1600 feddans, cumulative over a period of 3 years. To produce this quantity of certified seeds, ARC, will be contracted by the project to produce about 134 MT of registered seed of these four main crops.

56. Concurrently, and on the demand side, the project will have empowered about 105 Grain Producer Groups who will be targeted by the private seed companies through their retail sale network



for the marketing of the produced certified seeds. It is expected that the about 5,000 smallholders in 2013 to about 10,500 smallholders in 2014 will adopt the technical packages of certified seeds, soil and water conservation and micro-fertilization and will cultivate 50,000 to 105,000 feddans respectively.

57. At the conclusion of the calibration phase, the project is expected to satisfy seven critical trigger indicators, which will be subject to evaluation during mid-term review of the project, prior to passage to the intensification phase of the project. These triggers will include:

- (i) The net profits of the private seed company reach SDG 245,000 by 2014;
- (ii) Cash returns per seed growing household reach SDG 1700/HHd/yr in 2014
- (iii) The yearly net demand for certified seeds by GPG and other farmers is at least 300 MT
- (iv) 10,000 smallholders purchase certified seeds in 2014;
- (v) ARC has on hand 2 years' supply of registered seeds required by PSC which is equivalent to about 90 MT for the period 2013-2014;
- (vi) PVP legislation promulgated in 2012 and in full enforcement in 2014;
- (vii) NSA laboratory receives ISTA accreditation.

58. During the Intensification phase and upon fulfillment of the triggers, the project activities will be adjusted to take into account the recommendations of mid-term review and the feedback of thematic studies and technical feedback from backstopping entities. The project calibrated activities will be scaled-up and the outreach of certified seed production and marketing expanded to reach at least 32 SGGs or 1280 farmers producing 3 000 MT/year of certified seeds using about 300 MT of ARC-produced registered seeds. The adoption rate of certified seeds by GPGs will have reached at least 33% or approximately 108 000 households cultivating about 1 million feddans.

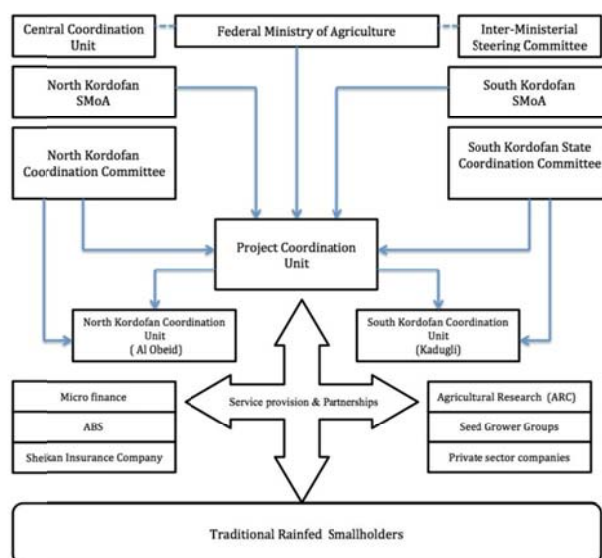
59. In 2017, the project will consolidate its activities as follows:

- Development of a plan for the expansion and the replication of the certified seed multiplication exercise. The expansion plan will focus on the beneficiary communities and the neighboring ones that have not directly benefited from the project;
- Based on the expansion and replication plan developed above, SMOA will define the contractual arrangements for the delivery of extension services for a fee to be determined with the grain producers' groups and the seed companies;
- Completion of thematic studies with respect to the impact of key project interventions;
- Completion report finalized;
- Consolidated financial reports and audit reports;
- Reconciliation of project accounts; and
- Handover modus operandi of project assets and inventories to the concerned agencies.

## B. Organizational Structure

60. A schematic illustration of the SDP organigramme is presented in the figure 4 below.

**Figure 2: Project Organigramme**



### Project governance structure

61. **The Ministry of Finance and National Economy (MOFNE).** MOFNE is the Recipient of the IFAD grant. It carries out annually joint supervision missions with IFAD on the performance and fiduciary aspects of the project. It allocates annually the Government contribution to the Seed Development Project and facilitates the exemption of duties and taxes on goods, works and services procured by the project. With regards to the government contribution to the insurance scheme, the Ministry of Finance and National Economy will verify that the annual insurance costs budgeted in the AWPB are available.

62. **The Federal Ministry of Agriculture (FMoA).** FMoA is the lead agency. It chairs the Inter-Ministerial Steering Committee of the IFAD co-financed projects and the Programme Coordination Committee of the WSRMP. Through these organs, it is responsible for programme and project oversight, strategic guidance and facilitation of the implementation of necessary strategic and policy decisions to enable the development of the seed sector.

63. **The Inter-Ministerial Steering Committee** for the IFAD co-financed Projects is a standing committee that oversees all IFAD co-financed projects in the country. Specifically for the SDP, its role and functions are primarily to review and approve policy recommendations emanating from the Programme Coordination Committee (PCC) pertaining to seed supply and marketing, and steer the replication of the SDP in other states. The State Minister of Agriculture in FMoA or his representative chairs this committee; the membership in this committee includes the representative of the Ministry of Finance and National Economy, Ministry of Irrigation and Water Resources, Ministry of Animal Resources and Fisheries, the State Ministries of Agriculture where IFAD co-financed projects are on-going, the Central Coordination Unit for IFAD co-financed projects. For the purpose of the SDP, the Seed Council will be added to the membership by a decree from the Federal Minister of Agriculture. The rapporteur of the Inter-ministerial Steering Committee is the Directorate of International Cooperation in the FMoA. The Inter-ministerial Steering Committee meets twice a year and reviews the status of the whole IFAD co-financed programme in Sudan.

64. **The Programme Coordination Committee of WSRMP (PCC).** The PCC was established at federal level by a ministerial decree in 2006 and it has overall oversight on the WSRMP. It is responsible for: (i) approval of the AWPB and progress reports; (ii) facilitating, supporting and assisting the progress in implementation through inter-agency and inter-state operations; (iii) monitoring the WSRMP progress without interfering in the day to day operations of the PCU; (iv)

ensuring incorporation of the state counterpart funds in their respective budgets and compliance of the states' development budget with the objectives of WSRMP. Its mandate will be extended to the SDP by decree from the Federal Minister of Agriculture. The PCC meets twice a year.

65. It currently includes the following members: The State Minister of the FMoA, chairperson; with the participation of a senior representative from the MOFNE; a senior representative of the State Ministry of Agriculture and State Ministry of Finance in each state; 4 senior representatives from the Union of Pastoralists, Farmers, Gum Arabic producers and from Water Associations; the Senior Coordinator of IFAD financed projects; the representative from Agricultural Bank of Sudan; and the Coordinator of WSRMP who acts as the rapporteur of the PCC. For the purpose of the SDP, the NSA and the Seed Trader Associations will both be added to the PCC.

66. The membership of the PCC will be right-sized after the completion of WSRMP: the membership of the representatives of Gum Arabic producers association and the state ministry of finance, as well as the ministry of federal government will end with the closing of loan 655-SD financing WSRMP.

67. The **State Coordination Committees** (SCC). The SCC is established in North and South Kordofan State. Its role is to facilitate and review the performance of WSRMP implementation at state level. It reviews AWPB and progress reports submitted by the SCU and approves them for submission to the PCU for consolidation. Its mandate will be extended to cover the SDP.

68. The SCC is chaired by the State Minister of Agriculture or his representative and composed of the director general of the state ministry of agriculture, one representative from the state ministry of finance, the state ministry of physical planning and public utilities, the state manager of Forest National Corporation, the manager of the range and pasture department and soil and water conservation of the state ministry of agriculture, representatives of the Farmers' Union, Pastoral Union, Women Union and the native administration. The state coordinator of WSRMP acts as the rapporteur of SCC. For the purpose of the SDP, the SCC will be expanded to include the ARC research stations in El Obeid and Kadugli. In 2014, the SCC will be right-sized to include the members directly related to the SDP implementation only. The SCC meets twice a year.

### Management set up of the project

69. The management structure of the project is composed of the Programme Coordination Unit and two State Coordination Units. It will be working closely with four key implementation partners: the NSA, the ARC, the state ministries of agriculture in North and South Kordofan and the seed companies collaborating with the project. The **Programme Coordination Unit** of WSRMP (PCU) was established in 2005 by the FMoA, the PCU coordinates WSRMP activities that are undertaken by the implementing agencies, consolidates AWPBs, liaises with state line ministries and NGOs; mobilizes technical assistance; ensures that contract obligations are met; follows-up and monitors component implementation; and ensures the integrity in the use of WSRMP funds, assets and financial systems. The PCU enjoys operational autonomy. Its mandate will be expanded to the SDP and this amendment will require a new ministerial decree.

70. The PCU is composed of a programme coordinator, a senior M&E officer, an assistant M&E officer, a rural finance and marketing officer, a community development officer, a financial manager, an accountant and an accountant clerk, 2 executive and technical secretaries, an administrative officer. Given the workload during the SDP calibration phase which corresponds to the phasing out of WSRMP, and the specialized nature of SDP, two staff will be added to the PCU during the period 2012-2014: (i) a seed specialist; (ii) an accountant. Their terms of reference are in annex 5 of the main report. As of 2014, the PCU will be right-sized and will be composed of the programme coordinator, the senior M&E officer, the community development officer, the financial manager, one accountant, the administrative officer and one secretary.

71. The **State Coordination Units** in North and South Kordofan of WSRMP were established in 2006 to carry out the following: (i) coordinate WSRMP activities undertaken by the implementing agencies within their respective states; (ii) consolidate the AWPB of the implementing agencies and service providers within the states; (iii) liaise with the state line ministries; (iv) manage contracts concluded with different service providers; (v) identify technical assistance requirements and facilitate its delivery on behalf of the PCU; (vi) carry out periodic M&E activities; (vii) safeguard the project

funds and assets and ensure financial system transparency and integrity. The SCU mandate will be expanded to cover SDP.

72. The SCUs are currently composed of the following key staff: state coordinator; M&E officer; secretary or administrative officer; accountant. The two SCUs are expected to bear the brunt of the SDP implementation during the calibration phase and hence an allocation was provided in the SDP budget to top up their salary by 20% as compensation for the additional workload. As of 2014, the SCUs will be terminated and the functions for the state coordination of the SDP will be streamlined within the state ministry of agriculture in North and South Kordofan. The State ministries of Agriculture in North and South Kordofan will recruit competitively among the staff of the extension/ planning/ rainfed agriculture/ land use/ finance and administration departments, qualified staff to occupy the posts of state coordinator, M&E officer and accountant for the SDP during the period 2015-2017. Their terms of reference are in annex 5.

73. The **National Seed Administration (NSA)**. The NSA will benefit from the SDP to develop its own capacity in the inspection and certification of seeds and it will organize the formulation of a plant variety protection legislation as well as a plant breeding strategy (terms of reference of these studies are in annex 5). In order to increase its efficiency, it will outpost 4 of its staff to North and South Kordofan: in each state, a seed analyst and an inspector will be out-posted. The seed analyst will provide technical backstopping to the operators of the seed lab of the state ministry of agriculture, and the inspector will carry out the inspection of contracted plots for seed multiplication as well as train the extension personnel and the seed growers. Each year and as per AWPB, NSA will validate whether the planned quantities of foundation and registered seeds for the production of certified seeds in the given year, are achievable. The NSA and PCU will sign a letter of agreement detailing their respective roles and responsibilities in the implementation of the SDP as well as the in-kind support to be provided by the project, in form of goods, works and services. The letter of agreement will also explain the disbursement modalities for the seed inspection account whereby the inspection fees paid by the private sector will be remitted to this account and disbursements from this account will cover the running expenses of the inspection team (vehicle operation costs, office running costs and field allowances).

74. The **Agriculture Research Corporation (ARC)**. The ARC will carry out the following in its two research stations: (i) production of registered seeds based on demand projections for sale of certified seeds; (ii) participatory breeding of improved varieties from the traditional landraces favored by farmers; (iii) training of the extension teams with establishment of demonstration plots on use of certified seeds, soil and water conservation techniques and micro-fertilization. The PCU and ARC will sign a letter of agreement detailing their respective roles and responsibilities in the implementation of the SDP and the type of in-kind support that ARC will receive from the project.

75. The **State Ministries of Agriculture in North and South Kordofan**. The two state ministries lead the state coordination unit of WSRMP and SDP. They carry out the following: (i) facilitate project implementation at state level through the deployment of staff for this purpose and through coordination/management and technical backstopping of the extension teams; (ii) provide offices and residential facilities to the NSA out posted staff; (iii) evaluate project performance and alignment with state objectives for agriculture development; (iv) ensure complementarity between various agriculture development projects operating at state level; (v) collect regular information about crops and seed production and supply, and in particular updating the Seed Market Database (see annex 6). The State Ministers of Agriculture in North and South Kordofan respectively chair the State Coordination Committee of the SDP in their states.

76. The **extension teams**. As mentioned, there are 6 extension teams in the SDP project area. They will be fully mobilized during the project. The existing teams will be organized to create a seed multiplication sub-team. The seed multiplication sub-team will be composed of: (i) team leader cumulating M&E and general agriculture responsibilities; (ii) seed production specialist; (iii) agricultural technician; and (iv) women extension agent. This sub-team will be responsible for the selection and formation of the SGG in collaboration with CDCs and seed companies, ensuring that the quota for women participation is adhered to, for the training and technical backstopping of the SGG, for the implementation of farmer field schools covering all topics related to seed multiplication, and for monitoring the SGG. The team leaders will prepare a consolidated monthly report. Over the project duration and considering the number of SGGs, it is estimated that only two sub-teams will be required, one based in Abbassiya locality and operational in 2012 and the other based in Rahad locality operational in 2015, in line with the phasing of the SGGs. The recurrent costs of the sub-team

will be covered by the seed company, as per terms of contract between the seed company and the agriculture department at locality level/ extension department at state level<sup>35</sup>.

77. The regular multi-disciplinary extension team, 6 in total, will continue working with the CDCs formed by SKRDP, WSRMP and the closed North Kordofan Rural Development project (NKRDP), with the aim to build effective demand for certified seeds among 105 existing farming groups in the calibration phase; this number would be expanded to 200 groups in the intensification/ scaling up phase. The multi-disciplinary extension teams are composed of 5-7 members. Their role is : (i) to sensitize and train the farming groups with the aim to increase adoption of certified seeds and improved technical practices (soil and water conservation and micro-fertilization), as well as periodic renewal of certified seeds; (ii) ensure that women are actively participating in demonstration and training activities; (iii) facilitate linkages between the farming groups and banks/ MFI, insurance companies and machinery operators; (iv) monitor participation of poor, women and youth in the project and monitor adoption rates and change in productivity and land cultivated. These extension teams will submit an AWPB that specifies activities carried out for WSRMP and for SDP. During the calibration phase, the recurrent costs for extending extension services to GPGs will be covered by the project, as per the terms of a service contract between the PCU and the agriculture department at locality level/ extension department at state level. However in the intensification/ scaling up phase, a cost recovery mechanism will be negotiated and agreed with the CDCs.

78. The final design mission discussed with the SMoA in both North and South Kordofan the existence of sufficient extension staff to carry out the activities listed under component 2 and 3 of SDP. SMoA confirmed the availability of trained staff as per information listed in annex 5.

79. The **Private Seed Company (PSC)**. The PSC will participate in the project with the aim of developing its retail seed business and extend seed supply to the smallholders, starting with the two states of North and South Kordofan. The PSC will be responsible for: (i) contracting SGG; (ii) providing them with agreed inputs and technical advice as per the approved business plan; (iii) developing a marketing network for certified seeds in the target localities and state as per approved business plan; (iv) complying with seed inspection, seed testing and certification requirements and timely payment of inspection fees; (v) assessing the profitability of the seed production model based on contracting SGG; (vi) reporting on the progress in implementation against approved business plan. The project will provide a one-off grant to the PSC to cover the costs of purchase of the production of certified seeds from the SGG at harvest time. This grant would cover up to 8% of the total expenditures of the PSC over a 6 year period (see para 111 to 113 below).

80. The roles of the remaining implementation partners such as the Agriculture Bank of Sudan, the Sheikan Insurance Company and the Central Coordination Unit for the IFAD co-financed projects are all described in annex 5.

### C. Planning, Monitoring And Evaluation and Knowledge Generation

81. The M&E specialist of WSRMP based in El Obeid, supported by Technical Assistance, will be responsible for expanding the existing WSRMP Planning, Monitoring & Evaluation (PME) System for the Project during the first six months of Project implementation<sup>36</sup>. For Project monitoring and evaluation the existing structure within the WSRMP will be expanded to incorporate indicators that directly respond to the production and delivery of certified seed.

82. The expansion of the WSRMP PM&E system to incorporate the SDP will include the following activities: (i) reviewing and updating, if necessary, the Logical Framework of SDP, following the start-up workshop with participation from representatives of all stakeholder groups, including farming communities; (ii) developing an operational M&E Plan integrating in it, the indicators at output, outcome and impact level defined in the Logical Framework (taking into account IFAD's Results and

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<sup>35</sup> In North Kordofan, extension services are fully decentralized. Administratively, the extension team is managed by the agriculture department at locality level. The State Ministry of agriculture has a technical backstopping role vis-à-vis the extension teams. The situation is different in South Kordofan where the management of the extension services is not decentralized. The State Ministry of Agriculture in South Kordofan is responsible administratively and technically for the management of the extension teams.

<sup>36</sup> The PME System will be described in the Project Implementation Manual (PIM) which is to be finalized during the first Semester of PY1.

Impact Management System - RIMS); (iii) preparing the first Annual Work Plan and Budget (AWPB) and (iv) developing an M&E system for the National Seed Administration (NSA). As much as feasible, the Project will build on the PME structures at Federal and State level that WSRMP established.

83. The M&E System will be part of an integrated PME/Information, Knowledge Management and Communication (KMC) System to provide: (a) timely and accurate information on implementation progress and constant feedback for decision making and addressing potential plan deviations and problems during implementation; and (b) the basis for assessing the achievement of Project results. The logical framework and M&E Plan may be revised at a later stage if required, no later than at the mid-term review of the Project. The logical framework approach will be applied to planning Project interventions at all levels, actively involving the beneficiaries in the formulation of objectives and indicators.

84. **Project Planning.** While the first AWPB will be prepared within three months after Project start-up at State level, subsequent AWPBs will be prepared at Locality level during the third quarter of each Project year (PY) for the following year. This will be based on participatory review and planning workshops with beneficiaries, implementing partners and service providers and consolidated at State level by the SCU. The AWPB will define outputs and activities with their related indicators and targets, as well as input requirements and implementation responsibilities. The State Coordination Committee (SCC) will review and approve AWPBs prior to sending it to the PCU. The PCU will consolidate the State AWPBs and present the overall Project AWPB to the Programme Coordination Committee (PCC) for approval at least six weeks before the start of the next PY. Once approved by the PCC, the AWPB will be sent to IFAD for no objection. The template for the AWPB 2012 is provided in annex 6.

85. **Surveys and Reviews.** As specified in the M&E Plan, baseline surveys will be undertaken during the first semester of PY1, to assess the situation and establish benchmarks against which the outcomes and impact on the beneficiaries would be assessed. Annual implementation reviews will be carried out, involving implementers at all levels and key stakeholders to analyze and review lessons and challenges. The reviews will be linked with the AWPB planning processes to ensure that lessons learned lead to improved implementation. In addition to regular implementation support from IFAD, a mid-term review (MTR) will be undertaken during the third quarter of PY3 to assess Project achievements against targets, interim Project impact, efficiency and effectiveness of Project management, sustainability arrangements, and in general pertinence and validity of Project design. On the basis of the MTR findings, the Project approach, activities and/or implementation arrangements for the remaining Project life may be adjusted. At the end of the Project, the PCU will prepare an internal Project Completion Report (PCR), which will include an assessment of the achieved versus planned impacts, to be submitted to Government and IFAD within three months after Project completion. The internal PCR will provide the basis for IFAD's PCR.

86. **Reporting.** Each implementing partner and service provider will be required to submit to the PCU regular progress reports which will be compiled by the M&E officer of the PCU on a quarterly basis, and fed into the Project overall semi-annual and annual progress reports. The semi-annual and the annual progress reports will be presented to the Programme Coordination Committee (PCC) and State Coordination Committee (SCC) meetings to guide adjustments to the implementation of the AWPB of the year and preparation for the next year's AWPB. The PCU will conduct periodic field checks and verifications on a random basis through independent consultants or other service providers. Annual reports would reflect cumulative progress, compliance with legal requirements and reconciliation of the expenditures. All programme reports will reflect gender-disaggregated data.

87. **Knowledge Management and Communication.** The success of the interaction among the diverse set of Project stakeholders depends largely on the quantity, quality and timeliness of information flowing among them. This calls for developing suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The Project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, TV and radio Projects), using the central knowledge management and communication platform established by the ongoing IFAD Projects under the leadership of the Central Coordination Unit for the IFAD co-financed Projects (CCU). This knowledge sharing process will be supported by a well-focused series of workshops and learning events. In addition, the Project will use the Sudan Country Programme Management Team (CPMT) as a mechanism for learning and exchanging knowledge among the IFAD-supported Projects and between them and other in-country Projects. Furthermore, Regional Knowledge Networking will be supported to build and share approaches, tools, methodologies, technologies and best practices.

## D. Financial Management, Procurement and Governance

88. A finance and administration unit exists in the PCU of WSRMP. It is headed by the financial manager, and composed of an accountant and an accountant clerk. It is located in El Obeid in North Kordofan. At the level of SCU, the finance and administrative team is composed of an accountant and an administrative officer. The additional accountant responsible for the SDP accounts will be competitively recruited and will be based in the PCU in El Obeid. The recruitment process will entail appropriate interviewing techniques, practical tests commensurate with the level of skills required, and cross-reference checks will be conducted.

89. The **Country Programme Management Team** (CPMT) will carry out quarterly fiduciary reviews and assist the PCU finance and administration unit to update the operational manuals for financial management and procurement to reflect any unique details, which may apply to the SDP. The financial management capabilities of the PCU are presented in annex 7.

90. SDP will comply with the IFAD procurement guidelines. The PCU will apply the following procurement methods and corresponding thresholds as presented in table 4. These methods, ceilings and thresholds will be reviewed based on progress in Project implementation and soundness of the Project financial and procurement systems.

**Table 4: Procurement Methods and Thresholds**

Procurement methods and thresholds			
	Procurement method	Ceiling	Prior review threshold
Works	National Competitive Bidding	> 50 0000 EURO	> 50 000 EURO
	National Shopping	> 5 000 EURO and < 50 000 EURO	
Goods	International Competitive Bidding	> 100 000 EURO	> 50 000 EURO
	National Competitive Bidding	20 000 to 100 000 EURO	
	National Shopping	up to 20 000 EURO	
Services	Sole Source Selection Quality and Cost Based Selection Consultant Qualification	Depending on nature of services	All contracts

91. The Project financial management will follow procedures adopted for the ongoing IFAD co-financed Projects. The Project will have the following accounts:

- The Government will authorize the PCU of WSRMP to open a designated account in EURO in the Omdorman National Bank, El Obeid Branch. The designated account will receive an initial deposit of EURO 1.04 million. The account will be replenished on a regular basis from the IFAD grant account based on submission of duly completed withdrawal applications. The Project coordinator and financial controller will jointly operate the designated account.
- The Government will also authorize the PCU to open a counterpart account in local currency. The Government counterpart account will receive the Government share of the annual work plan and budget. The Government will transfer quarterly payments to the Project based on the quarterly forecasts of the AWPB and the Project physical progress. The Project coordinator and financial controller will jointly operate the Government counterpart funds account.
- The Government will authorize the PCU to open a project account in local currency. It will be opened in the Omdorman National Bank, El Obeid Branch. It will finance eligible expenditures for IFAD financing. Expenditures will be reimbursed from the designated account for the IFAD portion and the Government account for the taxes and duties. The Project coordinator and financial controller will jointly operate the Project account.
- Current accounts in local currency. Each implementing agency will open a current account that will be used to finance the investment and recurrent costs under





Project implementation. Supervision will allow for the following activities should they prove necessary: (i) policy dialogue; (ii) fine-tuning of implementation procedures; (iii) revising agreements; and (iv) revising Project design to respond to unforeseen problems and issues. The supervision exercise will also involve three processes: loan administration; Project actual supervision, and implementation support.

96. The loan administration support will ensure Project compliance with fiduciary requirements mainly (i) legal covenants and conditions; (ii) financial management; and (iii) procurement and contracting; The actual Project supervision will deal mainly with the continuous assessment of the performance of Project implementation, focusing on: (i) overall performance of Project implementation and progress towards the achievement of results; (ii) timely delivery of inputs in terms of location, quality and quantity; (iii) implementation of activities and achievements of outputs and outcomes; (iv) legal requirements; (v) coordination, management and physical implementation, monitoring and evaluation; (vi) targeting and gender mainstreaming; and (vii) impact on the environment. During the project first year of implementation, the supervision will focus on the formulation and ratification of the plant variety protection legislation as well as on monitoring the implementation of the public private partnership between the private seed company, the seed producer groups and the extension teams.

97. The implementation support features of direct supervision will focus on four main activities:

- Providing direct support to the Project management in terms of continuous guidance to maintain the Project on the right track for the achievement of the Project objectives;
- Adapting Project interventions to changes which may be dictated by exogenous factors of natural, political or financial nature; and
- Resolving problems of a technical nature pertaining to Project operations; and
- Providing knowledge-based support about best practices and success stories, from other interventions in Sudan, in the region or elsewhere.

98. Implementation support will address broader issues related to the entire strategic and policy aspects of the Project portfolio in the country, focusing on the development of appropriate systems and institutional frameworks for poverty alleviation, building pro-poor partnerships and mobilizing financial resources for the rural poor. In this process, knowledge generated and lessons learned will be documented and effectively utilized to restructure and improve the ongoing Project portfolio and the design of future Projects. A holistic approach to implementation support is likely to promote innovation and creativity.

## **F. Risk Identification and Mitigation**

99. The main risks to the Project are the following: (i) the implementation of the first critical steps of the Seed Act in order to make it operational and enforced. These involve the establishment of the Seed Council together with its budgetary allocation as well as ensuring that the NSA operates in an autonomous manner; (ii) shy participation of the private sector due to modest level of profitability, particularly in early years of the project; (iii) adoption of certified seeds by GPGs may not catch up with the supply resulting in low adoption, thus threatening the viability of the project; (iv) inability of seed growers to sell their seeds and or inability to access necessary inputs may discourage them from participating in the project; (v) climatic change as manifested in recurrent droughts and frequent occurrence of hot spells may discourage risk averse farmers from adopting certified seeds; (vi) civil unrest and or flare up of conflict which may result in slow down or interruption of project implementation especially in the State of South Kordofan. A summary of the risk matrix is provided in Table 5.

**Table 5: Risk Matrix**

Risks	Risk Mitigation Measure
<b>Macro Level:</b> <ul style="list-style-type: none"> <li>- The institutionalization of the Seed Council together with its budgetary allocation may not materialize</li> <li>- Ensuring NSA autonomy in seed certification and inspection;</li> <li>- Inability of the GoS to stop distribution of free seeds</li> </ul>	<ul style="list-style-type: none"> <li>- The Seed Act of 2010 was ratified, the by-laws are under preparation and the seed council is being established.</li> <li>- The investment and recurrent expenditures provided under the project will significantly improve the NSA capacity to discharge its responsibilities effectively and efficiently. Assurances were obtained from the MoFNE to establish an account in which recovered funds from seed certification services will be deposited to cover recurrent costs of NSA.</li> <li>- Ministry of Finance and National Economy is unlikely to approve budgetary allocation to pay for free distribution of certified seeds. In addition, seed multiplication strategy of the project has taken this possibility into consideration by allowing supply of certified seeds to grow slowly to avoid excess supply and collapse of prices.</li> </ul>
<b>Mezzo Level:</b> <ul style="list-style-type: none"> <li>- Dropout of contracted private companies due to lack of interest or poor performance.</li> <li>- Default on bank loans by SGGs and GPGs.</li> <li>- Shy participation of the private sector due to modest level of profitability, particularly in early years of the project.</li> </ul>	<ul style="list-style-type: none"> <li>- A detailed study of the existing seed companies will be carried out followed by the establishment of a short list of prequalified companies taking into account their technical know-how, experience and availability of processing and storage facilities in the project area. One company will be recruited in the calibration phase to test the model. Additional companies would be invited once the viability of the business model is tested.</li> <li>- The crop/credit insurance linkage together with effective group monitoring supervision by extension teams for ensuring loan sizes is based on absorption capacity, proper loan utilization and timely loan repayment.</li> <li>- To render participation of private sector more attractive, a private sector support facility is established as grant to finance one-time expenditures to cover the cost of purchase of the certified seeds produced by SGGs at harvest time, to improve infrastructure facilities at the field level such as processing and packaging of certified seeds, kick-starting the network of traders and seed distribution agents.</li> </ul>
<b>Micro Level</b> <ul style="list-style-type: none"> <li>- Inability of seed growers to sell their seeds and or inability to access necessary inputs may discourage them from participating in the project.</li> <li>- Climate change as manifested in recurrent droughts and frequent occurrence of hot spells may discourage risk averse farmers (grain producers and seed growers) from adopting certified seeds and access credit to pay for necessary inputs</li> </ul>	<ul style="list-style-type: none"> <li>- In order to increase effective demand for certified seeds, by the smallholders, the project is undertaking two important interventions: the first is to carry out a series of campaigns to promote certified seeds, such as field demonstrations, intensive extension support to grain growers, in addition to establishment of a network of village based licensed certified seeds agents.</li> <li>- Seed growers and grain producers will be provided with crop insurance on a cost sharing principle. It will serve to smoothen shocks to farm income and facilitate access to credit.</li> </ul>
<ul style="list-style-type: none"> <li>- Flare-up of conflict which may result in slow down or interruption of project implementation especially in the State of South Kordofan.</li> </ul>	<ul style="list-style-type: none"> <li>- Armed conflict is limited in the project area to 4 out of 10 localities in South Kordofan. If conflict occurs, the activities will be downsized and confined to secure areas.</li> </ul>

## IV. PROJECT COSTS, FINANCING AND BENEFITS

### A. Project Costs

100. **Total Project Costs.** The total investment and incremental recurrent Project costs, including physical and price contingencies, are estimated at USD 18.3 million (SDP 85.5 million). The foreign exchange component is estimated at USD 2.62 million. Duties and taxes make up approximately USD 1.96 million. The total baseline costs are USD 17.6 million, while price and physical contingencies account for USD 0.60 million. Project costs are summarized in Table 6. The summary and detailed cost tables are presented in annex 9.

101. The major investments lie in the Seed Market Development Support which represents 50% (USD 8.9 million) of overall Project base costs. Project Coordination and Management constitutes 20% (USD 3.6 million), Improvement of the Seed Production System 18% (USD 3.2 million) and Institutional and Regulatory Environment Strengthening and Development 11% (USD 1.9 million).

**Table 6: Project Cost Summary by Component**

Components Project Cost Summary	(SDG Million)					(US\$ Million)				
	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs	Local	Foreign	Total	% Foreign Exchange	% Total Base Costs
1. Institutional and Regulatory Environment Strengthening and Development	3.7	2.1	5.7	36	11	1.2	0.7	1.9	36	11
2. Improvement of the Seed Production System	7.9	1.7	9.7	18	18	2.6	0.6	3.2	18	18
3. Seed Market Development Support	24.3	2.3	26.6	9	50	8.1	0.8	8.9	9	50
4. Project Coordination and Management	9.4	1.4	10.8	13	20	3.1	0.5	3.6	13	20
<b>Total BASELINE COSTS</b>	45.3	7.5	52.8	14	100	15.1	2.5	17.6	14	100
Physical Contingencies	0.0	0.0	0.0	20	-	0.0	0.0	0.0	20	-
Price Contingencies	27.5	5.1	32.6	16	62	0.5	0.1	0.6	16	4
<b>Total PROJECT COSTS</b>	72.8	12.7	85.5	15	162	15.6	2.6	18.3	14	104

### B. Project Financing

102. The International Fund for Agricultural Development (IFAD), the Government of the Republic of The Sudan (GoS), Seed Growers, Grain Producers and Private Sector Company (ies) would finance the Project. IFAD would finance USD 10.07 million (55.2%) as a Grant. The Seed Growers and Grain Producers would contribute USD 2.47 million (13.5%) through insuring their production and by contributing towards the upkeep of the extension system. The Seed Growers are fully financing their seed enterprises through seasonal input supply credit supplied through the Private Sector Support Facility which will be availed to the Private Sector Company (ies). The Grain Producers would finance their production through micro-credit which is available in the two States. IFAD would assist Absumi through a grant of USD 280 000 to expand their network to localities within the project area in which the Grain Producers are located but lack access to micro-credit. The Private Sector Company (ies) would finance USD 1.58 million (8.7%) which includes the production of registered seed, providing a 40% contribution to the Private Sector Support Facility and financing the extension costs for the seed growers. GoS would finance USD 4.14 million (22.7%) as crop insurance sharing the costs with the Seed Growers and Grain Producers, duties and taxes and the incremental recurrent costs associated with vehicles purchased for the extension, National Seed Administration (NSA) and Agricultural Research Corporation (ARC) and any associated allowances and running costs. The Government is already financing the salaries in its annual budget allocation. Table 7 provides a summary by Project component of the proposed financing arrangement. Table 8 provides the expenditure accounts of the project.

**Table 7: Components by Financier**

Components by Financiers (US\$ Million)	The Government of The Sudan		IFAD		Seed Growers & Grain Producers		Private Sector Company		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Institutional and Regulatory Environment Strengthening and Development	0.66	33.4	1.32	66.6	-	-	-	-	1.98	10.9
2. Improvement of the Seed Production System	0.92	27.7	1.34	40.4	0.04	1.2	1.01	30.7	3.31	18.1
3. Seed Market Development Support	2.10	23.0	4.02	44.1	2.43	26.6	0.57	6.2	9.11	49.9
4. Project Coordination and Management	0.46	12.0	3.39	88.0	-	-	-	-	3.85	21.1
<b>Total PROJECT COSTS</b>	<b>4.14</b>	<b>22.7</b>	<b>10.07</b>	<b>55.2</b>	<b>2.47</b>	<b>13.5</b>	<b>1.58</b>	<b>8.7</b>	<b>18.26</b>	<b>100.0</b>

**Table 8: Expenditure Accounts by Financier**

Expenditure Accounts by Financiers (US\$ Million)													
	The Government of The Sudan		IFAD		Seed Growers & Grain Producers		Private Sector Company		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
<b>I. Investment Costs</b>													
A. Civil Works	0.04	15.4	0.22	84.6	-	-	-	-	0.26	1.4	0.03	0.19	0.04
B. Technical Assistance (International)	-	-	0.38	100.0	-	-	-	-	0.38	2.1	0.38	-	-
C. Technical Assistance (National)	-	-	2.05	100.0	-	-	-	-	2.05	11.2	-	2.05	-
D. Contracted Services	-	-	0.32	100.0	-	-	-	-	0.32	1.7	-	0.32	-
E. Growers/Producer Groups	-	-	-	-	1.52	100.0	-	-	1.52	8.3	-	1.52	-
F. Private Sector Contribution	-	-	-	-	-	-	1.33	100.0	1.33	7.3	-	1.33	-
G. Fund	-	-	0.50	100.0	-	-	-	-	0.50	2.8	-	0.50	-
H. Government Contribution	1.57	100.0	-	-	-	-	-	-	1.57	8.6	-	1.57	-
I. Training	-	-	3.29	100.0	-	-	-	-	3.29	18.0	0.23	3.06	-
J. Equipment	0.24	17.6	1.11	82.4	-	-	-	-	1.35	7.4	0.71	0.40	0.24
<b>K. Vehicles</b>													
Hardtop	1.31	55.6	1.05	44.4	-	-	-	-	2.36	12.9	0.83	0.21	1.31
Double Cab	0.08	55.6	0.07	44.4	-	-	-	-	0.15	0.8	0.05	0.01	0.08
Subtotal	1.40	55.6	1.12	44.4	-	-	-	-	2.51	13.8	0.89	0.23	1.40
Total Investment Costs	3.25	21.6	8.98	59.6	1.52	10.1	1.33	8.8	15.08	82.6	2.24	11.17	1.68
<b>II. Recurrent Costs</b>													
A. Salaries and Allowances	0.08	6.5	0.39	31.3	0.78	62.1	-	-	1.25	6.9	-	1.25	-
B. Operations and Maintenance	0.07	61.7	-	-	-	-	0.04	38.3	0.11	0.6	0.02	0.07	0.02
C. Vehicle O & M	0.63	56.7	0.11	9.5	0.17	15.1	0.21	18.7	1.11	6.1	0.22	0.72	0.17
D. Direct Project Recurrent Costs	0.10	15.0	0.59	85.0	-	-	-	-	0.69	3.8	0.14	0.45	0.10
Total Recurrent Costs	0.89	27.9	1.09	34.3	0.95	29.8	0.25	7.9	3.17	17.4	0.38	2.50	0.29
Total PROJECT COSTS	4.14	22.7	10.07	55.2	2.47	13.5	1.58	8.7	18.26	100.0	2.62	13.67	1.96

## C. Economic justification

103. **Benefits and beneficiaries.** The project has 3 types of beneficiaries: (i) 1 280 seed growers organized in 32 SGGs; (ii) 108 000 smallholder farmers using certified seeds and improved soil and water conservation techniques on 1 million feddans; 30% of these smallholder farmers would be women; (iii) one to two seed companies contributing to the establishment of seed supply and marketing in the project area and benefiting from developing the retail market for seeds.. This section will examine the financial and economic benefits of the project as well as the specific returns accruing to each of the beneficiary groups.

104. **Production of Certified Seed.** The table 9 below presents the milestone and target production and revenues generated from seed production. The results under-score the profitability of the seed enterprise. The labor costs involved in seed production are high and represent 26% of the total costs for the groundnut seed enterprise and can reach as high as 74% of total costs as is the case for the production of certified seeds of sesame. This high labor cost can be met by the smallholder farmers who rely on their own family labor.

**Table 9: Milestone and target indicators for seed production and returns per household**

Crops grown	By 2014			By 2017		
	Area (fed)	No. beneficiaries	Cash return per household in SDG	Area (fed)	No. beneficiaries	Cash return per household in SDG
Sorghum	400	80	1477	1200	240	2160
Groundnut	400	80	2500	2200	440	5000
Sesame	400	80	601	1200	240	960
Cowpea	400	80	2500	1800	360	3000
Average			1700			2800

105. The cash return per household for sesame is the lowest. When comparing with the other crops, this seems to be largely due to the fact that the varieties of sesame that are being recommended do not generate crop residue or by-product that can be used as fodder or sold to complement revenues gained from the sale of sesame grain.

106. **Grain production using certified seeds.** A total number of 108 000 smallholder farmers including 30 000 women smallholder farmers will adopt certified seeds to produce grains of staple and cash crops. The average cultivated area varies based on soil type and rainfall. The modeling for the crop and farm budget has relied on differentiating the cultivated areas by soil type. Furthermore, the farm modeling involves the typical crop mix of food and cash crops for the average household, thus the analysis includes millet and watermelon which are food crops for which the households will typically utilize traditional or improved seeds. On qoz soil, average cultivated area is 5 feddans; this drops to 3 feddans on gardud soils; and increases to 11 feddans on clay soils. The table 10 below shows the differences in the financial viability of adoption of new varieties and technical practices.

**Table 10: Summary of internal rate of return, net present value and revenue in SDG**

Soil Type and Cropping Pattern	NORTH KORDOFAN					SOUTH KORDOFAN			
	Area Cropped in Feddans	Revenue		FIRR	NPV	Revenue		FIRR	NPV
		Without Project	With Project			Without Project	With Project		
<b>Qoz Soil</b>									
Groundnut	1.5								
Millet	2.5								
Cowpea	0.5								
Sesame	0.375								
W. Melon	0.125								
<b>Total</b>	<b>5</b>	<b>231</b>	<b>953</b>	<b>74%</b>	<b>1 216</b>	<b>751</b>	<b>1 952</b>		<b>5 649</b>
<b>Gardud Soil</b>									
Arfa Gadmak Sorghum	0.9								
Yarwasha Sorghum	0.9								
Sesame	1.2								
<b>Total</b>	<b>3</b>	<b>- 225</b>	<b>- 12</b>		<b>- 837</b>	<b>- 157</b>	<b>98</b>	<b>9%</b>	<b>- 149</b>
<b>Clay Soil</b>									
Arfa Gadmak Sorghum	6								
Sesame	4								
<b>Total</b>	<b>10</b>	<b>-1 046</b>	<b>334</b>		<b>-2 201</b>	<b>- 934</b>	<b>679</b>	<b>39%</b>	<b>779</b>
<b>Irrigated Clay Soil</b>									
Tabard Supplementary Irrigation	6								
Tabard Spate Irrigation	5								
<b>Total</b>	<b>11</b>	<b>- 215</b>	<b>1 754</b>	<b>70%</b>	<b>3 107</b>	<b>Not Applicable</b>			

107. The table above suggests that further work will be required to select appropriate varieties, crop mix and agricultural practices for the gardud soils. This finding will help focus the ARC participatory breeding research on suitable varieties and crop mix for the gardud soil in both North and South Kordofan and on clay soils in North Kordofan.

108. **Private Sector Support Facility.** The mission carried out an assessment of the profitability of the proposed model for seed multiplication to the seed companies. It is estimated that the annual net profit from the seed business generated by the project will be approximately SDG 130 000 in year 2012 and will increase to around SDG 1.1 million by year 2017 (Table 11). The pace of growth will be relatively slow in the first three years during the calibration phase with the net profit margins increasing from SDG 130 000 to SDG 245 000 in the three years from 2012 to 2014. Thereafter, the scaling-up of the project will rapidly multiply the profit margins by almost three times from approximately SDG 0.3 million to about SDG 1.1 million in the three years between 2015 and 2017. However, throughout the course of the project revenue levels are expected to remain above the expense levels thus resulting in 8% net returns on the direct costs incurred by the partner company during the project period.

109. It is worth mentioning here that given the challenge of creating effective demand, and the institutional risks involved in enacting and enforcing an appropriate regulatory framework, the final design mission adopted conservative estimates for the demand of certified seeds. This analysis underscores the need for an enabling institutional environment and the importance of supporting the demand side of the equation in order to develop the seed industry and attract the private sector to retail seeds to the smallholders.

**Table 11: Projected Profit and Loss Statement from Seeds Business Generated by the Project (in SDG)**

INCOME	Years					
	2012	2013	2014	2015	2016	2017
Selling price of certified seeds	1,742,543	1,742,543	2,373,514	4,719,814	10,676,186	12,664,714
<b>Total Revenue</b>	<b>1,742,543</b>	<b>1,742,543</b>	<b>2,373,514</b>	<b>4,719,814</b>	<b>10,676,186</b>	<b>12,664,714</b>
<b>EXPENSES</b>						
<b>Farm gate Purchase Cost</b>						
<i>Subtotal: Farm gate Purchase Cost</i>	1,086,501	1,086,501	1,407,557	3,006,761	6,573,831	7,763,199
<b>Transportation costs</b>						
Cost of loading and unloading	8,744	8,744	12,465	24,572	55,350	66,237
Cost of transportation	21,861	21,861	31,163	61,430	138,375	165,591
<i>Subtotal: Handling and Transportation</i>	30,605	30,605	43,629	86,002	193,726	231,828
<b>Processing costs</b>						
Sieving and Grading	17,940	17,940	24,840	49,850	112,582	134,469
Packaging and labeling	9,837	9,837	14,024	27,644	62,269	74,516
Fumigation	14,258	14,258	17,881	37,921	85,879	102,401
Laboratory test	14,166	14,166	20,194	39,807	89,667	107,303
<i>Subtotal: Processing and Testing</i>	56,201	56,201	76,939	155,222	350,397	418,690
<b>Adjustment for Storage Loss</b>						
<i>Subtotal: Cost of storage loss</i>	187,341	187,341	266,657	515,597	1,166,683	1,380,857
<b>Adjustment for Overhead Costs</b>						
<i>Subtotal: Overhead cost</i>	234,661	234,661	305,625	649,597	1,423,591	1,682,743
<b>Total Expenses</b>	<b>1,595,310</b>	<b>1,595,310</b>	<b>2,100,407</b>	<b>4,413,179</b>	<b>9,708,227</b>	<b>11,477,316</b>
<b>Gross Profit Margin</b>	<b>147,233</b>	<b>147,233</b>	<b>273,107</b>	<b>306,636</b>	<b>967,958</b>	<b>1,187,398</b>
<b>Other Costs</b>						
Commission to agents/traders (10%)	14,723	14,723	27,311	30,664	96,796	118,740
<b>Net Profit Margin from Project</b>	<b>132,509</b>	<b>132,509</b>	<b>245,796</b>	<b>275,972</b>	<b>871,163</b>	<b>1,068,658</b>

110. As per table 11 above, it is estimated that 67% of the annual costs incurred by the company will be on account of farm gate purchase of seeds from the seed grower groups. The remaining 37% of the costs will be spent on transportation, processing, storage loss, other overheads and trader commissions.

111. **Grant to the PSC.** Given the current context of the seeds marketing environment and the start-up risks associated with the proposed business model, the partner PSC will find it relatively challenging and time consuming to mobilize the funds for the farm gate purchase of seeds from the grain producers at harvest time during the calibration phase. The seasonal nature of business, gaps and delay in raising funds can adversely affect project implementation. In order to counter this risk the project will extend a grant to the partner private sector company (PSC) during the calibration phase with the objective of integrating the seeds grower groups in the value chain. This one off grant will assist to : (i) establish the linkage between the PSC and the seed grower groups; (ii) support timely start-up and implementation of the business model; and (iii) demonstrate the viability of the model leading to greater levels of interest and participation by funding partners, traders, technical assistance providers and other development stakeholders in subsequent years.

112. **Assumptions for calculating the grant volume.** The grant will be extended under the following assumptions: (i) it will cover 50% of the cost of the farm gate purchase of seeds by the PSC during the calibration phase. The PSC will mobilize the remaining 50% of requirement through bank loans or investments. In case bank loan is mobilized, the grant will also meet the interest payable on the profit margin; (ii) the cumulative profit margin generated in the first two years will be reinvested in the business by PSC in the third year; (iii) the PSC will strive to raise funds through private investments and will aim to raise approximately SDG 6 million by the 6th year of business.

113. **Grant contribution to PSC.** During the calibration stage (Year 1 – 3) the PSC own investments will be supplemented by the project grant to establish a sound and viable business model. Any gap in financing will be raised by PSC through bank loans. Based on the success of the calibration phase, the PSC will enhance its own investments and will also mobilize other private investment for funding the growth of the business during the scaling up phase from year 4-6. The

total funding needed over 6 years is approximately US\$ 4.5 million of which project grants will contribute US\$ 0.38 million (8%), bank loans will account for US\$ 0.36 million (8%), PSC's own investments will contribute US\$ 1.6 million (35%) and other the remaining US\$ 2.22 million (49%) will be met through mobilization of private investments (Table 12). These estimates will be further refined through business plan formulation of the PSC during the implementation stage.

**Table 12: Breakdown of Financing Contribution for the PSC**

*All figures in SDG*

Financing Breakdown					
Period	Project Grant	PSC own investment	Bank loans	Other Investments	Total
Year 1	580,988	523,532	546,501	-	1,651,021
Year 2	40,988	-	-	-	40,988
Year 3	415,190	461,647	-	-	876,838
<i>Sub total</i>	1,037,166	985,179	546,501	-	2,568,846
Year 4	-	758,301	349,204	1,250,000	2,357,505
Year 5	-	1,840,521	67,071	3,500,000	5,407,592
Year 6	-	643,529	-	1,250,000	1,893,529
<i>Sub total</i>	-	3,242,352	416,275	6,000,000	9,658,627
Total (SDG)	1,037,166	4,227,531	962,776	6,000,000	12,227,473
Total (USD)	384,135	1,565,752	356,584	2,222,222	4,528,694
Contribution (%)	8%	35%	8%	49%	100%

114. **Capacity building and training.** This intervention is by far the most important both in terms of its share of the total cost of the project, its complementarities to the main project activities, and its critical role in the achievement of the overall goal and outcomes of the project. The detailed training is provided in working paper 2. Table 13 summarizes the number of the beneficiaries of the training.

**Table 13: Beneficiaries of the capacity building program of the SDP**

No.	Institution receiving training	Total participants	No. men	No. women
1	Agriculture Research Corporation	57	40	17
2	National Seed Administration (federal level)	43	30	13
3	National Seed Administration (state level)	24	12	8
4	Extension staff	145	100	45
5	Seed Grower Groups	260	180	80
6	Grain Producer Groups	4460	1160	1300

### Economic analysis

115. The analysis is in February 2012 constant prices in SDG. The discount rate is 25 percent based on local inflation and the project life is 10 years as it is a pilot which will be up scaled. The shadow exchange rate (SER) used is SDP 4.5 to USD 1..

116. The economic analysis of the project compares all project investments with the measurable benefits generated by certified seed varieties produced in the project area based on the following assumptions:



- A conservative adoption rate of 25% for grain producers (down from the projected 33%).
- A drought cycle every three years in North Kordofan which reduces revenues by 75% for both seed growers and grain producers.
- Costs of insurance paid by Government and IFAD are subsidies, which are not considered as part of the investment costs within the Project.

117. The findings show that the project will be economically rewarding, with an EIRR for the base case estimated at 13%;. The sensitivity analysis shows the project to be sensitive to exchange rate shocks and in the worst case scenario (costs higher by 20% and benefits lower by 20%) the EIRR drops to 4%.

**Table 14: Sensitivity Analysis**

		Revenues				
C o s t s		-20%	-10%	0%	+10%	+20%
	-20%	13%	16%	18%	21%	23%
	-10%	10%	13%	16%	18%	20%
	0%	8%	11%	13%	15%	17%
	+10%	6%	9%	11%	13%	15%
	+20%	4%	7%	9%	11%	13%

#### D. Sustainability

118. The project has adopted a number of mechanisms, best practices and safeguards to promote the financial, technical and institutional sustainability of the project. These are summarized below:

- On the institutional side, each regulatory and or policy intervention of the project will be backed by a legal instrument in a form of a law and a suitable enforcement mechanism. It is worth noting that the building blocks for institutional sustainability are gradually put in place. The Seed Act of 2010 is expected to be enforced with the establishment of the Seed Council, the highest consultative body in 2011, the capacity building of NSA starting in 2012, and the PVP legislation which should be passed and enacted by end 2012. Furthermore, the involvement of the private sector, as articulated in the Seed Act, at each level of the seed value chain (from the production of breeder seeds to the production and marketing of certified seeds, together with its participation in the policy dialogue through the multi stakeholder platforms) is likely to have a strong and lasting impact on the sustainability of the seed industry as envisaged under the project.
- On the financial side, and at full development, all services provided by the project will be on a fee basis, particularly the NSA's seed certification services, ARC's production of registered seed as well as the advisory services of the extension teams. The prices charged will be set at a level to recover the full operation and maintenance costs and depreciation of equipment and material. In the specific case of extension services, only the allowances operation and maintenance costs of the vehicles will be recovered. However and in an attempt to recover the full cost of the services rendered, the prices charged will be gradually adjusted upward as the demand for certified seeds increases and the prices of certified seeds are stabilized.

119. **Scaling up.** The project design approach and its implementation strategy have been orchestrated to create a self-perpetuating project through its profitable business opportunities involving grassroots seed growers, grain producers, private seed companies and traders, through its cost recovery approach and forward-looking policy dialogue. The project scaling up agenda, planned to take place during 2015-2017 is outlined in table 15 below.

**Table 15: Scaling-up process for the SDP**

What to scale up	(i) PPP between private seed company, communities and government extension services for multiplication of certified seeds; (ii) Establishment village based seed marketing (iii) Cost recovery of the operating costs of the extension services
Conditions to be satisfied (triggers) and processes to be followed (calibration/evaluation)	(i) PPP concept for seed multiplication tested using different scenarios, rectified for quality assurance, verified for profitability and evaluated for its impact and sustainability (ii) Establishment and validation of private marketing channels through NSA effective regulatory body that inspects and certifies all classes of seeds produced by ARC and seed companies (iii) Efficiency and effectiveness of the different linkages pertaining to different support services such as extension, credit, insurance and capacity building by different partners.
The main thrust	A sustainable public-public partnership serving smallholders in increasing production and productivity of staple food and cash crops improving thereby their food security and incomes.
Requirements	
Leadership	The scaling up will be driven by Inter-Ministerial Committee of the IFAD funded projects which include key ministries in the seed sector, the farmers union and private sector representatives
Catalysts and synergies	Effective demand among smallholder producers in the rainfed sector. This will create a market for certified seeds which will attract farmers, traders and seed companies, thus creating real direct and indirect investment opportunities in sectors with market demand and growth potential.
Incentives	Win-win seed value chain relationships among seed companies, SGGs, traders, NSA, ARC the extension services, and farmers generating value added, profits, and sustainable employment opportunities
Enabling environment	
Policy, legal, regulatory space	Policy and regulatory environments are set out in the future Seed Council consultative role, in proposing new or amending existing laws and bylaws, and an establishment of a framework for policy dialogue through multi-stakeholder platforms.
Financial and fiscal environment	The SDP is creating a cost sharing Private Sector Support Facility to finance certain critical investments especially establishment of licensed seed agents, seed processing facilities at the field level. If the model is assessed as successful at mid-term, scaling up financial support to seed companies can be done through the banks.
Institutional	NSA to develop into a credible and effective regulatory body that inspects and certifies all classes of seeds and assists in creating a national capacity of producing breeder, foundation and seed in ARC and the private sector.
Knowledge	Introduction of participatory research to develop new varieties based on indigenous knowledge, which should be propagated during the scaling-up phase and shared countrywide.
Partnership	SDP and NSA will develop partnerships through the multi-stakeholder forums to develop the seed sector.
Time frame	Scaling up starts in 2015 if the project fulfills the trigger indicators
Role of drivers and spaces	Effective demand for certified seeds among smallholder farmers in the rainfed sector.
IFAD's role	Promoting scaling through grant funding, and policy dialogue, knowledge sharing and cross fertilization across the region by disseminating best practices and lessons learned
Impact and outcome of scaling up processes	Improving production and productivity of traditional rainfed smallholder farmers. The expected outcome of scaling up is to establish an efficient and effective production of different seed classes and a growing retail market for seeds through a private public partnership based on cost recovery, participatory research and effective institutional framework.

**REPUBLIC OF THE SUDAN**

**SEED DEVELOPMENT PROJECT (SDP)**

**PROJECT DESIGN REPORT**

**ANNEXES**



## **ANNEX 1: COUNTRY AND RURAL CONTEXT**

### **A. Country Economic Background**

1. Sudan has been known as the largest country in Africa by land area, with rich natural resources and an estimated population of forty two million according to 2008 census. With the declaration of independence of the Republic of South Sudan in July 2011, Sudan total area was reduced from 2,500,000 square km to 1,881,000 square km. Hence after being Africa's largest and the ninth largest country in the world, The Sudan will rank third in Africa (after Algeria and the Democratic Republic of the Congo) and also in the Arab world (after Algeria and Saudi Arabia), and it will rank 17<sup>th</sup> globally. The Sudan neighboring countries have been reduced from 9 to 7 where Sudan no longer has borders with Uganda, Kenya and Congo. The border with the Republic of South Sudan, is the largest as it amounts to more than 2,000 km. The Sudan's population, according to 2008 census, amounted to 33,419,625 people while that of the Republic of South Sudan is estimated at 8,260,490. The arable agricultural land is 175 million feddan which represents 78% of the historical arable land. The cultivated land remains 40 million feddan. The livestock population is estimated at 120 million heads representing 72% of the historical numbers. However, there is huge reduction in the range resources and forests cover amounting to 65% of the total resources before the separation.

2. With secession of the South Sudan on July 9, 2011, it is anticipated that the economy will suffer losses from the withdrawal of revenues from the exploitation and export of oil from the South Sudan and a significant fiscal adjustment will be required. A large part of the fiscal adjustment is expected to fall on the expenditure side. The Ministry of Finance and National Economy (MOFNE) projects a long-term fiscal adjustment to accommodate a revenue loss as high as 36.5 percent of total revenues. As a result, Sudan faces the challenge of balancing fiscal consolidation against the pressing needs for the development agenda. The fiscal authorities will need to do more with less. The extent of the shock in the short-run remains unclear, with possible transition arrangements to be agreed between the two parties that could smoothen the impact of the loss of oil revenues on the economy of Sudan. .

3. The government is carrying out a number of planning exercises to prepare for this fiscal adjustment, but all are yet to be finalized. A revised budget has been approved in August 2011 by the Council of Ministers and the Parliament. The revised plan projected that the real GDP will decrease to 3.0 percent, compared to a projected rate of 5.0 percent in the original budget for 2011; this mainly comes as a result of the lower domestic oil production, Inflation is expected to reach two-digit levels (18 percent), 6 percentage points higher than levels in the original budget driven by domestic and external factors, including exchange rate pass-through effects. The total revenue is projected to significantly decline by 12 percent compared to the original 2011 budgeted level, driven by the rapid drop in oil revenues. Oil revenues are projected to decline by 43 percent, and account for 26 percent of total revenue<sup>38</sup>. Non-oil revenue is projected to increase by 11 percent and account for 69 percent of total revenue, largely driven by an increased VAT rate on communication services from 20 to 30 percent. . Other key plans include a 3-year emergency plan (the "salvation program") and a longer term 5-year strategic plan (2012-2016). The authorities have stated that the 3-year plan is a key element to smooth the transition into the new post-secession era as it develops a macro framework to re-orient the economy from an oil-led to an agriculture sector-led model with the inclusion of appropriate social safety net measures.

4. Sudan's external debt stood at roughly USD 36.8 billion at the end of 2010, of which USD 30.8 billion is in arrears. Bilateral creditors account for sixty eight percent of obligations, split roughly equally between Paris Club and non-Paris Club bilateral partners. Multilaterals comprise fifteen percent of the total, including USD 1.45 billion to the World Bank and USD 1.54 billion to the International Monetary Fund (IMF). Private creditors account for USD 5.9 billion. The debt burden continues to be a significant development constraint as arrears to the World Bank and other development partners prevent normal relations and constrain access to concessional financing. Sudan and the new Republic of South Sudan agreed to the so-called "zero-option approach" regarding debt. In this approach, the North would take on all debt as the continuing state, under two conditions: 1) both South Sudan and Sudan will undertake a joint outreach to the creditors to move

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<sup>38</sup> previously oil accounted for more than half of total revenue

forward as promptly as possible towards debt relief; 2) The international community will give a “firm commitment” to debt relief. If the decision point cannot be reached with the two-year time-frame, the South would take on a portion of the debt, details of which are not yet agreed. Thus, a solution to the debt problem can improve prospects for growth and poverty reduction.

5. Overall, Sudan needs to create fiscal space to meet social and development needs, but the challenges of coping with the independence of South Sudan are likely to be the most pressing in the coming year. Rebuilding foreign exchange reserves, mobilizing non-oil revenue, and tightening monetary policy to contain inflationary and exchange rate pressures remain an immediate priority. In the medium term, Sudan must continue to strengthen its non-oil revenue collection and export base while developing its financial system to ensure sustainable growth.

## **B. Performance of the Agricultural Sector**

6. Prior to oil exploration, agriculture contributed 40.5 per cent of GDP until the year 2000. However, agriculture’s GDP contribution declined, the rate of growth of rural incomes has decreased and poverty in rural areas remains high. The average annual growth rate of the agricultural sector between 2000 and 2008 was 3.6 percent, substantially lower than the 10.8 percent during the previous decade. The largest decline in agricultural performance is recorded for the traditional farming sub sector, with a growth rate falling from 24.6 percent in the 1990s to 2.4 percent during 2000-2008. A recent poverty assessment estimates that 75% of the poor in Sudan are rural; and poor mainly derive their livelihoods from agricultural activities<sup>39</sup>.

7. The weak performance of the agriculture sector in the Sudan is perpetuated by five main factors: (i) decades of civil conflict and underdevelopment that have ravaged traditional rainfed agriculture, particularly in the Three Areas<sup>40</sup> and in South Sudan; (ii) disabling agriculture policies, including delayed financing of agricultural investments, insufficient financing of the running costs of agricultural services, and over taxation of agriculture commodities, particularly the exportable commodities produced mainly by the rainfed sector; (iii) inadequate land policy with the added complication of statutory and customary systems which has led to the reallocation of land uses without consultation with the users, introducing an open access regime to rangelands and weakening traditional institutions for land care; this dual system cannot deal effectively with competing land claims resulting from the expansion of farming, herding and mining; (iv) inadequate water policy, with no systematic implementation of the cost recovery of operation and maintenance costs of water services whether for irrigation or livestock purposes, an inappropriate level of water pricing and no enforcement of user management of water facilities; (v) inefficient marketing arrangements owing to chronic low productivity and low output value in agricultural and pastoral production systems, high internal costs of transport due to limited road infrastructure, high costs of handling products moving to points of export, imposition of charges and taxes in the marketing chain for which no services are provided, and, finally, the weak organization and bargaining power of small-scale producers. These structural factors have constrained the growth of the agricultural sector and have thus trapped households in poverty. This situation is further aggravated by climate change and rising food prices.

8. After two decades of neglect, agriculture, including livestock, forestry and fisheries is back on the Sudan’s growth agenda. The Government formulated the Agriculture Mobilization Plan then the Agriculture Revitalization Plan (ARP) which spanned the period 2007 to 2011. The Government earmarked a budget of SDG 10 billion for this programme to reach the following objectives: (i) higher agricultural exports and decreased reliance on volatile oil exports; (ii) increased productivity; (iii) improved food security and agricultural incomes; (iv) reduced rural poverty; and (v) redressed regional imbalances. Human development, gender mainstreaming and environmental conservation are cross-cutting issues. A recent evaluation of the Agriculture Revitalization Programme concludes that despite the budgetary constraints the government fulfilled, to a large extent, its commitments to the programme funding. The evaluation stressed the physical achievements of the programme and

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<sup>39</sup> Source: Ministry of Finance and National Economy. Draft Interim Poverty Reduction Strategy Paper. June 2011.

<sup>40</sup> The Three Areas refer to Abyei, which has a specific governance system reporting directly to the Presidency, the South Kordofan and Blue Nile States.

provided no solid judgment on the programme real impact. Qualitatively, the assessment recorded positive results under the nine objectives of the ARP; however the magnitude of these positive changes were not well articulated. The evaluation recommends the extension of the ARP as the initial duration of four years proved insufficient to bring about the desired change in the sector. The evaluation calls for an increased role of the state government in guiding the planning and in mobilizing the support for the second phase of the ARP.

9. The draft Interim Poverty Reduction Strategy Paper (I- PRSP) identified the agriculture sector and enabling the private sector development as the two key drivers for the growth strategy in Sudan. I-PRSP also identified key short term priority actions to bring the sector on the right track. These include:

- Assist smallholder farming to become more productive, competitive and sustainable. Actions here could include strengthening land rights, improving access to markets through developing rural infrastructure and providing access to financial services.
- Improve productivity of rain-fed farming with improved seeds, modern irrigation technologies and the provision of fertilizers and other farm inputs.
- Improved access to markets and establishment of efficient value chains by enhancing local infrastructure, improving commodity trading and risk management; link producers to modern supply chains for higher-value urban markets; and adopt product standards for higher-value exports;
- Increase access to water and irrigation as a major determinant of land productivity and the stability of yields. With rising uncertainties in rain-fed agriculture as a result of climate change, investment in water collection and management will be increasingly critical.
- Enhance agricultural research and extension by increasing the allocation of the share of research in the budget and by fostering public-private research partnership. This will enable closer connection between the problems faced by farmers and work done by researchers and an expansion of agricultural extension programs and access to relevant inputs. Commercial farming will receive more emphasis and support. An effective impetus of such investment program will require a land policy that provide most farmers with long term leases and hence a formal security of tenure, either through statutory or customary law.
- Improve livestock marketing through the regulation of stocking rates in Sudan's most vulnerable grazing environments such as North Darfur and North Kordofan with the aim of regenerating the pasture and other forage vegetation; improve the quality of stock routes and improve marketing efficiency.
- Making agricultural systems more environmentally sustainable through the Identification of the main drivers of resource degradation to reverse degradation in less favored areas; improvement in agricultural water management; better management of intensive livestock systems; and maintaining payments for environmental services.

### **Climate Change**

10. The expected changes in weather patterns are projected to exacerbate existing household vulnerabilities and to exceed current coping mechanisms, limiting still further the poor people's capacity to create sustainable livelihoods for themselves. Expected impacts are increased water scarcity, accelerated desertification and soil erosion processes, decreased productivity with a predicted twenty percent drop in crop yields, damages caused by more extreme climate events such as droughts or floods, increased health-related illnesses, and higher risk of pest and disease outbreaks<sup>41</sup>.

### **Volatile food prices**

11. The impact of food prices increases is nuanced in The Sudan. Sorghum and millet recorded a seventy percent and forty percent price increase respectively over the first semester 2008 compared with their 2007 levels. Since sorghum prices stabilized in March but are still higher than their 2006-

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<sup>41</sup> Source: United Nations Environment Programme (2007). Sudan: Post-conflict environmental assessment. Executive Summary.

2010 average. Despite high level and stabilizing trends, the local prices continue to be below the export parity prices which encourage commercial traders to export (FAO/SIFSIA bulletin 40). The observed increase in livestock prices in the previous years, which improved livestock terms of trade, have now started to stabilize, further stabilizing the terms of trade though still favoring livestock owners. Coupled with relatively high commodity prices, these high livestock prices may exacerbate the food insecurity situation of the poor. There is a high risk that the existing food insecurity could worsen in many traditional food insecure areas as food and livestock prices continue to rise in the coming months. The poor, whose production is always limited by inadequate land, labor and capital reserves, depend on the market to fill a majority of their food needs every year. It is also possible that price increases may erode the value of cash distributions made through Zakat<sup>42</sup> Chamber or other NGO channels. Between March and May 2011 the staple grains index dropped 22.8 percent below the values of March 2011. This decline was driven by millet and maize while rice and wheat price volatility followed instability in their world prices. Prices for the largely imported rice and wheat continued their upward trend and in May reached 33 and 22 percent higher prices, respectively, from one year ago. In effect, recent developments in food prices in Sudan are driven by both domestic and global factors. These are supply-side issues induced by weather-related production shortfalls in Sudan paired with higher and more volatile world grain prices; global food prices have risen by 47 percent since June 2010.

12. The government has undertaken several policy measures to contain inflationary pressures and to mitigate their adverse impact on the vulnerable poor. These included policy measures such as cutting import tariffs for wheat, flour, sugar, and capital goods; and releasing grain stocks of domestic reserves, particularly for sorghum. A number of safety net and social protection programs were officially announced (e.g. cash transfer, school feeding, free health support, and agriculture and industry support funds), but implementation remains unclear.

13. To date, higher food prices have not resulted in higher output, mainly as a result of structural constraints listed in paragraph 6 above, and the fact that the poor are net consumers and negatively affected by the increased food prices which erode their capacity to invest in agriculture. However, the high prices of staple crops and of cash crops (such as cotton) are also encouraging the Government to seek foreign direct investment in the agriculture sector and to facilitate this through private public partnerships either for export promotion or import substitution.

### **C. Poverty in Sudan is a Rural Phenomena**

14. Poverty in The Sudan remains a rural phenomenon, and within the rural areas it is closely associated with the rainfed agriculture livelihood systems. A recent study revealed that 46.5 percent of the population of Northern Sudan is found to fall below the poverty line, with 26.5 percent of the urban population and 57.6 percent of the rural population falling below the poverty line (CBS 2010). FAO/SIFSIA also reported that one of three Sudanese suffered from food deprivation in 2009, which is the Millennium Development Goal indicator 1.9 on hunger reduction, based on the 2009 Sudan NBHS data. The prevalence of under nourishment was thirty one and thirty four percent for the urban and rural populations, respectively.

15. It was also found that Khartoum is the region with the lowest poverty incidence, followed by the Northern region. Eastern and Central regions rank third, while Kordofan and Darfur are the poorest regions. Poverty levels vary greatly by state. The incidence of poverty ranges from one fourth in Khartoum to more than two thirds in Northern Darfur.

16. **Characteristics of poor households.** Poor households are characterized by their physical assets, land and livestock; economic activity that relies on traditional rainfed agriculture; gender of the head of household; and displacement status. Poor households include smallholders, woman headed households and returnee households. Proxy methods are used to assess poverty given the dearth of data on the subject.

17. **Livelihoods of poor rural people.** Rural livelihoods are subsistence oriented and are based on crop cultivation, herding, and fishing where available. Depending on the predominant production system, poor households own approximately ten to thirty small ruminants, cultivate about one to five

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<sup>42</sup> Islamic religious tax



feddans<sup>43</sup> of mainly food crops, cover from three to six months of their food requirements from their own production and the remainder from barter or trade of livestock products/inclusion in the labor force/handicrafts and petty trade. Their main livelihood constraints are (i) unpredictability of rainfall in terms of timing and quantity; (ii) pest and disease outbreaks; (iii) water shortages in the dry season; (iv) barriers on migratory routes, which lead to disputes over rights of passage between pastoral and settled communities or between local communities and commercial interests; and (v) cattle raiding.

18. **Coping strategies.** Poor rural people rely on kinship relations and solidarity among community members as their main coping strategies. They also compensate crop failures or loss of livestock by exploiting their environment, supplementing food or income through wild fruit collection, game hunting, fishing, apiculture, weed handicrafts and charcoal making. In larger villages and towns where production systems are more diversified, wage labor constitutes an alternative coping strategy. In the transition area and the northern region, wage labor represents close to fifty percent of cash incomes. Households also take consumption limiting decisions such as curbing education and health expenses, cutting water consumption and reducing food intake.

19. The gender related development index (GDI) is 0.492 compared with the human development index (HDI) of 0.516, which indicates that disparity in gender development accounts for 95.3 percent of the HDI. Women are generally the main contributors to the household's income and food production. Their participation in decision making can increasingly be quantified thanks to the introduction of a quota for their representation in state legislatures, parties and community organizations. Nevertheless, this participation is qualitatively weak. Women's empowerment is hindered by (i) a high rate of illiteracy among women, (ii) a customary law that attributes specific gender and age differentiated roles; (iii) marriage practices that push women into early marriages; and (iv) heavy workloads.

## **D. Policy, Strategy and Institutional Context**

### **National Institutional Context**

20. The national institutional context in The Sudan is characterized by decentralization, the emergence of new microfinance institutions (MFIs) and producers' organizations, and a centralized and discretionary policymaking process.

21. Sudan has a decentralized governance structure. It is a federal system of Government which includes fifteen states. State governments have large prerogatives over legislation, budget execution, development programming and service delivery. The federal Government retains - in the case of the agriculture sector – powers over the regulation of land tenure, water management, environmental conservation, trade, input supply, pest and disease surveillance and control. The main generic institutional weaknesses in decentralized government are poor budget formulation, incomplete staffing, scant attention given to agriculture in terms of financing investment and recurrent costs, variation in the transfer of federal funds and limited efforts in expanding the local revenue base.

22. The development of the microfinance sector has gained momentum as a result of the Central Bank of Sudan's and the Bank of Southern Sudan's efforts to promote microfinance, the former setting a quota for allocation of bank portfolios to microfinance, whether state owned or private banks, and the latter establishing three "best practice" MFIs. Organizations working on rural microfinance include state owned banks, such as the Agricultural Bank of Sudan and the Savings and Social Development Bank, and the sanduqs – member-based savings and credit groups piloted at village level and in a federated form at a locality level through NGOs, UNDP and IFAD financed Projects.

23. Producers' and community organizations are increasingly called on to play more active roles in development. The Government is piloting co-management of resources between parastatals and user groups in the Gezira scheme (with support from the FAO and the World Bank), in the Gash spate irrigation scheme (with support from IFAD), and in the Khor Abu Habil scheme. Development Projects are supporting the establishment of producers' organizations under appropriate cooperative laws or

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<sup>43</sup> A feddan is equal to 1.038 acres.

alternative legislation, and supporting their involvement in the delivery of social services, agricultural inputs and extension, and credit and marketing services. Moreover, the Government is promoting more enabling private-sector legislation.

24. Developing an enabling policy framework requires an understanding of policy processes. Policy analysis<sup>44</sup> highlighted the following:

- Policy decisions have historically been initiated by the bureaucracy, with membership being elite based along political affiliation and economic weight. This has meant that smallholders and their representatives have been largely excluded from decision making.
- The flow of information is inadequate and restricted. Deliberations and proceedings on a given policy issue are classified for a certain period, preventing the general population from knowing what information exists on key policy issues.

25. As a result of these processes, policy outcomes and enforcement are marked by frequent changes and insufficient resources for implementation. Furthermore, such processes neglect to address in substance the enabling environment for the development of the traditional rainfed sector, which is fundamental to rural poverty reduction.

### **National Rural Poverty Reduction Strategy**

26. Sudan has been able to maintain a credible Staff Monitored Program with the IMF for the past decade. The accumulated arrears and the political fallout associated with Darfur have prevented it from developing strategic relationships with donors. Discussions at the Sudan Roundtable in Washington DC, in April 2011 demonstrated that resolving Sudan's debts will require a well devised strategy, a pro-active stance by the Government of the Sudan, and considerable goodwill from all creditors, including multilateral and bilateral donors. One of the eligibility conditions for Highly Indebted Poor Countries (HIPC) is the preparation of highly participatory PRSP processes.

27. With significant support from the World Bank and the African Development bank, the Sudan embarked on developing an Interim Poverty Reduction Strategy paper and on formulating a road map for a full-fledged PRSP. The preparation of the draft I-PRSP document was led by a multi-sectoral Technical Committee formed under the MoFNE. The draft I-PRSP was recently shared for consultation with national and international stakeholders. The I-PRSP claimed that agriculture has significant potential to be the pillar of growth and diversification of the economy, poverty reduction and exports growth. As poverty is predominantly rural and high among agricultural households, the growth in agriculture will have a larger impact on poverty reduction relative to growth in other sectors.

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<sup>44</sup> Source: International Food Policy Research Institute with support from IFAD and the Government of National Unity's Ministry of Finance and National Economy (2006). Empowering the rural poor under volatile policy environments in the Near East and North Africa region research project, Sudan case study. The analysis of the policy process was conducted using the cases of natural resource management and decentralization.

Table 1: Rural Poverty and Agricultural/Rural Sector Issues

Priority Areas	Affected Group	Major Issues	Actions Needed
Prevalence of malnutrition	Poor smallholder farmers, pastoralists, landless, IDP, and poor rural women in transition areas between North and South Sudan	<ul style="list-style-type: none"> <li>• Low agricultural productivity</li> <li>• High exposure to insecurity</li> <li>• Limited access to water and sanitation</li> <li>• Physical isolation and remoteness from main villages/towns</li> </ul>	<ul style="list-style-type: none"> <li>• Improved agricultural production through technology transfer and appropriate practices and post-harvest handling.</li> <li>• Access to safe water and hygiene awareness</li> <li>• Increased development assistance to mitigate conflict situations and increase investments in social and road infrastructure.</li> </ul>
Low incomes in rural areas	Population in rainfed areas	<ul style="list-style-type: none"> <li>• Disincentives to production and marketing of rainfed commodities</li> <li>• Conflicts due to disputes over access to natural resources (water, grazing lands, etc.)</li> <li>• Women have increased workload to access fuel and water</li> <li>• Coping mechanisms with drought no longer adapted</li> <li>• High expenditures in dry season</li> <li>• Limited income earning opportunities during dry season</li> </ul>	<ul style="list-style-type: none"> <li>• Improved agricultural production and marketing through technology transfer, organizing producers to increase their marketing margins and planning enabling policies</li> <li>• Sustainable natural resource management</li> <li>• Labor saving techniques for women\</li> <li>• Decrease costs in dry season particularly water costs</li> <li>• Farming system development, vocational training, agro-processing and access to finance to increase income from off-season agriculture production and from non-farm activities</li> </ul>
Limited access to agricultural services, inputs and financial services	Population in rainfed areas	<ul style="list-style-type: none"> <li>• Weak extension service delivery and coverage</li> <li>• Free distribution of inputs which leads to limited coverage, delayed distribution and inadequate quality. This is particularly the case with access to improved seed varieties.</li> <li>• Absence of agro-dealer and input suppliers. The main trade is in staple grains, and to a very limited extent improved seed variety for vegetables.</li> <li>• High transaction costs for extending microfinance in low density areas; the use of group guarantee has not expanded access to finance.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening of extension services and their financing mechanisms</li> <li>• Replace free distribution of inputs with more effective development of the input supply chain.</li> <li>• Develop adapted models for rural finance.</li> </ul>
Poor access to market and lack of infrastructure in the rural areas		<ul style="list-style-type: none"> <li>• Limited opportunities for alternative income generating activities</li> <li>• High transaction costs</li> <li>• Long market chains leading to non-remunerative prices for producers</li> </ul>	<ul style="list-style-type: none"> <li>• Improve rural infrastructure</li> <li>• Shorten the value chain with producers' organizations and partnerships with the private sectors</li> </ul>
Limited access to agricultural services and micro-finance services		<ul style="list-style-type: none"> <li>• Weak extension service delivery and coverage</li> <li>• High transaction costs for extending microfinance in low density areas</li> </ul>	<ul style="list-style-type: none"> <li>• Liberalization of input supply system</li> <li>• Strengthen the establishment of community based micro-finance institutions and intermediaries</li> <li>• Assist banks with down-scaling their services</li> </ul>
Illiteracy, high maternal and infant mortality	Smallholder farmers, pastoralists, landless,	<ul style="list-style-type: none"> <li>• Limited or no access to schools, health clinics and lack of a reliable food intake</li> </ul>	<ul style="list-style-type: none"> <li>• Development of social services and an appropriate outreach/referral system</li> </ul>

Priority Areas	Affected Group	Major Issues	Actions Needed
	IDP, and poor rural women in transition areas between North and South Sudan	<ul style="list-style-type: none"> <li>• Limited awareness about hygiene</li> <li>• Limited educational and health staff</li> </ul>	<ul style="list-style-type: none"> <li>• Training of education and health cadres</li> <li>• Awareness raising in hygiene, nutrition, maternal and child health matters</li> </ul>
Gender inequity	Women	<ul style="list-style-type: none"> <li>• Very low access to agriculture services, education, health</li> <li>• Insecure access to land</li> <li>• Women's economic activities are not valued</li> </ul>	<ul style="list-style-type: none"> <li>• Mainstream gender in agricultural services and micro-finance</li> <li>• Enforce women's rights to land access</li> <li>• Gender sensitization of communities and leaders</li> </ul>
Land tenure	Smallholders Pastoralists Mechanized farmers	<ul style="list-style-type: none"> <li>• Unclear tenure arrangements particularly with regards the Government leases for mechanized farming.</li> <li>• Encroachment of farmland on grazing areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Clear land tenure arrangements that recognize customary rights and that settle the issue of the leases of the mechanized farmers that also recognize access rights and rights to grazing.</li> <li>• Land use mapping and regulations to control the expansion of agriculture.</li> </ul>

## ANNEX 2: POVERTY, TARGETING AND GENDER

### A. Poverty in the Project Area

1. **Poverty in North and South Kordofan.** The total population of North and South Kordofan is estimated to be 4.3 million inhabitants with 2.9 million and 1.4 million inhabitants respectively.<sup>45</sup> The International Organization for Migration (IOM) estimates that, up to December 2009, South Kordofan received about two hundred and seventy five thousand (275 000) returnees and recorded about sixty thousand (60 000) IDPs.<sup>46</sup> The HPI is recorded at 42.7 (North Kordofan) and 52 (South Kordofan) – vis à vis Khartoum state, which stands at 14.3 and is the less poor.<sup>47</sup> While South Kordofan is a conflict affected state with high levels of deprivation and poor standards, North Kordofan is drought prone and is characterized by a limited agriculture potential. Yet, agriculture incomes are comparatively higher in North Kordofan compared to South Kordofan due to a larger orientation in the former towards cash crops, and proximity to main commodity and livestock markets.<sup>48</sup> Prevalence of undernourishment is recorded at 40% and 27% respectively in North and South Kordofan.<sup>49</sup> North Kordofan has a high percentage of households in the food insecure category, particularly in the drier Northern regions of the state, with 59% being moderately food insecure.<sup>50</sup> In South Kordofan, one out of two rural households is food insecure of which 5% are severely food insecure.<sup>51</sup> Together with West Darfur which is a conflict region, South Kordofan has the highest percentage of households relying for their consumption on their own production of food. In both States, data related to malnourishment of children were found to be similar to those of South Darfur – 2% of the children being severely malnourished and 4% moderately malnourished<sup>52</sup>.

2. **Characteristics of poor households.** Appendix 1 summarizes the characteristics of poor households in North and South Kordofan. More specifically in South Kordofan, as indicated in table 1 below, the key criteria for poverty differentiation among households are: (i) reliance on farming as the main source of livelihood and absence of a diversified income base; (ii) single headed households due to death of spouse or divorce; (iii) small household size; (iii) illiteracy among heads of household; (iv) both women and men have access to land but the ratio of cultivated land to landholding is 25% as a result of limitations on labor and cash to finance cultural practices; (v) cultivation of both food and cash crops; (vi) their livestock holding is composed of small ruminants and chicken. Comparatively to other households, poor households are less likely to receive extension services or to adopt improved techniques on the totality of their land. Their income is in the range of SDG 1450/ year. Moreover, women are more active in agriculture in very poor households compared to the other households in a given community.

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<sup>45</sup> Population Census 2008

<sup>46</sup> Internal Displacement Monitoring Centre (IDMC) and Norwegian Refugee Council, Sudan: Durable Solutions Elusive as Southern IDPs Return and Darfur Remains Tense. A profile of the Internal Displacement Situation, December, 2010, p. 39

<sup>47</sup> Annex on poverty analysis, background report to the COSOP 2009-2012.

<sup>48</sup> *Ibidem*

<sup>49</sup> *Food Insecurity Assessment in Sudan; Analysis of 2009 Sudan National Baseline Household Survey*, Draft Report, Central Bureau of Statistics, Southern Sudan Commission for Census Statistics and Evaluation, p. 24

<sup>50</sup> Government of Sudan, FAO, WFP, *Crop and Food Security Assessment Mission (CFSAM)*, January 2011

<sup>51</sup> *Ibidem*

<sup>52</sup> *Ibidem*

**Table 1. Wealth ranking in South Kordofan**

	<b>Very poor</b>	<b>Poor</b>	<b>Less Poor</b>	<b>Rich</b>
Men headed households	10%	30%	40%	20%
Women headed households	25%	48%	22%	5%
Household size	7	8.6	9.4	10
Marital status of head of household	78% married 20% widowed 2% divorced	90% married 7% widowed 3% divorced	96% married 2% widowed	96% married 2% single
Main occupation of head of household	15% farming	35% farming 28% agro-pastoralists	35% farming 37% agro-pastoralists 50% pastoralists	15% farming 35% agro-pastoralists 50% pastoralists
Household head has secondary occupation	12%	34%	38%	16%
Education of household head	57% illiterate 24% read and write	54% illiterate 29% read and write	30% illiterate 55% read and write	44% illiterate 41% read and write
Landholding in fed				
Average home garden	2.4	1.5	1.8	1.7
Average women farm	10.5	4.6	4	5.1
Average men farm	15.1	31.5	25.4	44
Average planted area				
Total planted in fed	6	13.6	15.5	33.4
Sorghum	3	6.4	9.4	21
Sesame	2	5.6	4.4	11
Groundnut	1	1.6	1.7	1.4
Livestock holding in heads:				
No. cattle owned		4.4	7.7	17.4
No. sheep owned	3.5	3	13	22.1
No. goat owned	4.3	3.2	9.8	12.4
Household income in SDG	1450	3280	4000	5500
Access to extension services	13%	34%	37%	16%
> 50% land under improved technology	34% households	93%	100%	46%

Source: Dr. Hassan Shaker, Characteristics of Wealth Status in South Kordofan, 2008

3. In North Kordofan State, the socio-economic characterization is based on production system. The results in table 2 below are drawn from the baseline survey conducted for the WSRMP in 2006. It shows that although farming households have the lowest income, they are comparatively less vulnerable to food shortage; whereas the pastoralists although earning a higher income are more likely to suffer from food shortage. This is mainly due to a diversified production farming system with a wide range of crops that have phased maturity and that allow farming households to bridge the hunger season.

**Table 2. Socio-economic characteristics of households in North Kordofan**

	Farmers	Pastoralists	Agro-Pastoralists
Household size	6.6	6.6	7.4
Illiteracy of household head	56%	74%	56%
Landholding in fed			
Average Jubraka	2.6	1.4	3.1
Average women farm	15	27	14
Average men farm	38	24	38
Cultivated area in fed			
Sorghum	6.4	5.1	6.9
Millet	11.4	5.4	15.8
Sesame	9.8	6.4	9.6
Groundnut	6.8	2.6	12.4
Karkadeh	3.1	3.1	3.3
Watermelon	12	3.7	25
Cowpea	3.1	1.5	2
Vegetable and maize	11.3	0.8	10.3
Livestock holding and % households			
Cattle	5.5 (5.5% households)	10 (2.4%)	6.3 (10%)
Sheep	13.5 (28%)	45 (62%)	35 (69%)
Goats	6 (75%)	12 (93%)	13 (87%)
Poultry	6.5 (56%)	6.4 (43%)	6.7 (63%)
Camels	2.3 (11%)	12 (29%)	5 (28%)
Use of improved seeds (% households)	13%	4%	12%
Household experienced food shortage	25%	32%	20%
Household total income in SDG/ year	3100	5200	5600
Access to extension	21%	2%	18%

Source: Dr. Hassan Shaker, Characteristics of the Farmers, Pastoralists and Agro-Pastoralists in North and South Kordofan – a comparative study, July 2010.

4. There are a number of key differences in the livelihoods and the production systems of North and South Kordofan:

- The landholding area and the ratio of cultivated area/ landholding are higher in North Kordofan than in South Kordofan. This also means that soil fertility issues will be more severe in North Kordofan than South Kordofan as fallow is the key method used by farmers to reconstitute soil fertility. Yields in North Kordofan are equivalent to 40-50% of the yields in South Kordofan, for

equivalent crops. This reflects the lower rainfall and the depleting soil fertility in North Kordofan. Low yields are compensated by expansion in cultivated area in North Kordofan.

- North Kordofan relative proximity to the markets means that the farmers in the state are more oriented towards commercial farming than in South Kordofan, which is largely subsistence oriented. This will influence the uptake of improved varieties. The fact also that in both states, producers engage in both crop and livestock production means that varieties used should be adapted for both grain and fodder production<sup>53</sup>.
- Extension outreach seems to be more effective in South Kordofan compared to North Kordofan. This is reflected in the number of people accessing extension services and the differentiated rate of adoption of improved technical packages/ improved seeds.

5. **Target Group.** The primary target group will consist of smallholder farmers. As the landholding varies greatly between North and South Kordofan, the criteria for identifying smallholders in an indicative manner is less than 15 feddans of cultivated land, engaging in rainfed agricultural activities on which most of the rural poor depend for their livelihoods. The target farmers will include those growing staple food crops as well as cash crops and having limited access to inputs, assets and services. It will target both farmers engaging directly in seed production through seed producing groups and the whole farming communities that are expected to increasingly use certified seeds and benefit from them. The Project will also target smallholder farmers with entrepreneurial experience and skills that can be the key drivers of the seed commercialization process and whose involvement will also benefit the poorer farmers. The target groups are described more specifically below.

6. *Poor smallholder farmers*<sup>54</sup>: The target farmers live in clay and sandy plains and usually grow food and cash crops in fields located both close and far from their households.<sup>55</sup> The women have *jubraka* land located close to the homestead where early maturing varieties and horticulture crops are grown for consumption or sale. Women also have access to land to plant field crops for home consumption. The main crops grown are sorghum, millet (on sandier soils), sesame, groundnut, and *karkadeh*. In South Kordofan, each household generally has access to an average of 6 feddans average of cultivated land and owns less than ten small ruminants that are raised on a sedentary basis. In North Kordofan, farmers mostly grow about 40 feddans of staple and cash crops, while watermelon is intercropped as a multipurpose crop for food, fodder and water reserve. They generally engage in agro-pastoral activities and own less than 20 heads of small ruminants.

7. Major challenges of smallholder farmers in both states include low agricultural productivity due to the limited availability of good quality seeds, erratic rainfall, pest infestations, and declining soil fertility. In North Kordofan farmers also face drought and water shortages during the dry season due to the limited supply of water and the high cost of purchasing water when it is available. Furthermore the lack of adequate access to sufficient productive assets prevents smallholder farmers from making maximum use of the land (draught power/machinery, good quality seeds, fertilizer, and labor) in South Kordofan. The prices farmers receive from the sale of their products are low due to absence of organized commodity markets, and the smallholder farmers' need to sell their products as quickly as possible after harvest to gain cash and therefore weakens their bargaining power. Lack or limited access to credit together with poor savings is one the main constraints that prevents farmers from purchasing inputs and accessing hired machinery and labor for the more expensive and labor intensive farming activities - weeding and harvesting. As a result, households in South Kordofan leave more than half of their available land uncultivated and engage in off farm wage labor, for example gold mining, handicrafts and petty trade, or charcoal making and sale.

8. *Women, including women headed households*.<sup>56</sup> In the traditional rainfed sector, women provide a remarkable contribution to the household's wellbeing and food security. Women's specific responsibilities include: (i) farming, both on the household fields together with their husbands and on the *jubraka* land, generally 2 feddans (0.84 ha), where they mainly grow green vegetables, tomatoes, cowpeas, okra and maize for both household consumption and sale; (ii) household work: which includes preparing food, collecting fire wood or fetching water; (iii) childcare; (iv) rearing small animals;

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<sup>53</sup> The stalks and crop residues are used as fodder. Qualities relate to thickness of the stem, palatability and digestibility by the animal, as well as storage efficiency.

<sup>54</sup> Information partially taken from: Annex on poverty analysis, background report to the COSOP 2009-2012

<sup>55</sup> Generally within a radius of 10 km away from their households.

<sup>56</sup> Information partially taken from: Annex on poverty analysis, background report to the COSOP 2009-2012.



and (v) petty trade. The varied tasks mean that women generally work longer hours than men. In spite of their responsibilities, women have access to smaller plots of land and generally can control cash income coming from petty trade and poultry rearing, but are rarely involved in decisions concerning key productive assets, such as land. Women also have limited decision making power in the household or within the community. Their empowerment is hindered by a high rate of illiteracy, persisting gender inequalities perpetuated by the customary law, and early marriage. Compared to men, women earn lower incomes, but tend to allocate more of their earnings to buy food items for their households. Women headed households are particularly vulnerable. They can be categorized in three main groups: (i) polygamous households, which represent the largest segment; (ii) widows, in which the wife and the children remain attached to the late husband's relatives; and (iii) households whose male head left temporarily to take up non-farm employment opportunities or enrolled in the army. In the absence of the husband, the households are still under the nominal supervision of a male head, although it is up to the women to earn a livelihood and look after the children.

9. *Small traders/agro-dealers/entrepreneurs.* This group generally face a number of challenges and constraints that make them averse to engaging in the seed business, including limited access to credit, low margins in the grain trade, limited business opportunities in rural areas, lack of expendable income by farmers to buy their goods, unreliable seed market, lack of storage facilities, poorly developed business skills, and high rentals for their shops. The small traders/agro-dealers are expected to purchase the seeds produced by the seed companies and/or selling agricultural inputs at the village level. The small traders will benefit from the organization of workshops together with farmers to build mutual trust and market linkages and seed fairs as well as from the establishment of a market information system and a multi-stakeholder forum to discuss issues pertaining to the seed sub-sector policies.

10. *Rural youth*<sup>57</sup>, particularly unemployed youth and *young women*. The target youth will be those between eighteen to thirty years of age. The majority of the young people live in rural areas with no access to basic services or sustainable livelihood opportunities, limited or no employment opportunities, as well as limited access to capacity building or microfinance services that would enable them to establish their own businesses. The conflict in the country has prejudiced a whole generation of youth of educational and developmental opportunities. The project offers the following menu of activities that may be of interest to youth: (i) commercial production of certified seeds; (ii) trading in certified seeds; (iii) increasing agricultural productivity and developing a market oriented farming business; and (iv) training as contact farmers.

## **B. Poverty Targeting**

11. **Geographic targeting.** The Project area has been determined in close consultation with the State Ministry of Agriculture in North and South Kordofan, and the project staff of the on-going IFAD supported Western Sudan Resources Management Programme (WSRMP) and South Kordofan Rural Development Programme (SKRDP). The mission based its selection on the following considerations: (i) agro-ecological suitability for commercial seed production, particularly in terms of availability of land and reliable rainfall, and potential for economic development that can yield acceptable rate of return; (ii) coverage under the on-going IFAD co-financed Projects so as to build on successful approaches and rely on trained and experienced extension staff and community organizations; (iii) farmers' experience with the target crops and/or possibly with seed multiplication pilots under IFAD and other donors' interventions; (iv) areas where the extension services were the most effective and this is translated by high adoption rates of new varieties or agricultural practices; (v) accessibility of the project area by road. In addition to the above, the following criteria will also be taken into consideration in selecting the target villages: (i) accessibility during the rainy season; (ii) absence or limited conflicts between farmers and pastoralists that would not have adverse impact on the communities nor hamper project implementation; (iii) security of the area (free from mines and armed conflict); and, (iv) the extent of rural poverty.

12. As a result of these criteria, four localities were selected, two localities<sup>58</sup> in each state. In North Kordofan, the SDP area will include: (i) Rahad locality and (ii) Sheikan locality. In South Kordofan the targeted areas will include: (i) Abbassyia locality and (ii) Abu Gubeiha locality. These 4 localities are

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<sup>57</sup> The official government definition of youth is of people aged from 13 to 34 years.

<sup>58</sup> The administrative structure of Sudan is as follows: federal, state, locality, rural administrative unit (RAU), village/cluster of villages

contiguous and linked together by the Um Ruwaba-Abu Gubeiha road and the Rahad-El Obeid road. The total rural population in these 4 localities is approximately 94,000 households. The tables 3 and 4 below provide some characterization of Project localities in terms of rural/farming population and poverty.

**Table 3: Population and Poverty Data of Targeted Areas in North Kordofan**

Locality/ RAU	Population			Rural population			No. of HHs	No. of rural HHs	Per cent of poor HHs	Average rural HH size	Estimat ed no. of poor HHs	No. of villages
	Total	Male	Female	Total	Male	Female						
<b>Rahad</b> <sup>59</sup>	157,838	72,898	84,940	117,414	53,264	64,150	29,845	23,124	60	6.6	17,907	258
<b>Sheikan</b> <sup>60</sup>	540,898	267,380	273,518	179,737	84,489	95,248	94,865	35,421 <sup>61</sup>	41.6	6.6	39,464	423

**Table 4: Population and Poverty Data of Target Areas in South Kordofan**

Locality/ RAU	Population			Average HH size	No. of HHs	Farming HHs		Per cent of poor HHs	Estimated no. of poor HHs	No. of villages
	Total	Estimated male	Estimated female			Per cent	Estimated No			
<b>Abbas- syia</b> <sup>62</sup>	115,695	56,077	59,618	8.4	13,773	82	11,294	64	8,815	65
<b>Abu Jubaiha</b> <sup>63</sup>	330,002			12	26,362	87.5	24,534	73.7	20,665	313

13. The following specific considerations emerging from preliminary observations and field visits of the mission have also informed the selection process of the target area:

14. The Abu Habil agricultural scheme located in Rahad locality and covering about thirty villages is promising for the production of sorghum, millet and sesame. It is well equipped with supplementary irrigation, contiguous land that can guarantee isolation distances between the crops and has good road accessibility. Additionally, out of the about 258 villages located in Rahad, 20 are covered by WSRMP and 49 by the closed NKRDP. WSRMP has been adopting successful approaches for delivering microfinance services through women savings and credit groups and supporting farmers in establishing linkages with banks.

15. Sheikan locality is renowned for its commercial crop production and benefits from its proximity to the main El Obeid market, which acts as the main market in Western Sudan for trade and export of main rainfed commodities such as sorghum, millet, sesame, groundnut and Gum Arabic. It has also benefited from a range of development projects funded by UNDP, NGOs and lately IFAD and its communities are well exposed to extension services and new agricultural practices. Out of 423 communities in Sheikan, WSRMP works with 18 communities.

16. Abbassya locality is suitable for sorghum, sesame, millet, watermelon and groundnuts. The comparative advantage of this locality lies in the fact that seed multiplication pilots were conducted for the *wadahmed* sorghum variety and groundnuts under SKRDP. Additionally, a first attempt to commercialize seed was made by SKRDP with some encouraging results. The extension team of

<sup>59</sup> Sources of data are as follows: population, rural population, number of HHs and rural HHs: North Kordofan Census 2008 (however, Rahad was at that time an administrative unit under Omrowabaa locality); percentage of poor HHs: baseline survey of Kordofan States (2006), where data refer to Omrowabaa locality; number of villages: project staff.

<sup>60</sup> Sources of data are as follows: population, rural population, number of HHs and rural HHs: North Kordofan Census 2008; percentage of poor HHs: baseline survey of Kordofan States (2006).

<sup>61</sup> Sheikan locality contains the urban population of El Obeid.

<sup>62</sup> Sources of data are as follows: population and number of villages: Dept. of Agriculture (during Mission visits); average HH size, percentage of farming HHs and of poor HHs: baseline survey of Kordofan States (2006) – however at that time Abbassya was a RAU not a locality.

<sup>63</sup> Sources of data are as follows: population, number of HHs and no. of villages: Locality of Abu Jubaiha (March 2001); percentage of poor HHs and farming HHs: baseline survey of Kordofan States (2006).

Abbassiya locality was reported to be among the best performing under SKRDP coverage. In this locality, out of the 65 villages, 8 are covered by WSRMP and 14 are covered by SKRDP.

17. Abu Gubeiha locality is well suited for growing sorghum, millet and sesame. It is characterized by the availability of contiguous and very fertile land as well as a large market. The locality has also been covered, *inter alia*, by the Community Development Fund (CDF), which has been supporting community development interventions using participatory approaches, providing capacity building to local institutions (for example CDCs) in 26 communities. The locality also has one of the best performing extension teams supported by SKRDP together with that of Abbassiya locality. Out of 313 communities in Abu Gubeiha, SKRDP covers 10 communities whereas WSRMP covers 4 agro-pastoral and settled communities.

18. **Community targeting.** The SDP will target farming or agro-pastoral communities with the following characteristics for the production of certified seeds:

- experience in seed multiplication or with farmers trained in seed multiplication;
- Active contact farmers and pest control agent;
- Appropriate soils and acceptable average rainfall;
- Agricultural land under the command of the community sufficient for the allocation of 200 fed. for seed multiplication, and meets requirements for isolation;
- CDCs are interested in the commercial growing of certified seeds.
- In addition to the above, the communities will need to comply with the following : (a) accessibility during the rainy season; (b) absence or limited conflicts between farmers and pastoralists that would not have adverse impact on the communities nor hamper project implementation; (iii) security of the area (free from mines and armed conflict); and, (iv) the extent of rural poverty.

19. In the calibration phase, the SDP will establish 6 to 8 seed grower groups in Abbassiya locality. They will be selected among the 22 communities covered by SKRDP and WSRMP; the number of seed grower group will subsequently increase to 18 in Abbassiya locality to be selected among the 22 communities with which SKRDP and WSRMP operate. In the intensification phase, 14 seed grower groups will be established in Rahad locality in North Kordofan. They will be selected among the 69 communities that best respond to the criteria mentioned in para 10 above.

20. SDP envisages working with 105 communities in the calibration phase to develop effective demand for certified seeds. These 105 communities will be selected among the 222 communities that have benefited from the interventions of one or more IFAD co-financed projects over the past 10 years. The selection criteria are: (i) rate of adoption of improved technical practices, and (ii) willingness to organize producers to better plan for the agricultural season. In the intensification/scaling-up phase of the project, the number of communities is set to reach 200 and the number of beneficiary farmers is set to reach 108,000 households. At mid-term, and depending on the outcome of the trigger indicators, the Government will determine how to expand within the 4 localities and beyond to reach the target number of 108,000 beneficiary households. Additional communities will be selected based on the following criteria: (i) proximity to main markets; (ii) history of collective action in production related activities among women and men; (iii) trained farmers or community extension workers; (iv) experience with access to microfinance or credit services. If new localities are selected, then proposed locality selection criteria are: (i) the performance of the extension team in the locality and rural administrative units is satisfactory; (ii) satisfactory adoption rates of improved technical practices among participating communities; (iii) active CDCs; (iv) active contact farmers and pest control agents; (v) seed companies operate a network of licensed agents for the sale of certified seeds; (vi) good coverage of the locality by banks or microfinance institutions.

21. **Targeting is voluntary.** Considering the higher intensity of labor required for the production of certified seeds and the improved production of grain, it is likely that poorer households will be the first to participate as they can mobilize the labor requirements from within the family. Incentives used for to attract smallholders to become seed growers are (i) the insurance policy on the land under production; (ii) assured purchase at harvest at a higher price than the one prevailing at the market for grain produce at the time. In the case of grain producers, the incentives are (i) partial subsidy of the insurance policy; (ii) access to machinery early on in the season to complete land preparation. The

extension teams will monitor the poverty profile of the seed growers and grain producers participating in the project. Proactive measures will be taken to ensure that 40% of seed growers and 60% of grain producers are among the poorer households.

22. **Project outreach.** The total number of benefiting farmers using certified seeds would reach 108,000 households by the end of the project. This number covers the two states, with 43,200 households in North Kordofan and 64,800 households in South Kordofan. In addition, the project would help 1300 farmers establish themselves as specialized seed producers, supplying regularly the private sector with certified seeds.

### **C. Gender Mainstreaming, Women's Empowerment and Social Inclusion**

23. The Project will support gender mainstreaming and empowerment of women, to ensure maximum participation of women in various activities. It will also implement measures to enable the poor and more vulnerable groups (such as the youth, women heads of households) to participate and benefit. In particular, the Project will implement the following main measures and activities.

24. **Monitoring the participation of poorer households** in the project activities, namely seed production and adoption of certified seeds and soil and water conservation techniques. Given the incidence of poverty in the 4 localities constituting the project area, the poorer households should represent at least 60% of the membership of the grain producer groups. Given the entrepreneurial nature of the seed growing business, poorer households will constitute 40% of the seed grower groups. If the monitoring reveals that the participation of the poorer households is below average, the following measures can be introduced: (i) for the seed growers, decreasing the area to be cultivated by each participating farmer so that there is no competition over labor between food crops and the seed enterprise, or alternatively focusing the participation of the poor on the seed enterprises that require large labor input such as groundnut and cowpea; (ii) for the grain producers, ensure their full involvement in the participatory breeding activities so that their crop specifications are well understood and varieties developed are responsive to their needs, strengthen their saving capacity so that they can meet larger establishment costs of the crop, intensify extension visits.

25. Setting up of **quotas for women** participation in groups and associations, in particular: at least 30% of seed producer enterprise members and of grain producer group members will be women. The current track record of the SKRDP and WSRMP suggest that women participation in such activities can reach 40%, and that they are already well represented in the membership of the CDCs and of the farming groups.

26. Supporting groups consisting of women only as members; priority will be given to women heads of households through:

- Setting up quotas for women leaders in groups (at least one group leader will be a woman);
- Ensuring that at least 30% contact farmers (CFs) in each village will be women;
- Providing training on gender issues/gender mainstreaming in agriculture at various levels (grass root institutions, extension staff) for both men and women;
- Developing a gender-disaggregated monitoring and evaluation system that will specifically assess project's impact on women and men. The logframe of the project uses gender disaggregated data.

27. **Training and employment opportunities for rural young men and women.** The Project will specifically target young people to enable them to take up the various employment opportunities that will arise from the various activities, in particular: (i) seed production whereas during the selection of members of seed producer enterprises, priority will be given to interested and capable young farmers with a quota set at 20%; (ii) entrepreneurship opportunities for young people whereby youth will be encouraged to become small traders/agro-dealers/entrepreneurs and to be involved in seed marketing activities at the village or locality level; and (iii) non-farm job opportunities as a cadre in the grain producer associations or CDCs and in this respect, they will participate in the training of CDCs and Grain Producer Groups so that they become more effective in developing farming into a business at the level of their community or cluster of communities.

## Appendix 1: TARGET GROUP PRIORITY NEEDS AND PROJECT PROPOSALS

Typology	Poverty Levels And Causes	Coping Actions	Priority Needs	Project Response
Traditional rainfed small farmers	<ul style="list-style-type: none"> <li>Low agricultural productivity due to erratic rainfall, pest outbreaks, and lack adequate access to sufficient productive assets to make maximum use of the land (draught power/machinery, good quality seeds, fertilizer and labor) because of lack of access to credit</li> <li>Good quality seeds not available at right time and/or unsuitable to local agro-ecological conditions and farmers' production needs</li> <li>Some months of food insecurity for poorer households</li> <li>Poor extension services</li> <li>Poor organization of the farmers</li> <li>Poor marketing channels</li> </ul>	<ul style="list-style-type: none"> <li>Retaining seeds</li> <li>Available land left uncultivated</li> <li>Wage labor (off-farm, e.g. gold mining), handicrafts and petty trade)</li> </ul> <p>Specific coping mechanisms in NK are:</p> <ul style="list-style-type: none"> <li>Cultivation of watermelon which serves the triple purpose of food, fodder and water reserve;</li> <li>Charcoal making and sale;</li> <li>Reduction of household water consumption by half.</li> </ul>	<ul style="list-style-type: none"> <li>Improving yields</li> <li>Availability of improved quality seed of varieties that are suitable to the agro-ecological environments</li> <li>Availability of implements to ensure timely planting and weeding operations;</li> <li>Access to integrated pest management services;</li> <li>Access to credit</li> <li>Better agronomic and post-harvest practices</li> <li>Better support from the extension system</li> </ul>	<ul style="list-style-type: none"> <li>Bring research closer to the farmers to make sure that good quality seed varieties are developed according to smallholder farmers' needs and are suitable to their fragile agro-ecological environments.</li> <li>Bring the production of certified seeds at the local level through village-based seed producer enterprises and developing supply network at locality level and in main markets.</li> <li>Facilitate the development of contractual agreements between the seed grower groups and the seed companies.</li> <li>Support collective action, organization of farmers and capacity building of their institutions to enable them to better access inputs, credit and markets as well as achieve economies of scale.</li> </ul>
Small traders	<ul style="list-style-type: none"> <li>Low margins in grain trade</li> <li>Few business opportunities in rural areas</li> <li>High risk of farmer customers due to seasonal cash flows</li> <li>Trade in seeds very risky due to unreliable market and unavailability of good quality seeds</li> <li>Lack of credit</li> </ul>	<ul style="list-style-type: none"> <li>Buying and selling seed as grain</li> <li>Diversifying into other related businesses such as transport</li> <li>Investing in value-adding enterprises such as oil pressing and grain milling</li> </ul>	<ul style="list-style-type: none"> <li>Access to credit to finance grain purchases</li> <li>Access to special credit lines for distributing certified seed of improved varieties</li> <li>Business skills training</li> <li>Market information systems</li> </ul>	<ul style="list-style-type: none"> <li>Support the seed companies to develop a network of licensed traders of certified seeds</li> <li>Facilitate in the training of traders in seed business skills</li> <li>Support the development of a reliable seed market information system</li> </ul>

Typology	Poverty Levels And Causes	Coping Actions	Priority Needs	Project Response
Women <sup>64</sup>	<ul style="list-style-type: none"> <li>• Lack of storage facilities</li> <li>• High rent of shops</li> <li>• Lack of control over land</li> <li>• Illiteracy</li> <li>• Greater workloads (on the farm, for HH work and for walking distances for fetching water)</li> <li>• women are constrained by lack of credit, labor, and machinery for farming (particularly for land preparation, weeding and harvesting, being these more labor-intensive and costly)</li> <li>• Poor organization of the women</li> <li>• Lack of opportunities for small enterprises</li> </ul>	<ul style="list-style-type: none"> <li>• Home gardening (<i>jubraka</i>) to grow quick maturing varieties to bridge the hunger period</li> <li>• Participating in networks of women (<i>nafir</i>) for labor exchange</li> <li>• Participating in savings and credit groups</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of home gardening</li> <li>• Labor, machineries and credit for farming and off-farm activities</li> </ul>	<ul style="list-style-type: none"> <li>• Inclusion of quotas for membership of women in seed producer enterprise and farmer groups as well as for women-only seed producer enterprises</li> <li>• Support to women groups and their capacity building (training, FFS, link to machinery hire, credit, input suppliers for seeds and insurance)</li> </ul>
Youth <sup>65</sup>	<ul style="list-style-type: none"> <li>• Lack of employment opportunities in rural areas, especially those providing meaningful income and that attract young people to live in rural areas</li> <li>• Lack of skills</li> <li>• Lack of credit</li> </ul>	<ol style="list-style-type: none"> <li>1. Focus on subsistence agriculture</li> <li>2. Wage labor (gold mining)</li> <li>3. Migration</li> </ol>	<ul style="list-style-type: none"> <li>• Skills training for off/non-farm employment</li> <li>• Rural employment generation (both on and off farm)</li> </ul>	<ul style="list-style-type: none"> <li>• By supporting a market-oriented approach in the development of the seed sector, the Project expects to create meaningful employment opportunities for young people (e.g. in seed production and trade).</li> </ul>

<sup>64</sup> Issues noted for smallholder farmers are also valid for women, however, women (especially women heads of households) also face additional constraints and challenges because of persisting gender inequalities, which are separately highlighted and require specific support from the Project.

<sup>65</sup> Issues noted for smallholder farmers and small traders are also valid for the youth engaging in these activities (youth account for most of the agricultural workforce in the country). Some specific issues are noted here.

## **ANNEX 3: COUNTRY PERFORMANCE AND LESSONS LEARNED**

### **LESSONS FROM IFAD'S EXPERIENCE IN THE COUNTRY**

#### **A. Past results, Impact and Performance**

1. Since mid-1990s, IFAD emphasis began to shift towards developing the traditional rainfed sector. This orientation was explicitly declared in 2002-2007 COSOP and reiterated in the RB-COSOP 2009-2012. The current RB- COSOP 2009-2012, highlights the organization's aim of building the financial and social asset base of poor rural people, supporting their capacities to adapt and their ability to influence policy decisions that affect them. The overall goal is to empower 2.5 million rural poor people so they can increase their food security, incomes and resilience to shocks. The country programme is now working to: (i) leverage opportunities for rural poverty reduction created by the peace agreement and by the central position that agricultural development occupies in the growth strategies of the Government of Sudan; (ii) enable poor rural people to cope with the political risks related to continued civil and resource-based conflicts and with the environmental risks of climatic variability.

2. The results available indicated that IFAD programmes over years helped empower local communities, protect and assert traditional rights to resources, and promote good local governance. More than 700 registered community associations, including Village Development Committees (VDCs), Water Users Associations (WUAs), Village Sanduqs and Savings and Credit Groups (SCGs) have been registered and legally recognized. The Community Capability Index of the participating communities increased from 46% before project to 68% after project as in the case of North Kordofan Rural Development Project (NKRDP, loan 501-SD). The extension services have been improved at the community level through the deployment of community based and local extension agents e.g. paravets and midwives. In NKRDP, closed before the onset of the present COSOP, the introduction of improved seed varieties led to 60 to 170% increase in yields of food and cash crop respectively and this has culminated in an increase of 20% in farm income.

4. In the area of policy dialogue, the country programme shifted focus from the Nile based irrigated production systems to the traditional rainfed areas where the incidence of poverty and conflict is higher. Main achievements include: (i) enactment of state legislation for community organizations; (ii) decentralization of the extension services; (iii) demonstration of the potential of member based and managed microfinance institutions (MFIs) and ongoing engagement to replicate and scale up the model; (iv) devolution of water management to user groups, especially for potable and livestock uses but also in spate irrigation schemes; and (v) ongoing efforts to organize passage rights on stock routes and open-access rangelands

5. Currently, the programme is trying to: (i) consolidate ongoing projects to strengthen their impact and sustainability; (ii) strengthen marketing and microfinance components in ongoing projects; (iii) systematically seek complementarities and partnerships with ongoing operations in project areas; (iv) balance investments in capacity-building and productive activities; (v) mainstream gender; and (vi) expand the country programme to new rainfed areas.

#### **B. LESSONS LEARNED**

**5. Gender mainstreaming works best when the emphasis is on the practical.** The rate of women's participation in Projects' economic activities is estimated at forty percent. This was achieved by recruiting women extension officers at the local level, and by raising awareness of gender equity issues among extension staff, community leaders and women<sup>66</sup>. By focusing on practical actions with quick impact, such as labor saving techniques, nutrition and vocational training, the Projects have freed up women's time and helped develop their self-confidence. Building on socially accepted solidarity networks, they also enabled women to develop their financial assets and increase their incomes. In response to the Country Programme Evaluation (CPE), the ongoing programmes adopted an inclusive targeting approach. Self-targeting approaches based on livelihood systems has been used to channel proportionately more resources to the poorer households (smallholders, woman-headed households and returnee households). A case in point for the application of livelihoods-based targeting is the revitalization of the gum Arabic sector and in Support to small-scale traditional rainfed producers

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<sup>66</sup> The NKRDP developed a training curriculum on gender and development, which is being used in the training of project staff, community leaders and women in on-going and new projects.

in Sinnar State. The Country team is also continuing the use of gender mainstreaming and quota-setting for the participation of women and youth in the present SDP.

**6. Climate change activities are an essential part of operations in The Sudan.** The country programme features good climate change adaptation.<sup>67</sup> Ongoing Projects systematically include actions related to climate change adaptation such as: (i) dissemination of early maturing crop varieties; (ii) demonstration of water harvesting techniques; (iii) systematic mapping of natural resources in support of the formulation of state level natural resource management strategies; and (iv) protection of the vegetative cover by promoting the use of gas stoves, community forestry and range development. Given the severity of climate change over the long term in The Sudan, attention should be paid to developing disaster preparedness and rapid responses to severe climatic events particularly droughts and floods, in ongoing and future Projects, and to consider actions for climate change mitigation. The SDP proposes two main climate change adaptation measures: (i) drought resistant varieties; (ii) dissemination of soil and water conservations techniques.

**7. The community based institutions developed through IFAD co-financed projects are scalable.** IFAD country programme has many innovative features. The relevant key experiences include: (i) the adaptation and up-scaling of the community participatory approach (ii) the village extension agents operating on a cost recovery basis and (iii) the sanduq microfinance model (with links to the formal banking system); and (iv) the adaptation of indigenous water harvesting techniques; The SDP will complement these ongoing interventions and will build on them vertically through: (i) working with 200 registered and legally recognized CDCs developed by the previous and on-going IFAD intervention in the project areas namely NKRDP, SKRDP and WSRMP. This will enable SDP to generate the needed demand pull for a sustainable seed industry in the project area (ii) further strengthening the capacity of the extension teams to service and monitor demonstration packages and adoption of new technologies. The extension agents will receive both general and specialized training for group development and seed production; and (iii) developing the synergies and complementation with the community based microfinance institutions in implementing the full packages for the production of certified seeds and for the production of grain using certified seeds.

**8. Sudan is characterized by a volatile policy environment:** The core element of this project is cost recovery and its success depends on the abolition of the free distribution of seeds. It is true that the Ministry of Finance and National Economy stopped the programme of free seed distribution and accepted the principle of cost recovery as the key feature of project implementation approach; yet some of the government organs, NGOs and some UN agencies still distribute seeds for free. Sometime these decisions were justified by the humanitarian assistance for war affected people but often it is a matter of non-enforcement of the decisions. For example, while the Ministry of Finance did not provide allocation for seeds in 2011, the Federal Ministry of Agriculture used the allocation for the support to agriculture for the distribution of free seeds. At the state level, there is no unified position. In the case of South Kordofan three modalities are prevailing this year (i) complete free distribution (ii) highly subsidized distribution where farmers pay only the cost of transport and (ii) relatively subsidized where farmers are asked to pay half of the cost at delivery and the rest will be paid at harvest. This environment is not conducive for the development of a healthy business and unless a harmonized policy is adopted, the success of this project will be at extreme risk. As a result, the design team adopted a phased approach to programme implementation focusing on a small-scale pilot. Extending the project is based on the achievement of a set of trigger indicators.

**10. Contract farming in seed business is well practiced in the project areas:** historically, individual farmers are the main producers for their own seeds. Most farmers are not engaged in specialized seed production per se, but sell or exchange part of their grain harvest, specifically selected, as seeds to neighboring farmers and sometimes to local traders. More recently and with the increasing demand for certified seeds to meet some government, NGOs and UN agencies programmes, the seed companies started producing certified seed through contract farming. The contract varies from one company to the other but it shares the following common features: (i) the company finances partly the farmers and provides them with mainly seeds and sometimes other inputs in form of cash advances; (ii) at harvest the company deducts its cost, usually including the implicit cost of finance and purchases the total production at 15-20% higher price than the prevailing market price of grains. The company will be responsible for paying the fees for seed inspection. Field inspection and seed certification are carried out by the National Seed Administration.

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<sup>67</sup> Penny Urquhart (2008). Review of IFAD's support to climate change activities: case studies from Sudan. Draft report for the Technical Advisory Division, December 2008.



## **ANNEX 4: DETAILED PROJECT DESCRIPTION**

### **A. Project Approach and Design Considerations**

1. High quality certified seed of adapted varieties is not readily available to most rainfed traditional smallholders in the Sudan. The continuing decline in yields of major crops cultivated in rainfed areas by smallholders is attributed, among other things, to the constant use of harvested grain as seed. The inadequacy of certification and inspection services and the lack of an effective overall regulatory and enforcement policy perpetuate this situation. In the past, the Government failed to recognize the importance of the entire certified seed chain; and instead it recognized certified seeds as the only class of seed that can be sold to the public. Thus far, the regulatory and policy environment have not been favorable for private seed sector development. Instead the industry has been dominated by a state monopoly, the Arab Sudanese Seed Company (ASSCO) which controls more than 50% of the seed market thereby crowding out nascent private seed sector composed mainly of smaller companies.
2. Drawing on lessons from the community based seed production piloted by IFAD co-financed projects, FAO and other NGOs, the proposed Seed Development Project (SDP) will support formal production and marketing of certified seed through developing seed grower groups, market linkages and an enabling and conducive policy and legal environment. To develop further the community-based seed production system, seed producer groups will be formed, organized, and capacitated. Private seed companies will be invited to participate in the provision of inputs and services, marketing, contract production and joint ventures creating thereby a positively responsive seed supply system for increased smallholder crop productivity.
3. The Project investment would be directed at: (i) enactment and enforcement of seed legislation, improvement of policy dialogue and seed regulatory services; (ii) development and support of farmer seed growers and marketing channels, and (iii) promotion of active private sector participation. The investment in seed growers' enterprises will be on a cost recovery basis to create business-like environment and ensure sustainability.
4. The participation of the private sector in this project has a twin objective (i) to assist the smallholder seed growers groups to evolve into viable enterprises; and (ii) to increase the supply of high quality certified seed. It is expected that this business model will ensure sustainability of project interventions facilitating its intensification and scaling up to other localities and states.

### **B. Project Components**

5. The project has four main components, each component is expected to achieve a set of outcomes and outputs through a series of activities to be implemented by participating partners during the three phases of the project implementation, namely (i) pre-effectiveness phase, (ii) calibration phase, and (iii) intensification/scaling up and consolidation phase. These components together with their associated outcomes/outputs and activities are the following:
6. **Component 1: Institutional and Regulatory Environment Strengthening and Development.** *Outcome: Conducive policy and institutional environment for the Seed industry in place.* This component will work to introduce appropriate legislation for the seed industry; improve the National Seed Administration's (NSA) capacity to carry out its legal mandate of monitoring the national seed system; and establish a multi-stakeholder dialogue forum that brings together Government, the private sector, NGOs and farmers to discuss seed issues on a regular basis.
7. **Component 2: Improvement of the Seed Production System.** *Outcome: An economically viable seed production system that meets farmers' demands and expectations in place.* This component will capacitate the Agricultural Research Corporation (ARC) to carry out demand driven participatory research to ensure that sufficient quantities of high quality breeder, foundation and registered seed is produced. The registered seeds will then be made available to the private companies who will contract small scale Seed Growers Groups (SGGs) operating at the grassroots level to multiply registered seeds and produce seeds which will be certified by NSA before

commercialization by private companies to final users. Extension services of the SMOA will be provided with additional training on certified seeds-related aspects, as well as with necessary logistic and mobility to enable and empower them to provide the necessary and timely extension services to seed growers. Seed growers will be organized into registered groups to facilitate access to inputs, finance and crop insurance. Arrangement will be made to ensure that linkages between seed growers, private companies, rural finance services and crop insurance services are provided.

8. **Component 3: Support Seed Market Development.** *Outcome: Improved seed market delivery mechanisms in place.* This component will develop effective demand for certified seed; and link grain producer enterprises to financial institutions and input suppliers; enable PSC to put in place a network for effectively marketing certified seeds to smallholders in the project area; empowerment of existing Grain Producer Groups (GPGs) by acting on raising their awareness on adoption of certified seeds and correct seed practices<sup>68</sup> through extension services (including on-farm demonstrations) and information campaigns; seed fairs; most importantly through the promotion of full agricultural packages (including, certified seeds, mechanized land preparation and use of soil and water harvesting techniques, and crop insurance). Furthermore the project will support the establishment of Seed Market Database and assist microfinance institutions in improving their outreach in terms of logistic support and branch network.

9. **Component 4: Project Coordination and Management.** *Outcome: Project efficiently and effectively managed to achieve Project results with knowledge management in the seed industry.* This component will ensure that the Project is efficiently managed so that the Project achieves its objectives.

### **C. Detailed Description of the Project Activities**

10. **Component 1: Institutional and Regulatory Environment Strengthening and Development,** the expected outcome of this component is: ***the setting up of a conducive policy and institutional environment for the seed industry.*** The main outputs which will contribute to the achievement of this outcome are (i) enacting and enforcing a Plant Variety Protection (PVP) Legislation; (ii) building the capacity of NSA to effectively enforce and monitor seed multiplication and certification standards; and (iii) setting up a multi-stakeholder policy dialogue in the seed sector. The activities to be undertaken to deliver each of these outputs are described below:

- i. **Enacting and enforcing a Plant Variety Protection Legislation,** The key activities to be carried out include:
  - Drafting, reviewing and finalizing the PVP legislation for subsequent approval and enactment by appropriate authorities. This legislation should mirror Sudanese agriculture, in line with international standards and should be clear on the farmers' rights. This would be done in a series of consultations in form of workshops and forums involving the main stakeholders and experts, namely decision and policy makers from the lead ministries, breeders, researchers, private sector companies, members of parliament and NGOs; PVP legislation will be drafted by a highly qualified international expert and supported by a national expert both to be recruited competitively by the project.
  - Organizing specialized training workshops in PVP-related aspects for seed breeders from ARC and Private Seed Companies as well as the staff of NSA; and
  - Procurement, installation and maintenance of DNA testing equipment to enforce the capacity of NSA central laboratory to resolve breeders' rights disputes. The lead party responsible for PVP legislation and management and operation of the central laboratory is NSA.
- ii. **Improve the capacity building of NSA to effectively enforce and monitor seed multiplication and certification standards,** the following activities will be executed:
  - Training the staff of NSA in particular inspectors and seed analysts, to upgrade their skills and improve their capacity in the inspection of the seed certification process

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<sup>68</sup> For example the need for renewing their cultivars every three years to renew the quality or adopting newly developed cultivars)

both during production and processing of seeds, and to outpost NSA staff to the state to facilitate certification at the state level.

- Out posting of key staff to these NSA offices in the SMOA in North and South Kordofan States and provide them with means of transportation, laboratory equipment and technical assistance. In total 4 staff will be outposted, two seed inspectors and two seed analysts. The seed inspectors will work with a team of 2 extension agents from the SMOA to carry out the certification of contracted plots and production of seeds. The seed analysts will be posted in the state level seed testing laboratories. The SMOA in North and South Kordofan will provide the out posted staff with office space and housing. These facilities will be renovated by the project. The costs for the inspection of the plots contracted for the production of certified seeds will be charged to the seed company. The seed company will pay the funds into an inspection fee account which will be managed jointly by the NSA and the PCU of the project.

- iii. **Establish regular policy dialogue between different stakeholders in the seed industry,** the main activity is to support the convening of a national bi-annual forum of seed industry stakeholders (sponsored by the FMOA), to serve a common platform which will allow seed industry stakeholders, including representatives from FMOA, ARC, NSA, Extension Department, Farmer Unions, FAO, NGOs , seed companies, seed traders, etc. to engage collectively and periodically in a constructive policy dialogue to further improve the regulatory and policy environment of the seed industry. Similar forums will be held every two years at the state level.

11. **Component 2: Improvement of the Seed Production System.** The expected outcome of this component is to ***put in place an economically viable seed production system that meets farmers' demands***, and its main outputs are: (i) the improvement of the Agricultural Research Corporation's (ARC) capacity to carry out demand-driven participatory research; (ii) production of breeder, foundation and registered seed for the Project by the ARC; (iii) empowerment of extension system to provide technical support to seed producer enterprises; and (iv) formation and empowerment of community-based seed growers to grow certified seeds of improved and traditional varieties. The activities under each of these outputs areas follows

- i. **Improvement of the Agricultural Research Corporation's (ARC) capacity to carry out demand-driven participatory research,** the main activities are
  - Facilitate the creation of participatory research committees involving primarily, farmers and their organizations and the staff of ARC to develop among other things, research agendas;
  - Provide technical assistance to assist in the development of the participatory research methodologies and provide necessary training; and
  - Conduct on farm demonstration and participatory variety screening plots. Priority crops are: the landraces of millet/ certain varieties of sorghum (traditional varieties of South Kordofan) and of sesame which currently outperform improved varieties.
- ii. **Production of breeder, foundation and registered seed by the ARC,** the main activities are
  - Renovate the breeder/ foundation seed store at El Obeid to ensure that such seed can be stored for long periods with minimum deterioration in quality;
  - Provide input support for production of breeders and foundation seed. Both classes of seeds will be produced with supplementary irrigation to ensure optimum yields;
  - Provide laboratory equipment for the ARC station at El Obeid, and means of transportation and logistics for the two stations in El Obeid and Kadugli.
- iii. **Priorities for participatory research.** The preparatory work conducted during the design of SDP revealed that the performance of the following systems were mixed and required further fine tuning: (i) production of sorghum on gardud soils; (ii) the need for improved millet varieties that integrate features of traditional land races; (iii) the need for improved sesame varieties.

12. With regards the availability of registered seeds for the 2012 production season, the design mission ascertained that ARC and its network of breeders had sufficient quantities. The project will

provide an advance to ARC which will enable it to keep one year worth of registered seeds in stock. ARC will provide the registered seeds at the prevailing market rate to the PSC.

iii. **Enablement of extension system to provide technical support to seed producer enterprises** which will include:

- Assessment of training needs of extension staff;
- Organization of ToT workshops on aspects related to seed value chain (production, certification, storage marketing etc.) and on community development, participatory approaches, marketing, enterprise development; and gender mainstreaming;
- Organization and conducting of the baseline survey at the start of the project and partake in the impact assessment of the project after the completion of its calibration phase (in the third year);
- Training of extension staff on seed production and marketing practices; and
- Establishment of demonstration plots and farmer field school in each of the four localities in the project area. These farmers field school will involve the setting up of a field in the village where farmers will participate from land preparation to harvest. The field lessons will be held once every week for the duration of the crop. The field school will target both Seed Growers and Grain producers.

iv. **Formation and empowerment of Community-based Seed Growers Groups to multiply certified seeds of improved and traditional varieties**, is the principal and the most important output of the project and a key input in the development of the supply of certified seeds. It will bring production of certified seeds as close as possible to the communities and build on and learn from pilot initiatives that have been implemented through IFAD on-going operations, in the two States, and those of others donors. The project will establish and support up to 32 Seed Grower Groups (SGG), 14 in North Kordofan and 18 in South Kordofan. The average number of farmers per SGG is approximately 40 operating an average of 200 feddans. Each group will specialize in the production of preferably one crop per season following an appropriate crop rotation. To facilitate the inspection functions of NSA, access to extension support services, provision of agricultural inputs including supply of certified seeds, and to optimize different transaction costs in particular transportation and processing costs, SGGs will be selected, formed and trained in accordance with certain selection criteria which will be established by the PCU, NSA, ARC and Private Seed Companies (PSC). The latter will have the major say in this exercise. The critical parameters of the criteria include:

- a. Agronomical and physical characteristics (soil, rainfall, land area, plots isolation, specialization and distance between farmers, access to market and other physical infrastructure)
- b. SGG members' experience with entrepreneurial attitude and business skills;
- c. SGGs should be a registered body with a legal entity and emanating preferably from a Community Development Committee.
- d. At least 30% of group membership should be women. Women groups can be established based on assessment of local conditions and women's preferences.
- e. Preference for the formation of SGGs should be given to young farmers.

Extension teams who will spearhead the group formation, capacity building and coaching, will be carefully selected for this purpose and provided with supplementary advanced training in topics relating to group development and group dynamics, business planning, and the external and internal environment of certified seed value chain.

The SGG will be contracted by the PSC. The PSC will provide the seed grower group with registered seed, extension advice throughout the season and will purchase the seed production of certified plots at harvest with a 20% mark-up over the prevailing grain price. The PSC will deduct the cost of registered seed and all other inputs it provided from the purchase price. The PSC will conclude a contractual agreement with the SMoA/ agriculture department at locality level by which the latter will provide qualified extension teams to backstop the SGGs. This SMoA will provide this service to the PSC on a cost sharing basis. As the PSC will only partially cover the costs of production of certified seeds, certain SGG may resort to credit to finance their agricultural operations, in which case the extension

teams will facilitate the linkages of the SGG with the banks to take on agricultural loans. The size of the loan is estimated at 2700 SDG/ seed grower. Such a loan size is available under the conventional window of the banks and the requirements are an ID card, a guarantor's cheque or group guarantee.

**13. Component 3: Seed market development support** *Outcome: Certified seed marketing channels at the grassroots level developed:*

- (i) **Establishment of a Public Private Partnership** where initially one Private Seed Company (PSC) will be recruited through a two-step process, pre-qualification of first 6 companies with a profile satisfying a minimum technical, financial and managerial criteria, followed by a competitive bidding process for the selection of the highly qualified and socially responsible company. The recruited PSC will conclude a management agreement with PCU containing the modalities, terms and conditions for the production, processing and certification of seeds, the principles governing the contracting arrangement of SGGs and the different services such as inputs, technical support, pricing and marketing strategies, cost recovery aspects, relationship with ARC and ABS and insurance companies. A Private Sector Support Facility will be created under the project to finance on a grant basis one-off expenditures such as the purchase of the first round of production of certified seeds at harvest from the SGG. The PSCs and SGGs will conclude quantity-based seed production contracts specifying the crops, quantity, and seed varieties and the parameters for determining the purchase price of the produced seeds. SGGs may also act as agents for PSCs for the commercialization of the certified seeds in their communities.
- (ii) **Creation of a network for marketing certified seeds to smallholders in the project area.** The PSC will present – as part of its business plan – a proposal for retail sale of certified seeds to smallholders in the project area. The PSC will be responsible for setting up the network, equipping it as needed. The project will provide training to retail sale agents and company staff on marketing of certified seed.
- (iii) **Empowerment of the existing farmers producers (Grain Producers Groups)** the beneficiaries of the project in both North and South Kordofan are estimated at about 108,000 smallholders including 30,000 women, cultivating an average of about 1.0 million feddans per year. Increasing supply of certified seeds is contingent on the commitment of GPG to adopt cultivation of certified seeds annually and renew the stocks of certified seeds at least once every three years and preferably every two years. The starting point will be to work with the existing GPGs that were established under the on-going IFAD co-financed projects in the project area, in approximately 222 communities. The project will provide these groups with appropriate training and capacity building in group dynamics, conflict resolution, basic accounting and finance and in technical aspects for the use of certified seeds with soil and water harvesting techniques. The critical support activities which will be undertaken by the project will encourage farmers to adopt regular use of certified seeds. These activities are: demonstrations, field days, seed fairs, and a seed market database.
  - a. Access to credit to provide short-term loans to finance the improved agricultural package, which consists of certified seeds, machinery hire for soil and water conservation, labor cost for weeding and harvesting, and the cost of crop insurance. The estimated loan size in this case varies from SDG 500-600/ grain producer, which is equivalent to the range of microfinance products offered by ABSUMI and Bara'ah. In this case, the access to loans from Bara'ah and ABSUMI is mediated through women representing a household and organized in solidarity groups.
  - b. **Conclusion of a service contract between the project and the extension teams operating in the project area either through the agriculture department at locality level or the extension department of the SMOA**, to provide GPGs with

- intensive extension support services from sowing through to harvesting, storage and marketing. The extension staff will play a key role in the propagation and adoption of the proposed technical packages. They are organized into four teams one per locality; each team is composed of a multi-disciplinary extension team with the following specialization: (a) team leader cumulating M&E responsibilities; (b) crop production; (c) community development and capacity building; and (d) agricultural technician. Each team will be responsible for up to 25 GPGs villages. It will have a team leader who is responsible for the smooth operation of the team. Each extension agent will be responsible for the implementation of a monthly programme and the preparation and submission of monthly progress reports. Extension Team Leaders will prepare a consolidated monthly report. A monthly inter and intra team coordination meeting will be organized with the M&E officer of the PCU and SCU. The meetings will discuss the progress made, difficulties encountered and remedies for addressing emerging problems. The extension teams will organize in favor of the GPG intensive extension support services accompanied by continuous training and coaching through farmers' schools and field demonstrations, visits to the seed growers' fields and participation in seed fairs.
- c. The **insurance policy** is a production cost based insurance. It covers 75% of the total direct cost of production. The insurance premium is set at 10% of the total direct production cost per feddan which will be shared between GOS, the GPGs at a ratio of 1:1 during the calibration phase of the project. During the calibration period, Sheikan insurance company and the project will collaborate in collecting appropriate data, which will serve in fine-tuning the actuarial parameters and adjusting the insurance premium accordingly. The implementation arrangements of the insurance scheme are presented in annex 5. The project will monitor the profile of the beneficiaries of the insurance policy and the uptake rate after the initial calibration phase. This will help the project better fine tune its targeting strategy and tailor the insurance policy accordingly.
  - d. Extension teams will also assist the GPG to put in place a cost effective seasonal **purchase plan** for certified seeds through the participating PSC or through its agents and seed marketing outlets. The GPG will therefore make their seed requirements known early in the season thus facilitating the supply of seeds in a timely manner. The Extension teams will also assist the GPG link with machinery operators for land preparation, banks for agricultural loans, and Sheikan insurance company for an insurance policy.
  - e. In the first phase, the project will focus on 105 GPG in the 4 localities selected among the CDCs currently collaborating with WSRMP and SKRDP. It will expand to 200 GPG in the second phase, in the same project area and beyond based on the recommendation of the mid-term review mission, and as per the selection criteria indicated in annex 2. The capacity building of the GPG and the CDCs aims to develop a model farmer organization that will subsequently influence the uptake of certified seeds and the techniques of soil and water conservation.
- (iv) **Output: Development of Seed Market Information System** through setting up of a Seed Market Database (SMDB) which will involve collection of market-related seed data (quantities, varieties, crops, prices, location etc., growers, traders, agents). This information will be processed, analyzed and disseminated regularly and in appropriate formats. The templates for this information are presented in annex 6. There is a number of custom-made Seed Management Information Systems software, which could be purchased on demand or acquired as knowledge sharing initiative through similar IFAD financed projects within or outside the Near East and North Africa region. The activity will be carried out by PCU in coordination with NSA/SMoA once it is tested and becomes fully operational it will be transferred to NSA for management maintenance and update. In addition to SMDB, various modes of information transmission will be used such as special bulletins and newsletter, broadcasted through local televisions and radios as well as mobile phones and Internet. This should be the responsibility of the State Ministries of Agriculture in North and South Kordofan in coordination with the NSA. Initially this task will be contracted to media agencies. This information could also be made

available during seed fairs. The Project will supply computers and the necessary software. With a functioning system, farmers will be able to obtain fair value for their crops because they will have better bargaining power. Entrepreneurs will seize the business opportunities created to invest in agribusiness industries. This seed/grain market information system can develop into a national commodity exchange that can attract international buyers and investors.

- (v) **Expand access of the grain producers to ABSUMI services<sup>69</sup>**. The support will include: rehabilitation of ABSUMI offices in the locality of Sheikan, in addition to logistic support in form of means of transportation and office equipment. ABSUMI will have two branches covering Rahad and Sheikan locality and offering loans that are in demand for agriculture purposes. The access to finance from ABSUMI – given ABSUMI business model – would be through women representing households and organized in guarantee groups. It is likely that women grain producers will opt for this finance window. Men will likely opt for the conventional credit from the state banks, where alternative collateral requirements are a registered group, an account at the bank and a guarantor's cheque.

14. **Component 4: Project Management and Coordination.** SDP will be implemented through the ongoing IFAD co-financed WSRMP Project Coordination structure to take advantage of the synergies in management and extension support that this ongoing Project offers. The development of certified seed production is an input into improving the overall agricultural system for the smallholders in North and South Kordofan. The Project will provide allocation for the recruitment of the additional staff comprising a Seed specialist and an accountant, both competitively recruited to supplement the existing staff in the WSRMP. The Seed specialist will report to the Programme Coordinator of WSRMP in El Obeid.

- (i) WSRMP will outsource the implementation of contract agreements with the SGG and development of a network for marketing certified seeds to a competitively recruited private seed company. The private seed company will work with the extension teams facilitating the development and implementation of the appropriate enterprise development models.
- (ii) The M&E officers in the Programme and State Coordination Units of WSRMP will be responsible for expanding the existing Planning and Monitoring & Evaluation (PME) System for the WSRMP to include the SDP during the first six months of Project implementation. For Project monitoring and evaluation the existing structure within the WSRMP will be expanded to incorporate indicators that directly respond to the production and delivery of certified seed. However, the Project will provide a budget line for undertaking the baseline survey, annual implementation review, impact assessment, the mid-term review and the final Project completion report.
- (iii) The Project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, TV and radio programmes). This knowledge sharing process will be supported by a well-focused series of workshops and learning events. Regional knowledge networking will be supported to build and share approaches, tools, methodologies, technologies and best practices.

Table 1 summarizes the stakeholder matrix for the implementation of the various components and sub-components of the SDP. Table 2 provides an inventory of on-going agriculture development initiatives in North and South Kordofan with which the SDP can collaborate.

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<sup>69</sup> Agricultural Bank of Sudan Microfinance Initiative.

**Table 1: STAKEHOLDER MATRIX/PROJECT ACTORS AND ROLES**

<b>Component</b>	<b>Sub-Component</b>	<b>Coverage</b>	<b>Perennial Institutions Involved</b>	<b>Potential Contractors/ Periodic Inputs</b>	<b>Other Possible Partners in Execution</b>
Component 1: Strengthening policy and delivery capacities					
	Enacting and enforcing Plant Variety Protection legislation	Country-wide	National Seed Administration and Federal Ministry of Agriculture	Individual Consultants, UPOV	NGOs, Private Sector, Producer Organizations
	Capacity building of National Seed Administration	Country wide	National Seed Administration	Firms for goods and services	ISTA
	Support to policy dialogue	Khartoum, and in North and South Kordofan	National Seed Administration	Private seed companies, NGOs, and producer organizations, Farmers' Union	NGOs, Private Sector, Producer Organizations
Component 2: Improvement of the Seed Production System					
	Capacity building of ARC in participatory plant breeding	North and South Kordofan	ASARECA		
	Production of breeder/ foundation/registered seeds	North and South Kordofan	ARC		Private Seed Company
	Enable extension system to provide technical assistance to SGG	4 selected localities in North and South Kordofan	NSA, SMoA		Private Seed Company
	Formation and empowerment of SGG	4 localities in North and South Kordofan	Extension teams		Private Seed Company, Banks/ MFI, Sheikan Insurance Co.
Component 3: Seed Market Development Support					
	Establish Private Public Partnership	North and South Kordofan	Private Seed Company	national and international consultants on market research	
	Creation of a network for marketing certified seeds to smallholders in project area	North and South Kordofan	Private Seed Company		Banks
	Empowerment of GPG	4 project localities	Extension teams		LCSA, Banks/ MFI, Sheikan



Component	Sub-Component	Coverage	Perennial Institutions Involved	Potential Contractors/ Periodic Inputs	Other Possible Partners in Execution
					Insurance Co., machinery operators
	Seed Market Information System	North and South Kordofan	SMoA		NSA
	Support to ABSUMI	Sheikan locality	Agriculture Bank of Sudan		Microfinance Unit of Central Bank of Sudan
Component 4: Project management and coordination					
	Management, fiduciary aspects, planning/ monitoring/ evaluation/ knowledge management	North and South Kordofan	State Ministries of Agriculture in North and South Kordofan within the framework of the WSRMP	Individual contracts Service provider contracts	NGO, private sector, banking/ MFI, producer organizations, etc.

**Table 2: COMPLEMENTARY DONOR INITIATIVE/PARTNERSHIP POTENTIAL**

Donor/Agency	Nature Of Project/Programme	Project Coverage	Status	Complementarity/ Synergy Potential
<b>EU-</b> Sudan Productive Capacity Recovery Programme	<ul style="list-style-type: none"> <li>The programme aims at sustainable agricultural development to control poverty and attain desirable social and economic welfare in the country. The target beneficiaries of the project are the rural communities of the selected areas, including small farmers, fishermen and herdsmen who have been affected by the civil war, drought, inequitable land reallocation, tribal conflicts, high tax charges, high input costs, limited supply of credit, poor marketing services reduced access to essential services.</li> </ul>	<ul style="list-style-type: none"> <li>It covers four states Blue Nile, Red Sea, South Kordofanian and River Nile</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Capitalization and scaling up of production of certified seeds through the SPCRP model projects</li> <li>Source expertise for building the capacity of extension services in NK and SK</li> </ul>
<b>EU-</b> Food Security Information for Action (SIFSIA)	<ul style="list-style-type: none"> <li>The program will support baseline and information generation and interpretation to serve food security policy and planning making</li> </ul>	<ul style="list-style-type: none"> <li>All 15 states in the North and extension phase is under design and will cover South Kordofan, Blue Nile, Red Seas and Kassala</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>- Marketing database, market price information for stakeholders, and downscaling of this information to states and localities.</li> <li>- Knowledge sharing in establishing trade points in North and South Kordofan</li> </ul>
<b>ARP:</b> Agriculture Revival Programme	<ul style="list-style-type: none"> <li>Government programme</li> <li>Period 2008 to 2012</li> <li>In North and South Kordofan, mainly funding water harvesting projects (dams); extension (soil and water conservation, improved seed varieties); tractorization through equipment of cooperatives with tractor and implements.</li> </ul>	<ul style="list-style-type: none"> <li>All state for equipment in tractors and agriculture implements</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Capitalization in scaling up the technology transfer on soil and water conservation for production of certified seeds.</li> </ul>
<b>FAO-</b> Food Security Programme	<ul style="list-style-type: none"> <li>Distribution of seed as starter pack to displaced and returnees</li> </ul>	<ul style="list-style-type: none"> <li>The three Darfur states, South Kordofan, Blue Nile and Kassala</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Harmonization of seed distribution on cost basis.</li> <li>FAO and its NGO partners are a good market for the seed producers.</li> </ul>
<b>FAO</b> - Seed multiplication in South Darfur and Southern Sudan	<ul style="list-style-type: none"> <li>Seed multiplications</li> </ul>	<ul style="list-style-type: none"> <li>At negotiation stage in South Darfur; with primary focus on South Sudan</li> </ul>	<ul style="list-style-type: none"> <li>At negotiation stage</li> </ul>	<ul style="list-style-type: none"> <li>Scaling up of community based seed production and marketing and knowledge sharing</li> </ul>

Donor/Agency	Nature Of Project/Programme	Project Coverage	Status	Complementarity/ Synergy Potential
<b>WFP</b> - linking farmers to the markets	<ul style="list-style-type: none"> <li>Facilitation of linking farmers to the markets through the provision of insurance to the credit risk;</li> <li>Ensure the marketing of the produce in the early stage</li> </ul>	<ul style="list-style-type: none"> <li>Blue Nile, South and North Kordofan and Gedarif</li> <li>The three Darfur states, South Kordofan, Blue Nile, Kassala and Gedarif</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Collaboration to provide farmers benefiting from WFP initiative with certified seeds.</li> </ul>
<b>E.U. : Kadugli- Talodi Market Access Project</b>	Reduce vulnerability and enhance livelihoods of small-scale rainfed farmers (including returnees and those residing in peri-urban areas), while promoting peace initiatives in southern parts of S. Kordofan: <ul style="list-style-type: none"> <li>feeder roads</li> <li>support to productive marketing groups</li> </ul> Institutional capacity building of local authorities and local stakeholder organizations (farmers unions, chambers of commerce, etc.)	S. Kordofan (Kadugli and Talodi localities)	Not yet effective	<ul style="list-style-type: none"> <li>Completes needed infrastructure in conflict affected areas;</li> </ul>
<b>IFAD and Swedish Contribution</b> funded Bara'ah , Microfinance Institution (established under SKRDP)	<ul style="list-style-type: none"> <li>Provision a range of MF products to small scale producers in Rashad locality</li> </ul>	<ul style="list-style-type: none"> <li>Rashad locality of South Kordofan</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Farmer and seed producers' access to savings and credit services from Bara'ah.</li> <li>Sharing Bara'ah's experience in setting up apex associations.</li> </ul>
<b>IFAD and EKN</b> funded South Kordofan Rural Development Programme	<ul style="list-style-type: none"> <li>Provision of Agricultural services to small scale producers in South Kordofan</li> </ul>	<ul style="list-style-type: none"> <li>War affected areas in South Kordofan, namely, Juldud, Umdroain, Haiban, Liri, Kadougli and Talodi</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Knowledge sharing related to the present and future experience in seed production</li> </ul>
<b>IFAD and Central Bank of Sudan</b> funded ABS Microfinance Initiative	<ul style="list-style-type: none"> <li>ABS led MF institution providing a range of MF products through constitution of women groups</li> </ul>	<ul style="list-style-type: none"> <li>Um Ruwaba locality in North Kordofan</li> </ul>	<ul style="list-style-type: none"> <li>On going</li> </ul>	<ul style="list-style-type: none"> <li>Access of farmers to microfinance</li> </ul>
<b>IFAD</b> financed Western Sudan Resources Management Programme	<ul style="list-style-type: none"> <li>Improve the equity, efficiency and stability of the economy of North and South Kordofan through rationalizing the regulation and use of natural resources, enabling access of approximately 200,000 households in North and South Kordofan States, to productive services and to fair terms</li> </ul>	<ul style="list-style-type: none"> <li>North and South Kordofan with special focus on 3 stock routes and on the spate irrigation scheme of Khor Abu Habil</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> </ul>	<ul style="list-style-type: none"> <li>Coordination and fiduciary aspects of Seed Development Project</li> <li>Strengthening of extension, research and farmer groups and their linkages with the private sector</li> <li>Higher level of sustainability of the WSRMP interventions namely along the Eastern stock route where Seed Development Project activities</li> </ul>

Donor/Agency	Nature Of Project/Programme	Project Coverage	Status	Complementarity/ Synergy Potential
	<ul style="list-style-type: none"> <li>of trade.</li> <li>The Programme is expected to promote the establishment of a natural resources governance system</li> </ul>			concentrated.
IFAD and EKN financed South Kordofan Rural Development Programme	<ul style="list-style-type: none"> <li>3 phase programme with goal of “to improve and sustain the living standards of smallholder farming and pastoralist households by assuring their food security and providing them with social services in a secure environment where they can manage their own community affairs”</li> </ul>	<ul style="list-style-type: none"> <li>4 localities in South Kordofan</li> </ul>	<ul style="list-style-type: none"> <li>On-going</li> </ul>	<ul style="list-style-type: none"> <li>- SKRDP piloting a different PPP model for seed production with participation of SMoA, Farmers’ Union, representatives of beneficiary communities organized in CDCs – knowledge sharing on supply and marketing of certified seeds</li> <li>- Capitalize on technical expertise developed in SMoA of SK on seed multiplication and technology transfer.</li> </ul>

## **ANNEX 5: INSTITUTIONAL ASPECTS AND IMPLEMENTATION ARRANGEMENTS**

### **A. The main Implementing Partners and their Roles**

This section describes the governance of the project as well as the role of the main implementing partners. The project organigramme is available in figure 4 of the main report. The SWOT matrix is available in table 8.

#### **1. Governance of the project**

The **Ministry of Finance and National Economy (MOFNE)**. MOFNE is the Recipient of the IFAD grant. It carries out annually joint supervision missions with IFAD on the performance and fiduciary aspects of the project. It allocates annually the Government contribution to the Seed Development Project and facilitates the exemption of duties and taxes on goods, works and services procured by the project. With regards the Government contribution to the insurance scheme, the Ministry of Finance and National Economy will verify that the annual insurance costs budgeted in the AWPB is available for commitment.

The **Federal Ministry of Agriculture (FMOA)**. FMOA is the lead agency. It chairs the Inter-Ministerial Steering Committee of the IFAD co-financed projects and the Programme Coordination Committee of the WSRMP. Through these organs, it is responsible for programme and project oversight, strategic guidance and facilitation of the implementation of necessary strategic and policy decisions to enable the development of the seed sector.

The **Inter-Ministerial Steering Committee for the IFAD co-financed Projects** is a standing committee that oversees all IFAD co-financed projects in the country. Specifically for the SDP, Its role and functions are primarily to review and approve policy recommendations emanating from the Programme Coordination Committee pertaining to seed supply and marketing, and steer the replication of the SDP in other states. The State Minister of Agriculture in FMOA or his representative chairs this committee; the membership in this committee includes the representative of the Ministry of Finance and National Economy, Ministry of Irrigation and Water Resources, Ministry of Animal Resources and Fisheries, the State Ministries of Agriculture where IFAD co-financed projects are on-going, the Central Coordination Unit for IFAD co-financed projects. For the purpose of the SDP, the Seed Council will be added to the membership by a decree from the Federal Minister of Agriculture. The committee meets twice a year. The rapporteur of the Interministerial Steering Committee is the Directorate of International Cooperation in the FMOA.

The **Programme Coordination Committee of WSRMP (PCC)**. The PCC was established at federal level by a ministerial decree in 2006 and it has overall oversight on the WSRMP. It is responsible for; (i) approval of the AWPB and progress reports; (ii) facilitate, support and assist the progress in implementation through inter-agency and inter-state operations; (iii) monitoring the WSRMP progress without interfering in the day to day operations of the PCU; (iv) ensuring incorporation of the state counterpart funds in their respective budgets and compliance of WSRMP with state development plans. Its mandate will be extended to the SDP by decree from the Federal Minister of Agriculture. The PCC meets twice a year.

It currently includes the following members: The State Minister of Agriculture in the Federal Ministry of Agriculture, chairperson; with the participation of a senior representative from the MOFNE; a senior representative of the State Ministry of Agriculture and State Ministry of Finance in each state; 4 senior representatives from the Union of Pastoralists, Farmers, Gum Arabic producers and from Water Associations; the Senior Coordinator of IFAD financed projects; the representative of Agriculture Bank of Sudan; and the Coordinator of WSRMP who acts as the rapporteur of the PCC. For the purpose of the SDP, the NSA and the Seed Trader Associations will both be added to the PCC.

The membership of the PCC will be right-sized after the completion of WSRMP: the membership of the representatives of Gum Arabic producers association and the state ministry of finance, as well as the ministry of federal government will end with the closing of loan 655-SD financing WSRMP.

The two **State Coordination Committees (SCC)**. The SCC is established in North and South Kordofan State. Its role is to facilitate and review the performance of WSRMP implementation at state level. It reviews AWPB and progress reports submitted by the SCU and approves them for submission to the PCU for consolidation. Its mandate will be extended to cover the SDP.

The SCC is chaired by the State Minister of Agriculture or his representative and composed of the director general of the state ministry of agriculture, one representative from the state ministry of finance, the state ministry of physical planning and public utilities, the state manager of Forest National Corporation, the manager of the range and pasture department and soil and water conservation of the state ministry of agriculture, representatives from Pastoral and Farmers' Union and the native administration. The state coordinator of WSRMP acts as the rapporteur of SCC. For the purpose of the SDP, the SCC will be expanded to include the ARC research stations in El Obeid and Kadugli. In 2014, the SCC will be right sized to include the members directly related to the SDP implementation. It meets twice a year.

## **2. Management set up of the project**

The **Programme Coordination Unit of WSRMP (PCU)**. Established in 2005, the PCU coordinates WSRMP activities that are undertaken by the implementing agencies, consolidates AWPBs, liaises with state line ministries and NGOs; mobilizes technical assistance; ensures that contract obligations are met; follows up and monitors component implementation; and ensures the integrity in the use of WSRMP funds, assets and financial systems. The PCU enjoys operational autonomy. Its mandate will be expanded to the SDP and this amendment will require a new ministerial decree.

The PCU is composed of a programme coordinator, a senior M&E officer, an assistant M&E officer, a rural finance and marketing officer, a community development officer, a financial manager, an accountant and an accountant clerk, 2 executive and technical secretaries, an administrative officer. Given the workload during the SDP calibration phase which corresponds to the phasing out of WSRMP, and the specialized nature of SDP, two staff will be added to the PCU during the period 2012-2014: (i) a seed specialist; (ii) an accountant. Their terms of reference are in appendix 1 and 2 of this annex. As of 2014, the PCU will be right sized and will be composed of the programme coordinator, the senior M&E officer, the community development officer, the financial manager, one accountant, the administrative officer and one secretary.

The two **State Coordination Units in North and South Kordofan of WSRMP (SCUs)**. Established in 2006 by state decree, the SCUs in North and South Kordofan carry out the following: (i) coordinate WSRMP activities undertaken by the implementing agencies within their respective states; (ii) consolidate the AWPB of the implementing agencies and service providers within the states; (iii) liaise with the state line ministries; (iv) managing contracts concluded with different service providers; (v) identify technical assistance requirements and facilitate its delivery on behalf of the PCU; (vi) carry out periodic M&E activities; (vii) safeguard the project funds and assets and ensure financial system transparency and integrity. The SCU mandate will be expanded to cover SDP. SCUs currently report to the PCU, and are autonomous entities from the state ministries of agriculture.

The SCUs are currently composed of the following key staff; state coordinator; M&E officer; secretary or administrative officer; accountant. The two SCUs are expected to bear the brunt of the SDP implementation during the calibration phase and hence an allocation was provided in the SDP budget to top up their salary by 20% as compensation for the additional workload. As of 2014, the SCUs will be terminated and the functions for the state coordination of the SDP will be streamlined within the state ministry of agriculture in North and South Kordofan.

The state minister or his representative will recruit competitively among the staff of the extension/ planning/ rainfed agriculture/ land use departments/ finance and administration department qualified staff to occupy the posts of coordinator, M&E officer and accountant for the SDP during the period 2015-2017. Their terms of reference are in appendix 3, 4, 5. The new SCUs will report to the Extension Department.

The **National Seed Administration (NSA)**. The NSA will benefit from the SDP to develop its own capacity in the inspection and certification of seeds and it will organize the formulation of a plant variety protection legislation as well as a plant breeding strategy, as per terms of reference listed in appendices 6 and 7. In order to increase its efficiency, it will outpost 4 of its staff to North and South Kordofan: in each state, a seed analyst and an inspector will be outposted. The seed analyst will provide technical backstopping to the operators of the seed lab of the state ministry of agriculture, and the inspector will carry out the inspection of contracted plots for seed multiplication as well as train the extension personnel at state and locality levels, and the seed growers. Each year and as per AWPB, NSA will validate whether the planned quantities of foundation and registered seeds for the production of certified seeds in the given year, are achievable. The NSA and PCU will sign a letter of agreement detailing their respective roles and responsibilities in the implementation of the SDP as well as the in-kind support to be provided by WSRMP, in form of goods, works and services. The letter of agreement will also explain the disbursement modalities for the seed inspection account whereby the inspection fees paid by the private sector will be remitted to this account and disbursements from this account will cover the running expenses of the inspection team (vehicle operation costs, office running costs and field allowances).

The **Agriculture Research Corporation (ARC)**. The ARC will carry out the following in its two research stations: (i) production of registered seeds based on demand projections for sale of certified seeds; (ii) participatory breeding of improved varieties from the traditional landraces favored by farmers; (iii) training of the extension teams with establishment of demonstration plots on use of certified seeds, soil and water conservation techniques and micro-fertilization. The PCU and ARC will sign a letter of agreement detailing their respective roles and responsibilities in the implementation of the SDP and the type of in-kind support that ARC will receive from the PCU.

The **Central Coordination Unit for IFAD co-financed projects (CCU)**. The CCU is based in Khartoum. It is an autonomous unit that reports to the Federal Minister of Agriculture, and fulfills support services to the projects. The PCU will contract the CCU to undertake the following: (i) technical assistance during the start-up of the SDP; (ii) national and international procurement of goods, works and services; (iii) follow-up on the budgeting of counterpart funds in the Government development budget for the year and release of funds from the MOFNE to the project. The CCU will systematically involve the NSA in all procurement committees dealing with supply of equipment, works and services pertaining to seed testing, certification, production and marketing.

The **State Ministries of Agriculture in North and South Kordofan (SMoA)**. The two state ministries lead the state coordination committees of WSRMP and SDP. (i) facilitate project implementation at state level through the deployment of staff for this purpose and through coordination/management and technical backstopping of the extension teams; (ii) provide offices and residential facilities to the NSA out-posted staff; (iii) evaluate project performance and alignment with state objectives for agriculture development; (iv) ensure complementarity between various agriculture development projects operating at state level; (v) collect regular information about crops and seed production and supply, and in particular updating the Seed Market Database (see annex 6).

**The extension teams.** As mentioned, there are 6 extension teams in the SDP project area. They will be fully mobilized during the calibration phase. The existing teams will be organized to create a seed multiplication sub-team. The seed multiplication sub-team will be composed of: (i) team leader cumulating M&E and general agriculture responsibilities; (ii) seed production specialist; (iii) agricultural technician; and (iv) women extension agent. This sub-team will be responsible for the selection and formation of the SGG in collaboration with CDCs and seed companies, ensuring that the quota for women participation is adhered to, for

the training and technical backstopping of the SGG, for the implementation of farmer field schools covering all topics of seed multiplication, and for monitoring the SGG. The team leaders will prepare a consolidated monthly report. Over the project duration and considering the number of SGGs, it is estimated that only two sub-teams will be required, one based in Rahad locality and the other in Abbassiya locality. The recurrent costs of the sub-team will be covered by the seed company, as per terms of contract between the seed company and the agriculture department at locality level/ extension department at state level.

The regular multi-disciplinary extension team will continue working with the CDCs formed by SKRDP, WSRMP and the closed NKRDP, with the aim to build effective demands for certified seeds among the existing farming groups of 222 communities present in the project area. The multi-disciplinary extension teams are composed of 5-7 members. Their role is : (i) to sensitize and train the farming groups with the aim to increase adoption of certified seeds and improved technical practices (soil and water conservation and micro-fertilization), as well as periodic renewal of certified seeds; (ii) ensure that women are actively participating in demonstration and training activities; (iii) facilitate linkages between the farming groups and banks/ MFI, insurance companies and machinery operators; (iv) monitor participation of poor, women and youth in the project and monitor adoption rates and change in productivity and land cultivated. These extension teams will submit an AWPB that specifies activities carried out for WSRMP and for SDP. During the calibration phase, the recurrent costs for extending extension services to GPGs will be covered by the project, as per the terms of a service contract between the PCU and the agriculture department at locality level/ extension department at state level. However in the intensification/ scaling up phase, a cost recovery mechanism will be negotiated and agreed with the CDCs.

The mission carried out the following verification (table 1) to confirm that there were enough qualified human resources allowing the extension team to carry out the activities under components 2 and 3.

**Table 1. Human resources availability to staff the extension teams for SDP**

	2012	2013	2014	2015	2016	2017
<b>North Kordofan</b>						
Farmers Groups						
SGG in NK (cumulative)				7	14	14
GPG in NK (cumulative)	42	42	42	54	60	80
Human Resources in NK	2 extension teams, based in Sheikan and Rahad			Addition of sub-team in Rahad for SGG by recruitment of 4 persons from among 34 extension agents (18 men and 16 women), all qualified in crop sciences	Addition of extension team in Rahad – recruitment of 5 members from cadres posted at locality level	
<b>South Kordofan</b>						
SGG in SK (cumulative)	6	6	8	8	15	18
GPG in SK (cumulative)	63	63	63	81	80	120
Human Resources in SK	4 teams already in place and covering two localities of Abbassiya and A. Gubeiha – one team to specialize in SGG				Deployment of additional team from nearby Um Barambita	



Other partners in the project include:

- The **Agriculture Bank of Sudan (ABS)**. The PCU will conclude a letter of agreement with the ABS to support the expansion of ABSUMI in Sheikan; to conduct joint assessment to estimate the credit demand of SGGs and GPGs for each season; to hold regular meetings between the extension teams and the ABS and ABSUMI branches at locality level to assess performance of loans to SGG and GPG.
- **Sheikan Insurance Company**. The PCU will conclude a letter of agreement with Sheikan Insurance Company to extend cost based insurance to SGG and GPG. In the case of the SGG, the project will support the cost of insurance premium in a declining scale for two years, thereafter the cost of the premium is borne by SGG. In the case of the GPG, the group will pay the insurance cost on a 1:1 ratio with the Government contribution.
- The **Private Seed Company**. The PSC will participate in the project to develop its business and extend seed supply to the smallholders, starting with the two states of North and South Kordofan. The PSC will be responsible for: (i) contracting SGG; (ii) providing them with agreed inputs and technical advice as per the approved business plan; (iii) developing network of licensed traders for certified seeds in the target localities and state as per approved business plan; (iv) complying with seed inspection and certification requirements and timely payment of inspection fees; (v) assessing the profitability of the seed production model based on contracting SGG; (vi) reporting on the progress in implementation against approved business plan.

## **B. Component-wise implementation**

**Component 1.** The NSA will be responsible for the implementation of the activities under this component with the aim to build its regulatory capacity. NSA will prepare the plant variety protection legislation and ensure its subsequent enforcement, as well as formulate in a participatory manner a breeding strategy. It will refurbish its central laboratory for seed testing and complete the formalities for its accreditation by ISTA. It will organize relevant training for its staff as well as the staff of State Ministries of Agriculture and the breeders. In order to be more effective at field level, the NSA will outpost its staff in North and South Kordofan and will work in collaboration with the State Ministries of Agriculture in seed certification, with the understanding that by law, NSA is the sole entity responsible for seed inspection and certification in Sudan. The NSA will commission the design of M&E system that allows it to perform its regulatory role. As part of its efforts to support the seed industry, the NSA will convene on a bi-annual basis, a stakeholder forum to promote dialogue between the regulatory, business and users' entities, at both federal and state levels.

**Component 2.** The component activities cover the production chain from foundation seeds to the processing and storage of certified seeds. ARC will be responsible for the production of foundation and registered seeds which it will supply to the selected seed companies. Over the project duration, about 1-2 seed companies are expected to be competitively recruited by the project to enter into contract farming arrangements with seed growers' groups. The seed multiplication extension sub-teams will be responsible for the formation of the seed growers' groups and preparing them for contract farming with the seed companies. The ARC will undertake a participatory breeding research to develop improved varieties based on the landraces. This work will be applied as a matter of priority the gardud and clay production systems in North Kordofan, gardud production system in South Kordofan with special focus on millet and sesame in North Kordofan and on sorghum and sesame in South Kordofan.

**Component 3.** The seed companies will receive financial support from the project in form of a one-off grant to cover the costs of the purchase of the production of certified seeds from the SGGs at harvest. The grant will be disbursed against a business plan to be developed by the seed company as part of the tendering process. The grant is expected to cover up to 40% of the business plan costs during the calibration phase. As part of their contractual obligations with the project, the seed companies will be required to develop their network for retail sale of certified seeds to smallholders in the project area. The multi-disciplinary extension teams will be responsible for building the capacity of established and new farmers' groups – also called

grain producer groups - in the adoption and renewal of certified seed varieties and use of the appropriate agricultural practices. ABSUMI will expand its branch network to Sheikan. The state Ministries of agriculture in North and South Kordofan in collaboration with NSA will establish and operate a seed market database. The extension teams will facilitate the linkages between the grain producers and the seed agents, other input suppliers, rural finance service providers, insurance companies and the farmers' groups. These linkages would enable grain producers to develop an effective demand for certified seeds and renew their stock periodically.

**Component 4.** The implementation and coordination of SDP will be assimilated within the WSRMP for efficiency and effectiveness reasons. The PCU of the WSRMP will be expanded to include a Seed Specialist who will provide technical backstopping and participate in the monitoring of SDP implementation; as well as an accountant to handle SDP accounts under the supervision of the financial manager of the PCU. As of year 3 of the project implementation, the state level management of SDP will be streamlined in the State Ministries of Agriculture, while the PCU will remain under the lead agency of FMoA.

### **C. Detailed implementation arrangements**

This section presents the following: (i) selection of the seed companies participating in the project; (ii) establishment of the seed growers' groups; (iii) capacity building of the grain producer groups; and (iv) delivery of insurance services.

**Selection of the seed companies participating in the project.** In view of the small-scale of SDP operations in the calibration phase (6-8 seed grower groups), it is recommended that the PCU partners with one seed company during this phase. The selection of the seed company will be implemented as follows:

- Survey of the seed companies that are registered and member of the Seed Trader Association as per terms of reference listed in appendix 8;
- Based on the outcome of the survey, the companies will be ranked according to a profile satisfying minimum technical, financial and managerial criteria. The criteria may include: results of the SWOT analysis, strength of the financial situation, qualification of personnel, and existence of a network for marketing certified seeds.
- The top 6 companies will be retained for the expression of interest.
- An expression of interest will be sent to the 6 selected companies.
- Based on responses received, the request for proposal will be sent to the companies. The request for proposal will include the submission of a business plan for seed production for 3 years. The PCU will provide one day orientation to invited companies on the business plan and its contents. The business plan should include a plan for production, processing, certification and retail sale of certified seeds for a market of 10,500 producers by 2014, the principles governing the contracting arrangement of SGs, the supply of registered seeds and the different services such as inputs, technical support, pricing and marketing strategies to reach smallholders in the project area, cost recovery aspects, relationship with ARC and ABS and insurance companies.
- A quality and cost based selection will be applied to determine the PSC participating in the calibration phase.
- The technical and financial proposals will be evaluated by a committee comprising representatives of the NSA, the PCU and the State Ministries of Agriculture in North and South Kordofan.
- The responsive company will be awarded the contract.

This process will be repeated at mid-term to select an additional company for the intensification and scaling up phase.

**Establishment of the seed growers groups.** In the calibration phase, the seed grower groups will be selected among the best farming communities in Abbassiya locality. The communities collaborating with SKRDP and WSRMP will be screened based on the following criteria:

- Settled or agro-pastoral communities with experience in seed multiplication or with farmers trained in seed multiplication;
- Active contact farmers and pest control agent;
- Appropriate soils and acceptable average rainfall;
- Agricultural land under the command of the community sufficient for the allocation of 200 fed. for seed multiplication, and meets requirements for isolation;
- CDCs are interested in the commercial growing of certified seeds.

Within selected communities, the seed growers will be identified as follows:

- CDCs will call for voluntary nomination;
- The extension teams will validate the nominees with the CDCs based on the training they received, average yield achieved is higher than community average; residence in the village during the rainy season; and personal behavior in terms of discipline and teamwork;
- The extension teams will make sure that women represent at least 30% of the seed growers and youth represent about 20% of the seed growers; this may require further mobilization of the community and the women interest groups;
- It is recommended to select more farmers interested in growing seeds than the number that is strictly required in case there are last minute drop outs;
- A representative of the seed company will attend the validation session that the specialized extension team will carry out with the CDCs.

The seed multiplication sub-team will then work with the CDCs and the selected seed growers to identify the land that will be cultivated, and ensure that it complies with the isolation criteria, and that the area does not exceed 3 km in radius, i.e. approximately a total land area of 20 Km<sup>2</sup> to optimize the work of the extension agents and that of the NSA inspectors. The extension sub-team will also agree with the seed growers on the type of crop they will specialize in for seed multiplication during the season. The sub-team will orient the selected seed growers with the contractual arrangements for seed multiplication, the costs and the benefits involved. It will facilitate the seed growers' access to insurance and to credit if required.

The seed growers will elect a 5 member executive committee and will proceed to register themselves as a specialized CDC under the prevailing law of the state. At field level, seed growers can organize themselves into smaller homogeneous groups of 8-10 persons to plant contiguously, share labor and machinery resources, share knowledge, save together to meet farming expenses.

The training availed to seed growers is summarized in table 2. It is rolled over a 3 year period.

**Table 2. Training plan of one SGG**

Activity	Year of Support		
	1	2	3
Group formation, training and backstopping (field allowance)	350		
Training materials	50		
Start-up workshop for group leaders	50		
Seed technology training and supervision of groups	500		
Training in marketing and entrepreneurship	500		
Contact farmer demonstration equipment	100	100	100
Refresher technical training		300	300
<b>Total</b>	<b>1 550</b>	<b>400</b>	<b>400</b>

The phasing of the training for all SGG in both North Kordofan and South Kordofan is presented in table 3 and 4 respectively.

**Table 3. Phasing of SGG training in North Kordofan (by number of group per implementation year)**

Activity	Project Year				
	1	2	3	4	5
Start-up workshop for group leaders	0	0	0	7	7
Seed technology training and supervision of groups	0	0	0	7	7
Training in marketing and entrepreneurship	0	0	0	7	7
Contact farmer demonstration equipment	0	0	0	7	14
Refresher technical training		0	0	0	7

**Table 4. Phasing of SGG training in South Kordofan (by number of group per implementation year)**

Activity	Project Year					
	1	2	3	4	5	6
Start-up workshop for group leaders	6	0	2	0	7	3
Seed technology training and supervision of groups	6	0	2	0	7	3
Training in marketing and entrepreneurship	6	0	2	0	7	3
Contact farmer demonstration equipment	6	6	8	2	9	10
Refresher technical training		6	6	2	2	7
	9	2	5		11	7
<b>Total</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>800</b>	<b>650</b>	<b>450</b>

**Capacity building of the grain producer groups.** There are in total 222 communities that have participated in SKRDP, WSRMP or the closed NKRDP. These communities are either settled or agro-pastoral; all have a community organization and have been exposed to improved farming activities. These communities are well known to the extension teams operating in the project area. Whereas the extension teams focused on technology transfer under SKRDP and WSRMP, the main outcome from their work in SDP is 105 CDCs that drive agriculture development and adoption of new practices in their own and neighboring communities by the end of the calibration phase of SDP. This will be implemented through:

- Assessing the performance of the CDCs, farmers groups and women participation in relation to crop related activities; such performance can be measured in terms of adoption of improved technical practices, and willingness to organize producers to better plan for the agricultural season.;
- Orient the focus of the extension work based on the performance assessment of CDCs, farmers' groups and women participation through implementation of one or more of the following: refresher or advanced training for the contact farmers; supporting the mobility of contact farmers; increasing demonstrations and field days; increasing frequency of farmer field schools; etc...
- The extension teams support the CDCs in planning for the agricultural season in terms of planning machinery hire, access to inputs such as certified seeds, access to credit, and access to insurance.
- The farming interest groups can reach up to 200 members. The extension teams will work with these groups on their internal organization to ensure group cohesion, easy flow of information and if required use smaller groups as social collateral when accessing microfinance services.

The training availed to grain producers is summarized in table 5. It will be delivered over a period of 2 years.

**Table 5. Training plan of one GPG**

Activity	Year of Support	
	1	2
Group management	1	1
Business planning	1	1
Credit and insurance	1	1
Bookkeeping and accounting	1	1
Gender	1	1

The phasing of the training in North and South Kordofan is presented in table 6 and 7 respectively.

**Table 6. Phasing of the training of GPG in North Kordofan (by number of groups per implementation year)**

Activity	Project Year					
	1	2	3	4	5	6
Group management	42	42		12	18	26
Business planning	42	42		12	18	26
Credit and insurance	42	42		12	18	26
Bookkeeping and accounting	42	42		12	18	26
Gender	42	42		12	18	26

**Table 7. Phasing of the training of GPG in South Kordofan (by number of groups per implementation year)**

Activity	Project Year					
	1	2	3	4	5	6
Group management	63	63		18	27	39
Business planning	63	63		18	27	39
Credit and insurance	63	63		18	27	39
Bookkeeping and accounting	63	63		18	27	39
Gender	63	63		18	27	39

In the intensification/ scaling up phase of the project, additional localities will be included based on the following criteria:

- The performance of the extension team in the locality and rural administrative units is satisfactory;
- Satisfactory adoption rates of improved technical practices among participating communities;
- Active CDCs;
- Active contact farmers and pest control agents;
- Seed companies operate a network of licensed agents for the sale of certified seeds;
- Good coverage of banks or microfinance institutions.

Within these localities, the communities will be selected as follows: (i) proximity to the main markets; (ii) history of collective action in production related activities among women and men; (iii) trained farmers or community extension workers; and (iv) experience with access to microfinance or credit services

**Delivery of insurance services.** The purpose of providing crop insurance services to SGGs and GPGs is to mitigate the unpredictable impact of climatic change and its negative impact on production and yield of staple and cash crops and on farm income, and encourage risk averse farmers especially seed growers to act as risk neutral profit maximizing entrepreneurs. An important and crucial benefit of the crop insurance is also to reduce or minimize the risk of the default farmers on repayment of loans from banks or MFI. It will also act as credit insurance.

Sheikan insurance company, a parastatal institution, provides crop insurance against crop failure events, caused by uncontrollable events such as floods, disease, heat spells and drought. To be in line with Islamic principles, the insurance is based on costs of production, where up to 75% of the production cost is reimbursed in case of crop failure. The premium level is equal approximately to 10% of the total direct production cost.

In an effort to rationalize crop production and productivity, insurance premium for Grain producers will be shared between the participating farmers and the GoS in a ratio of 1: 1. Insured farmers use the insurance certificate to apply for seasonal loans from ABS and other banks such as Farmers Bank and MFIs. In case of crop failure, and in line with the agreement between the borrower, the Bank and the insurance company, the event is assessed and payment made accordingly.

Insurance premium for the SGGs will be shared between the project and SGGs for two years in a ratio of 1:1 the first year between the GoS and the project on behalf and in the name of the participating farmers. In the second year, the financing of the premium will be 0.25: 0.25: 0.50 between the project, the participating seed growers and the GoS. For the remaining years of the project, the premium will be borne by the farmers and the GoS in the ratio of 1:1

A tripartite MoU between the project, Sheikan and the banks will be concluded and signed before the implementation stage.

**Table 8: ORGANISATION CAPABILITIES MATRIX**

Organization	Strengths	Weaknesses	Opportunities	Threats	Remarks
<b>Enablers</b>					
Federal Ministry of Agriculture (FMoA)	<ul style="list-style-type: none"> <li>Re-instituted the National Seed Administration</li> <li>Enabled the adoption of the seed legislation</li> <li>Promotes private-public partnerships</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Absence of vision for the development of the seed sector in both irrigated and rainfed areas</li> <li>Absence of planned initiatives to use available budgetary resources earmarked for seeds in 2011</li> </ul>	<ul style="list-style-type: none"> <li>Demand for good quality and timely availability of seeds exist</li> <li>Import of seeds growing and 2010 seed legislation proposes to control it.</li> </ul>	<ul style="list-style-type: none"> <li>Free or subsidized distribution of seed undermines the commodity market for seed</li> </ul>	<ul style="list-style-type: none"> <li>The present Project design should provide the FMoA with elements to design the vision and programme to develop the seed sector.</li> </ul>
Ministry of Finance and National Economy	<ul style="list-style-type: none"> <li>Allocated a budget for seed production in 2011</li> <li>Manages development budget</li> <li>Prioritizes the rainfed sector for seed development and production</li> </ul>	<ul style="list-style-type: none"> <li>Uncertainty over release of funds budgeted in 2011</li> </ul>	<ul style="list-style-type: none"> <li>MOFNE is investing in Agriculture as it is considered as engine of growth and sector to compensate partially the loss of oil proceeds due to secession of South Sudan.</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient budgetary allocations to the development of the seed industry</li> </ul>	<ul style="list-style-type: none"> <li>The present Project is predicated on the premise that the MOFNE will finance the deployment of Seed Administration staff</li> </ul>
Agriculture Revival Programme	<ul style="list-style-type: none"> <li>Clear mandate for the development of agriculture with larger focus on rainfed areas.</li> <li>High visibility (under the patronage of the Vice President)</li> <li>Ability to mobilize resources</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Limited effectiveness of ARP.</li> <li>Non transparent in budget allocation</li> </ul>	<ul style="list-style-type: none"> <li>ARP ending in 2011/ 2012. Opportunity to devise a new strategy for agricultural development.</li> <li>Planned support from the World Bank for the formulation of an agricultural development strategy.</li> </ul>	<ul style="list-style-type: none"> <li>No clear lessons learnt from the existing ARP</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
State Ministries of Agriculture (with particular focus on North and South Kordofan)	<ul style="list-style-type: none"> <li>Capitalize on lessons learned from free distribution of seeds under the Smallholder support programme.</li> <li>Previous experience with seed production although results mixed.</li> <li>In South Kordofan, 20 extension teams in place.</li> <li>In SK, Minister of Agriculture established a board of</li> </ul>	<ul style="list-style-type: none"> <li>Personnel in extension and rainfed agriculture departments need additional training on seed multiplication.</li> <li>Dependence on external assistance to facilitate the outreach to communities by the extension teams and the technical departments.</li> <li>Absence of formal and regular communication</li> </ul>	<ul style="list-style-type: none"> <li>Attracting private sector to invest in agriculture.</li> <li>Interest in conservation of natural resources.</li> <li>Potential of food exports to the South Sudan.</li> <li>Focus on agricultural exports for foreign currency earnings.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Lack of harmonization of the interventions of seed suppliers so that quality and affordable seeds are delivered to farmers in a timely manner.</li> </ul>	<ul style="list-style-type: none"> <li>Need to harmonize intervention in seeds at state level through :               <ul style="list-style-type: none"> <li>Unified curriculum for farmers' training on application of certified seed or selection of local varieties.</li> <li>Unified modalities for demonstration plots.</li> <li>Clear guidelines for selection of varieties to</li> </ul> </li> </ul>

Organization	Strengths	Weaknesses	Opportunities	Threats	Remarks
	<ul style="list-style-type: none"> <li>advisors from private/ public and civil society sectors and a research advisory council.</li> <li>In North Kordofan, 19 extension teams are in place.</li> <li>Trained community members to be contact farmers and IPM agents.</li> <li>Expanding machinery part available to the State Ministry through the ARP to provide tractor hire services.</li> </ul>	<ul style="list-style-type: none"> <li>between the contact farmers/IPM agents and the relevant departments in the state ministry of agriculture after the Project ends.</li> <li>Poor management of agricultural machinery (in SK, the terms of tractor hire are not unified and are systematically subsidized). Moreover the unit managing the machinery has to remit all revenues to the State Ministry of Finance.</li> </ul>			<ul style="list-style-type: none"> <li>be tested.</li> <li>Clear guidelines for monitoring of demo plots.</li> <li>Clear guidelines for monitoring adoption of new varieties.</li> </ul>
Community Development Committees/ Village Development Committees	<ul style="list-style-type: none"> <li>There are approximately 500 registered CDCs/ VDCs in SK and NK.</li> <li>Broad based development focus.</li> <li>Trained cadre.</li> <li>Successful in mobilizing community for social initiatives.</li> </ul>	<ul style="list-style-type: none"> <li>Services rather than agriculture constitute primary concern.</li> <li>Performance is variable.</li> <li>Women participation in the VDC/ CDC is limited.</li> <li>.Linkages with formal institutions limited namely banks.</li> </ul>	<ul style="list-style-type: none"> <li>SKRDP formulated community development plans (CDP) that can guide the CDCs in the mobilization of their communities, engagement in partnerships, and fund mobilization.</li> <li>Seeds appear among the priorities listed in the CDPs.</li> </ul>	<ul style="list-style-type: none"> <li>CDC is a weak organization and may not necessarily directly respond to needs of farmers</li> </ul>	
<b>Service Providers</b>					
Agriculture Research Corporation	<ul style="list-style-type: none"> <li>Long terms experience in breeder and foundation seed development</li> <li>Linkages with CGIAR institutions like ICRISAT with</li> <li>Qualified staff and presence at regional level</li> </ul>	<ul style="list-style-type: none"> <li>Low priority in the government budget</li> <li>Old and obsolete laboratory and research equipment</li> <li>Top down research agenda</li> </ul>	<ul style="list-style-type: none"> <li>ARP</li> </ul>	<ul style="list-style-type: none"> <li>Preference on research on urban based research</li> </ul>	<ul style="list-style-type: none"> <li>Working with Individual researcher is better than working through the institution</li> </ul>
Extension teams	<ul style="list-style-type: none"> <li>There are 20 extension teams deployed in SK.</li> <li>There are 19 extension teams deployed in NK.</li> <li>The extension teams are</li> </ul>	<ul style="list-style-type: none"> <li>Cadres need additional training in technical aspects, managerial skills, gender and targeting.</li> <li>In SK, support to women producers is at very small</li> </ul>	<ul style="list-style-type: none"> <li>Organization of producers allows introduction of fee based extension services.</li> <li>Piloting of different extension methods and possibility to upscale the</li> </ul>	<ul style="list-style-type: none"> <li>Limited resources availed to the extension teams from Government resources</li> </ul>	<ul style="list-style-type: none"> <li>Project will rely heavily on the extension network and so increased capacity and facilitation will be required</li> </ul>



Organization	Strengths	Weaknesses	Opportunities	Threats	Remarks
	<ul style="list-style-type: none"> <li>multidisciplinary in crop production, livestock production, women development.</li> <li>Majority of cadre trained mostly in PLA tools, and technical skills.</li> <li>Where teams effective, good results in terms of productivity especially among men.</li> </ul>	<ul style="list-style-type: none"> <li>scale and is weak.</li> <li>Field presence of the extension team during growing season is limited.</li> <li>Extension teams are dependent on external assistance for mobility (funding of recurrent costs and purchase of vehicles).</li> <li>Several extension initiatives running in parallel in State of South Kordofan and no attempt to integrate them.</li> </ul>	<ul style="list-style-type: none"> <li>best (contact farmers, FFS, etc.)</li> </ul>		
Traders and input suppliers	<ul style="list-style-type: none"> <li>Located in the main markets of the RAU.</li> <li>Supply grain as well as seeds.</li> <li>Have storage capacity.</li> <li>Good knowledge of characteristics of variety and their demand in the market.</li> </ul>	<ul style="list-style-type: none"> <li>Inputs are not certified and hence the quality is not reliable. This is the case for seeds and seed dressing.</li> <li>In SK, prices of seeds are 20% percent higher than grain prices prevailing at the time of planting.</li> </ul>	<ul style="list-style-type: none"> <li>Traders willing to be a sale point and charge fee on transaction.</li> </ul>	<ul style="list-style-type: none"> <li>Traders not willing to take marketing risks and no guarantee that they will not sell seeds as grains.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Machinery operators	<ul style="list-style-type: none"> <li>They are mostly traders and large landholders.</li> <li>They service own plots first.</li> </ul>	<ul style="list-style-type: none"> <li>Insufficient number of tractors and implements compared to demand.</li> <li>Implements such as wide level disc are banned but still utilized.</li> <li>Service smallholders late in the season July/ August.</li> </ul>	<ul style="list-style-type: none"> <li>Companies expanding in SK: for example Central Trading Co. setting up sale point and showroom.</li> <li>ABS will no longer be providing the tractor hire services and instead farmers will be contracting directly from market.</li> <li>ABS loans for tractor ownership have higher cost especially as a result of devaluation of the SDG vs. the USD and high inflation.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
Contact farmers	<ul style="list-style-type: none"> <li>SKRDP and WSRMP trained a total of 1300 contact farmers (approx. 30%</li> </ul>	<ul style="list-style-type: none"> <li>Contact farmers need continuous training as production constraints are</li> </ul>	<ul style="list-style-type: none"> <li>ARP promotes concept of village based extension.</li> <li>Study on extension</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Organization	Strengths	Weaknesses	Opportunities	Threats	Remarks
	women). • Contact farmers are training peers, usually 50 producers/ contact farmer.	changing. • Absence of incentives for contact farmers to continue to support their peers technically. • Network of contact farmers loosely integrated with the extension teams.	commissioned by the EU funded Sudan Productive Capacity Recovery Programme.		
Agricultural Bank of Sudan	• Long-term experience in financing agriculture • Large number of branches and presence in rural areas • Accessible to poor women and men with leverage from donor financing • Establishing microfinance units • Developing business plan for downscaling	• High overhead costs and lending rates • Declining role in development financing • Limited in financial reserves for lending • Lack of investment portfolio • Weak operational and monitoring capacity due to downsizing of staff and loss of experienced staff to freelance consultancy and donor organizations	• Piloting of innovative financial services to poor farmers and community groups (mobile banking, sanduqs, financial intermediation, cotton pre-financing) with support from the IFAD funded country programme	• Long-term experience in financing agriculture • Large number of branches and presence in rural areas • Accessible to poor women and men with leverage from donor financing • Establishing microfinance units • Developing business plan for downscaling	
Bara'ah, community based Microfinance Institution	• 1000 members to date • Average loan size: SDG 900 • 90 percent women members. • Support for expansion of Bara'ah with funding from Swedish Complementary Contribution. • Repayment rate: 94 percent	• Limited coverage as it is only serving the RAUs in Abbassya, Rashad, Um Barambita, Abu Karshola, Tajmala. • Bara'ah is in an early stage of development and hence it cannot cover all financing needs for agriculture working capital.	• Technical support from Microfinance Unit of Central Bank of Sudan, Sudan Microfinance Development Facility and IFAD. • Demand for replication in other localities.	• Insecurity in South Kordofan which led to deterioration of the portfolio but currently delinquency situation under control	
<b>Client Organizations</b>					
Farmers' Union in SK and NK	• Established in 1956 • Participated in seed distribution during the Smallholder support programme.	• Limited women membership (10percent of total membership) and no women in leadership. • Expectation of subsidies for	• Showed interest to join a public-private partnership for the production of seeds.	• Highly politicalized organization	

Organization	Strengths	Weaknesses	Opportunities	Threats	Remarks
	<ul style="list-style-type: none"> <li>In NK, it has plans to acquire agricultural machinery, and hire it to producers.</li> <li>Good representation of the large holder mechanized farmers.</li> <li>Legislation of producers' organizations allows them to establish producers' groups.</li> </ul>	<ul style="list-style-type: none"> <li>the acquisition of equipment from Government or donors.</li> <li>Expectation that seed will be distributed free or at subsidized prices.</li> <li>Target relatively larger land holders.</li> </ul>			
Habila State Farm	<ul style="list-style-type: none"> <li>Rainfed Agriculture Dept. of SK Ministry of Agriculture located in Habila.</li> <li>It is planned for Habila state farm to provide agricultural services (namely machinery hire).</li> <li>Owens 11 tractors (4 with implements), 2 planters, 4 chisel plough, 6 wide level discs, 2 sprayers, 5 threshers, 4 water tanks, 4 tankers, 30 ton seed processor, 3 stores with total capacity of 12 000 bags (90 kg bags).</li> <li>Total seeds processed : 1200 bags</li> <li>Total seeds produced as certified in 2010: 900 bags approx.</li> <li>Has access to 4000 feddans.</li> <li>Supplies Arab Seeds Co. and NGOs.</li> <li>Introduced on small scale Butana variety in 2010 and found it promising.</li> </ul>	<ul style="list-style-type: none"> <li>Has a number of income generating activities which proceeds remitted to the State Ministry of Finance.</li> <li>Unreliable financing and uncertain leasehold implying that productivity will be variable.</li> <li>Management of seed processor and stores is sub-optimal and no lot identification on seed bags, seed bags stored with grain bags and frequent movement in stores.</li> <li>Staff needs training in seed multiplication.</li> </ul>	<ul style="list-style-type: none"> <li>Study available on the privatization of the Habila State Farm, in line with policy of Gvt. to enable the private sector.</li> <li>Possibility to turn Habila into a profit center and reach an agreement with State Ministry of Finance to keep proceeds and remit an agreed percent of surplus.</li> </ul>	<ul style="list-style-type: none"> <li>Inefficient administrative structure</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

## **Appendix 1. Terms of Reference of the Seed Specialist**

**Project Background.** As per executive summary.

### **Objectives and scope of the Consultancy**

The objective of the assignment is to provide technical and managerial implementation support to the Principal Project Coordinator (PPC) pertaining to the Seed Development Project throughout its implementation phases and across its three components. The key responsibilities of the incumbent are as follows:

#### **1. Managerial and technical duties**

**Managerial responsibilities** Seed specialist will, in full coordination under the overall responsibility of the PPC, and in coordination with M&E officer and Financial Controller as well as the NSA office, be accountable for efficient implementation of the key pre-implementation activities relating directly or indirectly to seed activities specifically:

- Participate in the preparation of the AWP&B for 2012,
- Lead the preparation of the detailed study of the Private Seed Companies;
- Lead the preparation of the Seed/grain Traders Survey
- Follow up closely on the progress with respect to the ASSCO privatization study and prepare a monthly report to the PPC
- Work closely with TA consultant and the staff of NSA and ARC in the preparation of the rehabilitation plans of the NSA and ARC central and state laboratories
- Drafting the TOR of the seed inspectors and participate actively in the selection of the seed inspectors to be outposted and lead their training
- Take part in the amendment of the M&E of the WSRMP to fit the SDP M&E requirements with special focus on seed Supply/Demand value chain and also in respect to institutional and regulatory framework;
- Work closely with the Data base consultant to establish a Seed Database mirroring the information which may be required by different stakeholders at different stage of the seed value chain covering all seed classes and institution providing/ using such information
- Participate in the preparation of the PIM, BLS and commissioning of different thematic studies and impact surveys;
- Participate in the preparation of the TOT programme of the field inspection staff, extension staff and members of SGGs in seed certification processes state laboratory staff Take part in the training of trainers for the staff
- Take part in the prequalification, preparation of bid documents and selection of qualified private seed companies;
- Take the lead in the preparation of the draft contracts between the project and ARC, between the project and the Private sector, and between the project and the extension department of the SMoA and take part in the review of the prototype contract between the private sector companies and the SGGs
- Lead the preparation of the MoU between private sector seed companies, ARC, and SGGs SMoA/NSA, regarding the cooperation modalities and coordination mechanisms with respect to project implementation and in particular production of seeds of different classes, crops and varieties together with modalities and timing of delivery,
- Take part in the selection of the participating villages both in grain production seed multiplication and identify the first SGGs and GPGs to be enrolled in 2012 and

completion of group formation, mobilization, launching of the extension staff TOT and training of farmers groups.

## **2. Technical responsibilities will include**

1. To put seed production plan in term of areas for each crop and varieties according to the plan for each year
2. To follow up the execution of seed production for the different seed classes (foundation, registered and certified) with the contracting bodies (ARC ,Private Seed Companies and Farmers Groups ) under supervision of National Seed Administration .
3. To put the technical specification for seed production contracts in consultation with National Seed Administration.
4. To follow-up and ensure that National Seed Administration do the certification process for the contracted areas.
5. To decide on the maintenance of released varieties under seed production system according to the directives of National Seed Administration.
6. To recommend entry of newly developed varieties into the seed production system according to research achievements and farmer consultation and acceptance.
7. To work with the concerned authorities in the establishment of storage facilities according to technical specifications stipulated in the bylaws.
8. Coordination with the concerned authorities for establishment of seed marketing mechanisms both within and outside the two states.
9. To follow-up and ensure execution of domestic training in the two states according to the plan and the curriculum put by national seed administration and ARC taking into account specialization of participants enrolled in the training and the percent of women and the geographical distribution .
10. follow-up and ensure execution of abroad training in NAS and ARC according to the topics in training programme taking into account the equity of chances and limiting training to those really benefited from the training and work in the field of training .

## **3. Seed Market research**

With the help of a professional survey service provider, Seed Specialist will commission the following thematic studies *preferably in cooperation with the University of North Kordofan and with the University of Dilling*, i.e. (i) survey on the certified staple and cash crops value chain building on the achievements and information of the earlier work aiming at presenting a complete picture of the certified seed chain; for the main crops namely Sorghum, Sesame, Groundnuts and Cowpea (ii) Grain Producers' study to collect and analyze information regarding input use including types and quantities used, prices paid, sources of inputs, bottlenecks etc.; (iii) certified seeds and other inputs distribution study which should have a close look at the distribution channels or seed, including the private sectors, farmer-to-farmer initiatives , relatives, own retained seeds and traders

The Seed Specialist will provide technical guidance for the preparation of the research methodology of these studies and the preparation of focus group discussion themes and detailed questionnaire as may be required. S/he should provide supervision and guidance during implementation and interpretation of these studies. The seed specialist may request specific support in terms of backstopping or consultancy services. These studies should be completed during the first pre-implementation phase of the project.

## **4) Needs assessment of the seed multiplication chain including quality control and seed certification**

The different elements and partners in the seed production/marketing chain are being supported under the project. These include the establishment of a complete and coherent seed chain, by providing capacity building and financial means to address different needs of each partner involved in the seed chain in terms of equipment logistic support and appropriate

infrastructure and above all competent human resources. To rationalize and fine tune the envisaged support and prior to the intensification phase of the project, a *need assessment* will be carried out during the pre-implementation and calibration phased of the project

### **Qualifications**

The following qualifications are required for the Consultant Seed Specialist:

- Advanced degree in plant breeding or related discipline from a respectable university;
- Proven recent experience with similar duties and responsibilities and/or managing seed production projects;
- Proven experience in seed multiplication and certification of relevant crops and similar environment and settings;
- Thorough understanding and proven long-term hands-on experience with the pre and post-harvest seed inspection stages, and with the procedures of ISTA and PVP;

In addition, the incumbent should have strong background in designing, implementation and analysis of surveys and needs assessments and preparation and monitoring of participatory variety research;

- Experience of working for IFAD funded agricultural programs would be an advantage;
- Arabic as mother tongue and fluency in English language (written and spoken) - essential;
- Proven communications and reporting skills.

### **Outputs**

The incumbent will be recruited for the duration of the project implementation but subject to annual renewable contracts. Contracts will only be renewed subject to satisfactory performance and output delivery. The expected outputs are the following:

1. Satisfactory implementation of the tasks as spelled out in the quarterly work plan
2. Good quality and timely preparation of monthly semi-annual and annual progress reports;
3. Effective participation in the preparation of the projects AWP&B , and progress reports;
4. Active background preparation of and participation in the IFAD supervision missions of the project
5. Satisfactory annual performance evaluation by PPC. Program design for awareness creation among farmers for the rational use of high quality seed of improved varieties, including optimizing the potential for production and for re-multiplication of seed for own use;
6. A detailed analysis of the production capacities required of each of the actors in the seed production chain, an assessment of their existing capacity
7. and a plan for improvement of their capacity, keeping in mind the results of the above analyses, government policies with regard to production and distribution of seed, and the actual and intended support provided by other donors;

## **Reporting**

The incumbent is expected to provide the following outputs, as per the schedule given below:

- An action plan for each implementation year including the capacity building and institutional strengthening aspects, specific contract/agreements to be sought or concluded between different parties, seed production and marketing targets... procurement plans and associated budgets. This include the seed production and marketing plans involving ARC, private sector, SGG, and traders
- Prepare an annual training programme for different actors and in particular extension staff, SGGs and GPGs, traders and Private seed companies personnel, and follow up on its implementation by preparing quarterly progress reports with quantified outputs;
- Take the lead in the preparation of an extension services delivery plan in collaboration with the extension department of the SMoA, private sector and ARC and follow up on its implementation by preparing quarterly progress reports with quantified outputs;
- Prepare the TOR of thematic studies as explained above, select the implantation party and finalize the implementation plan and follow closely it execution

## **Appendix 2. Terms of reference of SDP accountant**

1. The **Project Accountant (PA)** will be accountable for the accounting aspects related to financial management needed for project implementation. PA will be answerable to the Principal Project Coordinator (PPC) and will work closely with the institutions and partners involved in the project implementation. His/her main responsibilities include:

- Maintains updated records of the project accounts from bookkeeping to trial balance;
- Prepares and submits for approval to the Financial Manager all financial statements, budgets, financial projections, cash flow forecasts and all other projects reports as requested by the PCC, IFAD and MoFNE, at the federal and the state levels;
- Prepares specific budgetary documentation, according to the Sudanese legislation, issue payment orders and obtain the necessary approvals for finalizing payments to the suppliers/contractors;
- Assist Financial Controller of the Project in all the activities related to human resources management;
- Operates and maintains the financial management software system related to accounting and financial management by ensuring that: (a) all financial transactions are entered into the system in timely and proper manner; (b) all financial records are updated regularly; (c) periodic financial monitoring reports are regularly generated.
- Collaborates with other staff of PCU for smooth set up operation and maintenance of Project assets inventory database;
- Participates, as member in the procurement committee member, in the processing of tenders,
- Performs other duties, of financial nature which pertains to the implementation of the project, as may be requested by the PCC, and Financial Controller.

### **Qualifications and experience required**

Potentially successful candidate is expected to have (i) a first university degree in accounting or related field; (ii) a minimum 3 years of experience in accounting and financial management; (iii) excellent communications and office skills; (iv) thorough knowledge of GOS accounting procedures; (v) familiarity with the financial and accounting rules and regulations of IFAD or other international financial institution; and (vi) excellent command of Arabic and English

The initial contract will be for one year, with six-month probation period, renewable every year on continued satisfactory performance.



### **Appendix 3. Terms of Reference of State Coordinator**

The State Programme Coordinator will work under the supervision of the Head of the Extension Department in the SMoA, and through him/ her will report to the PCU on the implementation of SDP activities. More specifically s/he will be responsible for the following:

- Implementation of SDP activities at state level in compliance with the SDP poverty targeting and gender mainstreaming strategy;
- Monitoring of project activities and submitting periodic progress reports and statements of expenditure accordingly;
- Liaising with the relevant departments in SMoA and relevant authorities to ensure effective implementation of SDP activities;
- Formulating the state AWPB based on planning conducted with SGG, GPG and the extension teams, and submission to SCC for approval and subsequently to PCU for consolidation;
- Providing backstopping to the extension teams as required;
- Organizing capacity building activities directed at the extension teams, as part of deliverables under the AWPB of the year;
- Assessing the performance of the extension teams on an annual basis and recommending corrective actions accordingly to SMoA and PCU.

**Qualification.** Graduate degree in agronomy, extension, rural development, development planning and programming. At least 10 years' experience working with development projects, managing teams, and leading multi-disciplinary teams. Hands-on experience working on gender mainstreaming and women empowerment in rural areas and in agricultural activities. Good interpersonal skills. Good presentation and reporting skills. Computer literate. English is an asset.

**Post tenure.** This post will be recruited competitively among the staff of the SMoA. PCU will participate in the shortlist committee, in the interview panel and will endorse the selection of the incumbent. The initial contract will be for one year, with six-month probation period, renewable every year on continued satisfactory performance.

#### **Appendix 4. Terms of reference of M&E in SCU**

The State M&E Officer will work under the supervision of the State Coordinator. S/He will be responsible for the following activities at state level:

- Prepare the first draft of the AWPB for the year and submit to the State Coordinator for validation and endorsement;
- Carry out periodic monitoring of SDP activities at state level; the monitoring will track progress against AWPB, physical targets for the outreach and development of the seed market, and will measure performance against the targets set in the SDP business plan for seed companies, SGG and GPG;
- Assist extension teams, SGG, and GPG in setting up and using the M&E system in accordance with result and impact monitoring and reporting.
- Document best practices and share knowledge among state stakeholders.
- Commission thematic studies to analyze specific aspects of project implementation.
- Participate in the completion assessment and submit a report about effectiveness of the SDP.

**Qualification.** Graduate degree in agronomy, extension, rural development, development planning and programming, statistics. At least 10 years' experience working with development projects, managing complex data collection and analyses, Hands-on experience working on gender mainstreaming and women empowerment in rural areas and in agricultural activities. Good interpersonal skills. Good presentation and reporting skills. Computer literate. English is an asset.

**Post tenure.** This post will be recruited competitively among the staff of the SMoA. PCU will participate in the shortlist committee, in the interview panel and will endorse the selection of the incumbent. The initial contract will be for one year, with six-month probation period, renewable every year on continued satisfactory performance.

### **Appendix 5: Terms of reference of the State accountant**

The State accountant will work under the supervision of the State Coordinator. S/He will be responsible for the following activities at state level:

- Maintains updated records of the project accounts from bookkeeping to trial balance;
- Submits periodical statement of expenditures to the PCU;
- Prepares and submits for approval to the Financial Manager all financial statements, budgets, financial projections, cash flow forecasts and all other projects reports as requested by the SCC, IFAD and MoFNE, at the federal and the state levels;
- Prepares specific budgetary documentation, according to the Sudanese legislation, issue payment orders and obtain the necessary approvals for finalizing payments to the suppliers/contractors;
- Operates and maintains the financial management software system related to accounting and financial management by ensuring that: (a) all financial transactions are entered into the system in timely and proper manner; (b) all financial records are updated regularly; (c) periodic financial monitoring reports are regularly generated.
- Collaborates with other staff of PCU for smooth set up operation and maintenance of Project assets inventory database;
- Participates, as member in the procurement committee member, in the processing of tenders,
- Performs other duties, of financial nature which pertains to the implementation of the project, as may be requested by the PCC, and Financial Controller.

**Qualifications.** Potentially successful candidate is expected to have (i) a first university degree in accounting or related field; (ii) a minimum 3 years of experience in accounting and financial management; (iii) excellent communications and office skills; (iv) thorough knowledge of GOS accounting procedures; (v) familiarity with the financial and accounting rules and regulations of IFAD or other international financial institution; and (vi) excellent command of Arabic and English

**Post tenure.** The initial contract will be for one year, with six-month probation period, renewable every year on continued satisfactory performance.

## **Appendix 6: Terms of reference for the formulation of the plant variety protection legislation**

The assignment will cover:

### **A. Assessment of present related legislation in the country: mandated institutions and implementation status**

International agreements and their national domestication (translation into national legislation)

- National Seed Law
- Breeders' Rights
- International Union for the Protection of New Varieties of Plants (UPOV)
- Biosafety and Cartagena Protocol
- Biodiversity conservation, farmers' rights and the Convention on Biodiversity

National related legislations and decrees

- National Seed Law
- Breeders' Rights
- Varietal registration, cataloguing and release
- Patency and intellectual property rights regulations

### **B. PVP legislation development**

Chapters to be included in the legislation

- Conditions for PVP: definition of terms, distinctness, homogeneity, stability, novelty, denomination of varieties requesting protection
- Entitlement of breeders to variety protection: who is entitled and effect of entitlement (what does entitlement include)
- Legal succession and exploitation rights
- Compulsory exploitation rights and exemptions
- Duration of the PVP

Procedural implementation and enactment

- Responsible body: mandate and responsibilities, committees, members, registration, examination, opposition board, legal members, timeframe for the establishment of the responsible bodies
- Procedural issues: chronological order for the application for Varietal Protection, publication of the application, objections, examination of requirement fulfillment, failure to comply, PVP register, access to PVP information, annulment of PVP, ending of PVP, associated costs.
- Court procedures: appeals, infringements, third parties, fines

This assignment will be led by UPOV through a letter of agreement between the project and the UPOV for this purpose. This direct contracting is based on the following two considerations: (i) UPOV is the global organization dealing with PVP and (ii) Sudan will need to be a member of the UPOV convention to be compliant with WTO and this requires the help of UPOV. UPOV will work with a national consultant to complete this assignment.

## **Appendix 7. Terms of reference for the formulation of the breeding strategy**

The assignment will cover:

### **A. Assessment of present situation: strengths, weaknesses and needs**

Regulatory framework, its effectiveness and implementation

- Plant Breeders rights and national seed law
- Biosafety and Cartagena Protocol
- Biodiversity conservation, farmers' rights and the Convention on Biodiversity (CBD)
- International Union for the Protection of New Varieties of Plants (UPOV)

Available plant breeding capacities

- National institutions involved in breeding (public and private sector)
- Human, infrastructure and funding capacities

Responsibilities and mandates of national Institutions/departments for:

- Germplasm development and breeding (including contributions of the International Research Centers)
- Germplasm conservation and maintenance and genebanks
- Varietal release
- Varietal registration and cataloguing

### **B. Strategy development**

Setting national crop priorities and future needs (vision) taking into consideration

- Food security crops, forage and cash crops
- Local varieties and indigenous wild relatives, exotic varieties
- Agro-ecological zoning and crop characteristics needed (resistance to drought, salinity, pests and diseases, organoleptic or processing characteristics,)
- Technologies available globally and their applicability nationally
- Climate change and other challenges

Strategy coverage

- Germplasm development: strategic plant breeding (sources of genetic material, role of wild relatives and local varieties, genebanks, vision to future needs, ...)
- Cultivar development: applied plant breeding (varietal development, registration, release and documentation)
- Varietal exploitation: marketing, popularization and adoption by farmers

Needs for strategy implementation

- Regulatory and institutional adjustments
- Public investments
- Private investments
- Incentives and investment support
- Regional and International cooperation and partnerships

This assignment will be led by UPOV through a letter of agreement between the project and the UPOV. UPOV will work with a national consultant to complete this assignment.

## **Appendix 8: Terms of reference for the assessment of seed companies**

**Project Background** – As per project description

### **Objectives and scope of the study**

The study aims to : (i) identify and characterize the main players in the Sudan seed industry in the private, parastatal and NGO sectors with special focus on the private sector and its intervention in the seed industry for the rainfed agriculture; (ii) to document features of seed production and distribution, as well as the progress made in the liberalization of the sector; (iii) to characterize the linkages between all participants in the seed market, promotion of the use of certified seeds by the extension services, and research processes that generate new plant varieties.

The insights gained through this study would serve to: (i) contribute to the identification of direction and future evolution of institutional and regulatory framework, (ii) development of research priority options affecting production and distribution of quality seed for smallholders in the rainfed sector; (iii) facilitate the selection of the most suitable company, that will take part in the implementation of the project; and (iv) secure critical information which will be needed for drafting the guidelines for the management and administration of the Private Sector Support Facility and the activities which will qualify for funding under it.

PCU will assign the Seed Specialist the responsibility of coordinating this study and in close coordination with the NSA, and in full consultation with the National Seed Traders Association.

### **Methodology**

The study will be completed using a combination of desk and field work, the desk work will consist of thorough analysis of the available literature, followed by surveys which include three major stakeholders, seed producers, seed traders, and seed users. Producers of breeder, foundation and registered seeds should also be surveyed. In addition, focus group discussions will be used to address qualitative aspects of the seed value chain.

### **Specific tasks**

#### **1. Collection of secondary information**

The necessary information to be collected regarding Private Seed Companies and traders should cover companies own records, annual reports, statistical year books, chamber of commerce and NSA records etc... the information to be collected may include following :

- Historical perspectives and development of the private seed subsector in terms of its evolution and major players, legal setup in terms of ownership, public responsibility,
- Organization structure in terms of Management Organigramme, such as departments, divisions, field branches (particularly in the project area), technical know-how in terms of technology used, profile and number of technical staff, equipment available, the level and sophistication of the seed chain dominated by the company, national and international partnerships;
- Social responsibility, competitiveness of wages paid to workers, provision of social benefits, medical care to staff, practicing of fair price and contracting procedures, etc.
- Outreach in terms of number of branches in the country, company sales agents, contracting partners,
- Main clientele, share of the market, specialization,
- Detailed financial situation in terms of assets, liabilities, income statements, financial ratios, access to financial market, audit reports , taxes
- Seed production capacity by crop and variety and seed class, seed production modes and processing and storage capacity, type of seed production contracting,

- The companies' marketing channels, seed pricing policy, access to registered seeds, imports and exports,

2. **Collection of Primary data** After collection, processing and analysis of primary data, information gaps should be bridged through structured surveys and focused interviews; the structured survey may be carried out using a detailed questionnaire covering the areas for which secondary updated data is not available. Data of qualitative nature may be collected through interviews of officials of the companies and its clienteles and partners such as contracted farmers, traders and agents.

3. **Report writing.** After completion of the data collection and analysis, an annotated table of content should be prepared and discussed with the PCU and NSA. The report will be drafted along the approved annotated outline.

4. **Presentation of the outcome of the study.** A power point presentation should be prepared and used to introduce the findings, conclusion and recommendations of the study. Comments will be accommodated in the final report.

**Submission of the final report.** A final report should be drafted along the line of the annotated table of contents and integrating the comments raised during the presentation of the preliminary findings and conclusions of the study.

**Expected outputs** The expected output is a detailed structured report providing a detailed account of the seed industry with particular focus on the private sector. The report should include a detailed profile of the top six companies, including a detailed SWOT analysis matrix, a capability matrix and an evaluation of the financial situation of the top six companies. The six companies will be ranked using a set of indicators representing the main characteristics of the seed industry as mentioned above.





## **ANNEX 6: PLANNING, MONITORING & EVALUATION, AND KNOWLEDGE MANAGEMENT**

### **Introduction**

1. This Annex is based on the Team Leader's previous capacity building and training work regarding the streamlining and operationalization of the WSRMP Monitoring and Evaluation System as detailed in Part 3 of the Programme Implementation Manual of WSRMP. It provides the main ingredients for further elaboration and fine-tuning of the M&E chapter in the PIM of the project. In preparation of SDP, the monitoring instruments including data collection and templates and reporting tables should be inspired from those presently utilized by WSRMP with appropriate modifications to reflect the specificities of SDP and in particular its logframe. The M&E team in place could complete this exercise easily with some backstopping from CCU/IFAD and/or limited TA.
2. To facilitate this exercise: (i) the Logframe is fully harmonized with the COSTAB tables to simplify the preparation of the results-based AWP&Bs; (ii) a raw table for RIMS which could be utilized for the finalization of the RIMS table is also prepared (appendix 1)
3. The purpose of M&E system is to: (i) satisfy the project management information requirements; (ii) promote active involvement of the project beneficiaries; (iii) focus more on project effects and impact as well as on oversight aspects; (iv) adopt modular decentralized approach in data generation, processing and reporting; (v) prioritize quality and organizational aspects of the information generated; and (vi) and involve the project staff at different levels to participate not only on data collection but in reporting and feedback.

### **Planning and Budgeting**

4. The purpose of AWP&B is to provide PCU with a timetable for implementation of a set of carefully scheduled activities, together with their respective budgets/inputs. AWP&B are formulated taking into account the previous AWP&B, Project design report, supervision report recommendations and legal agreements, contract and management agreements of service providers and participating partners. AWP&B is a tool for underlining and specifying and consolidating implementation priorities, predicting inputs needed and procurement requirements, and most importantly establishing staff work plan both within PCU, and between implementing agencies. Financial allocations within the AWP&B constitute a basis for release of funds, by different donors, and for financial control. If linked to the Final Design Report and the Logframe of the project, AWP&B can be a powerful tool to assess the project efficiency and effectiveness in achieving the project outcome. Quality AWP&B facilitate the preparation of progress reports and the work of the supervision missions. AWP&B is an essential covenant in the legal financing agreement; failure to prepare it on a timely basis may entail delay or suspension of fund disbursement by IFAD and other donors. Ideally, the first AWP&B should be prepared, together with the procurement plan for the first 18 months of the project and presented for discussion during the start-up workshop, after which it is amended and submitted to PCC for approval and IFAD for no objection. The preparation of the following AWP&B should be prepared, discussed and approved no later than sixty days before the end of the year. Experience shows that this review process requires a minimum of six months. To allow full participation of the project stakeholders, the process of AWP&B preparation should start at the locality level and consolidated both at the State level and finally at Federal level, during the third quarter of the year. To that end, the State-level cost details have been disaggregated to state level. The draft AWP&B 2012 is attached in appendix 2.

### **Monitoring and Evaluation**

5. The purpose of M&E system is to: (i) satisfy the project management information requirements; (ii) promote active involvement of the program beneficiaries; (iii) focus more on project effects and impact as well as on oversight aspects; (iv) adopt modular decentralized approach in data generation, processing and reporting; (v) prioritize quality and organizational aspects of the information generated; and (vi) and involve the project staff at different levels to participate not only on data collection but in reporting and feedback

6. The **M&E system** would also generate quantitative verifiable information on the Projects' performance in a form that will assist PCU, and state level units to plan and finance their activities, compare physical progress against the planned targets and allow timely remedial action to be taken to correct encountered problem during implementation. The M&E-generated information would contribute to facilitating the workflow and quality of the decision-making by providing the means of focusing on implementation problems and ensuring effective communication and co-ordination between the implementing agencies.

7. The operational framework of M&E system is harmonized with the project cycle and its Logical Framework as stipulated in IFAD M&E guidelines. The four interrelated components of the proposed M&E will collectively span the **performance-impact space**

The four components of the M&E system are:

- (a) Input/Output/Activity monitoring subsystem;
- (b) Financial and Procurement subsystem;
- (c) Outcome/impact assessment subsystem (includes RIMS); and
- (d) Reporting routine

8. **Input/Activity/Output monitoring (relevance, efficiency)** is concerned primarily with the monitoring of input delivery, activity implementation, and output achievements. This sub-system should in principle be linked to the financial monitoring subsystem through input procurement in order to monitor the project efficiency.

9. **Financial and procurement component (efficiency)** is concerned mainly with the monitoring of procurement of goods and services (inputs), Project accounts, project expenditures and disbursement and project financing.

10. **Impact and Effect assessment** (relevance, effectiveness, impact, and sustainability) is concerned with nature, intensity, and sustainability of the occurred changes to the livelihood and the environment of the participating households that is brought about by the direct effects of the achieved outputs, as well as the effectiveness of the targeting and gender mainstreaming strategy. Sustainability of these changes is a necessary factor for positive and lasting impact.

11. **Reporting routine** captures data periodically from different sources (stakeholders) about project interventions. The captured data is consolidated at different levels processed analyzed, classified and presented into customized tables that are used for the preparation of different reports namely: (i) monitoring reports, (ii) progress reports (iii) financial reports; (iv) audit reports; and (v) completion reports. This set of reports constitutes IFAD minimum reporting requirements. The different reports of the M&E will be categorized by timing, partners producing them as well as by the project objective hierarchy and the indicator level.

### **M&E instruments**

12. Each of the M&E component is managed by a set of interlinked instrument which captures data in pre-designed templates and provides information in customized tables these instruments are summarized in **table 1** below

<b>Table 1: instrument of the M&amp;E system</b>			
<b>Monitoring instruments</b>	<b>Purpose</b>	<b>Data collection format</b>	<b>Frequency of data collection</b>
<b>Project Output Database (POD) (Activity, Output and Outcome monitoring database)</b>	Monitoring program physical achievements to be contrasted against, planned targets of the AWP&B, Project Design Report (PDR) milestones and when applicable against the Baseline Survey (BLS) benchmarks	Pre-designed standardized templates	Continuously
<b>Financial and Procurement Application (FPA)</b>	Monitoring of program sources and application of funds	Procurement records, withdrawal application, bank statement, IFAD disbursement records.	Continuously
<b>Project Area Database (PAD) (RAU and villages)</b>	Assessment of the direct and indirect effect and impact of the project on the communities at large	Pre-designed standardized database	Twice in the life of the project, at midterm and at completion
<b>Beneficiary Database (BD)</b>	Monitoring program outreach of the beneficiaries in the project area by different target groups and project interventions	Pre-designed standardized database	Continuously
<b>Household Survey (HS)</b>	Captures socio-economic and livelihood data regarding the beneficiaries of the program at different points of its implementation to facilitate assessment of program effects and impact	Pre-designed questionnaire	Twice in the lifetime of the project at mid-term and at completion.
<b>Thematic Studies (TS)</b>	Assessment of the effects and impact of specific interventions	In line with a TOR and pre designed tables	In accordance with specific triggers. And/or on request.
<b>RIMS</b>	IFAD requirement for assessment of project impact	Is web based system; data is entered on a set of agreed indicators by the M&E unit at PCU	Once every year

### **Project Output Database**

13. Project Output Database would serve as a real time tracking instrument of the implementation of the project activities and associated outputs and outcome together with other related attributes. The AWP&B data will be captured in two stages (i) immediately after its approval; and (ii) regularly during its implementation. AWP&B should be translated into monthly action plans to be implemented and monitored at village level.

14. The process of data collection involves completion of standardized templates about the input delivery, implementation of specific activities, and achievement of outputs in accordance with a set of pre-selected indicators. These templates will be used to track the implementation of each of the proposed activities under AWP&B in terms of starting date,

percentage of completion and completion date. The outputs and outcomes of each activity will be tracked in terms of quantities planned; quantities achieved and compared to AWPB targets, POD milestones and, BLS benchmarks when applicable. Qualitative outcome indicators should be scored using IFAD scoring criteria. Under the same database, information connected with the activities, components, sub-components, localities and villages will also be captured. Inputs will be captured in terms of their delivery date and place and recorded into the project inventory database.

15. To keep the database simple and well-focused, the reporting system of the database should consist initially of a set of tables which responds to the requirements of different reports namely (six-monthly and annual progress reports, IFAD supervision and follow up reports). If other tables are needed, (requiring advanced analysis), the database should allow for crude data to be transferred to other specialized software for further analysis.

16. The design of Project output database should be fully harmonized with other applications/databases of the Project, especially with the financial and procurement application in order to be able to assess the project efficiency.

### **Financial and Procurement Application**

17. The purpose of Financial and Procurement application is to track the project financial transactions using a set of financial indicators for each of the project components, associated subcomponents, activities, outputs and outcomes. Financial monitoring would capture data on these indicators on a monthly basis comparing achievements against AWP&B and appraisal targets. This data would be tabulated and reported in monthly, quarterly, semi-annually, and annually

18. Project financial reporting would include procurements of inputs and services, measuring the cumulative expenditures of IFAD and GOS, beneficiaries and other donors respectively against the financing plans in the Final Design Document and the AWP&B.

19. Monthly financial statements, consisting of expenditure by component and disbursement category for the month, and expenditure to date, compared with the monthly and annual budgets. The templates for monthly financial statements will be prepared during the adjustment of the existing M&E of WSRMP. Detailed six-monthly financial progress reports will be prepared at all levels of project management and be consolidated by the Financial Controller.

20. The consolidated financial progress reports consist of a set of templates which will report, among other things on the following:

- Disbursement Category and expenditures;
- Financier Contribution;
- Component expenditures;
- Detailed Component financial analysis.

21. Monitoring of procurement activities is part of the financial system, which serves to ensure that the procurement plan is completed satisfactorily in line with IFAD procurement guidelines and in accordance with the Final Design Report (FDR) and AWP&B targets. Procurement of goods and services is the first step in input delivery and implementation of activities. Input delivery on the other hand is the entry point of linking the financial system and the output/ activity monitoring. Procurement monitoring is also necessary for setting up the project assets database (inventory system).

22. The computerized financial management information system of WSRMP which was developed in 2009 is fully operational and should be able to generate the required information to complete the reporting templates for financial management and procurement as may be required. These templates will have to be prepared during the adjustment of the existing M&E system of WSRMP.

### **Beneficiary Database (BD)**

23. The purpose of Beneficiary database is to track the project beneficiary outreach, both as seed growers and seed users, targeting physically and spatially, and to complement the other instruments to make it possible to assess the project effects and evaluate its outcomes. BD would capture on a regular basis beneficiary-related data, specifically regarding direct beneficiaries mainly seed growers, and grain producers, reached by the project. Data, which will be captured by the proposed database, may include several modules, a demographic module, and access to project activities module. Data should be captured on continuous basis and it will be collected through pre-designed templates. These templates will be completed at the level of the seed growers and grain producers' communities; the validation, consolidation and recording into the BD will be the responsibility of the M&E unit at the PCU level.

24. The captured data for BD will be restricted to AWP&B, which will be done in two stages (i) immediately after its approval; and (ii) regularly as its implementation progresses. The process of data collection involves completion of standardized templates about the beneficiaries' demographic characteristics and their outreach by the project. The main attribute to be tracked by BD should be in terms of number of beneficiaries (both in AWPB and FDR) to be reached, against actual number the project has effectively reached.

25. BD should serve in understanding the quality of the effects of the project outputs and their likely impact on the livelihood of the beneficiaries, which can be accomplished through specific thematic studies using structured focus group discussions or random household survey.

26. To keep BD well focused and manageable, its reporting should consist initially of a set of tables which respond to the information requirements of different types of periodic reports such as progress reports, IFAD supervision and follow up reports. If other tables are needed which require advanced analysis, BD should allow for data transfer to other specialized software for further analysis.

### **Project Area Database (PAD)**

27. The existing PAD of WSRMP will be expanded to include specific aspects of the project which complement available information so as to track the changes, which may have occurred to the beneficiaries' environment, particularly with respect to seed value chain, and its effect and impact on their standard of living. The purpose of Project Area Data base is to track these changes with respect to key indicators particularly those pertaining to the project outcomes, objectives and goal. This information will be collected two times during the life of the project, at the start of the project, and at project completion. Data collection will be collected at the level of the locality and village.

### **Household Survey (HS)**

28. Household survey would build on that of WSRMP, which has been developed and used periodically to collect effect and impact-related information about the targeted beneficiaries. The data collection instruments and process will be amended to cater for the specificities of SDP. The approach of conducting HS should remain the same. The household survey would be carried every three years, one after the completion of the calibration phase and the second at project completion. This however can change, depending on the progress registered regarding the project implementation. The data generated by the survey will be analyzed to assess the likelihood of occurrence of project impact using the Sustainable Livelihood Approach. The data collection will be by means of a questionnaire, the attributes of which should be included in the Beneficiary Household. This should be prepared during the adjustment of the existing M&E system

### **Thematic studies**

29. Thematic studies play an important part in the M&E Cycle. They are used to provide a qualitative validation of the project outputs and exploration of changes to the lives and the

environment of the project beneficiaries as induced by the interaction of the beneficiaries with the outputs of the project. Thematic studies will be used to provide valuable supplementary implementation-related information regarding specific subjects, interventions or concerns of the project; they will be prompted by the occurrence of specific triggers such as, unexpected delays in the implementation of certain components or early completion of others; assessment of pilot activities to determine their replication on a larger scale as appropriate. While thematic studies are part of the proposed M&E system they will not constitute a structured activity within the system with pre-determined specific themes with the associated budget and time table, but rather they will be demand-driven to be conducted at the request of Project Supervision Mission, Midterm Review mission and/or at the request of PCC/SCC. Thematic studies can also have an evaluation character.

30. Thematic studies may be outsourced to local or international consultants, but could also be entrusted to an institute of higher education<sup>70</sup> where such studies are entrusted to graduate students in fulfillment of their postgraduate degrees and meet concomitantly the terms of reference of the proposed thematic study.

### **Baseline situation**

31. An important part of the M&E framework is the pre-project assessment of the socioeconomic and livelihood situation of the intended beneficiaries and the environment they live and derive their livelihood from.

32. Different instruments namely, the Baseline Survey (BLS), and a survey of the physical, social and environment of the project area assess the baseline situation.

### **Baseline Survey**

33. The BLS should be completed before project implementation preferably before project start-up workshop. Terms of reference are in appendix 3.

### **M&E Indicators**

34. The M&E list of indicators that will be employed to monitor project implementation and assess its impact, including RIMS indicators are described in the Logframe (see main report).

### **RIMS indicators**

35. The M&E system for IFAD-financed projects is required to include among its M&E indicators a list of RIMS indicators at the three different levels (compiled from the standard list provided by IFAD). Inclusion of RIMS indicators in the project M&E system will facilitate the preparation of RIMS tables, which should be completed and sent to IFAD at the end of each year of the project implementation. The list of the proposed first and second indicators is presented in appendix 1.

36. **Level 3 indicators:** These are **Impact** indicators that measure the effects of the Level 1 and Level 2 indicators and correspond to the goal level of the Project Logframe. They are also called **Anchor indicators**. They are a short list of critical **Impact** indicators that are based on objective, comparable data and linked to the Millennium Development Goals. **They are compulsory**. There are four Anchor Indicators which are measured at the beginning, mid-term and completion of the Project:

- Households with improved household assets;
- Reduction in the prevalence of children malnutrition (Weight for age, Height for age and Weight for height).
- Households with increased food security;
- Households receiving project services.

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<sup>70</sup> These could be accomplished in collaboration between the PCU and the different Universities in North and South Kordofan.

37. **Knowledge Management and Communication.** The success of the interaction among the diverse set of Project stakeholders<sup>71</sup> depends largely on the quantity, quality and timeliness of information flowing among them. This calls for developing suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The Project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, TV and radio), using the central knowledge management and communication platform established by the ongoing IFAD Projects under the leadership of the Central Coordination Unit (CCU) for the IFAD co-financed projects. This knowledge sharing process will be supported by a well-focused series of workshops and learning events. In addition, the Project will use the Sudan Country Programme Management Team (CPMT) as a mechanism for learning and exchanging knowledge among the IFAD-supported Projects and between them and other in-country Projects. Furthermore, Regional Knowledge Networking will be supported to build and share approaches, tools, methodologies, technologies and best practices. The main KM&C activities are:

- (a) The generation of knowledge to influence policy formulation will be done through the implementation of the results-oriented M&E as described above and joint policy analysis.
- (b) The scouting for lessons and innovative or successful approaches generated or captured by the Project will be disseminated through the Knowledge Access in Rural Interconnected Areas Network (Karianet) <sup>72</sup> regional network, the communities of practice established in IFAD and other networks.

38. The Project will document models for seed multiplication, processing and marketing, both supported by the Project and the other on-going IFAD-supported Projects in Sudan (South Kordofan Rural Development Programme, Butana Integrated Rural Development project and Support to small-scale traditional rainfed producers in Sinnar State) so as to adjust the approach adopted and make sure a successful model is finally determined and is ready for scaling up.

### **Seed Market Database**

39. A simple M&E system for seed production and marketing will be established at the PCU in full participation of the NSA. The purpose of which is to collect and process relevant information with respect to specific indicators in order to monitor the implementation progress of the project and its effect and impact on the targeted population. This data will be collected from different sources and centers directly involved in the implementation of seed-related interventions at the institutional development level as well as at the production and marketing of all seed classes. These sources are NSA, ARC, private sector and traditional rainfed farmers and their producers groups. Private sector is composed of three main players, Private Seed Companies, Seed Grower Groups, and seed marketing agents.

40. M&E system will be developed to track and monitor the outputs and outcomes produced by these players at different stages of project implementation. For this purpose, a set of templates that have been prepared will be utilized for that purpose (appendix 4). The data will be collected in different methods, directly by the implementing partners such as NSA, ARC, Private companies or through the extension teams who will assist SGGs and GPGs and seed marketing agents to complete these templates on a regular basis.

41. The completed templates will be processed at the locality level and consolidated at the state level before it is sent to the M&E office for further consolidation analysis and tabulation in line with the Progress Report requirements.

### **Costing M&E activities**

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<sup>71</sup> Including seed producers, farmer groups and operators (input dealers, traders, processors and transporters), farmers' apex associations and other business organizations, government institutions, research institutes and NGOs.

<sup>72</sup> KariaNet is multi-stakeholder partnership between IFAD, the International Development and Research Centre (IDRC) and ten development projects in the Middle East and North Africa for knowledge fostering.

42. Cost-tables include appropriate financial allocation and human resources for KM activities, namely: (i) one annual workshop on KM organized by the NSA; (ii) training and refresher courses on communications for extension staff; (iii) annual workshops organized by the PCU to assess progress against Project objectives, main achievements and success stories as well as lessons learned; (iv) preparation of case studies, successful stories, field experiences in both Arabic and English as part of M&E activities and that will be shared through the networks; (v) exposure visits and study tours for extension staff and group members; and (vi) information/awareness raising campaigns on importance of using good quality seeds; and seed fairs.

43. The Terms of Reference (ToR) of the M&E specialist in the WSRMP already incorporate KM aspects. He will assist the seed producer enterprises, the farmers groups, and the service provider with M&E of their activities and the measurement of their results.



## Appendix 1. First, second and third level RIMS indicators for SDP

Components	Component 1	Component 2	Component 3
<b>First level indicators</b>	People trained in crop production practices and technologies	<ul style="list-style-type: none"> <li>People accessing facilitated advisory services (disaggregated by gender)</li> </ul>	<ul style="list-style-type: none"> <li>Land under improved management practices</li> <li></li> </ul>
<b>Second level indicators</b>	<ul style="list-style-type: none"> <li>Operational self-sufficiency</li> </ul>	<ul style="list-style-type: none"> <li>Number of seed growers groups operational/functional</li> </ul>	<ul style="list-style-type: none"> <li>Hectares of land improved through soil/water conservation methods</li> <li>Number of farmers adopting recommended technologies (disaggregated by gender)</li> </ul>
<b>Third level indicators</b>	<ul style="list-style-type: none"> <li>Prevalence of malnutrition in children under age of five years reduced : rate reduced from 3% to 2%</li> <li>Improved food security : food insecurity reduced from 55% to 40%.(RIMS)</li> <li>Increase in HH asset index : production 5 fed in qoz soils, 3 fed in gardud soils and 10 fed in clay soils doubles</li> <li>Total number of beneficiaries: 1280 seed growers; 108000 grain producers; 30% of seed growers and grain producers are women; 20% of seed growers and grain producers are youth</li> </ul>		

## **Appendix 2. Terms of reference of the baseline survey**

### **The Project**

Goal and Objectives: ***As contained in Design Document***

The key objectives are that: ***As contained in Design Document***

Target group: ***As contained in Design Document***

Project area: ***As contained in Design Document***

Project Components: The project will comprise the following parts ***as contained in Design Document***

### **The Baseline Survey (BLS)**

A Baseline Survey (BLS) will be conducted in the project area. At different times during the project life (possibly at the mid-term and at the completion of the project), impact surveys structured in a similar manner as the BLS will be made and the data collected then can be compared to the baseline data to make an evaluation of the impact the project might have had on the intended beneficiaries.

The BLS will focus on gathering data related to the indicators identified in the project design document and that are used in the project M&E system. This survey will be contracted to a reputable institution with expertise and experience in social and agricultural survey work.

**Objective:** The objective of the BLS is the quantitative and qualitative definition of the current situation of villages, households, and groups who will be affected by the project.

**Geographical area of survey:** the 4 localities of Rahad, Sheikan in the State of North Kordofan and Abbassiya and Abu Jubeiha in the State of South Kordofan.

**Output:** The collected data from BLS will be processed and a Baseline Survey Report prepared containing the systematized results of survey with conclusions and general evaluation of situation in project area in terms of the main indicators covered in the survey.

BLS report itself should be limited to fewer than 40 pages of text with tables, charts, questionnaires and other details included as attachments/annexes to the baseline report.

### **BLS Survey Methodology**

Various methods of data collection will be used and combined to produce a comprehensive understanding of the baseline situation of the project area:

- Surveying all the communities in the project area, scoring them and ranking them based on a set of indicators assessing poverty and readiness of the community to participate in the project
- Surveying a representative sample of poor households in the project area
- Collection, analysis and interpretation of data from available secondary sources
- Expert opinions and panel – discussions for specific areas of survey
- Interviews with focus groups or individuals (likely project beneficiaries of men and women smallholders, pastoralists and displaced women)

The survey is intended to gather information on the poverty level of the communities in the project area, the profile of the rural poor (in terms of assets, livelihoods and coping mechanisms, crops grown areas cultivated with different crops, improved seeds produced and utilized ), the opportunities and constraints facing poor rural households in the project area. Information gathered during the survey will include:

### ***General indicators on project area***

- Geographical and demographic indicators
- Role of agriculture (crop and livestock) and off-farm activities in structure of activities
- Status of certified seed productions and use in the project area by type of farmers

### ***General indicators on communities***

- Percentage of poor households in the village;
- Number of women headed households;
- Access to drinking water for potable and livestock uses;
- Reliance on rainfed farming and herding as the main source of livelihoods;
- Quality of the agricultural land and degree of erosion as manifested in the infestation with noxious weeds;
- Access to health services;
- Access to basic education;
- Level of social capital;
- Positive feedback to project menu of activities.

### ***Household level data***

- Household family structure
- Labor supply and use
- Productive assets owned
- Crop production (structure, areas, practices, average yields)
- Sources of seeds, types (improved, traditional land races), prices of seed purchased, place of purchase, perception of the quality of the seeds.
- Livestock production (number and types, productivity, management system)
- Access to agricultural and other support services, especially credit, machinery services, veterinary services, etc.
- Income/ expenditures of farm households
- Level of market disposal of agriculture production
- Non-agricultural sources of income and their significance in overall household income
- Food security
- Child malnutrition
- Gender differences between women headed and men headed households

### ***Producer Organizations***

- Current method and level of organizing of agriculture producers and pastoralists
- Number of associations, number and structure of its members and % of woman in its membership
- Range and quality of services provided by organizations
- Interest of other groups of producers to form associations

### ***Access to Finance***

- Status of rural financing in the project area (banks, moneylenders, traders)
- Number and type of financial products
- Level of satisfaction of demand for agriculture credits by existing financial institutions
- Number of households/clients benefiting credits and its structure
- Regularity and level of repayment
- Access to insurance services

### ***Seed companies***

- Number and type of seed companies operating in the project area;
- Number of farmers groups under contracts for certified seed production with the private sector;

- Quantity of certified seeds marketed by the private companies in the area.
- Average capacity to service farmers during the season
- Prices paid by farmers for certified seeds,
- Prices paid by private companies for certified seeds provided by seed growers
- Prices of seeds paid by grain producers

### **Sampling**

Part of the data will be collected through a survey of a representative sample of rural households located within the project area.

The survey will involve a multistage stratified random sample of households. As the project is expected to cover up to 200 communities for grain producers in the project area, the following method is proposed. First, the survey team will survey all the villages in the selected localities which qualify for the use of certified seeds and which are participating in a development programme (either IFAD co-financed such as WSRMP or SKRDP, or supported by NGOs); second, in each locality, the villages will be ranked on the basis of poverty criteria; third, a sample of 50% of the proposed number of the villages in the four localities will be randomly selected; fourth, in each village a sample of 20 households will be randomly selected. This will bring the sample size to around 1000 household respondents.

A questionnaire adapted from IFAD impact survey questionnaire (to be found on the IFAD web site [www.ifad.org](http://www.ifad.org)) can be used after modifying it to suit the local conditions and to respond to the information needs of the indicators identified in the project logframe.

### **Activities**

The following is the expected sequence of activities to be performed by the consultant carrying out the assignment. The consultant will discuss and clear each step with the Project Coordination Unit.

- Compose the survey team
- Survey all the villages, score and rank them
- Decide on the sample frame
- Select survey locations
- Decide the questionnaire
- Decide the data processing method
- Plan field work organization
- Train supervisors and enumerators
- Test Questionnaire
- Conduct field survey
- Analyze the data
- Draft report
- Prepare final report

### Appendix 3. The draft AWPB 2012 for SDP

#### Annual Work Plan And Budget Template (AWP&P for 2012)

#### Seed Development Project: Component 1: Strengthening Policy and Delivery capacities (1/1) Annual Work Plan and Budget Year 2012

	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area
1: Plant variety legislation drafted and enforced										
Technical Assistance										Feder
Plant variety protection legal expert (IC) /a	person/month	15000	1	15000					NSA	Feder
Plant variety protection legal expert (NC) /b	Person/month	3000	1	3000					NSA	

**Seed Development Project:**  
**Component 2: Improvement of the seed production system (1/5)**  
**Annual Work Plan and Budget**  
**Year: 2012**

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>A. North Kordofan</b>											
<b>Output 2.1: Extension system Capacitated to support target seed growers</b>										SNK	Investment
<b>2.1.1. Capacity Building</b>										SNK	Investment
2.1.1.1 Seed production and marketing practices training /b	course	3700	1	3,700						SNK	Investment
2.1.1.2 ICT in agriculture for M&E /c	course	3700	1	3,700						SNK	Investment
2.1.1.3 Best practices in M&E and impact assessment /d	course	3700	1	3,700						SNK	Investment
2.1.1.4 Study tour /e	tour	8000	1	8,000						SNK	Investment
2.1.1.5 Exchange visits incentive for seed growers /f	tour	2000	-	2,000						SNK	Investment
2.1.1.6 Gender mainstreaming in agriculture	course	3700	1	3,700						SNK	Investment
2.1.1.7 Training of village-based extension staff /g	course	3700	1	3,700						SNK	Investment
2.1.1.8 Sensitization training/awareness on gender issues /h	course	3700	1	3,700						SNK	Investment
2.1.1.9 Develop tools and information materials /i	lumpsum			5,000						SNK	Investment
<b>Subtotal capacity building</b>				37,200						SNK	Investment
<b>2.1.2. Vehicles</b>										SNK	Investment
2.1.2.1 4WD 3-door Hardtop - extension teams	number	51500	1	51,500						SNK	Investment
2.1.2.2 Motorcycles	number	2600	2	5,200						SNK	Investment
<b>Subtotal vehicles</b>				56,700						SNK	Investment
<b>Subtotal Output 2.1</b>				93,900						SNK	Investment
<b>Output 2.2 breeder/foundation/registered seed produced by ARC</b>										SNK	Investment
<b>2.2.1. Equipment and Materials</b>										SNK	Investment
2.2.1.1 Renovate breeders' seed storage at ARC	facility	25000	1	25,000						SNK	Investment
<b>Output</b>	<b>Unit</b>	<b>Unit cost (USD)</b>	<b>Qty.</b>	<b>Base cost (USD)</b>	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>	<b>Implementing Entity</b>	<b>Project Area</b>	<b>Expenditure type</b>
2.2.1.2 Laboratory equipment for El Obeid	lumpsum			37,500						SNK	Investment
<b>Subtotal equipment and materials</b>				62,500						SNK	Investment

Seed Development Project:  
Component 2: Improvement of the seed production system (2/5)  
Annual Work Plan and Budget  
Year: 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>2.2.2. Vehicles</b>										SNK	Investment
2.2.2.1 hardtop 3-door 4x4	number	51500	1	51,500						SNK	Investment
Subtotal vehicles				51,500							
<b>2.2.3. Training in Crop Breeding</b>										SNK	Investment
2.2.3.1 Crop Breeding	course	13000	1	13,000						SNK	Investment
2.2.3.2 Water harvesting techniques	course	15630	1	15,630						SNK	Investment
Subtotal training in crop breeding				28,630						SNK	Investment
Subtotal output 2.2				142,630						SNK	Investment
<b>Output 2.3 Participatory research implemented</b>										SNK	Investment
<b>2.3.1 Training</b>										SNK	Investment
2.3.1.1 Participatory research	course	13000	1	13,000						SNK	Investment
Subtotal training				13,000						SNK	Investment
Subtotal output 2.3				13,000							
<b>Output 2.4. Community based seed growers enabled</b>										SNK	Investment
<b>2.4.1 Training</b>										SNK	Investment
2.4.1.1 Training of seed growers by extension teams	lumpsum			9,300						SNK	Investment
2.4.1.2 Information campaigns, awareness raising, media campaign /v	per annum			5,000						SNK	Investment
2.4.1.3 National Exchange visits on successful experiences	tour	2000	2	4,000						SNK	Investment
Subtotal training				18,300						SNK	Investment
<b>2.4.2. Insurance</b>										SNK	Investment
2.4.2.1 IFAD Insurance Contribution	lumpsum			-						SNK	Investment
2.4.2.2 Govt Insurance Contribution	lumpsum			-						SNK	Investment
2.4.2.3 Growers contribution to insurance	lumpsum			-						SNK	Investment
Subtotal insurance				-						SNK	Investment
Subtotal output 2.4				18,300						SNK	Investment
Subtotal total outputs North Kordofan				267,830						SNK	Investment



Seed Development Project:  
Component 2: Improvement of the seed production system (3/5)  
Annual Work Plan and Budget  
Year: 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>B. South Kordofan</b>											
<b>Output 2.1: Extension system Capacitated to support target seed growers</b>											
<b>2.1.1. Capacity Building</b>										SSK	Investment
2.1.1.1 Seed production and marketing practices training	course	3700	1	3,700						SSK	Investment
2.1.1.2 ICT in agriculture for M&E	course	3700	1	3,700						SSK	Investment
2.1.1.3 Best practices in M&E and impact assessment	course	3700	1	3,700						SSK	Investment
2.1.1.4 Study tour	tour	8000	1	8,000						SSK	Investment
2.1.1.5 Exchange visits incentive for seed growers	course	3700	1	3,700						SSK	Investment
2.1.1.6 Gender mainstreaming in agriculture	course	3700	1	3,700						SSK	Investment
2.1.1.7 Training of village-based extension staff	course	3700	1	3,700						SSK	Investment
2.1.1.8 Sensitization training/awareness on gender issues	lumpsum			5,000						SSK	Investment
2.1.1.9 Develop tools and information materials	lumpsum			3,700						SSK	Investment
<b>Subtotal capacity building</b>				<b>38,900</b>						SSK	Investment
<b>2.1.2. Vehicles</b>										SSK	Investment
2.1.2.1 4WD 3-door Hardtop - extension teams	number	51500	1	51,500						SSK	Investment
2.1.2.2 Motorcycles	number	2600	2	5,200						SSK	Investment
<b>Subtotal vehicles</b>				<b>56,700</b>						SSK	Investment
<b>2.1.3 Equipment</b>										SSK	Investment
2.1.3.1 Equipment for contact farmers	number	50	12	600							
<b>Subtotal equipment</b>				<b>600</b>							
<b>Subtotal Output 2.1</b>				<b>96,200</b>							
<b>Output 2.2 breeder/foundation/registered seed produced by ARC</b>										SSK	Investment
<b>2.2.1. Equipment and Materials</b>										SSK	Investment
2.2.1.1 Renovate breeders' seed storage at ARC	facility	50000	1	50,000						SSK	Investment
2.2.1.2 Laboratory equipment for El Obeid	lumpsum			62,500						SSK	Investment
<b>Subtotal equipment and materials</b>				<b>112,500</b>						SSK	Investment



Seed Development Project:  
Component 2: Improvement of the seed production system (4/5)  
Annual Work Plan and Budget  
Year: 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>2.2.2. Vehicles</b>										SSK	Investment
2.2.2.1 hardtop 3-door 4x4	number	51500	1	51,500						SSK	Investment
<b>Subtotal vehicles</b>				<b>51,500</b>							
<b>2.2.3. Training in Crop Breeding</b>										SSK	Investment
2.2.3.1 Crop Breeding	course	13000	1	13,000						SSK	Investment
2.2.3.2 Water harvesting techniques	course	15630	1	15,630						SSK	Investment
<b>Subtotal crop breeding</b>				<b>28,630</b>						SSK	Investment
<b>Subtotal output 2.2</b>				<b>192,630</b>						SSK	Investment
<b>Output 2.3 Participatory research implemented</b>										SSK	Investment
<b>2.3.1 Training</b>										SSK	Investment
2.3.1.1 Participatory research	course	13000	1	13,000						SSK	Investment
<b>Subtotal training</b>				<b>13,000</b>						SSK	Investment
<b>Subtotal output 2.3</b>				<b>13,000</b>							
<b>Output 2.4. Community based seed growers enabled</b>										SSK	Investment
<b>2.4.1 Training</b>										SSK	Investment
2.4.1.2 Information campaigns, awareness raising, media campaign /v	per annum			5,000						SSK	Investment
2.4.1.3 National Exchange visits on successful experiences	tour	2000	2	4,000						SSK	Investment
<b>Subtotal training</b>				<b>9,000</b>						SSK	Investment
<b>2.4.2. Insurance</b>										SSK	Investment
2.4.2.1 IFAD Insurance Contribution	lumpsum			15,950						SSK	Investment
2.4.2.2 Govt Insurance Contribution	lumpsum			15,950						SSK	Investment
2.4.2.3 Growers contribution to insurance	lumpsum			-						SSK	Investment
<b>Subtotal insurance</b>				<b>31,900</b>						SSK	Investment
<b>Subtotal output 2.4</b>				<b>40,900</b>						SSK	Investment
<b>Subtotal South Kordofan</b>				<b>342,730</b>						SSK	Investment

**Seed Development Project:**  
**Component 2: Improvement of the seed production system (5/5)**  
**Annual Work Plan and Budget**

Year: 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>C. Project Facilitation</b>										SSK	Investment
<b>2.1. Participatory research implemented</b>										SSK	Investment
2.1.1 Participatory Research expert (IC)	personmonth	15000	2	30,000						SSK	Investment
<b>Subtotal output 2.1</b>				30,000							
<b>2.2. Extension training Needs Assessed</b>										SSK	Investment
2.2.1 Training needs assessment for Extension staff	personmonth	3000	3	9,000						SSK	Investment
<b>Subtotal output 2.2</b>				9,000							
<b>2.3. Sufficient quantity of breeder/foundation/registered seed produced by ARC</b>										SSK	Investment
2.3.1 Foundation Seed				87,824						SSK	Investment
<b>Subtotal output 2.3</b>				87,824						SSK	Investment
<b>Subtotal project facilitation outputs</b>				126,824						SSK	Investment
<b>Total outputs investment costs</b>				737,384						SSK	Investment
<b>A. North Kordofan</b>											
<b>2.1. Agricultural Research Corporation fully equipped</b>											
2.1.1 Field Allowances for Breeders and technicians /hhh				6,000						SNK	Recurrent
2.1.2 Vehicle O & M				7,725						SNK	Recurrent
2.1.3 General operating expenses				3,450						SNK	Recurrent
<b>Subtotal output 2.1</b>				17,175						SNK	Recurrent
<b>2.2. Extension system capacitated to provide support to target groups</b>	per annum									SNK	Recurrent
2.2.1 Vehicle O & M	per annum	3000	1	8,505						SNK	Recurrent
2.2.2 General Operations & Maintenance	per annum	11505	1	3,000						SNK	Recurrent
<b>Subtotal output 2.2</b>				11,505						SNK	Recurrent
<b>Subtotal recurrent expenditures outputs for SNK</b>				28,680							

Seed Development Project:  
Component 2: Improvement of the seed production system (5/5)  
Annual Work Plan and Budget  
Year: 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>B. South Kordofan</b>											
<b>2.1. Agricultural Research Corporation</b>										SSK	Recurrent
Field Allowances for Breeders and technicians /iii				6,000						SSK	Recurrent
Vehicle O & M				7,725						SSK	Recurrent
General operating expenses				3,450						SSK	Recurrent
<b>Subtotal output 2.1</b>				<b>17,175</b>						SSK	Recurrent
<b>2.2 Extension system capacitated in support to target groups</b>										SSK	Recurrent
Vehicle O & M	per annum			8,505						SSK	Recurrent
General Operations & Maintenance	per annum			3,450						SSK	Recurrent
<b>Subtotal output 2.2</b>				<b>11,955</b>						SSK	Recurrent
<b>Subtotal recurrent expenditures outputs for SNK</b>				<b>29,130</b>						SSK	Recurrent
<b>Total recurrent expenditure outputs for SNK &amp; SSK</b>				<b>57,810</b>							

[illegible]



Seed Development Project  
III. Seed Market Development Support  
Annual Work Plan and Budget  
Year 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
Subtotal outputs project facilitation										ALL	Investment
										SNK	Investment
3.1. Empowerment of Farmer Producer Groups										SNK	Investment
3.1.1 Training									PCU/MoA/TA	SNK	Investment
3.1.1.1 Training of grain producers	per annum								PCU/MoA/TA	SNK	Investment
3.1.1.2 Training of contact farmers	trainee	200	84	16800					PCU/MoA/TA	SNK	Investment
3.1.1.3 Demonstration on soil and water conservation	number	300	84	25200					PCU/MoA/TA	SNK	Investment
3.1.1.4 Field days	number	200	42	8400					PCU/MoA/TA	SNK	Investment
Subtotal training									PCU/MoA/TA	SNK	Investment
Subtotal empowerment output 3.1											
3.2. Equipment for extension teams										SNK	Investment
3.2.1 Vehicles	unit	51500	2	103000					PCU	SNK	Investment
Subtotal equipment output 3.2											
3.3. Insurance									PCU	SNK	Investment
3.3.1 Govt Insurance Contribution	lumpsum								GoS/Insurance	SNK	Investment
3.3.2 Producers contribution to insurance	lumpsum								GoS/Insurance	SNK	Investment
Subtotal insurance output 3.3										SNK	Investment
3.4. Infrastructure Support to ABSUMI									PSC/PCU	SNK	Investment
3.4.1. Support to Absumi /m									PSC/PCU	SNK	Investment
3.4.1.1 Infrastructure and equipment support	lumpsum								PSC/PCU	SNK	Investment
Subtotal output 3.4										SNK	Investment
C. South Kordofan										SSK	Investment
3.1. Empowerment of Farmer Producer Groups										SSK	Investment
3.1.1 Training										SSK	Investment
3.1.1.1 Training of grain producers	per annum								PCU/MoA/TA	SSK	Investment
3.1.1.2 Training of contact farmers	trainee	200	126	25200					PCU/MoA/TA	SSK	Investment
3.1.1.3 Demonstration on soil and water conservation	number	120	126	15120					PCU/MoA/TA	SSK	Investment
3.1.1.4 Field days	number	200	63	12600					PCU/MoA/TA	SSK	Investment
Subtotal									PCU/MoA/TA	SSK	Investment
3.2. Equipment for extension teams										SSK	Investment
3.2.1 Vehicles	unit	51500	2	103000					PCU	SSK	Investment



Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>I Investment Costs</b>	per annum										Investment
<b>A. Project Coordination</b>	per annum										Investment
<b>4.1 Project Management and Coordination structures established</b>	per annum								PCU/SMoA	FEDERAL/SNK/SSK	Investment
<b>4.1.1 Project Coordination Unit</b>	per annum										Investment
4.1.1.1 Principal Programme Coordinator	per annum	46800	-	-							Investment
4.1.1.2 Seed Specialist	per annum	40950	1	40,950							Investment
4.1.1.3 Financial Controller	per annum	40950	-	-							Investment
4.1.1.4 Senior M&E Officer	per annum	35100	-	-							Investment
4.1.1.5 Community Development Officer	per annum	28080	-	-							Investment
4.1.1.6 Administrative Officer	per annum	28080	-	-							Investment
4.1.1.7 Accountant	per annum	25740	1	25,740							Investment
4.1.1.8 Secretary Executive		10500	-	-							Investment
4.1.1.9 Driver /c		7800	1	7,800							Investment
4.1.1.10 Guards	number	7800	-	-							Investment
4.1.1.11 Cleaner	number	7800	-	-							Investment
<b>Subtotal Project Coordination Unit</b>	number			<b>74,490</b>							<b>Investment</b>
<b>4.1.2. Project Equipment and Materials</b>	number										Investment
4.1.2.1 Laptop computers - professional staff	lumpsum	1500	1	1,500							Investment
4.1.2.2 Desktop computers - support staff	lumpsum	800	1	800							Investment
4.1.2.3 Photocopier	set	5000	-	-							Investment
4.1.2.4 Printer		3000	1	3,000							Investment
4.1.2.5 Specialised equipment to set up MIS		6250	1	6,250							Investment
4.1.2.6 Miscellaneous equipment	number	1000	1	1,000							Investment
4.1.2.7 Office equipment & furniture		1250	1	1,250							Investment
<b>Subtotal equipment and materials</b>				<b>13,800</b>							<b>Investment</b>
<b>4.1.3. Vehicles</b>	study			-							Investment
4.1.3.1 Project vehicle - 5 door hardtop	personmonth	53000	1	53,000							Investment
<b>Subtotal vehicles</b>	personmonth			<b>53,000</b>							<b>Investment</b>

Seed Development Project  
 IV Project Coordination and Management



Annual Work Plan and Budget  
Year 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>4.2. M &amp; E Knowledge Management (KM) system established</b>	lumpsum										Investment
4.2.1 Comprehensive baseline study	lumpsum	75000	1	75,000							Investment
4.2.2 Develop KM Strategy	workshop	3000	2	6,000							Investment
4.2.3 Update Project M & E System Design /d	personmonth	3000	2	6,000							Investment
4.2.4 Mid Term review	course										Investment
4.2.5 Project Completion	per annum										Investment
4.2.6 Start-up workshop /e	per annum	3700	1	3,700							Investment
4.2.7 Technical and thematic studies /f		3700	1	3,700							Investment
4.2.8 Training for PIU staff /g		3700	1	3,700							Investment
4.2.9 Conduct Annual Review and Planning Workshops /h	per annum	6000	1	6,000							Investment
4.2.10 Annual Project Assessments	per annum										Investment
<b>Subtotal M&amp;E and KM</b>	per annum			<b>104,100</b>							<b>Investment</b>
<b>4.3. Project Supervised and backstopped</b>				-							Investment
4.3.1 Supervision by PSC, SCC, IFAD & Govt /i		9000	1	9,000							Investment
4.3.2 Annual Audit		15000	1	15,000							Investment
4.3.3 Service fees to CCU		20000	1	20,000							Investment
<b>Subtotal project supervision</b>	per annum			<b>44,000</b>							<b>Investment</b>
<b>Subtotal establishment project management and co0rdination structure</b>	per annum			<b>289,390</b>					<b>PCU</b>		<b>Investment</b>
<b>B. Project Oversight North Kordofan</b>											Investment
<b>4.1. Personnel Costs</b>											Investment
4.1.2 State Focal Point /j	unit	35.142	-	-							Investment
4.1.2 SCU		118623	0.2	23,725							Investment
<b>Subtotal personnel cost</b>				<b>23,725</b>							<b>Investment</b>
<b>4.2. Vehicles</b>				-							Investment
4.2.1 Hardtop - 3 door		51.500	-	-							Investment
<b>Subtotal vehicles</b>				-							
<b>Subtotal project oversight SNK</b>	per annum			<b>23,725</b>					<b>PCU/SNK</b>		



Seed Development Project  
IV Project Coordination and Management  
Annual Work Plan and Budget  
Year 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
<b>C. Project Oversight North Kordofan</b>	per annum										Investment
<b>4.1. Personnel Costs</b>											Investment
4.1.2 State Focal Point /j	unit	118623	0.2	23,725							Investment
4.1.2 SCU		35,142	-	-							Investment
<b>Subtotal personnel cost</b>				<b>23,725</b>							Investment
<b>4.2. Vehicles</b>											Investment
4.2.1 Hardtop - 3 door		51500	0	-							Investment
<b>Subtotal vehicles</b>				<b>-</b>							Investment
<b>Subtotal project oversight SSK</b>				<b>23,725</b>					PCU/SSK		
<b>Total project investment cost for coordination and management</b>	per annum			<b>360,564</b>					PCU/SPCU	FEDERAL /SNK/SSK	Investment
<b>I. Recurrent Costs</b>	per annum										Recurrent
<b>A. Project Coordination</b>	per annum										Recurrent
<b>4.1. Vehicles and equipment</b>	per annum			-							Recurrent
4.1.1 Vehicle O&M	per annum	12000	1	12,000							Recurrent
4.1.2 Vehicle and equipment insurance		12000	1	12,000							Recurrent
4.1.3 Vehicle registration		1000	1	1,000							Recurrent
4.1.4 Equipment operations and maintenance	per annum	1000	1	1,000							Recurrent
4.1.4 Generator operation and maintenance	per annum	1000	1	1,000							Recurrent
<b>Subtotal vehicles and equipment</b>	per annum			<b>27,000</b>							Recurrent
<b>4.2. Office running costs</b>	per annum										Recurrent
4.2.1 Guesthouse and office rent	per annum	0	0	-							Recurrent
4.2.2 Casual Labourers	per annum	0	0	-							Recurrent
4.2.3 Documentation and media editing	per annum	1000	1	1,000							Recurrent
4.2.4 Advertising	per annum	1000	1	1,000							Recurrent
4.2.5 Electricity and water		0	0	-							Recurrent
4.2.6 Bank charges		1000	1	1,000							Recurrent

Seed Development Project  
IV Project Coordination and Management  
Annual Work Plan and Budget  
Year 2012

Output	Unit	Unit cost (USD)	Qty.	Base cost (USD)	Q1	Q2	Q3	Q4	Implementing Entity	Project Area	Expenditure type
4.2.7 Telephone and internet connection		1000	1	1,000							Recurrent
4.2.8 Postage and courier		0	0	-							Recurrent
<b>Subtotal office running cost</b>	per annum			4,000							Recurrent
<b>Subtotal project coordination</b>				31,000							Recurrent
<b>B. Project Oversight North Kordofan</b>	per annum										Recurrent
<b>4.1 Office operating and vehicle running costs</b>											Recurrent
4.1.1 Vehicle and office operating costs		0	0	-							Recurrent
<b>4.2. Field allowances</b>											Recurrent
4.2.1 Field allowances for State MoA	per annum	0	0	-							Recurrent
<b>Subtotal project oversight in NK</b>				-							Recurrent
<b>C. Project Oversight North Kordofan</b>	per annum										Recurrent
<b>4.1. Office operating and vehicle running costs</b>											Recurrent
Vehicle and office operating costs		0	0	-							Recurrent
<b>4.2. Field allowances</b>											Recurrent
Field allowances for State MoA		0	0	-							Recurrent
<b>Subtotal project oversight SK</b>				-							Recurrent
				31,000							Recurrent
				360,564							Investment
<b>Total project coordination and management</b>				391,564							All

## Appendix 4. Templates for the Seed Market Database

### Template 1: Monitoring Of Seed Production and Marketing

Code	Crop	Variety	ARC				ARC/Participatory Research			
			Target Breeder Seed	Actual Breeder Seed	Target Foundation Seed	Actual Foundation Seed	Target Breeder Seed	Actual Breeder Seed	Target Foundation	Actual Foundation Seed
	Sorghum									
	Total Sorghum									
	Sesame									
	Total Sesame									
	Groundnut									
	Total Groundnut									
	Cowpea									
	Total Cowpea									
	Grand Total									

Template 2: Production of Certified Seeds (disaggregated by localities)

Code	Crop	Variety	Number of SGGs	Number of Farmers	Target Production “000”Kg	North Kordofan				South Kordofan				
						Target Production “000”Kg	Target Area (fd)	Actual Area (fd)	Number of SGGs	Number of Farmers	Target Production “000”Kg	Target Production “000”Kg	Target Area (fd)	Actual Area (fd)
	Sorghum													
	Total Sorghum													
	Sesame													
	Total Sesame													
	Groundnut													
	Total Groundnut													
	Cowpea													
	Total Cowpea													
	Grand Total													

Template 3: Grassroots Seed Production planned vs. actual disaggregated by gender (this can be repeated by state and by locality)

Code	Crop & Variety	Planned								Actual							
		Number of SGGs		Number of Farmers		Production ‘000’Kg		Area Feddans		Number of SGGs		Number of Farmers		Production ‘000’Kg		Area Feddans	
		Female	Male	Female	Male	Male	Female	Male	Female	Female	Male	Female	Male	Male	Female	Male	Female
	Sorghum																
	Total Sorghum																
	Sesame																
	Total Sesame																
	Groundnut																
	Total Groundnut																
	Cowpea																
	Total Cowpea																
	Grand Total																

Template 4: Production by crop and variety of certified seeds and area harvested

Code	Crop & Variety	North Kordofan				South Kordofan			
		Number of Farmers	Number of SGGs	Production “000’Kg	Area harvested (fd)	Number of Farmers	Number of SGGs	Production “000’Kg	Area harvested (fd)
	Sorghum								
	Total Sorghum								
	Sesame								
	Total Sesame								
	Groundnut								
	Total Groundnut								
	Cowpea								
	Total Cowpea								
	Grand Total								

Template 5: Seed Grower Groups Performance (disaggregated by state and locality)

Code	Crop	Variety	Number of SGGs Formed	Number of groups contracted	Quantity Seed Produced “000”kg	Quantity Seed Certified (fd)	Area harvested (fd)	Yield of certified seeds	Quantity of seeds purchased by Private companies (“000”kg)
	<b>Sorghum</b>								
	<b>Total Sorghum</b>								
	<b>Sesame</b>								
	<b>Total Sesame</b>								
	<b>Groundnut</b>								
	<b>Total Groundnut</b>								
	<b>Cowpea</b>								
	<b>Total Cowpea</b>								
	<b>Grand Total</b>								

Template 6 Marketing of certified seeds for North Kordofan (same for South Kordofan and disaggregated by locality, gender)

Code	Crop	Variety	GPGs mobilized				Quantity of certified Seeds purchased ('000"kg)				Source of certified seeds					
			# of GPGs		Number of Farmers		Mobilized GPGs		Non Mobilized GPGs		LCSAs	SGGs	Direct from PSC	Farmer to Farmer	Own seeds from previous season	Directly from SGGs
			Male	Female	Male	Female	Male	Female	Male	Female						
	Sorghum															
	Total Sorghum															
	Sesame															
	Total Sesame															
	Groundnut															
	Total Groundnut															
	Cowpea															
	Total Cowpea															
	Grand Total															



**Template 7: NSA: Seed certification monitoring Season 20xx-20xx (applies to all seed classes including breeder foundation and certified)**

Code	Crop	Variety	Pre-harvesting inspection (feddans)				Post Harvesting	Rejection		Re-inspected	
			Pre-flowering	Flowering	Pre-harvesting	Harvesting	Quantity successfully certified “000’Kgs	Number of Plots rejected	Area rejected (fd)	Plots successfully re-inspected after rejection	Area successfully re-inspected after rejection (fd)
	Sorghum										
	Total Sorghum										
	Sesame										
	Total Sesame										
	Groundnut										
	Total Groundnut										
	Cowpea										
	Total Cowpea										
	Grand Total										



## **ANNEX 7: FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS**

### **INTRODUCTION**

1. The financial review draws on the Country Integrated Fiduciary Assessment (CIFA) carried out by the World Bank for federal and state organizations in the Sudan. In North and South Kordofan, a number of Projects use separate financial systems such as the Integrated Livestock Production and Marketing Project financed by the Multi-Donor Trust Fund, the EU financed Sudan Productive Capacity Recovery Programme, IFAD financed South Kordofan Rural Development Programme (SD-544) and the Western Sudan Resources Management Programme (SD-655). The lead agencies for all these Projects are the Federal Ministry of Animal Resources and Fisheries and Federal Ministry of Agriculture respectively.

2. The CIFA and Country Procurement Assessment Report (CPAR) report that the main weaknesses of federal and state Ministries with respect to financial management are the following: (i) manual accounting system is still widely used; (ii) weak financial controls; (iii) incomplete and outdated legal, and regulatory framework; (iv) weak procedures and practices, often applied in discretionary and discriminating manner; (v) insufficient human and financial resources. These aspects were confirmed during the review of the National Seed Administration and the review of the accounting systems in selected technical departments of the state ministries of agriculture in North and South Kordofan during the 2010 supervision mission.

3. In order to overcome these weaknesses, the IFAD co-financed Projects resolved to set up separate financial and procurement systems managed by the Project Coordination Unit. In the case of the Western Sudan Resources Management Programme (WSRMP), measures were taken to improve the financial system as follows: (i) a computerized system was installed and is being developed based on emerging issues; (ii) an imprest account system that the Programme Coordination Unit adopted with the state coordination units that implement activities at state level; (iii) a payment and reporting system that the Programme Coordination Unit and the State Coordination Units adopted with executing agencies. The system can still be further developed namely in the areas of : (i) management of advance requests to executing agencies against their annual work plan and budget; (ii) strengthening internal controls and tracking of expenditures; and (iii) timely reporting.

### **DESCRIPTION OF THE FINANCIAL MANAGEMENT SYSTEM OF THE SEED DEVELOPMENT PROJECT**

4. WSRMP will implement the Seed Development Project. The financial management of the Seed Development Project will use the financial system in place as follows:

- The Seed Development Project will be established as a new accounting unit in WSRMP and will have a dedicated accountant<sup>73</sup>. The accountant will be recruited competitively.
- The Seed Development Project will have its own set of designated accounts in foreign currency (EURO), Project account and counterpart fund account. These accounts will be managed under the principle of joint signatures of the Programme Coordinator and Financial Manager of the WSRMP.
- For the purpose of financing the recurrent costs of the NSA seed certification and inspection, the PCU was authorized by the Ministry of Finance to open an account that will be jointly managed by the PCU and NSA. This account is called the inspection fee account: it will be used to remit the certification and inspection fees charged to the seed company for the contracted fields and will be used to finance the recurrent costs of the NSA inspection and certification missions in the project area.
- Service providers such as the extension team and the seed company will be paid in accordance with a service agreement. The schedule of payment will be contingent on achieving the AWPB or business plan performance targets. This should facilitate the monitoring of contract implementation.

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<sup>73</sup> The terms of reference of the accountant are in annex 5.

5. The flow of funds of the Project is described in figure 6 of the main report.

6. **The designated account in EURO.** The designated account will operate on an advance basis and receive an initial deposit of EURO 1 040 000 representing the requirement for the first semester. The account will be replenished on a regular basis from the IFAD grant account based on submission of duly completed withdrawal applications. The designated account will be opened in a bank acceptable to IFAD, and likely to be the Omdurman National bank in El Obeid where PCU holds the special account of WSRMP (655-SD). The designated account will be jointly operated by the Project manager and financial manager.

7. **The Government counterpart account in local currency.** The Government counterpart account receives the Government share of the annual work plan and budget. The Government transfers quarterly payments to the Project based on the quarterly forecasts of the AWPB and the Project physical progress. The Government counterpart account will be jointly operated by the Project manager and financial manager.

8. **The Project account in local currency.** It will be opened in a bank acceptable to IFAD likely to be the Omdurman National bank in El Obeid where PCU holds the project account of WSRMP (655-SD). It will be funded from the designated account and will finance eligible expenditures in local currency. Expenditures will be replenished from the designated account. The Project account will be jointly operated by the Project manager and financial manager.

9. **Inspection fee account.** The NSA lacks financial autonomy, is under-financed and yet it generates revenues for the Government in form of inspection and certification fees that it remits to the treasury. In order to overcome this situation, the Ministry of Finance and National Economy authorized the opening of an inspection fee account where the inspection and certification fees charged in the context of SDP can be remitted and used for financing the operating costs of the NSA team outposted at state level. The account will be opened by the PCU but disbursement will be subject to joint request submitted by NSA and approved by PCU.

10. **The statement of expenditures (SoE).** The Seed Development Project will adopt the same SoE thresholds practiced by the WSRMP. These are:

**Table 1: Statement of Expenditure Thresholds**

SoE threshold in EURO	
<b>I. Investment Costs</b>	
A. Civil Works	40 000
B. Technical Assistance (international)	Not under SoE
C. Technical Assistance (national)	All national TA
D. Contracted Services	Not under SoE
G. Fund	Not under SoE
I. Training	All national training
J. Equipment	40 000
K. Vehicles	40 000
<b>II. Recurrent Costs</b>	
A. Salaries and Allowances	All expenditures
B. Operation and Maintenance	All expenditures
C. Vehicle O & M	All expenditures
D. Direct Project Recurrent Costs	All expenditures

11. **Audit.** The PCU of WSRMP will prepare semi-annual financial statements of the operations, resources and expenditures related to the Project in respect of each Fiscal Year and deliver such consolidated financial statements to the Fund and Government within two months of the end of each such period. The WSRMP will amend the scope of work of the General Auditor's Chamber to include the audit of the Seed Development Project. In addition to the audit report on the consolidated financial statements of the Seed Development Project, the auditors will provide: (i) an opinion on the certified

statements of expenditure and the operation of the Designated Account; and (ii) a separate management letter, addressing the adequacy of the accounting and internal control systems. The PCU of WSRMP will deliver the audited report containing the above-mentioned items to the Fund and Government within six months of the end of each such Fiscal Year. The PCU of WSRMP will submit to the Fund the reply to the management letter of the auditors within one month of receipt thereof.

12. The General Auditor Chamber will audit the Seed Development Project accounts as part of the annual audit of the WSRMP. The first audit of the Project account will take place in 2013 (should the disbursement commence as planned). The terms of reference are in appendix 1 and are copied from IFAD's audit guidelines.

## **Appendix 1. Terms of reference of the Audit of the Seed Development Project**

1. Kindly note that the ToR presented here is based on the annex VI of the IFAD guidelines for Project audits (for Borrowers' use). The ToR of the WSRMP audit will need to be updated to include an additional scope of work for the Seed Development Project as indicated below.
2. **Description of the Project.** As per main report.
3. **The objective of the audit** of the Project financial statement (PFS) is to enable the auditor to express a professional opinion on the financial position of Seed Development Project at the end of each fiscal year and of the funds received and expenditures incurred for the accounting period ended [31/12/20XX], as reported in the PFS, including an opinion on the statements of expenditure (SOE) and special account (SA).
4. The Project books of accounts and records provide the basis for preparation of the PFS and have been maintained to reflect all financial transactions in respect of the Project by the Project-implementing agency which is the Programme Coordination Unit of the Western Sudan Resources Management Programme (WSRMP).
5. **Scope of work of the auditor.** The audit will be carried out in accordance with International Audit Standards (ISA) issued by The International Organization of Supreme Audit Institutions (INTOSAI) and will include such tests and reviews, as the auditor considers necessary under the circumstances. Special attention will be paid to establishing that :
  - All external funds have been used in accordance with the conditions stipulated in the financing agreement, with due attention to economy and efficiency, and solely for the purposes for which the financing was provided. The relevant financing agreements are those for the Seed Development Project and the Western Sudan Resources Management Programme.
  - All Government counterpart funds have been provided by the Ministry of Finance and National Economy as per the Annual Work Plan and Budget (AWPB) for the fiscal year under review and used in accordance with national or organizational financial regulations, with due attention to economy and efficiency, and solely for the purposes for which they were provided.
  - All goods, consultancy and other services, and civil works financed out of the Project funds have been procured in accordance with stipulations in the financing agreement and/or government regulations.
  - All necessary supporting documents, records and accounts have been kept in respect of all Project ventures, including expenditures reported via the statement of expenditures (SOEs) or special account (SA).
  - The Designated Account (DA) has been used in accordance with the provisions of the financing agreement.
  - The Project accounts have been prepared in accordance with consistently applied rules acceptable to IFAD ( such as IFRS, IPSAS, National Accounting Standards if converging towards international best practice) and give a true and fair view of the financial status of the Project at [31/12/20XX] and of resources and expenditures for the year ended on that date.
  - All assets purchased are allocated as per the Project design document and the AWPB for the year under review and confirm their existence and use for Project purposes.
  - Ensure that all goods/works/services procured to the three main implementing agencies, the National Seed Administration (NSA), the Agriculture Research Corporation (ARC), and the extension teams as well as the contract payments to the seed company have been used with due attention to economy and efficiency, and solely for the purposes for which the financing was provided and are fully documented.
6. **Project Financial Statements.** It should be noted that clear linkages should exist between the Project books of accounts and the reports presented to IFAD. The PFS will include the following:
  - Yearly and cumulative statements of sources and application of funds, which should disclose separately IFAD's funds, counterpart funds (Government), and beneficiaries' funds;
  - Bank Reconciliation Statements, which should disclose bank and cash balances (that should agree with the statement of sources and application of funds), and liabilities;
  - Yearly and cumulative SOEs by withdrawal application and category of expenditures; and

- Fixed Assets Register;
- Consolidated financial statements, as Project consists of more than one entity (NSA, ARC, Service Provider, Extension teams).
- A reconciliation between the amounts shown as received by the Project and those shown as being disbursed by IFAD should be attached as an annex to the PFS. As part of that reconciliation, the auditor will indicate the procedure used for disbursement – DA funds, letters of credit, special commitments, reimbursement or direct payment – and indicate whether the expenditure is fully documented or uses the SOE format.

7. **Statement of Expenditures.** In addition to the audit of the PFS, the auditor will include a review of SOEs used as the basis for submitting withdrawal applications. The auditor will carry out tests and reviews as necessary and relevant to the circumstances. SOE expenditures will be carefully compared for eligibility with relevant financial agreements, and the disbursement letter, and with reference to the Project design report for guidance when necessary. Where ineligible expenditures are identified as having been included in withdrawal applications and reimbursed, auditors will note these separately.

8. A schedule listing individual SOEs reviewed by withdrawal applications by reference number and amount should be attached to the PFS. The total withdrawals under the SOE procedure should be part of the overall reconciliation of IFAD disbursements described above.

9. **Designated Account.** The auditor is also required to audit the activities of the Designated Account (DA) associated with the Project, including the Authorized Allocation or initial deposit, replenishments, interest that may accrue on the outstanding balances, and the year-end balances. The auditor must form an opinion as to the degree of compliance with IFAD procedures and the balance of the DA at year end. The audit should examine: (i) the eligibility of withdrawals from the DA during the period under review; (ii) the operation of the DA in accordance with the relevant financing agreement; (iii) the adequacy of internal controls within the Project appropriate for this disbursement mechanism; and (iv) the use of correct exchange rates to convert local currency expenditures to United States Dollars and EURO.

10. **Auditor opinion.** As part of the opinion on the PFS, the audit report will include a **separate** opinion on SOEs and DA, indicating the extent to which these procedures can be relied upon as a basis for fund disbursements under the Project.

11. **Audit management letter and report.** The auditor will provide a management letter<sup>74</sup> which will identify deficiencies in the Project accounting records, procedures, systems and internal controls and make appropriate recommendations for improvement. The management letter will also include any other significant matters that come to the auditor's attention and might have material impact on Project implementation. The auditor's report should be addressed to the Western Sudan Resources Management Programme.

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<sup>74</sup> A sample of the management letter is available in Annex VIII of the IFAD guidelines for project audits (for Borrowers' use)





### Annex 8: Detailed 18-Month Procurement Plan

SUMMARY OF 18-MONTH PROCUREMENT PLAN BY PROCUREMENT METHOD AND	
PROCUREMENT METHOD	TOTAL AMOUNT
<b>Category 1 - Goods</b>	
Community Participation in Procurement (CPP)	35 130
International Competitive Bidding	1 333 474
Local Competitive Bidding	2 500
Limited International Bidding	14 176
National Competitive Bidding	128 750
<b>TOTAL CATEGORY 1 - GOODS</b>	<b>1 514 029</b>
<b>Category 2 - Works</b>	
National Competitive Bidding	162 500
<b>TOTAL CATEGORY 2 - WORKS</b>	<b>162 500</b>
<b>Category 3 - Services</b>	
Community Participation in Procurement (CPP)	313 649
Direct Contracting (Dir-Contract)	62 988
Local Competitive Bidding	306 065
Limited International Bidding (LIB)	38 250
Non-Bank Financed (NBF)	344 024
National Competitive Bidding (NCB)	110 500
Quality and Cost Based Services (QCBS)	1 506 402
<b>TOTAL CATEGORY 3 - SERVICES</b>	<b>2 681 877</b>
<b>TOTAL 18 MONTH PROCUREMENT COST</b>	<b>4 358 407</b>

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 1 - GOODS, BY COMPONENT AND CATEGORY											
Component Description				Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible
CATEGORY 1					Yr1	Yr2					
GOODS											
Table 1. Institutional and Regulatory Environment Strengthening and Development											
		Vehicles									
		Double cabin for Centre /i		unit	2.00	0.00	2.00	34 000	68	ICB	PCU/CCU
		4WD 3-door Hardtop		unit	1.00	0.00	1.00	51 500	52	ICB	PCU/CCU
		Sub-total		Table 1. Institutional and Regulatory Environment Strengthening and Development				120			
Table 2. Improvement of the Seed Production System											
		4WD 3-door Hardtop - extension teams		number	1.00	0.00	1.00	51500	52	ICB	PCU/CCU
		Motorcycles /j		number	2.00	0.00	2.00	2 600	5	ICB	PCU/CCU
		4WD 3-door hardtop		number	1.00	0.00	1.00	51 500	52	ICB	PCU/CCU
		4WD 3-door Hardtop - extension teams		number	1.00	0.00	1.00	51 500	52	ICB	PCU/CCU
		Motorcycles /kk		number	2.00	0.00	2.00	2 600	5	ICB	PCU/CCU
		4WD hardtop		number	1.00	0.00	1.00	51 500	52	ICB	PCU/CCU
		Sub-total		Table 2. Improvement of the Seed				216			
Table 3. Seed Market Development Support											
		Vehicles		unit	2.00	0.00	2.00	51 500	103	ICB	PCU/CCU
		Vehicles		unit	2.00	0.00	2.00	51 500	103	ICB	PCU/CCU
		Sub-total		Table 3. Seed Market Development				206			
Table 4. Project Coordination and Management											
		Project vehicle - 5 door hardtop		number	1.00	0.00	1.00	53 000	53	ICB	PCU/CCU
TOTAL		Sub-total		Table 4. Project Coordination and				53			
Total Vehicles								595			

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 1 - GOODS, BY COMPONENT AND CATEGORY										
Component Description CATEGORY 1 GOODS			Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible
				Yr1	Yr2					
Equipment and Materials										
		DNA testing equipment and consumables /f	lumpsum	131.25	6.25	137.50	1 000	138	ICB	NSA/PCU
		Seed testing equipment for central lab /h	lumpsum	65.00	3.13	68.13	1 000	68	ICB	NSA/PCU
		International Rules for Seed Testing	copy	4.00	0.00	4.00	420	2	LIB	NSA/PCU
		Seed Science and Technology	copy	2.00	0.00	2.00	480	1	LIB	NSA/PCU
		Handbook on Seed Evaluation	copy	4.00	0.00	4.00	280	1	LIB	NSA/PCU
		Slides of seeding list	set	4.00	0.00	4.00	4	0	LIB	NSA/PCU
		Hand book on moisture determination	copy	4.00	0.00	4.00	280	1	LIB	NSA/PCU
		Hand book on pure seed definition	copy	4.00	0.00	4.00	280	1	LIB	NSA/PCU
		Proceedings of the ISTA Purity Analysis /r	copy	4.00	0.00	4.00	70	0	LIB	NSA/PCU
		Calibration samples	copy	4.00	0.00	4.00	1 000	4	LIB	NSA/PCU
		Hand book on seed sampling	copy	4.00	0.00	4.00	280	1	LIB	NSA/PCU
		Common laboratory Seed health testing method /s	copy	4.00	0.00	4.00	170	1	LIB	NSA/PCU
		ISTA working sheets /t	copy	4.00	0.00	4.00	280	1	LIB	NSA/PCU
		Electrophoresis testing	copy	4.00	0.00	4.00	70	0	LIB	NSA/PCU
		Grow th chamber, green house testing procedures	copy	4.00	0.00	4.00	70	0	LIB	NSA/PCU
		Laboratory tests for variety determination /u	copy	4.00	0.00	4.00	50	0	LIB	NSA/PCU
		Hand book of vigour test methods	copy	4.00	0.00	4.00	50	0	LIB	NSA/PCU
		Equipment for State Seed Laboratory /dd	lumpsum	30.00	1.50	31.50	1 000	32	ICB	NSA/PCU
		Equipment for State Seed Laboratory /ll	lumpsum	50.00	2.50	52.50	1 000	53	ICB	NSA/PCU
		Laptops /mm	unit	2.00	0.00	2.00	1 500	3	ICB	PCU/CCU
		Desktop	unit	2.00	0.00	2.00	800	2	ICB	PCU/CCU
		Photocopier	unit	1.00	0.00	1.00	5 000	5	ICB	PCU/CCU
		Laserjet Printer	unit	1.00	0.00	1.00	5 000	5	ICB	PCU/CCU
		Miscellaneous equipment	unit	1.00	0.00	1.00	2 000	2	ICB	PCU/CCU
		Office furniture	set	2.00	0.00	2.00	1 000	2	ICB	PCU/CCU
		Outpost Inspector and Seed Analyst /nn	lumpsum	2.50	0.00	2.50	1 000	3	LCB	NSA/PCU/CCU
		Sub-total	Table 1. Institutional and Regulatory Environment Strengthening and					325		
Table 2. Improvement of the Seed Production System										
		Laboratory equipment for El Obeid /n	lumpsum	37.50	1.88	39.38	1 000	39	ICB	ARC/PCU
		Equipment for contact farmers /ll	number	12.00	0.00	12.00	50	1	ICB	ARC/PCU
		Office equipment for extension teams /mm	lumpsum	12.50	0.00	12.50	1 000	13	ICB	ARC/PCU
		Materials and equipment for demonstration farmer field school	per annum	12.50	6.25	18.75	1 000	19	NCB	ARC/PCU
		Renovate breeders' seed storage at ARC /nn	facility	1.00	0.00	1.00	50 000	50	NCB	ARC/PCU
		Laboratory equipment for South Kordofan /oo	lumpsum	62.50	3.13	65.63	1 000	66	ICB	ARC/PCU
		Registered Seed /ggg	per annum	87.82	0.00	87.82	1 000	88	ICB	ARC/PCU
		Registered seed production	per annum	0.00	35.13	35.13	1 000	35	CPP	ARC/PSC
		Sub-total	Table 2. Improvement of the Seed Production System					310		

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 1 - GOODS, BY COMPONENT AND CATEGORY										
Component Description CATEGORY 1 GOODS			Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible
				Yr1	Yr2					
Table 3. Seed Market Development Support										
		Publicity and various demonstrations of use of certified seed /f	campaigns	2.00	1.00	3.00	20 000	60	NCB	PCU/CCU
		Equipment for seed database /h	set	1.00		1.00	10 000	10	ICB	PCU/CCU
		Infrastructure and equipment support /n	lumpsum	200.00	0.00	200.00	1 000	200	ICB	PCU/CCU
			Table 3. Seed Market Development Support					270		
		Sub-total								
Table 4. Project Coordination and Management										
		Laptop computers - professional staff	number	1.00	0.00	1.00	1 500	2	ICB	ARC/PCU
		Desktop computers - support staff	number	1.00	0.00	1.00	800	1	ICB	ARC/PCU
		Photocopier	number	0.00	0.00	0.00	5 000	0	ICB	ARC/PCU
		Printer	number	1.00	0.00	1.00	3 000	3	ICB	ARC/PCU
		Specialised equipment to set up MIS	lumpsum	6.25	0.00	6.25	1 000	6	ICB	ARC/PCU
		Miscellaneous equipment	lumpsum	1.25	0.63	1.88	1 000	2	ICB	ARC/PCU
		Office equipment & furniture	set	1.00	0.00	1.00	1 000	1	ICB	ARC/PCU
		0				0.00		0		ARC/PSC
			Table 4. Project Coordination and Management					14		
		Sub-total								
		Sub-total	Table 1. Institutional and Regulatory Env					444		
		Sub-total	Table 2. Improvement of the Seed Prod					526		
		Sub-total	Table 3. Seed Market Development Sup					476		
		Sub-total	Table 4. Project Coordination and Mana					67		
		Total Purchases Category 1 - Goods						1 514		

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 2 - WORKS BY COMPONENT, PROCUREMENT METHOD AND CATEGORY										
Component Description			Unit	Quantity		Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible	
CATEGORY 2				Yr 1	Yr 2					Total
WORKS										
Table 1. Institutional and Regulatory Environment Strengthening and Development										
	Civil Works									
		Refurbishment of Central Laboratory	lumpsum	87.5	0	87.5	1000	88	NSA/PCU	
		Rehabilitate offices and staff accommodation	lumpsum	50	0	50	1000	50	SK/PCU	
		Sub-total	Table 1. Institutional and Regulatory Environment Strengthening and Development				138			
Table 2. Improvement of the Seed Production System										
		Renovate breeders' seed storage at ARC /m	facility	1	0	1	25000	25	NK/ARC/PCU	
		Sub-total	Table 2. Improvement of the Seed Production System				25			
		Total Category 2 - Works					163			

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 3 - SERVICES, BY COMPONENT AND CATEGORY									
Component Description		Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible
CATEGORY 3 SERVICES			Yr1	Yr2					
Table 1. Institutional and Regulatory Environment Strengthening and Development									
Technical Assistance									
Te	Plant variety protection legal expert (IC) /a	personmonth	1.0	0.5	1.5	15 000	23	QCBS	CONSULT/NSA/PCU
Te	Plant variety protection legal expert (NC) /b	personmonth	2.0	0.5	2.5	3 000	8	QCBS	CONSULT/NSA/PCU
Te	Plant breeding strategy developed (IC)	personmonth	1.0	0.0	1.0	15 000	15	QCBS	CONSULT/NSA/PCU
Te	Plant breeding strategy developed (NC)	personmonth	2.0	0.0	2.0	3 000	6	QCBS	CONSULT/NSA/PCU
Te	M & E Design - for NSA (IC) /x	personmonth	2.0	0.0	2.0	15 000	30	QCBS	CONSULT/NSA/PCU
Te	M&E Annual Follow up (NC) /y	personmonth	1.0	0.5	1.5	3 000	5	QCBS	CONSULT/NSA/PCU
	Sub-total Technical Assistance						86		
Training and Workshops									
Tr	PVP Legislation Consultative Workshop /c	w orkshop	1.0	0.0	1.0	1 600	2	QCBS	CONSULT/NSA/PCU
Tr	National Forum /d	forum	0.0	0.5	0.5	3 600	2	QCBS	CONSULT/NSA/PCU
Tr	PVP training for breeders and NSA staff /e	w orkshop	1.0	0.0	1.0	6 000	6	QCBS	CONSULT/NSA/PCU
Tr	Crop seed technology course for developing countries /j	trainee	1.0	0.0	1.0	11 300	11	QCBS	CONSULT/NSA/PCU
Tr	Protection of new plant varieties, breeders' rights /k	trainee	1.0	0.0	1.0	17 200	17	QCBS	CONSULT/NSA/PCU
Tr	Seed Health Testing Course /l	trainee	1.0	0.5	1.5	2 000	3	QCBS	CONSULT/NSA/PCU
Tr	ISTA laboratory quality assurance /m	trainee	1.0	0.5	1.5	10 400	16	QCBS	CONSULT/NSA/PCU
Tr	Variety identification /n	trainee	1.0	0.5	1.5	20 000	30	QCBS	CONSULT/NSA/PCU
Tr	Train SA staff - inspectors and seed analysts /o	w orkshop	1.0	0.5	1.5	3 704	6	QCBS	CONSULT/NSA/PCU
TC	Training of Trainers on Seed Technology /p	trainee	1.0	0.0	1.0	10 000	10	QCBS	CONSULT/NSA/PCU
Tr	Computer training & specialised softw are /q	course	1.0	0.0	1.0	10 000	10	QCBS	CONSULT/NSA/PCU
Tr	Annual subscription	per annum	7.5	3.8	11.3	1 000	11	LIB	CONSULT/NSA/PCU
Tr	Annual participation in proficiency tests	per annum	3.0	1.5	4.5	1 000	5	LIB	CONSULT/NSA/PCU
Tr	Participation in international Fora /w	participant	1.0	0.5	1.5	15 000	23	LIB	CONSULT/NSA/PCU
Tr	Thematic seminars, and w orkshops /z	per annum	0.0	2.0	2.0	1 000	2	QCBS	CONSULT/NSA/PCU
Tr	Facilitate the convening of a national bi-annual forum/bb	forum	2.0	1.0	3.0	2 000	6	LCB	CONSULT/NSA/PCU
Tr	Seed Technology	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed health testing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Traditional seed testing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Tetrazolium test	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed sampling	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed processing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Field inspection	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed pathology	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed storage	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Training of NSA staff out posted to state level - laboratory staff /hh	course	1.0	0.5	1.5	3 704	6	QCBS	CONSULT/NSA/PCU
Tr	Facilitate the convening of a state forum /jj	forum	0.0	0.5	0.5	2 000	1	LCB	CONSULT/NSA/PCU
Tr	Seed Technology	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed health testing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Traditional seed testing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Tetrazolium test	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed sampling	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed processing	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Field inspection	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed pathology	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Seed storage	course	1.0	0.0	1.0	3 704	4	QCBS	CONSULT/NSA/PCU
Tr	Training of NSA staff out posted to state level - laboratory staff /pp	course	1.0	0.5	1.5	3 704	6	QCBS	CONSULT/NSA/PCU
Tr	Facilitate the convening of a state forum /rr	forum	0.0	0.5	0.5	2 000	1	LCB	CONSULT/NSA/PCU
	Sub-total Training and Workshops						238		

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 3 - SERVICES, BY COMPONENT AND CATEGORY											
		Component Description	Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible	
CATEGORY 3				1.0	2.0						
SERVICES											
	Recurrent Costs										
		Recurrent costs	lumpsum	22.0	10.9	32.9	1 000	33	NBF	GOVT/PCU	
			Table 1. Institutional and Regulatory Environment Strengthening and Development					356			
Table 2. Improvement of the Seed Production System											
	Technical Assistance										
	Te	Participatory Research expert (IC) /eee	personmonth	2.0	1.0	3.0	15000	45	QCBS	PCU/ARC	
	Te	Training needs assessment for Extension staff /fff	personmonth	3.0	1.0	4.0	3000	12	QCBS	PCU/ARC	
		Sub-total	Technical Assistance					57			
	Recurrent Costs					0.0					
	Re	Recurrent costs Government	lumpsum	34.4	17.2	51.5	1 000	52	NBF	PCU/ARC	
	Re	Recurrent costs	lumpsum	23.9	12.0	35.9	1 000	36	LCB	PCU/ARC	
		Sub-total	Recurrent Costs					87			
	Training and Workshops										
	Tra	Seed production and marketing practices training /b	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	ICT in agriculture for M&E /c	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Best practices in M&E and impact assessment /d	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Study tour /e	tour	1.0	0.0	1.0	8 000	8	QCBS	PSC/PCU/CONSULT	
	Tra	Exchange visits incentive for seed growers /f	tour	0.0	0.5	0.5	2 000	1	QCBS	PSC/PCU/CONSULT	
	Tra	Gender mainstreaming in agriculture	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Training of village-based extension staff /g	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Sensitization training/awareness on gender issues /h	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Develop tools and information materials /i	lumpsum	5.0	2.5	7.5	1 000	8	QCBS	PSC/PCU/CONSULT	
	Tra	Crop Breeding /o	course	1.0	0.0	1.0	13 000	13	QCBS	PSC/PCU/CONSULT	
	Tra	Water harvesting techniques /p	course	1.0	0.0	1.0	15 630	16	QCBS	PSC/PCU/CONSULT	
	Tra	Participatory research /r	course	1.0	0.0	1.0	13 000	13	QCBS	PSC/PCU/CONSULT	
	Tra	Facilitate formation of the Participatory Research Committee /s	course	0.0	0.5	0.5	3 704	2	QCBS	PSC/PCU/CONSULT	
	Tra	Conduct on-farm and demonstration and participatory variety screening plots	per annum	0.0	3.5	3.5	1 000	4	QCBS	PSC/PCU/CONSULT	
	Tra	Training of seed growers by extension teams /t	lumpsum	0.0	0.0	0.0	1 000	0	QCBS	PSC/PCU/CONSULT	
	Tra	Regional exchange visits on successful experiences with group-based seed multi	tour	0.0	0.5	0.5	3 000	2	QCBS	PSC/PCU/CONSULT	
	Tra	Information campaigns, awareness raising, media campaign /v	per annum	5.0	2.5	7.5	1 000	8	QCBS	PSC/PCU/CONSULT	
	Tra	National Exchange visits on successful experiences /w	tour	2.0	1.0	3.0	2 000	6	QCBS	PSC/PCU/CONSULT	
	Tra	Workshop for leaders of seed producer groups /x	workshop	0.0	0.5	0.5	4 333	2	QCBS	PSC/PCU/CONSULT	
	Tra	Seed production and marketing practices training /cc	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	ICT in agriculture for M&E /dd	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Best practices in M&E and impact assessment /ee	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Study tour /ff	tour	1.0	0.0	1.0	8 000	8	QCBS	PSC/PCU/CONSULT	
	Tra	Exchange visits incentive for seed growers /gg	tour	0.0	0.5	0.5	2 000	1	QCBS	PSC/PCU/CONSULT	

DETAILED BREAKDOWN OF PROCUREMENT CATEGORY 3 - SERVICES, BY COMPONENT AND CATEGORY											
		Component Description	Unit	Quantity		Total	Unit Cost USD	Total Cost USD	Procurement Method	Agency Responsible	
CATEGORY 3				Yr 1	Yr 2						
SERVICES											
	Recurrent Costs										
		Recurrent costs	lumpsum	0.0	0.0	0.0	1 000	0	NBF	GOVT/PCU	
	Tra	Gender mainstreaming in agriculture	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Training of village-based extension staff /hh	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Sensitization training/aw areness on gender issues /ii	course	1.0	0.0	1.0	3 700	4	QCBS	PSC/PCU/CONSULT	
	Tra	Develop tools and information materials /jj	lumpsum	5.0	2.5	7.5	1 000	8	QCBS	PSC/PCU/CONSULT	
	Tra	Crop Breeding /pp	course	1.0	0.0	1.0	13 000	13	QCBS	PSC/PCU/CONSULT	
	Tra	Water harvesting techniques /qq	course	1.0	0.0	1.0	15 630	16	QCBS	PSC/PCU/CONSULT	
	Tra	Participatory research /ss	course	1.0	0.0	1.0	13 000	13	QCBS	PSC/PCU/CONSULT	
	Tra	Facilitate formation of the Participatory Research Committee /tt	course	0.0	1.9	1.9	1 000	2	QCBS	PSC/PCU/CONSULT	
	Tra	Conduct on-farm and demonstration and participatory variety screening plots	per annum	0.0	2.5	2.5	1 000	3	QCBS	PSC/PCU/CONSULT	
	Tra	Participatory breeding techniques /uu	course	1.0	0.0	1.0	27 500	28	QCBS	CONSULT/NSA/PCU	
	Tra	Training of seed grow ers by extension teams /vv	lumpsum	9.3	1.2	10.5	1 000	11	QCBS	CONSULT/NSA/PCU	
	Tra	Regional exchange visits on successful experiences with group-based seed multi	tour	0.0	0.5	0.5	3 000	2	QCBS	CONSULT/NSA/PCU	
	Tra	Information campaigns, aw areness raising, media campaign /xx	per annum	5.0	2.5	7.5	1 000	8	QCBS	CONSULT/NSA/PCU	
	Tra	National Exchange visits on successful experiences /yy	tour	2.0	1.0	3.0	2 000	6	QCBS	CONSULT/NSA/PCU	
	Tra	Workshop for leaders of seed producer groups /zz	w orkshop	0.0	0.5	0.5	4 333	2	QCBS	CONSULT/NSA/PCU	
	Tra	IFAD Insurance Contribution /aaa	lumpsum	15.6	3.9	19.5	1 000	19	DIR CONTRACT	CONSULT/NSA/PCU	
	Tra	Govt Insurance Contribution /bbb	lumpsum	15.6	7.8	23.4	1 000	23	NBF	CONSULT/NSA/PCU	
	Tra	Grow ers contribution to insurance /ccc	lumpsum	0.0	3.9	3.9	1 000	4	CPP	CONSULT/NSA/PCU	
		Sub-total	Training and Workshops					289			
		Total Category 3 - Services	Table 2. Improvement of the Seed Production System					434			
Table 3. Seed Market Development Support											
	Technical Assistance										
	Te	Market systems/market research study (IC) /a	personmonth	1.0	0.5	1.5	15 000	23	QCBS	PSC/PCU/CONSULT	
	Te	Market systems/market research study (NC) /b	personmonth	2.0	1.0	3.0	15 000	45	QCBS	PSC/PCU/CONSULT	
	Te	Develop trader database	personmonth	3.0	1.0	4.0	3 000	12	QCBS	PSC/PCU/CONSULT	
		Sub-total	Technical Assistance					80			
	Training and Workshops										
	Tra	Exposure visits to similar enterprises /c	lumpsum	0.0	10.0	10.0	1 000	10	QCBS	PSC/PCU/CONSULT	
	Tra	Technical/specialised training /d	course	2.0	1.0	3.0	6 000	18	QCBS	PSC/PCU/CONSULT	
	Tra	Capacity building of traders /e	course	2.0	0.0	2.0	3 704	7	QCBS	PSC/PCU/CONSULT	
	Tra	Seed fairs for agro-dealers /g	per annum	10.0	5.0	15.0	1 000	15	QCBS	PSC/PCU/CONSULT	
	Tra	Seed information system/database established	lumpsum	10.0	5.0	15.0	1 000	15	QCBS	PSC/PCU/CONSULT	
	Tra	Training of grain producers /i	per annum	79.0	39.5	118.4	1 000	118	QCBS	PSC/PCU/CONSULT	
	Tra	Training of contact farmers	trainee	84.0	84.0	168.0	200	34	QCBS	PSC/PCU/CONSULT	
	Tra	Demonstration on soil and w ater conservation	number	84.0	84.0	168.0	120	20	QCBS	PSC/PCU/CONSULT	
	Tra	Field days	number	42.0	21.0	63.0	200	13	QCBS	PSC/PCU/CONSULT	
	Tra	Training of grain producers /o	per annum	118.4	59.2	177.7	1 000	178	QCBS	PSC/PCU/CONSULT	
	Tra	Training of contact farmers	trainee	126.0	126.0	252.0	200	50	QCBS	PSC/PCU/CONSULT	
	Tra	Demonstration on soil and w ater conservation	number	126.0	126.0	252.0	120	30	QCBS	PSC/PCU/CONSULT	
	Tra	Field days	number	63.0	31.5	94.5	200	19	QCBS	PSC/PCU/CONSULT	
		Sub-total	Training and Workshops					527			



**Annex 9: Project Cost Tables**

**Appendix 1 – Summary Cost Tables**

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Appendix 1: Table 1: Components Cost Summary

Components Project Cost Summary	(SDG Million)					(US\$ Million)				
				% Foreign	% Total Base				% Foreign	% Total Base
	Local	Foreign	Total	Exchange	Costs	Local	Foreign	Total	Exchange	Costs
1. Institutional and Regulatory Environment Strengthening and Development	3.7	2.1	5.7	36	11	1.2	0.7	1.9	36	11
2. Improvement of the Seed Production System	7.9	1.7	9.7	18	18	2.6	0.6	3.2	18	18
3. Seed Market Development Support	24.3	2.3	26.6	9	50	8.1	0.8	8.9	9	50
4. Project Coordination and Management	9.4	1.4	10.8	13	20	3.1	0.5	3.6	13	20
<b>Total BASELINE COSTS</b>	45.3	7.5	52.8	14	100	15.1	2.5	17.6	14	100
Physical Contingencies	0.0	0.0	0.0	20	-	0.0	0.0	0.0	20	-
Price Contingencies	27.5	5.1	32.6	16	62	0.5	0.1	0.6	16	4
<b>Total PROJECT COSTS</b>	72.8	12.7	85.5	15	162	15.6	2.6	18.3	14	104

**Appendix 1: Table 2: Expenditure Accounts Summary**

Expenditure Accounts Project Cost Summary	(SDG Million)					(US\$ Million)				
	Local	Foreign	Total	% Foreign	% Total	Local	Foreign	Total	% Foreign	% Total
				Exchange	Base Costs				Exchange	Base Costs
<b>I. Investment Costs</b>										
A. Civil Works	0.6	0.1	0.7	12	1	0.2	0.0	0.2	12	1
B. Technical Assistance (International)	-	1.1	1.1	100	2	-	0.4	0.4	100	2
C. Technical Assistance (National)	5.7	-	5.7	-	11	1.9	-	1.9	-	11
D. Contracted Services	0.9	-	0.9	-	2	0.3	-	0.3	-	2
E. Growers/Producer Groups	4.4	-	4.4	-	8	1.5	-	1.5	-	8
F. Private Sector Contribution	4.0	-	4.0	-	8	1.3	-	1.3	-	8
G. Fund	1.5	-	1.5	-	3	0.5	-	0.5	-	3
H. Government Contribution	4.7	-	4.7	-	9	1.6	-	1.6	-	9
I. Training	9.0	0.7	9.7	7	18	3.0	0.2	3.2	7	18
J. Equipment	1.9	2.0	3.9	52	7	0.6	0.7	1.3	52	7
<b>K. Vehicles</b>										
Hardtop	4.4	2.4	6.9	35	13	1.5	0.8	2.3	35	13
Double Cab	0.3	0.2	0.5	36	1	0.1	0.1	0.2	36	1
<b>Subtotal</b>	<b>4.7</b>	<b>2.6</b>	<b>7.3</b>	<b>35</b>	<b>14</b>	<b>1.6</b>	<b>0.9</b>	<b>2.4</b>	<b>35</b>	<b>14</b>
<b>Total Investment Costs</b>	<b>37.5</b>	<b>6.5</b>	<b>44.0</b>	<b>15</b>	<b>83</b>	<b>12.5</b>	<b>2.2</b>	<b>14.7</b>	<b>15</b>	<b>83</b>
<b>II. Recurrent Costs</b>										
A. Salaries and Allowances	3.5	-	3.5	-	7	1.2	-	1.2	-	7
B. Operations and Maintenance	0.3	0.1	0.3	20	1	0.1	0.0	0.1	20	1
C. Vehicle O & M	2.5	0.6	3.1	20	6	0.8	0.2	1.0	20	6
D. Direct Project Recurrent Costs	1.5	0.4	1.9	20	4	0.5	0.1	0.6	20	4
<b>Total Recurrent Costs</b>	<b>7.8</b>	<b>1.1</b>	<b>8.9</b>	<b>12</b>	<b>17</b>	<b>2.6</b>	<b>0.4</b>	<b>3.0</b>	<b>12</b>	<b>17</b>
<b>Total BASELINE COSTS</b>	<b>45.3</b>	<b>7.5</b>	<b>52.8</b>	<b>14</b>	<b>100</b>	<b>15.1</b>	<b>2.5</b>	<b>17.6</b>	<b>14</b>	<b>100</b>
Physical Contingencies	0.0	0.0	0.0	20	-	0.0	0.0	0.0	20	-
Price Contingencies	27.5	5.1	32.6	16	62	0.5	0.1	0.6	16	4
<b>Total PROJECT COSTS</b>	<b>72.8</b>	<b>12.7</b>	<b>85.5</b>	<b>15</b>	<b>162</b>	<b>15.6</b>	<b>2.6</b>	<b>18.3</b>	<b>14</b>	<b>104</b>

**Appendix 1: Table 3: Project Components by Year – Base Costs**

**Project Components by Year -- Base Costs**  
(US\$ Million)

(US\$ Million)	Base Cost						
	2012	2013	2014	2015	2016	2017	Total
1. Institutional and Regulatory Environment Strengthening and Development	1.1	0.2	0.2	0.2	0.1	0.1	1.9
2. Improvement of the Seed Production System	1.1	0.3	0.3	0.4	0.8	0.3	3.2
3. Seed Market Development Support	1.9	1.6	3.3	0.7	0.6	0.7	8.9
4. Project Coordination and Management	0.5	0.2	0.8	0.9	0.6	0.7	3.6
<b>Total BASELINE COSTS</b>	4.5	2.4	4.7	2.3	2.1	1.8	17.6
Physical Contingencies	0.0	-	-	-	-	-	0.0
<b>Price Contingencies</b>							
<b>Inflation</b>							
Local	0.2	0.5	1.6	1.3	2.0	2.9	8.4
Foreign	0.0	0.0	0.0	0.0	0.0	0.0	0.1
<b>Subtotal Inflation</b>	0.2	0.5	1.6	1.4	2.0	2.9	8.5
Devaluation	-0.1	-0.4	-1.5	-1.3	-1.8	-2.7	-7.8
Subtotal Price Contingencies	0.0	0.0	0.2	0.1	0.1	0.2	0.6
<b>Total PROJECT COSTS</b>	4.5	2.4	4.8	2.4	2.2	1.9	18.3
Taxes	1.0	0.1	0.5	0.3	0.1	0.1	2.0
Foreign Exchange	1.1	0.3	0.5	0.3	0.2	0.2	2.6

**Appendix 1: Table 4: Expenditure Accounts by Components – Base Costs**

Expenditure Accounts by Components - Base Costs (US\$ Million)	Institutional and Regulatory	Improvement	Seed Market	Project	Total	Physical Contingencies	
	Environment	of the Seed	Development	Coordination		%	Amount
	Strengthening	Production	Support	and			
	Development	System		Management			
I. Investment Costs							
A. Civil Works	0.2	0.1	-	-	0.2	5.9	0.0
B. Technical Assistance (International)	0.1	0.1	0.1	0.1	0.4	-	-
C. Technical Assistance (National)	0.0	0.0	0.1	1.8	1.9	-	-
D. Contracted Services	-	-	-	0.3	0.3	-	-
E. Growers/Producer Groups	-	0.0	1.4	-	1.5	-	-
F. Private Sector Contribution	-	0.8	0.6	-	1.3	-	-
G. Fund	-	0.1	0.4	-	0.5	-	-
H. Government Contribution	-	0.2	1.4	-	1.6	-	-
I. Training	0.5	0.6	2.0	0.1	3.2	-	-
J. Equipment	0.4	0.3	0.6	0.0	1.3	-	-
K. Vehicles							
Hardtop	0.2	0.5	1.0	0.6	2.3	-	-
Double Cab	0.2	-	-	-	0.2	-	-
Subtotal	0.4	0.5	1.0	0.6	2.4	-	-
Total Investment Costs	1.6	2.6	7.5	3.0	14.7	0.1	0.0
II. Recurrent Costs							
A. Salaries and Allowances	0.0	0.1	1.1	-	1.2	-	-
B. Operations and Maintenance	0.0	0.1	-	-	0.1	-	-
C. Vehicle O & M	0.3	0.4	0.3	-	1.0	-	-
D. Direct Project Recurrent Costs	-	-	-	0.6	0.6	-	-
Total Recurrent Costs	0.3	0.6	1.4	0.6	3.0	-	-
Total BASELINE COSTS	1.9	3.2	8.9	3.6	17.6	0.1	0.0
Physical Contingencies	0.0	0.0	-	-	0.0	-	-
Price Contingencies							
Inflation							
Local	0.6	1.1	3.1	3.6	8.4	-	-
Foreign	0.0	0.0	0.0	0.0	0.1	-	-
Subtotal Inflation	0.6	1.1	3.1	3.7	8.5	-	-
Devaluation	-0.6	-1.0	-2.9	-3.4	-7.8	-	-
Subtotal Price Contingencies	0.1	0.1	0.2	0.2	0.6	-	0.0
Total PROJECT COSTS	2.0	3.3	9.1	3.9	18.3	0.1	0.0
Taxes	0.4	0.5	0.7	0.5	2.0	0.2	0.0
Foreign Exchange	0.7	0.6	0.8	0.5	2.6	0.1	0.0

Appendix 1: Table 5: Components by Financiers

Components by Financiers (US\$ Million)	The Government of The Sudan		IFAD		Seed Growers & Grain Producers		Private Sector Company		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
1. Institutional and Regulatory Environment Strengthening and Development	0.66	33.4	1.32	66.6	-	-	-	-	1.98	10.9	0.71	0.90	0.37
2. Improvement of the Seed Production System	0.92	27.7	1.34	40.4	0.04	1.2	1.01	30.7	3.31	18.1	0.59	2.26	0.46
3. Seed Market Development Support	2.10	23.0	4.02	44.1	2.43	26.6	0.57	6.2	9.11	49.9	0.81	7.63	0.68
4. Project Coordination and Management	0.46	12.0	3.39	88.0	-	-	-	-	3.85	21.1	0.51	2.88	0.46
<b>Total PROJECT COSTS</b>	<b>4.14</b>	<b>22.7</b>	<b>10.07</b>	<b>55.2</b>	<b>2.47</b>	<b>13.5</b>	<b>1.58</b>	<b>8.7</b>	<b>18.26</b>	<b>100.0</b>	<b>2.62</b>	<b>13.67</b>	<b>1.96</b>

Appendix 1: Table 6: Expenditure Accounts by Financiers

Expenditure Accounts by Financiers (US\$ Million)		The Government of The Sudan		IFAD		Seed Growers & Grain Producers		Private Sector Company		Total		For.	Local	Duties &
		Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Exch.	(Excl. Taxes)	Taxes
<b>I. Investment Costs</b>														
A. Civil Works		0.04	15.4	0.22	84.6	-	-	-	-	0.26	1.4	0.03	0.19	0.04
B. Technical Assistance (International)		-	-	0.38	100.0	-	-	-	-	0.38	2.1	0.38	-	-
C. Technical Assistance (National)		-	-	2.05	100.0	-	-	-	-	2.05	11.2	-	2.05	-
D. Contracted Services		-	-	0.32	100.0	-	-	-	-	0.32	1.7	-	0.32	-
E. Growers/Producer Groups		-	-	-	-	1.52	100.0	-	-	1.52	8.3	-	1.52	-
F. Private Sector Contribution		-	-	-	-	-	-	1.33	100.0	1.33	7.3	-	1.33	-
G. Fund		-	-	0.50	100.0	-	-	-	-	0.50	2.8	-	0.50	-
H. Government Contribution		1.57	100.0	-	-	-	-	-	-	1.57	8.6	-	1.57	-
I. Training		-	-	3.29	100.0	-	-	-	-	3.29	18.0	0.23	3.06	-
J. Equipment		0.24	17.6	1.11	82.4	-	-	-	-	1.35	7.4	0.71	0.40	0.24
<b>K. Vehicles</b>														
Hardtop		1.31	55.6	1.05	44.4	-	-	-	-	2.36	12.9	0.83	0.21	1.31
Double Cab		0.08	55.6	0.07	44.4	-	-	-	-	0.15	0.8	0.05	0.01	0.08
<b>Subtotal</b>		<b>1.40</b>	<b>55.6</b>	<b>1.12</b>	<b>44.4</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.51</b>	<b>13.8</b>	<b>0.89</b>	<b>0.23</b>	<b>1.40</b>
<b>Total Investment Costs</b>		<b>3.25</b>	<b>21.6</b>	<b>8.98</b>	<b>59.6</b>	<b>1.52</b>	<b>10.1</b>	<b>1.33</b>	<b>8.8</b>	<b>15.08</b>	<b>82.6</b>	<b>2.24</b>	<b>11.17</b>	<b>1.68</b>
<b>II. Recurrent Costs</b>														
A. Salaries and Allowances		0.08	6.5	0.39	31.3	0.78	62.1	-	-	1.25	6.9	-	1.25	-
B. Operations and Maintenance		0.07	61.7	-	-	-	-	0.04	38.3	0.11	0.6	0.02	0.07	0.02
C. Vehicle O & M		0.63	56.7	0.11	9.5	0.17	15.1	0.21	18.7	1.11	6.1	0.22	0.72	0.17
D. Direct Project Recurrent Costs		0.10	15.0	0.59	85.0	-	-	-	-	0.69	3.8	0.14	0.45	0.10
<b>Total Recurrent Costs</b>		<b>0.89</b>	<b>27.9</b>	<b>1.09</b>	<b>34.3</b>	<b>0.95</b>	<b>29.8</b>	<b>0.25</b>	<b>7.9</b>	<b>3.17</b>	<b>17.4</b>	<b>0.38</b>	<b>2.50</b>	<b>0.29</b>
<b>Total PROJECT COSTS</b>		<b>4.14</b>	<b>22.7</b>	<b>10.07</b>	<b>55.2</b>	<b>2.47</b>	<b>13.5</b>	<b>1.58</b>	<b>8.7</b>	<b>18.26</b>	<b>100.0</b>	<b>2.62</b>	<b>13.67</b>	<b>1.96</b>

Appendix 1: Table 7: Disbursement Accounts by Financiers

Disbursement Accounts by Financiers (US\$ Million)	The Government of The Sudan		IFAD		Seed Growers & Grain Producers		Private Sector Company		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
1. Civil Works	0.04	15.4	0.22	84.6	-	-	-	-	0.26	1.4	0.03	0.19	0.04
2. Fund	-	-	0.50	100.0	-	-	-	-	0.50	2.8	-	0.50	-
3. Vehicles	1.40	55.6	1.12	44.4	-	-	-	-	2.51	13.8	0.89	0.23	1.40
4. Equipment	0.24	17.6	1.11	82.4	-	-	-	-	1.35	7.4	0.71	0.40	0.24
5. Growers/Producers Contribution	-	-	-	-	1.52	100.0	-	-	1.52	8.3	-	1.52	-
6. Private Sector Contribution	-	-	-	-	-	-	1.33	100.0	1.33	7.3	-	1.33	-
7. Government Contribution	1.57	100.0	-	-	-	-	-	-	1.57	8.6	-	1.57	-
8. Contracted Services	-	-	6.03	100.0	-	-	-	-	6.03	33.0	0.61	5.42	-
9. Recurrent Costs	0.69	100.0	-	-	-	-	-	-	0.69	3.8	0.12	0.48	0.09
10. Direct Project Recurrent Costs	0.12	10.1	1.09	89.9	-	-	-	-	1.21	6.6	0.16	0.92	0.12
11. Recurrent Costs - Private Sector	0.07	5.8	-	-	0.95	74.4	0.25	19.8	1.27	7.0	0.10	1.10	0.07
<b>Total PROJECT COSTS</b>	4.14	22.7	10.07	55.2	2.47	13.5	1.58	8.7	18.26	100.0	2.62	13.67	1.96



**Appendix 1: Table 8: Procurement Arrangements**

Procurement Arrangements (US\$ '000)	Procurement Method						Community Participation in Procurement	N.B.F.	Total
	International Competitive Bidding	Limited International Bidding	National Competitive Bidding	Local Competitive Bidding	Consulting Services: QCBS	Direct Contracting			
A. Equipment	843.74 (732.80)	14.32 (10.74)	486.67 (365.00)	4.04 (3.03)	-	-	-	-	1 348.77 (1 111.58)
B. Civil Works	-	-	261.10 (220.82)	-	-	-	-	-	261.10 (220.82)
C. Contracted Services	-	128.02 (128.02)	32.80 (32.80)	50.97 (50.97)	5 672.24 (5 672.24)	146.54 (146.54)	-	-	6 030.57 (6 030.57)
D. Government Contribution	-	-	-	-	-	-	-	1 574.56	1 574.56
E. Vehicles	2 514.35 (1 115.87)	-	-	-	-	-	-	-	2 514.35 (1 115.87)
F. Growers/Producers Contribution	-	-	-	-	-	-	1 520.40	-	1 520.40
G. Private Sector Contribution	-	-	-	-	-	-	1 329.75	-	1 329.75
H. Fund	-	-	384.14 (384.14)	-	-	119.78 (119.78)	-	-	503.92 (503.92)
I. Training	-	-	-	-	-	-	-	-	-
J. Recurrent Costs	-	-	-	-	-	-	-	689.37	689.37
K. Direct Project Recurrent Costs	-	-	-	1 210.54 (1 087.91)	-	-	-	-	1 210.54 (1 087.91)
L. Recurrent Costs - Private Sector	-	-	-	1 272.28	-	-	-	-	1 272.28
<b>Total</b>	3 358.09 (1 848.67)	142.34 (138.76)	1 164.71 (1 002.77)	2 537.83 (1 141.91)	5 672.24 (5 672.24)	266.32 (266.32)	2 850.16 -	2 263.93 -	18 255.60 (10 070.66)

Note: Figures in parenthesis are the respective amounts financed by IFAD

**Appendix 1: Table 9: Financing of Investment/Recurrent Costs**

**Project Components by Year -- Investment/Recurrent Costs**  
(US\$ Million)

(US\$ Million)	Totals Including Contingencies						
	2012	2013	2014	2015	2016	2017	Total
<b>A. Institutional and Regulatory Environment Strengthening and Development</b>							
Investment Costs	1.0	0.1	0.2	0.2	0.1	0.1	1.6
Recurrent Costs	0.0	0.0	0.0	0.1	0.1	0.1	0.3
<b>Subtotal</b>	1.1	0.2	0.2	0.3	0.1	0.1	2.0
<b>B. Improvement of the Seed Production System</b>							
Investment Costs	1.0	0.2	0.2	0.3	0.7	0.2	2.7
Recurrent Costs	0.1	0.1	0.1	0.1	0.1	0.1	0.6
<b>Subtotal</b>	1.1	0.3	0.3	0.5	0.8	0.3	3.3
<b>C. Seed Market Development Support</b>							
Investment Costs	1.7	1.5	3.2	0.5	0.3	0.4	7.6
Recurrent Costs	0.1	0.2	0.2	0.3	0.3	0.4	1.5
<b>Subtotal</b>	1.9	1.7	3.4	0.7	0.6	0.8	9.1
<b>D. Project Coordination and Management</b>							
Investment Costs	0.4	0.2	0.7	0.8	0.5	0.6	3.2
Recurrent Costs	0.0	0.0	0.1	0.2	0.2	0.2	0.7
<b>Subtotal</b>	0.5	0.2	0.8	0.9	0.7	0.7	3.9
<b>Total PROJECT COSTS</b>	4.5	2.4	4.8	2.4	2.2	1.9	18.3
Total Investment Costs	4.2	2.0	4.3	1.8	1.5	1.2	15.1
Total Recurrent Costs	0.3	0.4	0.5	0.6	0.6	0.7	3.2

Appendix 1 Table 1: Disbursements by Semesters and Government Cash Flow

Disbursements by Semesters and Government Cash Flow (US\$ Million)							
	Financing Available			Total	Costs to be Government of Financed The Sudan		
	IFAD	Seed	Private Sector Company		Project	Cash	Cumulative
		Growers & Grain Producers					
Amount	Amount	Amount	Costs	Flow	Cash Flow		
1	1.52	-	0.22	1.74	2.27	-0.53	-0.53
2	1.52	-	0.22	1.74	2.27	-0.53	-1.05
3	0.59	0.25	0.06	0.89	1.20	-0.31	-1.37
4	0.59	0.25	0.06	0.89	1.20	-0.31	-1.68
5	1.00	0.50	0.15	1.64	2.40	-0.76	-2.44
6	1.00	0.50	0.15	1.64	2.40	-0.76	-3.21
7	0.73	0.13	0.11	0.97	1.19	-0.22	-3.42
8	0.73	0.13	0.11	0.97	1.19	-0.22	-3.64
9	0.58	0.16	0.23	0.97	1.09	-0.13	-3.77
10	0.58	0.16	0.23	0.97	1.09	-0.13	-3.89
11	0.62	0.21	0.02	0.85	0.97	-0.12	-4.01
12	0.62	0.21	0.02	0.85	0.97	-0.12	-4.14
Total	10.07	2.47	1.58	14.12	18.26	-4.14	-4.14

## **Appendix 2: Detailed Cost Tables**

- **Appendix 2: Table 1: Institutional and Regulatory Environment Strengthening and Development**121
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# SEED DEVELOPMENT PROJECT (SDP)

## PROJECT DESIGN REPORT: MAIN REPORT AND ANNEXES

### ANNEX 9: PROJECT COST TABLES

### Detailed Costs

(US\$)

(US\$)

Quantities										Base Cost ('000)						
Unit	2012	2013	2014	2015	2016	2017	Total	Unit Cost	2012	2013	2014	2015	2016	2017	Total	
I. Investment Costs																
A. Federal																
1. Plant variety legislation drafted and enforced																
a. Technical Assistance																
Plant variety protection legal expert (IC) /a	personmonth	1	1	-	-	-	-	2	15.000	15.00	15.00	-	-	-	-	30.00
Plant variety protection legal expert (NC) /b	personmonth	2	1	-	-	-	-	3	3.000	6.00	3.00	-	-	-	-	9.00
Subtotal										21.00	18.00	-	-	-	-	39.00
b. Training and Workshops																
PVP Legislation Consultative Workshop /c	workshop	1	-	-	-	-	-	1	1.600	1.60	-	-	-	-	-	1.60
National Forum /d	forum	-	1	-	-	-	-	1	3.600	-	3.60	-	-	-	-	3.60
PVP training for breeders and NSA staff /e	workshop	1	-	1	-	-	-	2	6.000	6.00	-	6.00	-	-	-	12.00
Subtotal										7.60	3.60	6.00	-	-	-	17.20
c. Equipment and materials																
DNA testing equipment and consumables /f	lumpsum									105.00	10.00	10.00	10.00	10.00	10.00	155.00
Subtotal										133.60	31.60	16.00	10.00	10.00	10.00	211.20
2. Plant Breeding Strategy Developed																
a. Technical Assistance																
Plant breeding strategy developed (IC)	personmonth	1	-	-	-	-	-	1	15.000	15.00	-	-	-	-	-	15.00
Plant breeding strategy developed (NC)	personmonth	2	-	-	-	-	-	2	3.000	6.00	-	-	-	-	-	6.00
Subtotal										21.00	-	-	-	-	-	21.00
3. National Seed Administration capacitated /g																
a. Rehabilitation and refurbishment of facilities																
Refurbishment of Central Laboratory	lumpsum									70.00	-	-	-	-	-	70.00
Seed testing equipment for central lab /h	lumpsum									52.00	5.00	5.00	5.00	5.00	5.00	77.00
Double cabin for Centre /i	unit	2	-	-	-	-	-	2	75.094	150.19	-	-	-	-	-	150.19
Subtotal										272.19	5.00	5.00	5.00	5.00	5.00	297.19
b. Capacity Building - training																
Crop seed technology course for developing countries /j	trainee	1	-	1	-	-	-	2	11.300	11.30	-	11.30	-	-	-	22.60
Protection of new plant varieties, breeders' rights /k	trainee	1	-	-	-	-	-	1	17.200	17.20	-	-	-	-	-	17.20
Seed Health Testing Course /l	trainee	1	1	-	-	-	-	2	2.000	2.00	2.00	-	-	-	-	4.00
ISTA laboratory quality assurance /m	trainee	1	1	-	-	-	-	2	10.400	10.40	10.40	-	-	-	-	20.80
Variety identification /n	trainee	1	1	-	-	-	-	2	20.000	20.00	20.00	-	-	-	-	40.00
Train SA staff - inspectors and seed analysts /o	workshop	1	1	1	1	1	1	6	3.704	3.70	3.70	3.70	3.70	3.70	3.70	22.22
Training of Trainers on Seed Technology /p	trainee	1	-	1	-	-	-	2	10.000	10.00	-	10.00	-	-	-	20.00
Computer training & specialised software /q	course	1	-	-	-	-	-	1	10.000	10.00	-	-	-	-	-	10.00
Subtotal										84.60	36.10	25.00	3.70	3.70	3.70	156.82

Table 1. Institutional and Regulatory Environment Strengthening and Development

**Detailed Costs**

(US\$)

(\$)

		Quantities								Base Cost ('000)						
	Unit	2012	2013	2014	2015	2016	2017	Total	Unit Cost	2012	2013	2014	2015	2016	2017	Total
c. Procurement of ISTA publications																
International Rules for Seed Testing	copy	4	-	-	-	-	-	4	420	1.68	-	-	-	-	-	1.68
Seed Science and Technology	copy	2	-	-	-	-	-	2	480	0.96	-	-	-	-	-	0.96
Handbook on Seed Evaluation	copy	4	-	-	-	-	-	4	280	1.12	-	-	-	-	-	1.12
Slides of seeding list	set	4	-	-	-	-	-	4	4	0.02	-	-	-	-	-	0.02
Hand book on moisture determination	copy	4	-	-	-	-	-	4	280	1.12	-	-	-	-	-	1.12
Hand book on pure seed definition	copy	4	-	-	-	-	-	4	280	1.12	-	-	-	-	-	1.12
Proceedings of the ISTA Purity Analysis /r	copy	4	-	-	-	-	-	4	70	0.28	-	-	-	-	-	0.28
Calibration samples	copy	4	-	-	-	-	-	4	1.000	4.00	-	-	-	-	-	4.00
Hand book on seed sampling	copy	4	-	-	-	-	-	4	280	1.12	-	-	-	-	-	1.12
Common laboratory Seed health testing method /s	copy	4	-	-	-	-	-	4	170	0.68	-	-	-	-	-	0.68
ISTA working sheets /t	copy	4	-	-	-	-	-	4	280	1.12	-	-	-	-	-	1.12
Electrophoresis testing	copy	4	-	-	-	-	-	4	70	0.28	-	-	-	-	-	0.28
Growth chamber, green house testing procedures	copy	4	-	-	-	-	-	4	70	0.28	-	-	-	-	-	0.28
Laboratory tests for variety determination /u	copy	4	-	-	-	-	-	4	50	0.20	-	-	-	-	-	0.20
Hand book of vigour test methods	copy	4	-	-	-	-	-	4	50	0.20	-	-	-	-	-	0.20
Subtotal										14.18	-	-	-	-	-	14.18
d. Accreditation of Central Seed Testing Lab to ISTA Standards																
Annual subscription	per annum									7.50	7.50	7.50	-	-	-	22.50
Annual participation in proficiency tests	per annum									3.00	3.00	3.00	-	-	-	9.00
Subtotal										10.50	10.50	10.50	-	-	-	31.50
e. Participation in international fora /v																
Participation in international Fora /w	participant	1	1	1	1	1	1	6	15.000	15.00	15.00	15.00	15.00	15.00	15.00	90.00
f. Monitoring and Evaluation system for NSA																
M & E Design - for NSA (IC) /x	personmonth	2	-	-	-	-	-	2	15.000	30.00	-	-	-	-	-	30.00
M&E Annual Follow up (NC) /y	personmonth	1	1	1	1	1	1	6	3.000	3.00	3.00	3.00	3.00	3.00	3.00	18.00
Thematic seminars, and workshops /z	per annum									-	4.00	4.00	4.00	4.00	4.00	20.00
Subtotal										33.00	7.00	7.00	7.00	7.00	7.00	68.00
Subtotal										429.47	73.60	62.50	30.70	30.70	30.70	657.69
4. Multi-stakeholder policy dialogue in seed sector established /aa																
Facilitate the convening of a national bi-annual forum /bb	forum	2	2	2	2	2	2	12	2.000	4.00	4.00	4.00	4.00	4.00	4.00	24.00
Subtotal										588.07	109.20	82.50	44.70	44.70	44.70	913.89
B. North Kordofan State																
1. NSA capacitated /cc																
a. Rehabilitation, refurbishing & equipping of facilities																
Rehabilitate offices and staff accommodation	lumpsum									50.00	-	-	-	-	-	50.00
Equipment for State Seed Laboratory /dd	lumpsum									30.00	3.00	3.00	3.00	3.00	3.00	45.00
Laptops /ee	unit	2	-	-	-	-	-	2	1.500	3.00	-	-	-	-	-	3.00
Desktop	unit	2	-	-	-	-	-	2	800	1.60	-	-	-	-	-	1.60
Photocopier	unit	1	-	-	-	-	-	1	5.000	5.00	-	-	-	-	-	5.00
Laserjet Printer	unit	1	-	-	-	-	-	1	3.000	3.00	-	-	-	-	-	3.00
Miscellaneous equipment	unit	1	-	-	-	-	-	1	2.000	2.00	-	-	-	-	-	2.00
Office furniture	set	2	-	-	-	-	-	2	2.000	4.00	-	-	-	-	-	4.00
Outpost Inspector and Seed Analyst /ff	lumpsum									2.00	-	-	-	-	-	2.00
Subtotal										100.60	3.00	3.00	3.00	3.00	3.00	115.60

Table 1. Institutional and Regulatory Environment Strengthening and Development

**Detailed Costs**

(US\$)

	Unit	Quantities							Unit Cost	Base Cost ('000)						
		2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
<b>b. Vehicles</b>																
4WD 3-door Hardtop	unit	-	-	-	1	-	-	1	119.531	-	-	-	119.53	-	-	119.53
<b>c. Capacity Building - training /gg</b>																
Seed Technology	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed health testing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Traditional seed testing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Tetrazolium test	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed sampling	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed processing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Field inspection	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed pathology	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed storage	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Training of NSA staff out posted to state level - laboratory staff /hh	course	1	1	-	-	-	-	2	3.704	3.70	3.70	-	-	-	-	7.41
<b>Subtotal</b>										37.04	3.70	33.34	-	-	-	74.08
<b>Subtotal</b>										137.64	6.70	36.34	122.53	3.00	3.00	309.21
<b>2. Multi-stakeholder policy dialogue in seed sector established /ii</b>																
Facilitate the convening of a state forum /jj	forum	1	1	1	1	1	1	6	2.000	2.00	2.00	2.00	2.00	2.00	2.00	12.00
<b>Subtotal</b>										139.64	8.70	38.34	124.53	5.00	5.00	321.21
<b>C. South Kordofan State</b>																
<b>1. NSA capacitated /kk</b>																
<b>a. Rehabilitation, refurbishment &amp; equipping of facilities</b>																
Rehabilitate offices and staff accommodation	lumpsum									50.00	-	-	-	-	-	50.00
Equipment for State Seed Laboratory /ll	lumpsum									50.00	5.00	5.00	5.00	5.00	5.00	75.00
Laptops /mm	unit	2	-	-	-	-	-	2	1.500	3.00	-	-	-	-	-	3.00
Desktop	unit	2	-	-	-	-	-	2	800	1.60	-	-	-	-	-	1.60
Photocopier	unit	1	-	-	-	-	-	1	5.000	5.00	-	-	-	-	-	5.00
Laserjet Printer	unit	1	-	-	-	-	-	1	5.000	5.00	-	-	-	-	-	5.00
Miscellaneous equipment	unit	1	-	-	-	-	-	1	2.000	2.00	-	-	-	-	-	2.00
Office furniture	set	2	-	-	-	-	-	2	2.000	4.00	-	-	-	-	-	4.00
Outpost Inspector and Seed Analyst /nn	lumpsum									2.00	-	-	-	-	-	2.00
<b>Subtotal</b>										122.60	5.00	5.00	5.00	5.00	5.00	147.60
<b>b. Vehicles</b>																
4WD 3-door Hardtop	unit	1	-	-	-	-	-	1	119.531	119.53	-	-	-	-	-	119.53
<b>c. Capacity Building - training /oo</b>																
Seed Technology	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed health testing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Traditional seed testing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Tetrazolium test	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed sampling	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed processing	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Field inspection	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed pathology	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Seed storage	course	1	-	1	-	-	-	2	3.704	3.70	-	3.70	-	-	-	7.41
Training of NSA staff out posted to state level - laboratory staff /pp	course	1	1	-	-	-	-	2	3.704	3.70	3.70	-	-	-	-	7.41
<b>Subtotal</b>										37.04	3.70	33.34	-	-	-	74.08
<b>Subtotal</b>										279.17	8.70	38.34	5.00	5.00	5.00	341.21

Table 1. Institutional and Regulatory Environment Strengthening and Development

**Detailed Costs**

(US\$)

(US\$)

	Unit	Quantities							Unit Cost	Base Cost ('000)						
		2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
2. Multi-stakeholder policy dialogue in seed sector established /qq																
Facilitate the convening of a state forum /rr																
forum		1	1	1	1	1	1	6	2.000	2.00	2.00	2.00	2.00	2.00	2.00	12.00
Subtotal										281.17	10.70	40.34	7.00	7.00	7.00	353.21
Total Investment Costs										1,008.88	128.61	161.18	176.24	56.70	56.70	1,588.31
II. Recurrent Costs																
A. Seed Administration																
Vehicle O & M	per annum									22.53	22.53	22.53	22.53	22.53	22.53	135.17
General Operations & Maintenance	per annum									1.50	1.50	1.50	1.50	1.50	1.50	9.00
Field allowances for inspection teams	per annum	24	16	16	30	58	64	208	25	0.60	0.40	0.40	0.75	1.45	1.60	5.20
Subtotal										24.63	24.43	24.43	24.78	25.48	25.63	149.37
B. State Ministry of Agriculture - North Kordofan																
General Operations & Maintenance	per annum									-	-	-	1.50	1.50	1.50	4.50
Vehicle O&M	per annum									-	-	-	17.93	17.93	17.93	53.79
Subtotal										-	-	-	19.43	19.43	19.43	58.29
C. State Ministry of Agriculture - South Kordofan																
General Operations & Maintenance	per annum									1.50	1.50	1.50	1.50	1.50	1.50	9.00
Vehicle O&M	per annum									17.93	17.93	17.93	17.93	17.93	17.93	107.58
Subtotal										19.43	19.43	19.43	19.43	19.43	19.43	116.58
Total Recurrent Costs										44.06	43.86	43.86	63.64	64.34	64.49	324.24
Total										1,052.94	172.47	205.03	239.87	121.04	121.19	1,912.55

\a to consult and draft PVP legislation UPOV standards; facilitates PVP consultative workshop and provides training for breeder and SA staff covers honorarium, airfare, per diem, local transport, etc.

\b to assist IC; covers honorarium, DSA, local transport, etc.

\c 1 day x 25 participants see annex for detailed cost breakdown

\d 1 day x 100 persons see annex for detailed breakdown

\e 50 participants x 3 days see annex for detailed breakdown

\f Detailed list attached in annex (consumables yr 2 onwards)

\g to effectively monitor the multiplication and certification standards.

\h Detailed list attached in annex (consumables year 2 onwards)

\i 1 for Central Lab and 1 for HQ

\j in China 14 day duration (Course cost USD 5600, airticket, per diem USD 5700)

\k in the Netherlands 15 days (course cost USD 11 200, airticket & per diem USD 6000)

\l Khartoum University

\m At ISTA (Course duration 5 days USD 7450, airticket & per diem USD 3000

\n India x 30 days includes airticket and per diem

\o 10 participants x 5 days Khartoum see annex for detailed breakdown

\p In Sennar x 14 day Course x 10 participants see training breakdown in annex

\q 5 days for 10 persons (Incl. cost of trainer (regional))

\r and determination of other seeds by number

\s for detecting fungi



\t on tetrazolium testing, volume 2, trees and shrubs spp.  
 \u with fungal pathogens  
 \v Costs inclusive of airticket and per diem  
 \w ISTA annual meeting, ISTA workshop, UPOV, OECD, ISF, AFSTA, FASI  
 \x For designing a seed sector specific M&E system  
 \y Annual updates and refinements of M&E system in consultation with international bodies and standards  
 \z 2 day workshops x 50 participants see annex for detailed breakdown  
 \aa with participation from women and youth  
 \bb 50 participants x 1 day for seed industry stakeholders  
 \cc to effectively monitor the multiplication and certification standards.  
 \dd Consumables from yr 2, see detailed breakdown in annex  
 \ee Seed inspector and lab personnel  
 \ff Relocation cost - generally cost of hiring transport approximately 1 000 SDG and other contingencies for 4 staff  
 \gg 12 participants x 7 days (3 trainees per locality)  
 \hh 15 day course x 5 trainees  
 \ii with participation from women and youth  
 \jj 50 participants x 1 day for seed industry stakeholders  
 \kk to effectively monitor the multiplication and certification standards.  
 \ll Consumables from yr 2, see detailed breakdown in annex  
 \mm Seed inspector and lab personnel  
 \nn Relocation cost - generally cost of hiring transport approximately 1 000 SDG and other contingencies for 4 staff  
 \oo 12 participants x 7 days (3 trainees per locality)  
 \pp 15 day course x 5 trainees  
 \qq with participation from women and youth  
 \rr 50 participants x 1 day for seed industry stakeholders

## Appendix 2: Table 2: Capacity Building and Institutional Development

Table 2. Improvement of the Seed Production System

### Detailed Costs

(US\$)

#### I. Investment Costs

##### A. North Kordofan

##### 1. Extension system capacitated to support target seed growers

##### a. Capacity Building /a

	Unit	Quantities						Unit Cost	Base Cost ('000)						Total
		2012	2013	2014	2015	2016	2017		2012	2013	2014	2015	2016	2017	
Seed production and marketing practices training /b	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
ICT in agriculture for M&E /c	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
Best practices in M&E and impact assessment /d	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
Study tour /e	tour	1	-	-	-	-	-	1	8.000	8.00	-	-	-	-	8.00
Exchange visits incentive for seed growers /f	tour	-	1	1	1	1	1	5	2.000	-	2.00	2.00	2.00	2.00	10.00
Gender mainstreaming in agriculture	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
Training of village-based extension staff /g	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
Sensitization training/awareness on gender issues /h	course	1	-	1	-	-	-	2	3.700	3.70	-	3.70	-	-	7.40
Develop tools and information materials /i	lumpsum								5.00	5.00	5.00	5.00	5.00	-	25.00

##### Subtotal

35.20 7.00 29.20 7.00 7.00 2.00 87.40

##### b. Vehicles

4WD 3-door Hardtop - extension teams	number	1	-	-	-	-	-	1	119.531	119.53	-	-	-	-	119.53
Motorcycles /j	number	2	-	-	-	-	-	2	4.330	8.66	-	-	-	-	8.66

##### Subtotal

128.19 - - - - - 128.19

##### c. Equipment

Equipment for contact farmers /k	number	-	-	-	14	14	-	28	50	-	-	-	0.70	0.70	1.40
Office equipment for extension teams /l	lumpsum									-	-	-	10.00	-	10.00
Materials and equipment for demonstration farmer field school	per annum									-	-	-	10.00	10.00	30.00

##### Subtotal

- - - 20.70 10.70 10.00 41.40

##### Subtotal

163.39 7.00 29.20 27.70 17.70 12.00 256.99

##### 2. Sufficient quantity of breeder/foundation/registered seed produced by ARC

##### a. Equipment and Materials

Renovate breeders' seed storage at ARC /m	facility	1	-	-	-	-	-	1	25.000	25.00	-	-	-	-	25.00
Laboratory equipment for El Obeid /n	lumpsum									30.00	3.00	3.00	3.00	3.00	45.00

##### Subtotal

55.00 3.00 3.00 3.00 3.00 3.00 70.00

##### b. Vehicles

4WD 3-door hardtop	number	1	-	-	-	-	-	1	119.531	119.53	-	-	-	-	119.53
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##### c. Training in Crop Breeding

Crop Breeding /o	course	1	-	-	-	-	-	1	13.000	13.00	-	-	-	-	13.00
Water harvesting techniques /p	course	1	-	-	-	-	-	1	15.630	15.63	-	-	-	-	15.63

##### Subtotal

28.63 - - - - - 28.63

##### Subtotal

203.16 3.00 3.00 3.00 3.00 3.00 218.16

Table 2. Improvement of the Seed Production System

**Detailed Costs**

(US\$)

\$)	Unit	Quantities								Unit Cost	Base Cost ('000)						
		2012	2013	2014	2015	2016	2017	Total	2012		2013	2014	2015	2016	2017	Total	
3. Participatory research implemented /q																	
a. Training																	
Participatory research /r	course	1	-	-	-	-	-	-	1	13.000	13.00	-	-	-	-	-	13.00
Facilitate formation of the Participatory Research Committee /s	course	-	1	1	1	1	-	4	3.704		-	3.70	3.70	3.70	3.70	-	14.82
Conduct on-farm and demonstration and participatory variety screenin	per annum										-	7.00	7.00	7.00	7.00	7.00	35.00
Subtotal											13.00	10.70	10.70	10.70	10.70	7.00	62.82
4. Community based seed growers enabled																	
a. Training																	
Training of seed growers by extension teams /t	lumpsum										-	-	-	10.85	13.65	-	24.50
Regional exchange visits on successful experiences with group-based	tour	-	1	1	-	-	-	2	3.000		-	3.00	3.00	-	-	-	6.00
Information campaigns, awareness raising, media campaign /v	per annum										5.00	5.00	5.00	5.00	5.00	-	25.00
National Exchange visits on successful experiences /w	tour	2	2	2	2	2	2	12	2.000		4.00	4.00	4.00	4.00	4.00	4.00	24.00
Workshop for leaders of seed producer groups /x	workshop	-	1	1	1	1	1	5	4.333		-	4.33	4.33	4.33	4.33	4.33	21.67
Subtotal											9.00	16.33	16.33	24.18	26.98	8.33	101.17
b. Insurance																	
IFAD Insurance Contribution /y	lumpsum										-	-	-	19.38	26.69	8.50	54.56
Govt Insurance Contribution /z	lumpsum										-	-	-	13.07	32.30	14.41	59.78
Growers contribution to insurance /aa	lumpsum										-	-	-	0.92	5.61	5.91	12.44
Subtotal											-	-	-	33.38	64.60	28.81	126.79
Subtotal											9.00	16.33	16.33	57.56	91.58	37.15	227.95
Subtotal											388.55	37.04	59.24	98.96	122.99	59.15	765.92
3. South Kordofan																	
1. Extension system capacitated to support target seed growers																	
a. Capacity Building /bb																	
Seed production and marketing practices training /cc	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
ICT in agriculture for M&E /dd	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
Best practices in M&E and impact assessment /ee	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
Study tour /ff	tour	1	-	-	-	-	-	1	8.000		8.00	-	-	-	-	-	8.00
Exchange visits incentive for seed growers /gg	tour	-	1	1	1	1	1	5	2.000		-	2.00	2.00	2.00	2.00	2.00	10.00
Gender mainstreaming in agriculture	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
Training of village-based extension staff /hh	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
Sensitization training/awareness on gender issues /ii	course	1	-	1	-	-	-	2	3.700		3.70	-	3.70	-	-	-	7.40
Develop tools and information materials /jj	lumpsum										5.00	5.00	5.00	5.00	5.00	-	25.00
Subtotal											35.20	7.00	29.20	7.00	7.00	2.00	87.40
b. Vehicles																	
4WD 3-door Hardtop - extension teams	number	1	-	-	-	-	-	1	119.531		119.53	-	-	-	-	-	119.53
Motorcycles /kk	number	2	-	-	-	-	-	2	4.330		8.66	-	-	-	-	-	8.66
Subtotal											128.19	-	-	-	-	-	128.19
c. Equipment																	
Equipment for contact farmers /ll	number	12	-	4	-	14	6	36	50		0.60	-	0.20	-	0.70	0.30	1.80
Office equipment for extension teams /mm	lumpsum										10.00	-	-	-	-	-	10.00
Materials and equipment for demonstration farmer field school	per annum										10.00	10.00	10.00	10.00	10.00	10.00	60.00
Subtotal											20.60	10.00	10.20	10.00	10.70	10.30	71.80
Subtotal											183.99	17.00	39.40	17.00	17.70	12.30	287.39

Table 2. Improvement of the Seed Production System

**Detailed Costs**

(US\$)		Unit	Quantities							Unit Cost	Base Cost ('000)						
			2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
2. Sufficient quantity of breeder/foundation/registered seed produced by ARC																	
a. Equipment and Materials																	
	Renovate breeders' seed storage at ARC /nn	facility	1	-	-	-	-	-	1	50.000	50.00	-	-	-	-	-	50.00
	Laboratory equipment for South Kordofan /oo	lumpsum									50.00	5.00	5.00	5.00	5.00	5.00	75.00
	Subtotal										100.00	5.00	5.00	5.00	5.00	5.00	125.00
b. Vehicles																	
	4WD hardtop	number	1	-	-	-	-	-	1	119.531	119.53	-	-	-	-	-	119.53
c. Training in Crop Breeding																	
	Crop Breeding /pp	course	1	-	-	-	-	-	1	13.000	13.00	-	-	-	-	-	13.00
	Water harvesting techniques /qq	course	1	-	-	-	-	-	1	15.630	15.63	-	-	-	-	-	15.63
	Subtotal										28.63	-	-	-	-	-	28.63
	Subtotal										248.16	5.00	5.00	5.00	5.00	5.00	273.16
3. Participatory research implemented /rr																	
	Participatory research /ss	course	1	-	-	-	-	-	1	13.000	13.00	-	-	-	-	-	13.00
	Facilitate formation of the Participatory Research Committee /tt	course									-	3.70	3.70	3.70	3.70	-	14.80
	Conduct on-farm and demonstration and participatory variety screening /r	per annum									-	5.00	5.00	5.00	5.00	5.00	25.00
	Subtotal										13.00	8.70	8.70	8.70	8.70	5.00	52.80
4. Training																	
	Participatory breeding techniques /uu	course	1	-	-	-	-	-	1	27.500	27.50	-	-	-	-	-	27.50
5. Community based seed growers enabled																	
a. Training																	
	Training of seed growers by extension teams /vv	lumpsum									9.30	2.40	5.50	0.80	11.65	7.45	37.10
	Regional exchange visits on successful experiences with group-based	tour	-	1	1	-	-	-	2	3.000	-	3.00	3.00	-	-	-	6.00
	Information campaigns, awareness raising, media campaign /xx	per annum									5.00	5.00	5.00	5.00	5.00	-	25.00
	National Exchange visits on successful experiences /yy	tour	2	2	2	2	2	2	12	2.000	4.00	4.00	4.00	4.00	4.00	4.00	24.00
	Workshop for leaders of seed producer groups /zz	workshop	-	1	1	1	1	1	5	4.333	-	4.33	4.33	4.33	4.33	4.33	21.67
	Subtotal										18.30	18.73	21.83	14.13	24.98	15.78	113.77
b. Insurance																	
	IFAD Insurance Contribution /aaa	lumpsum									15.59	7.80	3.19	1.59	19.38	17.67	65.22
	Govt Insurance Contribution /bbb	lumpsum									15.59	15.59	3.19	9.49	23.45	29.95	97.27
	Growers contribution to insurance /ccc	lumpsum									-	7.80	-	0.67	4.08	12.28	24.82
	Subtotal										31.18	31.18	6.38	11.76	46.91	59.90	187.31
	Subtotal										49.48	49.91	28.21	25.89	71.89	75.69	301.07
	Subtotal										522.13	80.61	81.31	56.59	103.29	97.99	941.92
C. Project Facilitation																	
1. Participatory research implemented /ddd																	
	Participatory Research expert (IC) /eee	personmonth	2	2	-	-	-	-	4	15.000	30.00	30.00	-	-	-	-	60.00
2. Extension Needs Assessment																	
	Training needs assessment for Extension staff /fff	personmonth	3	2	-	-	-	-	5	3.000	9.00	6.00	-	-	-	-	15.00
3. Sufficient quantity of breeder/foundation/registered seed produced by ARC																	
	Registered Seed /ggg	per annum									70.26	-	-	-	-	-	70.26
	Registered seed production	per annum									-	70.26	81.46	185.16	425.57	-	762.45
	Subtotal										70.26	70.26	81.46	185.16	425.57	-	832.71
	Subtotal										109.26	106.26	81.46	185.16	425.57	-	907.71
Total Investment Costs																	
											1,019.94	223.91	222.01	340.71	651.85	157.13	2,615.55

Table 2. Improvement of the Seed Production System

**Detailed Costs**

(US\$)

**II. Recurrent Costs****A. North Kordofan****1. Agricultural Research Corporation**

Field Allowances for Breeders and technicians /hhh

per annum

6.00 6.00 6.00 6.00 6.00 6.00 36.00

Vehicle O &amp; M

per annum

17.93 17.93 17.93 17.93 17.93 17.93 107.58

General operating expenses

per annum

3.00 3.00 3.00 3.00 3.00 3.00 18.00

**Subtotal**

26.93 26.93 26.93 26.93 26.93 26.93 161.58

**2. Extension system capacitated to provide support to target groups**

Vehicle O &amp; M

per annum

19.23 19.23 19.23 19.23 19.23 19.23 115.37

General Operations &amp; Maintenance

per annum

4.00 4.00 4.00 4.00 4.00 4.00 24.00

**Subtotal**

23.23 23.23 23.23 23.23 23.23 23.23 139.37

**Subtotal**

50.16 50.16 50.16 50.16 50.16 50.16 300.95

**B. South Kordofan****1. Agricultural Research Corporation**

Field Allowances for Breeders and technicians /iii

per annum

6.00 6.00 6.00 6.00 6.00 6.00 36.00

Vehicle O &amp; M

per annum

17.93 17.93 17.93 17.93 17.93 17.93 107.58

General operating expenses

per annum

3.00 3.00 3.00 3.00 3.00 3.00 18.00

**Subtotal**

26.93 26.93 26.93 26.93 26.93 26.93 161.58

**2. Extension system capacitated to provide support to target groups**

Vehicle O &amp; M

per annum

19.23 19.23 19.23 19.23 19.23 19.23 115.37

General Operations &amp; Maintenance

per annum

4.00 4.00 4.00 4.00 4.00 4.00 24.00

**Subtotal**

23.23 23.23 23.23 23.23 23.23 23.23 139.37

**Subtotal**

50.16 50.16 50.16 50.16 50.16 50.16 300.95

**Total Recurrent Costs**

100.32 100.32 100.32 100.32 100.32 100.32 601.90

**Total**

1,120.26 324.23 322.33 441.03 752.16 257.45 3,217.45

la 15 participants x 5 days

lb for extension staff - contact farmers and community trainers

lc Extension staff particularly M&amp;E

ld ToT for extension staff

le Neighbouring country - 4 Women Devt Officer consolidate experience in  
grassroot institutional building practices for 10 days

lf on successful experiences with group-based seed multiplication supported by the project; for selected CTs and WDOs x 2 days x 10 persons

lg contact famers, community trainers; training locally; 5 day workshop by extension agents on community devt./participatory issues

lh both extension teams and village-based extension staff

li to raise awareness on certified seed production and produce standardised manuals for group management

lj to enable extension teams easy access to seed producing villages

lk 4 contact famers and 1 CT per village choice of transportation (bicycle) or ag. equipment

\l Contribution to teams  
 \m to facilitate long term storage  
 \n consumables from yr 2 (detailed breakdown in annex)  
 \o In India includes cost of ticket  
 \p ICARDA (course cost USD 9 630 and air ticket and per diem USD 6 000)  
 \q for the identification of suitable cultivars implemented  
 \r India 14 days includes airticket and per diem  
 \s 15 participants x 5 day course  
 \t Detailed breakdown in annex Cost of Groups NK includes all extension fuel & field allowances  
 \u on successful experiences with group-based seed multiplication supported by the project for selected CTs and WDOs  
     2 days for 10 persons; bus hire; DSA  
 \v to raise awareness on certified seed production and produce standardised manuals for group participants  
 \w 1 extension staff per 2 localities, 1 leader per group; bus hire and per diem for participants  
 \x for 12 seed producer groups; 3 per locality per year; 2-day per diem and travel cost  
 \y For each group IFAD pays 50% of insurance cost in Yr 1 and 25% in Yr 2  
 \z Govt. pays 50%  
 \aa Each new group pays 0% in Yr. 1, 25% in Yr 2 and 50% in Yr 3 onwards  
 \bb 15 participants x 5 days  
 \cc for extension staff - contact farmers and community trainers  
 \dd Extension staff particularly M&E  
 \ee ToT for extension staff  
 \ff Neighbouring country - 4 Women Devt Officer consolidate experience in  
     grassroot institutional building practices for 10 days  
 \gg on successful experiences with group-based seed multiplication supported by the project; for selected CTs and WDOs x 2 days x 10 persons  
 \hh contact famers, community trainers; training locally; 5 day workshop by extension agents on community devt./participatory issues  
 \ii both extension teams and village-based extension staff  
 \jj to raise awareness on certified seed production and produce standardised manuals for group management  
 \kk to enable extension teams easy access to seed producing villages  
 \ll 4 contact famers and 1 CT per village choice of transportation (bicycle) or ag. equipment  
 \mm Contribution to teams  
 \nn to facilitate long term storage  
 \oo consumables from yr 2 (detailed breakdown in annex)  
 \pp In India includes cost of ticket  
 \qq ICARDA (course cost USD 9 630 and air ticket and per diem USD 6 000)  
 \rr for the identification of suitable cultivars implemented

\ss India 14 days includes airticket and per diem  
\tt 15 participants x 5 day course  
\uu India 14 days (course cost USD 21 800 and air ticket & per diem USD 5 700)  
\vv Detailed breakdown in annex Cost of Groups SK includes all extension fuel & field allowances  
\www on successful experiences with group-based seed multiplication supported by the project for selected CTs and WDOs  
2 days for 10 persons; bus hire; DSA  
\xx to raise awareness on certified seed production and produce standardised manuals for group participants  
\yy 1 extension staff per 2 localities, 1 leader per group; bus hire and per diem for participants  
\zz for 12 seed producer groups; 3 per locality per year; 2-day per diem and travel cost  
\aaa For each group IFAD pays 50% of insurance cost in Yr 1 and 25% in Yr 2  
\bbb Govt. pays 50%  
\ccc Each new group pays 0% in Yr. 1, 25% in Yr 2 and 50% in Yr 3 onwards  
\ddd for the identification of suitable cultivars implemented  
\eee to develop participatory research methodologies to be used in the two states  
and conduct training  
\fff TA (NC) contract for ToT on community development/participatory approaches  
gender mainstreaming in agric. (full extension teams)  
\ggg Yr 1 IFAD financed to kickstart Project  
\hhh USD40 for 90 days for 6 breeders and technicians  
\iii USD40 for 90 days for 6 breeders and technicians

## Appendix 2: Table 3: Support to Seed Market Development

Table 3. Seed Market Development Support

### Detailed Costs

(US\$)

#### I. Investment Costs

##### A. Project Facilitation

##### 1. Market channels established and operational for certified seed

##### a. Assessment of Private Seed Companies

Market systems/market research study (IC) /a

Market systems/market research study (NC) /b

##### Subtotal

##### b. Training

Exposure visits to similar enterprises /c

Technical/specialised training /d

##### Subtotal

##### c. Infrastructure and Equipment Support

Private Sector Support Facility

Private Sector Contribution

##### Subtotal

##### d. Trader Network Support

Capacity building of traders /e

Develop trader database

##### Subtotal

##### Subtotal

##### 2. Seed Market Information System Developed

##### a. Development of Market Awareness

Publicity and various demonstrations of use of certified seed /f

Seed fairs for agro-dealers /g

##### Subtotal

##### b. Development of Seed database

Seed information system/database established

Equipment for seed database /h

##### Subtotal

##### Subtotal

##### Subtotal

##### B. North Kordofan

##### 1. Empowerment of Farmer Producer Groups

##### a. Training

Training of grain producers /i

Training of contact farmers

Demonstration on soil and water conservation

Field days

##### Subtotal

Unit	Quantities							Unit Cost	Base Cost ('000)						
	2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
personmonth	1	1	-	-	-	-	2	15.000	15.00	15.00	-	-	-	-	30.00
personmonth	2	2	2	-	-	-	6	15.000	30.00	30.00	30.00	-	-	-	90.00
Subtotal									45.00	45.00	30.00	-	-	-	120.00
lumpsum									-	20.00	-	-	-	-	20.00
course	2	2	2	-	-	-	6	6.000	12.00	12.00	12.00	-	-	-	36.00
Subtotal									12.00	32.00	12.00	-	-	-	56.00
lumpsum									215.18	15.19	153.77	-	-	-	384.14
lumpsum									396.32	-	170.98	-	-	-	567.30
Subtotal									611.50	15.19	324.75	-	-	-	951.44
course	2	-	2	-	-	-	4	3.704	7.41	-	7.41	-	-	-	14.82
personmonth	3	2	2	-	-	-	7	3.000	9.00	6.00	6.00	-	-	-	21.00
Subtotal									16.41	6.00	13.41	-	-	-	35.82
Subtotal									684.91	98.19	380.16	-	-	-	1,163.26
campaigns	2	2	2	3	3	3	15	20.000	40.00	40.00	40.00	60.00	60.00	60.00	300.00
per annum									10.00	10.00	10.00	20.00	20.00	20.00	90.00
Subtotal									50.00	50.00	50.00	80.00	80.00	80.00	390.00
lumpsum									10.00	10.00	10.00	10.00	-	-	40.00
set	1	-	-	-	-	-	1	10.000	10.00	-	-	-	-	-	10.00
Subtotal									20.00	10.00	10.00	10.00	-	-	50.00
Subtotal									70.00	60.00	60.00	90.00	80.00	80.00	440.00
Subtotal									754.91	158.19	440.16	90.00	80.00	80.00	1,603.26
per annum									78.96	78.96	22.56	33.84	48.88	-	263.20
trainee	84	168	252	432	144	304	1,384	200	16.80	33.60	50.40	86.40	28.80	60.80	276.80
number	84	168	168	216	80	160	876	120	10.08	20.16	20.16	25.92	9.60	19.20	105.12
number	42	42	42	54	20	40	240	200	8.40	8.40	8.40	10.80	4.00	8.00	48.00
Subtotal									114.24	141.12	101.52	156.96	91.28	88.00	693.12



Table 3. Seed Market Development Support

**Detailed Costs**

(US\$)

	Unit	Quantities							Unit Cost	Base Cost ('000)						
		2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
<b>b. Equipment for extension teams</b>																
Vehicles	number	2	-	2	-	-	-	4	119.531	239.06	-	239.06	-	-	-	478.13
<b>c. Insurance /j</b>																
Govt Insurance Contribution /k	lumpsum									-	189.00	378.00	-	-	-	567.00
Producers contribution to insurance /l	lumpsum									-	189.00	378.00	-	-	-	567.00
<b>Subtotal</b>										-	378.00	756.01	-	-	-	1,134.01
<b>Subtotal</b>										353.30	519.12	1,096.59	156.96	91.28	88.00	2,305.25
<b>2. Support to LETs and Farmer Groups</b>																
PCU support /m	per annum									6.65	6.65	6.65	6.65	6.65	6.65	39.90
<b>3. Infrastructure Support to ABSUMI</b>																
<b>a. Support to Absumi /n</b>																
Infrastructure and equipment support /o	lumpsum									200.00	-	80.00	-	-	-	280.00
<b>Subtotal</b>										559.95	525.77	1,183.24	163.61	97.93	94.65	2,625.15
<b>C. South Kordofan</b>																
<b>1. Empowerment of Farmer Producer Groups</b>																
<b>a. Training</b>																
Training of grain producers /p	per annum									118.44	118.44	-	33.84	50.76	73.32	394.80
Training of contact farmers	trainee	126	252	378	648	216	456	2,076	200	25.20	50.40	75.60	129.60	43.20	91.20	415.20
Demonstration on soil and water conservation	number	126	252	252	324	120	240	1,314	120	15.12	30.24	30.24	38.88	14.40	28.80	157.68
Field days	number	63	63	63	81	30	60	360	200	12.60	12.60	12.60	16.20	6.00	12.00	72.00
<b>Subtotal</b>										171.36	211.68	118.44	218.52	114.36	205.32	1,039.68
<b>b. Equipment for extension teams</b>																
Vehicles	number	2	-	2	-	-	-	4	119.531	239.06	-	239.06	-	-	-	478.13
<b>c. Insurance /q</b>																
Govt Insurance Contribution /r	lumpsum									-	283.50	567.00	-	-	-	850.51
Producers contribution to insurance /s	lumpsum									-	283.50	567.00	-	-	-	850.51
<b>Subtotal</b>										-	567.00	1,134.01	-	-	-	1,701.01
<b>Subtotal</b>										410.42	778.68	1,491.51	218.52	114.36	205.32	3,218.82
<b>2. Support to LETs and Farmer Groups</b>																
PCU support /t	per annum									6.65	6.65	6.65	6.65	6.65	6.65	39.90
<b>Subtotal</b>										417.07	785.33	1,498.16	225.17	121.01	211.97	3,258.72
<b>Total Investment Costs</b>										1,731.93	1,469.29	3,121.56	478.78	298.94	386.62	7,487.13
<b>II. Recurrent Costs</b>																
<b>A. North Kordofan</b>																
<b>1. Allowances</b>																
Field allowances for extension teams - IFAD financed	per annum	1,680	2,100	2,310	-	-	-	6,090	25	42.00	52.50	57.75	-	-	-	152.25
Field allowances for extension teams - Grower Financed	per annum	-	-	-	2,970	3,600	4,800	11,370	25	-	-	-	74.25	90.00	120.00	284.25
<b>Subtotal</b>										42.00	52.50	57.75	74.25	90.00	120.00	436.50
<b>2. Vehicle O&amp;M</b>																
Vehicle O&M - IFAD Financed	per annum	2	2	4	-	-	-	8	7.500	15.00	15.00	30.00	-	-	-	60.00
Vehicle O&M - Grower Financed	per annum	-	-	-	4	4	4	12	7.500	-	-	-	30.00	30.00	30.00	90.00
<b>Subtotal</b>										15.00	15.00	30.00	30.00	30.00	30.00	150.00
<b>Subtotal</b>										57.00	67.50	87.75	104.25	120.00	150.00	586.50

Table 3. Seed Market Development Support

**Detailed Costs**

(US\$)

(US\$)

		Quantities							Base Cost ('000)								
	Unit	2012	2013	2014	2015	2016	2017	Total	Unit Cost	2012	2013	2014	2015	2016	2017	Total	
B. South Kordofan																	
1. Allowances																	
Field allowances for extension teams - IFAD Financed	per annum	2,520	3,150	3,465	-	-	-	9,135	25	63.00	78.75	86.63	-	-	-	228.38	
Field allowances for extension teams - Grower Financed	per annum	-	-	-	4,455	5,400	7,200	17,055	25	-	-	-	111.38	135.00	180.00	426.38	
Subtotal										63.00	78.75	86.63	111.38	135.00	180.00	654.75	
2. Vehicle O&M																	
Vehicle O&M - IFAD Financed	per annum	2	2	4	-	-	-	8	7.500	15.00	15.00	30.00	-	-	-	60.00	
Vehicle O&M - Grower Financed	per annum	-	-	-	4	4	4	12	7.500	-	-	-	30.00	30.00	30.00	90.00	
Subtotal										15.00	15.00	30.00	30.00	30.00	30.00	150.00	
Subtotal										78.00	93.75	116.63	141.38	165.00	210.00	804.75	
Total Recurrent Costs											135.00	161.25	204.38	245.63	285.00	360.00	1,391.25
Total											1,866.93	1,630.54	3,325.94	724.41	583.94	746.62	8,878.38

- \a Analyse current marketing systems, develop TORs for selection of Seed Companies, analyse traders
- \b Analyse current marketing systems, develop TORs for selection of Seed Companies, analyse traders
- \c To learn from other African country experiences - 20 persons
- \d Workshops for selected companies on various technical areas: financial, marketing, seed production
- \e Training in accounting, bookkeeping, inventory management, marketing, sales point management & storage  
15 trainees x 5 days/course
- \f Radio programmes, pamphlets, publications
- \g Market awareness raising and promotion of seed producer
- \h Software, hardware and any subscriptions for establishment of seed database
- \i Seed detailed training programming in annex each group gets training in 1st & 2nd yrs of formation
- \j Note Insurance only calculated until mid-term  
total insurance cost overall USD 10.8  
for NK and SK 2013 to 2017
- \k Govt. pays 50%
- \l Producers pay 50%
- \m Includes perdiems and field allowances
- \n Develop outreach of microfinance to locality in which SDP operates
- \o Vehicles, office furnishings, operating goods & equip, contribution towards operating costs and T.A.
- \p Seed detailed training programming in annex each group gets training in 1st & 2nd yrs of formation
- \q Note Insurance only calculated until mid-term  
total insurance cost overall US 10.8 million for NK and SK 2013 - 2017
- \r Govt. pays 50%
- \s Producers pay 50%
- \t Includes perdiems and field allowances

## Appendix 2: Table 4: Project Coordination and Management

Table 4. Project Coordination and Management

### Detailed Costs

(US\$)

#### I. Investment Costs

##### A. Project Coordination /a

##### 1. Project Coordination and Management structures established

##### a. Project Coordination Unit /b

	Unit	Quantities							Unit Cost	Base Cost ('000)						
		2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total
Principal Programme Coordinator /c	per annum	-	-	0.5	1	1	1	3.5	52.000	-	-	26.00	52.00	52.00	52.00	182.00
Seed Specialist	per annum	1	1	1	1	1	1	6	43.600	43.60	43.60	43.60	43.60	43.60	43.60	261.60
Financial Controller /d	per annum	-	-	0.5	1	1	1	3.5	43.600	-	-	21.80	43.60	43.60	43.60	152.60
Senior M&E Officer /e	per annum	-	-	0.5	1	1	1	3.5	38.450	-	-	19.23	38.45	38.45	38.45	134.58
Community Development Officer	per annum	-	-	1	1	1	1	4	28.450	-	-	28.45	28.45	28.45	28.45	113.80
Administrative Officer /f	per annum	-	-	0.5	1	1	1	3.5	24.000	-	-	12.00	24.00	24.00	24.00	84.00
Accountant	per annum	1	1	1	1	1	1	6	28.000	28.00	28.00	28.00	28.00	28.00	28.00	168.00
Secretary Executive /g	per annum	-	-	0.5	1	1	1	3.5	10.550	-	-	5.28	10.55	10.55	10.55	36.93
Driver /h	per annum	1	1	3	3	3	3	14	8.000	8.00	8.00	24.00	24.00	24.00	24.00	112.00
Guards /i	per annum	-	-	2	4	4	4	14	6.700	-	-	13.40	26.80	26.80	26.80	93.80
Cleaner /j	per annum	-	-	1	2	2	2	7	6.700	-	-	6.70	13.40	13.40	13.40	46.90
<b>Subtotal</b>										<b>79.60</b>	<b>79.60</b>	<b>228.45</b>	<b>332.85</b>	<b>332.85</b>	<b>332.85</b>	<b>1,386.20</b>

##### b. Project Equipment and Materials

Laptop computers - professional staff	number	1	-	-	2	-	-	3	1.500	1.50	-	-	3.00	-	-	4.50
Desktop computers - support staff	number	1	-	-	2	-	-	3	800	0.80	-	-	1.60	-	-	2.40
Photocopier	number	-	-	-	1	-	-	1	5.000	-	-	-	5.00	-	-	5.00
Printer, fax and scanner	number	1	-	1	2	-	-	4	3.000	3.00	-	3.00	6.00	-	-	12.00
Specialised equipment to set up MIS	lumpsum									5.00	-	-	-	-	-	5.00
Miscellaneous equipment	lumpsum									1.00	1.00	1.00	1.00	1.00	1.00	6.00
Office equipment & furniture	set	1	-	-	-	-	-	1	2.000	2.00	-	-	-	-	-	2.00
<b>Subtotal</b>										<b>13.30</b>	<b>1.00</b>	<b>4.00</b>	<b>16.60</b>	<b>1.00</b>	<b>1.00</b>	<b>36.90</b>

##### c. Vehicles

Project vehicle - 5 door hardtop	number	1	-	-	2	-	-	3	119.531	119.53	-	-	239.06	-	-	358.59
<b>Subtotal</b>										<b>212.43</b>	<b>80.60</b>	<b>232.45</b>	<b>588.51</b>	<b>333.85</b>	<b>333.85</b>	<b>1,781.69</b>

##### 2. M & E Knowledge Management (KM) system established

Comprehensive baseline study	study	1	-	-	-	-	-	1	75.000	75.00	-	-	-	-	-	75.00
Develop KM Strategy	personmonth	2	-	-	-	-	-	2	3.000	6.00	-	-	-	-	-	6.00
Update Project M & E System Design /k	personmonth	2	-	-	-	-	-	2	3.000	6.00	-	-	-	-	-	6.00
Mid Term review	lumpsum									-	-	60.00	-	-	-	60.00
Project Completion	lumpsum									-	-	-	-	-	50.00	50.00
Project Start Up and PIM /l	lumpsum									10.00	-	-	-	-	-	10.00
Technical and thematic studies /m	personmonth	-	2	2	-	2	2	8	3.000	-	6.00	6.00	-	6.00	6.00	24.00
Training for PCU staff /n	course	2	2	2	2	2	2	12	3.700	7.40	7.40	7.40	7.40	7.40	7.40	44.40
Conduct Annual Review and Planning Workshops /o	per annum	1	1	1	1	1	1	6	6.000	6.00	6.00	6.00	6.00	6.00	6.00	36.00
Annual Project Assessments	per annum									-	5.00	5.00	5.00	5.00	5.00	25.00
<b>Subtotal</b>										<b>110.40</b>	<b>24.40</b>	<b>84.40</b>	<b>18.40</b>	<b>24.40</b>	<b>74.40</b>	<b>336.40</b>

Table 4. Project Coordination and Management

**Detailed Costs**

(US\$)

(US\$)

										Quantities						Base Cost ('000)										
										Unit	2012	2013	2014	2015	2016	2017	Total	Unit Cost	2012	2013	2014	2015	2016	2017	Total	
3. Supervision and backstopping																										
Supervision by PSC, SCC, IFAD & Govt /p										per annum										15.00	15.00	15.00	15.00	15.00	15.00	90.00
Annual Audit										per annum	1	1	1	1	1	1	6	15.000	15.00	15.00	15.00	15.00	15.00	15.00	90.00	
Service fees to CCU										per annum									8.00	8.00	8.00	8.00	8.00	8.00	48.00	
Subtotal																			38.00	38.00	38.00	38.00	38.00	38.00	228.00	
Subtotal																			360.83	143.00	354.85	644.91	396.25	446.25	2,346.09	
B. Project Oversight North Kordofan																										
1. Personnel Costs																										
State Focal Point /q										per annum	-	-	1	1	1	1	4	35.142	-	-	35.14	35.14	35.14	35.14	140.57	
SCU										per annum	0.2	0.2	-	-	-	-	0.4	118.623	23.72	23.72	-	-	-	-	47.45	
Subtotal																			23.72	23.72	35.14	35.14	35.14	35.14	188.02	
2. Vehicles																										
Hardtop - 3 door										unit	-	-	1	-	-	-	1	119.531	-	-	119.53	-	-	-	119.53	
Subtotal																			23.72	23.72	154.67	35.14	35.14	35.14	307.55	
C. Project Oversight South Kordofan																										
1. Personnel Costs																										
State Focal Point /r										per annum	-	-	1	1	1	1	4	35.142	-	-	35.14	35.14	35.14	35.14	140.57	
SCU										per annum	0.2	0.2	-	-	-	-	0.4	118.623	23.72	23.72	-	-	-	-	47.45	
Subtotal																			23.72	23.72	35.14	35.14	35.14	35.14	188.02	
2. Vehicles																										
Hardtop - 3 door										unit	-	-	1	-	-	-	1	119.531	-	-	119.53	-	-	-	119.53	
Subtotal																			23.72	23.72	154.67	35.14	35.14	35.14	307.55	
Total Investment Costs																			408.28	190.45	664.20	715.20	466.53	516.53	2,961.19	
II. Recurrent Costs																										
A. Project Coordination																										
1. Recurrent costs																										
a. Vehicles and equipment																										
Vehicle O&M										per annum									10.00	10.00	15.00	15.00	15.00	15.00	80.00	
Vehicle and equipment insurance										per annum										10.00	10.00	15.00	15.00	15.00	15.00	80.00
Vehicle registration										per annum										1.00	1.00	3.00	3.00	3.00	3.00	14.00
Equipment operations and maintenance										per annum										1.00	1.00	2.50	2.50	2.50	2.50	12.00
Generator operation and maintenance										per annum										1.00	1.00	2.50	2.50	2.50	2.50	12.00
Subtotal																				23.00	23.00	38.00	38.00	38.00	38.00	198.00
b. Office running costs																										
Guesthouse and office rent										per annum										-	-	28.00	28.00	28.00	28.00	112.00
Casual Labourers										per annum										-	-	2.00	2.00	2.00	2.00	8.00
Documentation and media editing										per annum										1.00	1.00	1.00	1.00	1.00	1.00	6.00
Advertising										per annum										1.00	1.00	1.00	1.00	1.00	1.00	6.00
Electricity and water										per annum										-	-	6.50	6.50	6.50	6.50	26.00
Bank charges										per annum										1.00	1.00	1.00	1.00	1.00	1.00	6.00
Telephone and internet connection										per annum										1.00	1.00	2.50	2.50	2.50	2.50	12.00
Postage and courier										per annum										-	-	0.40	0.40	0.40	-	1.20
Subtotal																				4.00	4.00	42.40	42.40	42.40	42.00	177.20
Subtotal																				27.00	27.00	80.40	80.40	80.40	80.00	375.20

Table 4. Project Coordination and Management

**Detailed Costs**

(US\$)

	Unit	Quantities							Unit Cost	Base Cost ('000)							Total
		2012	2013	2014	2015	2016	2017	Total		2012	2013	2014	2015	2016	2017	Total	
<b>B. Project Oversight North Kordofan</b>																	
<b>1. Office operating and vehicle running costs</b>																	
Vehicle and office operating costs	per annum									-	-	15.00	15.00	15.00	15.00	60.00	
<b>2. Field allowances</b>																	
Field allowances for State MoA	per annum									-	-	15.00	15.00	15.00	15.00	60.00	
<b>Subtotal</b>										-	-	30.00	30.00	30.00	30.00	120.00	
<b>C. Project Oversight South Kordofan</b>																	
<b>1. Office operating and vehicle running costs</b>																	
Vehicle and office operating costs	per annum									-	-	15.00	15.00	15.00	15.00	60.00	
<b>2. Field allowances</b>																	
Field allowances for State MoA	per annum									15.00	15.00	15.00	15.00	15.00	15.00	90.00	
<b>Subtotal</b>										15.00	15.00	30.00	30.00	30.00	30.00	150.00	
<b>Total Recurrent Costs</b>										42.00	42.00	140.40	140.40	140.40	140.00	645.20	
<b>Total</b>										450.28	232.45	804.60	855.60	606.93	656.53	3,606.39	

\a Management of SDP mainstreamed in WSRMP

\b No incentives for taking on SDP as most of it borne under 17% social security and end of service benefits

All salaries from YR3 include 17% social security and end of service benefits

\c WSRMP to pay 50% of costs in Yr 3

\d WSRMP to pay 50% of the costs Yr 3

\e WSRMP to pay 50% of the costs Yr. 3

\f WSRMP to pay 50% of the costs Yr. 3

\g WSRMP to pay 50% of the costs Yr. 3

\h For seed specialist Yr. 1 and 2;

\i WSRMP to pay for 50% of the costs Yr. 3

\j WSRMP to pay for 50% of the costs Yr. 3

\k to include SDP in other IFAD projects

\l Project Implementation Manual completed and presented at start-up workshop

\m In collaboration with students from State Universities in the 2 States

\n Various technical areas

\o including Annual Work Plans and Budgeting 50 persons x 3 days

\p Supervision oversight by the Project Steering Committee (PSC)

\q For project oversight

\r For project oversight



## **ANNEX 10: ECONOMIC AND FINANCIAL ANALYSIS**

### **Project Scenario**

1. The Project will provide the necessary support to increase certified seed production through community based smallholder seed growers and develop the seed market through a number of mechanisms including extension and advisory services, seed fairs and radio programmes for increased use of certified seed and other more appropriate technological packages to improve productivity. The project will also assist the National Seed Administration (NSA) to improve its regulatory and enforcement services such that the seed industry can grow and develop. The small-scale seed growers will be mentored and linked with Private Seed Company (ies) in order to provide them with a market outlet and to develop their production capacity.

### **Overall Impact**

2. The Project would increase agricultural productivity, production and farm incomes through the use of certified seeds and it would generate employment on smallholder seed farms. The establishment of an organised seed production, processing, marketing and distribution system would also provide a sound foundation for future expansion of the seed industry in the Sudan.

### **Beneficiaries**

3. It is indicatively estimated that the Project will directly benefit around 109 280 smallholder farm holdings through increased returns from the use of certified seeds. The seed growers will comprise 32 groups and 200 grain producer groups of which 30% overall will be women. It should be emphasised that this number is indicative and used primarily for the purpose of estimating and aggregating benefits.

### **Incremental Production**

4. The main quantifiable benefits would be incremental crop yields that would be obtained by smallholders through the use of certified seed. Yields of certified seed for seed growers at full development are estimated to be 60 percent higher than yields from non-field certified seeds. Those of grain producers are estimated to reach 90 percent, however in North Kordofan the analysis has factored in the three-year cyclical drought. Achievement of these yields would be supported by extension teams better trained in crop husbandry techniques of new varieties, and by the timely supply of recommended levels of seasonal inputs.

5. At full development, smallholders producing certified seed would be earning on average a net incremental benefit per feddan of between SDG 251 to SDG 545 for sorghum depending on the soil type and SDG 304 and SDG 580 for sesame.

The Project would purchase registered seed from the Agricultural Research Corporation in the first year and subsequently the Private Sector Companies with contractual arrangements with seed growers would purchase the required registered seed.

### **Benefits**

6. The Project benefits will include the contribution to safeguarding the supply of certified seed in North and South Kordofan with the resulting favourable impact on crop productivity and production. Certified seed would be produced in the communities under rainfed conditions. Participatory research would be conducted to continuously improve the resilience and applicability of seed varieties.

7. The Project is expected to demonstrate the viability of financially sustainable seed production and marketing systems. In so doing, it will pave the way for increased private sector and smallholder participation in seed production, marketing, distribution and trade and a corresponding freeing of Government resources, as well as promoting domestic investment in the establishment of a modern seed production system.

## FINANCIAL ANALYSIS

### Methodology and Assumptions

8. As part of the financial analysis of the Project seed and grain production crop budgets were prepared for five crops namely sorghum, millet, sesame, cowpea, watermelon and groundnuts. These indicative budgets are based on the following assumptions:

- Smallholder farmers would be provided with strong vertically integrated extension and contract farming support ensuring financing and technically sound development of seeds resulting in high quality seed production.
- All benefiting smallholder farmers are willing to take on the full technical package including crop insurance.
- The major climatic risk is poor rainfall in North Kordofan.

9. The grain production models and budgets take into account yield increases for grain production that can be anticipated as a result of utilising certified seeds, improved crop husbandry practices, processing and marketing. The models were developed based on primary and secondary data, interviews with farmers and other informed sources. The models/budgets are utilised to assess production costs for seed production under the Project. They also reflect increased yield as a result of using certified seed with lower seeding rates. The “without Project” situation refers to an existing seed production unit by a smallholder. All prices are expressed at August 2011 constant prices in Sudanese Pounds (SDG). The cost of labour is assumed to be SDG 10 per person day.

10. The budgets are broken down to production costs, labour costs and revenue/sales for the eight years of their operations, starting with 2012 when the initial investments are made. For the purpose of the analysis, PY7 and beyond are taken as having the same revenue and cost structure as in PY6. Table 1 provides indicative yield increases and gross margins for sorghum and sesame.

**Table 16: Indicative Yields and Gross Margins for Sorghum and Sesame Certified Seed Growing in Without and With Project Situations at Full Development**

Soil Type	NORTH KORDOFAN				SOUTH KORDOFAN			
	Sorghum				Sorghum			
	Yields in kgs		Gross Margins in SDP		Yields in kgs		Gross Margins in SDP	
	Without Project	With Project	Without Project	With Project	Without Project	With Project	Without Project	With Project
<b>Sorghum</b>								
Clay	360	576	53	251	405	648	103	330
Gardud	400	640	157	445	450	720	211	545
Irrigated								
<b>Sesame</b>	Sesame				Sesame			
	Yields in kgs		Gross Margins in SDP		Yields in kgs		Gross Margins in SDP	
Qoz	210	336	203	481	230	368	269	580
Clay	180	288	198	465	225	360	212	496
Gardud	180	288	79	304	180	288	79	304

11. The crop budgets were used to develop typical farm enterprises for the grain producers based on the soil type and crop mix. Table 2 below provides a summary of the Internal rates of return



(FIRR), Net Present Values (NPV), Revenues and returns per family labour day in the without and with project situations for grain production:

**Table 17: Farm Models summary of Internal Rate of Return (FIRR), Net Present Value, Revenue and Returns per Family Labour Day**

Soil Type and Cropping Pattern	NORTH KORDOFAN							SOUTH KORDOFAN					
	Area Cropped in Feddans	Revenue				Return per Labour Day		Revenue				Return per Labour Day	
		Without Project	With Project			Without Project	With Project	Without Project	With Project				
Qoz Soil													
Groundnut	1.5												
Millet	2.5												
Cowpea	0.5												
Sesame	0.375												
W. Melon	0.125												
Total	5	231	953	74%	1 216	2	7	751	1 952		5 649	7	15
Gardud Soil													
Arfa Gadmak Sorghum	0.9												
Yarwasha Sorghum	0.9												
Sesame	1.2												
Total	3	- 225	- 12		- 837	- 3	0	- 157	98	9%	- 149	- 2	1
Clay Soil													
Arfa Gadmak Sorghum	6												
Sesame	4												
Total	10	-1 046	334		-2 201	- 22	5	- 934	679	39%	779	- 19	11
Irrigated Clay Soil													
Tabard Supplementary Irrigation	6												
Tabard Spate Irrigation	5												
Total	11	- 215	1 754	70%	3 107	- 3	19	Not Applicable					

12. The higher returns in South Kordofan reflect the higher rainfall pattern although it must be noted that South Kordofan is still a conflict zone at the time of writing this report.

## ECONOMIC ANALYSIS

### Economic Parameters

13. The analysis is in February 2012 constant prices in SDG. The discount rate is 25 percent based on local inflation and the project life is 10 years as it is a pilot which will be up scaled. The shadow exchange rate (SER) used is SDP 4.5 TO USD 1.

14. The economic analysis of the project compares all project investments with the measurable benefits generated by certified seed varieties produced in the project area based on the following assumptions:

- An overall adoption rate of 25% by both seed growers and grain producers.
- A drought cycle every three years in North Kordofan which reduces revenues by 75% for both seed growers and grain producers.
- Costs of insurance paid by Government and IFAD are subsidies which are not considered as part of the investment costs within the Project.

### Results and sensitivity analysis

15. The findings show that the project will be economically rewarding, with an EIRR for the base case estimated at 13%;. The sensitivity analysis shows the project to be sensitive to exchange rate shocks and in the worst case scenario (costs higher by 20% and benefits lower by 20%) the EIRR drops to 4%.

**Table 18: Sensitivity Analysis**

C o s t s	Revenues					
		-20%	-10%	0%	+10%	+20%
	-20%	13%	16%	18%	21%	23%
	-10%	10%	13%	16%	18%	20%
	0%	8%	11%	<b>13%</b>	15%	17%
	+10%	6%	9%	11%	13%	15%
	+20%	4%	7%	9%	11%	13%

## ANNEX 11: PROJECT IMPLEMENTATION MANUAL

The outline of the Project Implementation Manual (PIM) is prepared to guide the PCU of the Western Sudan Resources Management Programme (WSRMP) in the drafting of the PIM for the Seed Development Project. The PIM provides greater procedural details and guidance to facilitate proper implementation of the Project. The following table indicates the content and preparation status of various chapters of the PIM. The PIM will be finalized following conclusion of the Financing Agreement, approval by the Executive Board of the Seed Development Project and recruitment of the Seed Specialist who will report to the Programme Coordinator of the WSRMP. Some of the important templates which should be prepared such as AWPB template are in annex 6.

**Table 19: Table of Content of PIM**

Content	Status	Reference
<ul style="list-style-type: none"> <li>• Currency equivalents</li> <li>• Weights and measures</li> <li>• Financial Year</li> <li>• Abbreviations and Acronyms</li> </ul>	Drafted	Main Report (MR)
<b>Chapter 1: Project Framework</b>	Drafted	MR
<b>Project description</b> <b>Costs and financing</b>		Executive summary
<b>Chapter 2: Organizational Structure and Responsibilities</b>	Drafted	MR-Annex 5
<ul style="list-style-type: none"> <li>• Inter-Ministerial Committee</li> <li>• Programme Coordination Committee</li> <li>• Programme Coordination Unit of WSRMP</li> <li>• National Seed Administration</li> <li>• Agriculture Research Corporation</li> <li>• Seed Company</li> <li>• Extension Teams</li> <li>• Seed Grower Groups</li> <li>• Grain producer Groups</li> <li>• Community Development Committees</li> </ul>		
<b>Chapter 3: Administrative and Financial Procedures</b>		
<b>A. Administrative Procedures</b>		
<ul style="list-style-type: none"> <li>• Staff terms of employment</li> <li>• Staff management</li> </ul>	Drafter	MR-annex 5 Based on by laws of the WSRMP
<b>B. Financial Procedures</b>		
<ul style="list-style-type: none"> <li>• Financial management (accounting system, flow of funds)</li> <li>• Bank accounts</li> <li>• Financial controls</li> <li>• Grant disbursement (Effectiveness date, Project completion date, grant closing date, authorized signatories, allocation of grant proceeds, amendment of financing agreement, documentation, taxes)</li> <li>• Procurement, review of procurement decisions, procurement methods, thresholds, post and prior review</li> <li>• Financial reporting and auditing</li> <li>• Good governance and anti-corruption</li> </ul>	<p>Drafted</p> <p>To be drafted</p>	<p>MR and Annex 7</p> <p>Letter to the Recipient Operational manual to standardize financial management and procurement in IFAD co-financed Projects (under development)</p> <p>World Bank. 2009. Emerging good practices on Dealing with Governance and Corruption Risks in Project Lending.</p>
<b>Chapter 4: Project Implementation Arrangements</b>		
<b>A. Annual Work Planning and Budgeting (AWPB)</b>	Drafted	MR-Annex 6
<b>B. Implementation of Institutional and Regulatory Environment component</b>	Drafted	Working paper 1

<b>Content</b>	<b>Status</b>	<b>Reference</b>
<b>C. Implementation of Improvement of the Seed Production System component</b>	Drafted	MR-Annex 5 and Working paper 2
<b>D. Implementation of Support Seed Supply/Market Development component</b>	Drafted	MR-Annex 5 and Working paper 2
<b>Chapter 5: Project Monitoring &amp; Evaluation and Supervision</b>		
<ul style="list-style-type: none"> <li>• Progress monitoring</li> <li>• Evaluation</li> <li>• Operation of M&amp;E system</li> <li>• Performance questions and indicators</li> <li>• SMART indicators</li> <li>• RIMS indicators</li> <li>• Participatory community based monitoring</li> <li>• Monitoring and Evaluation by IFAD</li> <li>• Start-up workshop</li> <li>• Base Line survey</li> <li>• Mid Term review</li> <li>• Special Studies</li> <li>• Project Completion Report</li> <li>• Project contribution to Knowledge Management</li> <li>• Supervision Arrangements</li> </ul>	Drafted	MR-Logframe, MR-Annex 6, and IFAD guidelines for project M&E
<b>Project reporting System</b>	Not drafted	Based on the WSRMP progress reports
<b>Attachments</b>		
<b>Attachment 1: Organization Chart</b>	Drafted	Annex 5
<b>Attachment 2: Flow of Funds Diagram</b>	Drafted	MR-Section III
<b>Attachment 3: Job Descriptions for Project Personnel</b>	Drafted	MR-Annex 5
<b>Attachment 4: The Baseline Survey</b>	Drafted	MR-Annex 6
<b>Attachment 5: Progress Report Content</b>	Not drafted	Based on the WSRMP progress reports
<b>Attachment 6: Mid-Term Review</b>	Not drafted	To be based on the template provided in the IFAD guidelines on M&E

## **ANNEX 12: COMPLIANCE WITH IFAD POLICIES**

1. This annex tries to document how the Seed Development Project (SDP) is largely aligned to the relevant IFAD strategies, procedures and policies. These include: Programme Design, Targeting and Sustainability Policies, Operational Policies, Innovation and Knowledge Management. It briefly describes how the Project fits to each strategy/procedure/policy along with references to particular sections with the main Project design report and related annexes.

### **IFAD's Strategic Framework 2011-2015**

2. The goal of IFAD's Strategic Framework 2011-2015 is that poor rural women and men in developing countries are enabled to improve their food security, raise their incomes and strengthen their resilience. This goal is underpinned by five strategic objectives:

- A natural resource and economic asset base for poor rural women and men that is more resilient to climate change, environmental degradation and market transformation;
- Access for poor rural women and men to services to reduce poverty raise incomes and build resilience in a changing environment;
- Poor rural women and men and their organizations able to manage profitable, sustainable and resilient farm and non-farm enterprises or take advantage of decent work opportunities;
- Poor rural women and men and their organizations able to influence policies and institutions that affect their livelihoods; and
- Enabling institutional and policy environments to support agricultural production and the full range of related non-farm activities.

3. Generally SDP fits perfectly in the overall IFAD strategic framework. It aims at increasing the smallholder food production by promoting the growth and development of seed production and use in North and South Kordofan. The main entry point will be to organize the smallholder seed producer into viable enterprises to promote the production, dissemination, marketing and adoption of certified seed as well as develop the effective demand among farmers (also called in this report grain producers) to purchase on a regular basis certified seeds. The Project intends to work with the seed companies and their network of small traders/agro-dealers. By so doing, the Project aspires to working along the whole chain for seed markets, including input suppliers, and to influence the local and national policy processes and creating a viable and sustainable seed market.

### **Climate Change Strategy**

4. The goal of IFAD's climate change strategy is to maximize IFAD's impact on rural poverty in a changing climate. The SDP design identified soil degradation, vulnerability to drought as the critical environmental issues for sustainable traditional rainfed agricultural productivity. The Project design addressed these issues by investing the production and marketing of quality certified seeds. Varieties are selected among other for their drought and pest resistance. Proposed seed varieties and agricultural techniques based on soil harvesting will encourage vertical expansion rather than horizontal expansion.

### **Potential Social and Environmental Impacts**

5. The environmental impacts and risks as well as mitigation measures for each component and its activities are described in the table below.

**Table 20: Project's Social and Environmental Impact**

Component/ activities	Environmental and Social Impacts/ risks	Mitigation measures
<b>Component 1: Institutional and Regulatory Environment Strengthening and Development</b>		
Enactment and enforcement of PVP legislation	-Increased number of crop varieties and introduction of new types of crops. -increased area under seed production -Improved food security from better varieties -Improved household incomes from wider choice of cash crops	Monitoring of environmental, production and economic aspects of the new varieties and new crop types
Training of seed administration and extension staff	- Monitoring seed production and marketing	Not applicable
Multi-stakeholder policy dialogue	- Development of sustainable seed industry responsive to environmental challenges	Not applicable
<b>Component 2: Improvement of the Seed Production System</b>		
ARC capacitated for implementation of participatory breeding research	-Seed varieties and technologies that fit with farmers' situations are developed together with farmers -Improved farmer confidence from the acknowledgement of their knowledge systems.	Farmer involvement in technology development
High quality and sufficient quantity of breeder/foundation/registered seeds produced by Agricultural Research Corporation (ARC)	- registered seeds key input in seed value chain	Two year requirements produced in any given year to have a buffer against calamities
Community-based Seed Grower Groups enterprises are enabled to produce certified seeds of improved and traditional varieties	- Diversification of production system of smallholders - Increase supply of certified seed at local level	Monitoring of environmental, production and economic aspects of the new varieties and new crop types
The extension system is strengthened to support target seed producer enterprises	- improved advice to farmers to improve productivity and environmental management	Annual seed production figures
<b>Component 3: Support Seed Market Development</b>		
Licensed seed agents established	- Better supply of quality seeds at local level (timeliness, reliability).	- Individual farmer and group seed demand and grain production figures
Farmers empowered to use certified seeds and improved techniques	- Increased resilience of farmers to climatic shocks	- Household survey
Seed Market Database in place	- Information on market for drought and pest resistant seed varieties	- Monitoring of seed market (supply and demand)
Increased access of farmers/ grain producers to credit and microfinance	- adoption of drought resilient production practices	- Monitoring of land under improved crop practices
<b>Component 4: Project Management and Coordination</b>		
Establishment of the Project management and coordination structure	-Monitoring and management of Project implementation	Not applicable

### Environmental category

6. Given that the Project interventions aim to improve smallholder farmers' access to certified seed of improved varieties that will help cope with climatic variability, the Project environmental classification was confirmed as **category B**. This classification is based on technical considerations and on the alignment of Project interventions with proposed climate change adaptation and mitigation measures for Sudan.

### **Monitoring Aspects**

7. The monitoring and evaluation process is an integral element of the Project extension approach. The Project monitoring includes a baseline study, annual assessments, a mid-term and completion reviews and provision was made for the M&E in the budget. Annex 6 details the project M&E system.

### **Gender Policy**

8. The IFAD strategy for gender mainstreaming and women's empowerment focuses on a three-pronged strategy: (i) expand women's economic empowerment through access to and control over key assets; (ii) strengthen women's decision-making role in community affairs and representation in local institutions; and (iii) improve the knowledge and well-being of women and ease women's workloads by facilitating women's access to basic rural services and infrastructures.

9. As stipulated in the main Project document and in annex 2, the Project intends to support gender mainstreaming and empowerment of women, to ensure maximum participation of women in various activities. It will also implement measures to enable the poor and more vulnerable groups (such as the youth, women heads of households) to participate and benefit. A set of quotas were identified for women memberships at different levels of community based organization to be established. A provision of training on gender issues/gender mainstreaming in agriculture at various levels (grass root institutions, extension staff) for both men and women was set and a gender-disaggregated monitoring and evaluation system that will specifically assess Project's impact on women and men was developed.

10. The IFAD Prerequisites for Gender Sensitive Design and a brief description of how they have been taken into account in the REP design are provided below.

**Table 21: Gender Checklist Questions**

<p><b>1. Does the design document contain a context-specific gender strategy that aims to:</b></p> <ul style="list-style-type: none"> <li>Expand women's access to and control over fundamental assets – capital, land, knowledge and technologies: <i>The Project provides particular support to women producers through including crops for which women have high preference such as food crops, groundnuts and cowpeas.</i></li> <li>Strengthen their agency – thus their decision-making role in community affairs and representation in local institutions: <i>The Project works on setting up of a quota for women participation in groups. The quota is set at 30%. Priority will be given to interested women heads of households</i></li> <li>Improve well-being and ease workload: <i>The selection of varieties through participatory research will prioritize variety characteristics that are less labor intensive such as weeding and harvesting given the increasing cost of labor.</i></li> </ul>
<p><b>2. The Project identifies operational measures to ensure gender-equitable participation in, and benefit from, planned activities, and in particular:</b></p> <ul style="list-style-type: none"> <li>Sets indicative and realistic targets in terms of proportion of women participants in different Project activities and components: <i>Yes – see annex 2, a quota system of 30% was specified.</i></li> <li>Establishes women's participation in Project-related decision-making bodies (such as Water User Associations; committees taking decisions on micro-Projects; etc.): <i>Yes – quota also applies to women representation in executive committees of seed grower groups or grain producer groups.</i></li> <li>Reflects attention to gender equality/ women's' empowerment in Project/ programme management arrangements (e.g. including in Terms of Reference of Project coordinating unit or Project management unit (PMU) responsibilities for gender mainstreaming; inclusion of gender focal point in PCU, etc.): <i>This already features in the ToR of the existing WSRMP management.</i></li> <li>Explicitly addresses the issue of outreach to women (e.g. through female field staff; NGO group promoters, etc.) especially where women's mobility is limited: <i>Women are well represented in the extension teams where 37% of technical staff are women. .</i></li> </ul>
<p><b>3. The Project logframe and suggested monitoring system specify sex-disaggregated performance and impact indicators. Yes and this was applied to the logframe</b></p>

### Targeting Policy

11. In order to ensure programme benefits reach IFAD's target group – rural people living in poverty and food insecurity – target groups have been defined, a targeting strategy developed and means of operationalizing the targeting strategy integrated into the Project design and implementation modalities. Target groups have been identified based on gender and livelihood analysis along the whole value chain. (See Annex II of MR). The main targets consists of smallholder farmers, women and women headed household, small scale agro-dealers and youth both men and women.



**Table 22: Targeting Checklist Questions**

<p><b>1. Does the main target group – those expected to benefit most – correspond to IFAD’s target group as defined by the Targeting Policy (the extremely poor and food insecure):</b></p> <p><i>Yes, the targets include small scale producers who generally grow less than fifteen (6.3) feddans of land, engaging in rainfed agricultural activities on which most of the rural poor depend for their livelihoods. It also include women and women headed household, the small agro-dealers and unemployed youth and young women</i></p>
<p><b>2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods – with due attention to gender differences:</b> <i>Yes, please see section II of the PDR and Annex 2</i></p>
<p><b>3. Is evidence provided by interest in and likely uptake of the proposed activities by the identified target sub-groups?</b> <i>The design mission selected areas where farmers have previous experience in seed production and where they have been exposed to technology transfer on use of certified seeds and soil and water conservation techniques. The intention is to organize them to ensure better markets, better prices and fair accessibility to inputs/ credit/ crop insurance.</i></p>
<p><b>4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy?</b> <i>The targeting strategy will involve either all or some of the following measures and methods: (i) Geographic targeting; (ii) Enabling measures; (iii) Empowerment and capacity building measures; (iv) Direct targeting; and (v) Attention to procedural mechanisms. Yes, the design document employed (i) geographic targeting; (ii) direct targeting for women and youth through quotas (iii) empowerment and capacity building and enabling measures. (See section II MR and annex 2).</i></p>
<p><b>5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&amp;E, and also be assessed at Mid-Term review</b></p> <p><i>Yes, please see Annex 6.</i></p>

### Preventing Fraud and Corruption

12. The following preventive measures were adopted: (i) semi-annual submission of project financial statements; (ii) annual audit; (iii) multi-stakeholder platforms that would allow aggrieved parties to voice their concern; and (iv) regular monitoring. It is worth mentioning that to date, the WSRMP audit reports are unqualified and that the overall management of the programme is considered moderately satisfactory.

### Procurement Guidelines

13. Procurement procedures are detailed in the Main Report (section III.D) and in Annex 8. The project will be submitted to annual audits.

### Supervision and Implementation Support Policy

14. In line with IFAD policy and criteria for selection of supervision approaches the SDP will be directly supervised by IFAD. This will enable the country team to provide implementation support with focus on: (i) providing direct support to the Project management in terms of continuous guidance for maintain the Project on the right track for the achievement of the Project objectives; (ii) adapting Project interventions to changes which may be dictated by exogenous factors of natural, political or financial nature; (iii) resolving problems of technical nature pertaining to Project operations; and (iv) providing knowledge-based support about best practices and success stories, from other interventions in Sudan, in the region or elsewhere.

### Innovation

15. The main innovation introduced by the Project is the Private Public partnership model for the production and marketing of certified seeds. The PPP involves the seed companies, the farmers (as seed growers and grain producers) and the extension services. The model will be tested during the

calibration phase and its soundness and replicability will be assessed on the basis of a set of trigger indicators to be met at the mid-term review in project year 3.

### **Knowledge Management**

16. The Project intends to and provides significant financial allocation for the development of suitable knowledge sharing platforms and mechanisms to improve information flow among actors. The Project will package and disseminate information to the respective stakeholders in the appropriate formats (e.g. brochures, studies, articles, newsletter, TV and radio Projects), using the central knowledge management and communication platform established by the ongoing IFAD Projects under the leadership of the Central Coordination Unit for IFAD co-financed projects. This knowledge sharing process will be supported by a well-focused series of workshops and learning events. In addition, the Project will use the Sudan Country Project Management Team (CPMT) as a mechanism for learning and exchanging knowledge among the IFAD-supported Projects and between them and other in-country Projects. Furthermore, Regional Knowledge Networking will be supported to build and share approaches, tools, methodologies, technologies and best practices.

17. The main KM&C activities are: (a) the generation of knowledge to influence policy formulation will be done through the implementation of the results-oriented M&E as described above and joint policy analysis and (b) the scouting for lessons and innovative or successful approaches generated or captured by the Project will be disseminated through the Knowledge Access in Rural Interconnected Areas Network (Karianet)<sup>75</sup> regional network, the communities of practice established in IFAD and other networks.

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<sup>75</sup> KariaNet is multi-stakeholder partnership between IFAD, the International Development and Research Centre (IDRC) and ten development projects in the Middle East and North Africa for knowledge fostering.

## **Appendix 1: Environmental and Social Review Note (ESRN)**

### **1. Brief description of Project and components**

**Project area.** The Seed Development Project will be implemented in two states North and South Kordofan and there are two localities per state. These localities are Sheikan and Rahad in North Kordofan, and Abbassya and Abu Gubeiha in South Kordofan. The total population in the 4 localities is approx. 1 144 000 individuals of which more than 60 percent come from poor households. The production system relies on a combination of subsistence agriculture based on staple crops and livestock, and market oriented production. Low productivity coupled with poor marketing systems in agriculture and unemployment in the dry season are the main causes of poverty.

**Project beneficiaries.** The total Project number of primary beneficiaries during the Project life is 108000 grain producers and 1280 seed growers. Other beneficiaries will be small traders/agro dealers, and youth. The majority of the beneficiaries will be smallholders with moderate poverty though individual farmers with entrepreneurial skills will be targeted to encourage a business approach to the Project that will ensure sustainability.

**Project objective.** The Project's development objective is to increase crop productivity for about 108000 smallholders using certified seeds in North and South Kordofan.

**Project activities.** The Project has 4 components:

- **Component I (USD 1.80 million): Institutional and Regulatory Environment Strengthening and Development.** *Outcome: Conducive policy and institutional environment for the Seed industry in place.* This component will work to introduce appropriate legislation for the seed industry; improve the National Seed Administration's (NSA) capacity to carry out its legal mandate of monitoring the national seed system; and establish a multi-stakeholder dialogue forum that brings together Government, the private sector, NGOs and farmers to discuss seed issues on a regular basis.
- **Component II (USD 3.02 million): Improvement of the Seed Production System.** *Outcome: An economically viable seed production system that meets farmers' demands and expectations in place.* This component will capacitate the Agricultural Research Corporation (ARC) to carry out participatory research to ensure that sufficient quantities of high quality breeder, foundation and registered seed are produced. The registered seeds will then be made available to the private companies who will contract small scale Seed Growers Groups (SGGs) operating at the grassroots level to multiply registered seeds and produce seeds which will be certified by NSA before commercialization by private companies to final users. The extension services of the State Ministry of Agriculture will be provided with additional training on certified seeds-related aspects, as well as with necessary logistic and mobility to enable and empower them to provide the necessary and timely extension services to seed growers. Seed growers will be organized into registered groups to facilitate access to inputs, finance and crop insurance. Arrangement will be made to ensure that linkages are provided between seed growers, private seed companies, rural finance services and crop insurance services.
- **Component III (USD 8.56 million): Support Seed Market Development.** *Outcome: Improved seed market delivery mechanisms in place.* This component will develop effective demand for certified seed; and link Grain Producer Groups (GPG) to financial institutions and input suppliers; create a network of village- based trained and experienced licensed certified seeds agents/traders (LCSA); empowerment of existing Grain Producer Groups (GPGs) by acting on raising their awareness to adopt certified seeds and correct seed practices through extension services (including on-farm demonstrations) and information campaigns; seed fairs; most importantly through the promotion of full agricultural packages (including, certified seeds, mechanized services, water harvesting, and crop insurance). Furthermore, the project will support the establishment of a Certified Seed Market Database and assist microfinance institutions in improving their outreach in terms of logistic support and branch network.

- **Component IV (USD 3.23 million) Project Coordination and Management.** *Outcome: Project efficiently and effectively managed to achieve Project results.* This component will ensure that the Project is efficiently managed and knowledge and pest practices generated during implementation are properly documented, shared and disseminated so that the Project achieves its objectives.

## **2. Major site characteristics**

The Project covers two localities in each state. These localities were selected following the field visit by the mission team and consultations with state level extension staff and central Government officials. Criteria used included the following: previous seed production experience, previous technology transfer experience, accessibility, productivity of farmers, suitability of area for seed production of target crops and level of extension services support.

**Population and communities.** The total population in the 4 localities is estimated at approximately 1 144 000 individuals. 75% of the population is rural and their main source of income is agricultural activities. Off-farm activities are limited to petty trading, wage labor to larger farms and towns, charcoal making, special skills such as tailoring, welding, and carpentry and sale of handicrafts.

**Land use in the Project area.** Traditional rainfed agriculture is the main form of agriculture in the target areas. The land area for the majority of the smallholder traditional farmers ranges from three feddans to 30 feddans. The farmers practice shifting cultivation with an average of one third of the land fallow. A piece of land is cultivated continuously for three years then left for vegetation to grow and replenish the soil for at least two years. The addition of inorganic fertilizers is not practiced though continuously declining crop yields have been blamed on depleted soils that are not getting enough mineral replenishment. Recent research by the Agricultural Research Corporation (ARC) at El Obeid Research Station shows that farmers cultivating in sandy soils must start applying inorganic fertilizers if their yields are to improve significantly.

The practice of renting out land by poor farmers to better off farmers is common especially in South Kordofan as source of extra income. However, this results in shorter fallow periods of one season. Women have areas of about 0.5 to 2 feddans set aside for gardening (*jubraka*) to produce vegetables, cowpeas, okra, spices and maize. This provides extra family nutrition and is a main source of income for the women. Livestock is grazed in communal pastures which are sometimes invaded by migrating pastoralists during the dry season.

**Rainfall.** The average rainfall in the Project area varies from 350 mm in Sheikan and Rahad localities of North Kordofan to about 400 mm in Abbassya and 600 mm in Abu Gubeiha in South Kordofan. The rainfall season starts in June and ends in October. The season starts a bit earlier and lasts longer in the South. Due to climate change the seasons are becoming more unreliable with uneven rainfall distribution and the effects of these changes are more pronounced in the North. Farmers have adopted coping strategies that allow them to plant crops and varieties of different maturities depending on the onset of the rains. Reduced soil cover due to overgrazing in the North increases rain runoff thereby reducing effective rainfall in an area already suffering from low precipitation.

**Main livelihoods.** The rural economy in the four localities is mainly driven by traditional rainfed agriculture which is the mainstay for the majority of the rural population. The following describes the livelihoods of the different groups of the Project's target population:

**Poor smallholder farmers** (South Kordofan). These target farmers live in clay and loamy plains and usually grow food and cash crops in fields ranging in size from 3 to 15 feddan. The women have gardens (*jubraka*) located close to the homestead or on stream-banks where early maturing varieties and horticulture crops are grown by the women for consumption and sale. The main crops grown are sorghum, millet, sesame, groundnut on the sandier soils and *kerekede* (hibiscus). Each household generally owns less than 5 small ruminants that are raised on a sedentary basis. Major challenges that these farmers face include: low agricultural productivity due to erratic rainfall, pest infestations, and the farmers lack adequate access to sufficient productive assets to make maximum use of the

land (draught power/machinery, certified seeds, fertilizer, and labor). Lack or limited access to credit is the main constraint that prevents the purchase of inputs and access to hired machinery and limits access to labor for the more expensive and labor intensive farming activities which are weeding and harvesting. As a result, these households leave much of their available land uncultivated or rented out to better off farmers. Activities for extra income include off-farm wage labor, gold panning, sale of handicrafts and petty trade. Especially poorer households are always at risk of food insecurity.

**Poor smallholder farmers from agro-pastoralist households** (North Kordofan). These farmers mostly grow about five feddans of sorghum, groundnuts, sesame, and *kerekede*. Watermelon is cultivated as a multipurpose crop for food, fodder and water reserve. As in South Kordofan, women grow *jubraka* land. These farmers generally own less than ten head of small ruminants. Their main constraints include limited access to labor, declining soil fertility, drought and pest outbreaks and water shortages during the dry season due to the limited supply of water and the high cost of purchasing water when it is available. Coping mechanisms include charcoal making and sale, wage labor in larger villages and towns, sale of handicrafts such as mats and basket work, and reducing household water consumption by half.

**Less poor smallholder farmers** have the ability to cultivate up to 30 feddan and have 10 - 15 small ruminants and may also have some cattle and have access to some form of mechanization. They also have some entrepreneurial experience and skills that can enable Project-supported seed producers to start up successful enterprises and act as catalysts for the seed commercialization process.

**Women, particularly women-headed households.** Women provide a remarkable contribution to the household's wellbeing and food security, as they perform a number of responsibilities which include: i) farming, both on the household fields together with their husbands and on the *jubraka* land (generally 0.5-2 feddans); household work: including preparing food, collecting fire wood or fetching water; iii) looking after the children; and iv) petty trade. Agro-processing is limited to pressing of groundnut and using the oil for consumption, making groundnut paste and drying okra for sale in the village market. Women, particularly women-headed households, generally control smaller areas of land, have fewer cash resources from farming and livestock activities and are more likely to face certain constraints such as lack of access to labor compared to men because of persisting gender inequalities

**Small traders/agro-dealers/entrepreneurs.** The small traders/agro-dealers could be involved in purchasing commodities specifically the seed produced by the seed producers, or selling agricultural inputs at the village level to encourage a sustainable seed marketing system. Small traders generally face a number of challenges and constraints that make them averse to engaging in the seed business including: low margins in the grain trade business, limited business opportunities in rural areas, lack of cash by farmers to buy their goods, unreliable seed markets, limited access to credit, and no storage capabilities.

**Rural youth (including young women)** Young people generally experience the problem of limited job opportunities in rural areas more than other groups. Their low level of education and skills, including entrepreneurial, business and financial skills, and their relative inexperience do not allow them to take up potential opportunities in rural areas and can also expose them to unsafe and unfair working conditions such as low pay and low status work. In many cases, the youth are not aware of vocational training opportunities or cannot afford the costs. The Project will attempt to involve young people in the various employment opportunities that will arise from its interventions in seed production, grain production using certified seed, small trading, extension service provision and the provision of vocational training.

**Poverty.** The design mission concluded – based on its field observations – that the main causes of poverty are:

- Inadequate development strategies;
- Slow adaptation to climatic change (volatility associated with unpredictable rainfall, dry spells)

- during rainy season, and erosion of natural resources);
- Prolonged civil conflicts that have had a devastating effect on the rural population;
- Subsistence focus and lack of opportunities to shift to market –oriented activities;
- Low rates of productivity and an inability to improve their incomes;
- Inadequate access to markets and poor post-harvest management;
- Low index of social capital and ability to form effective groups and associations capable of collective actions;
- Inadequate access to extension services, input supply, and rural financial services

### **3. Issues in Sustainable Traditional Rainfed Agricultural Productivity**

The design mission identified the following issues as critical for sustainable traditional rainfed agricultural productivity:

**Soil degradation.** Cutting down of trees, overgrazing, inadequate rotation/fallowing and lack of soil and water conservation practices has exposed the soil to serious wind and soil erosion. The practice of shifting cultivation with reduced fallowing and no supplementary inorganic fertilizer application has resulted in declining soil fertility. The effect of this soil degradation is evident in declining crop yields and an upsurge in parasitic weeds such as striga in sorghum. Soil degradation is also affecting rangelands with non-nutritive invasive plant species replacing pastures grasses. This is more evident in North Kordofan.

**Vulnerability to drought.** Drought in Sudan is a common occurrence such that on average with crop failure is recorded in one out of three years. The situation is being worsened by the increased frequency of late and poorly distributed rains in the supposedly good years.

According to the Federal Ministry of Environment and Physical Development (2003) temperatures and precipitations are going to change significantly by 2030 and 2060 for the States of North and South Kordofan. The average temperatures are expected to rise significantly relative to the baseline (1961-1990). By 2060, average temperatures are expected to rise by between 1.5°C and 3.1°C above the baseline during August (rainy season), and by between 1.1°C to 2.1°C during January (beginning of dry season). Average rainfall is also expected to reduce by about 6 mm per month during the rainy season. The impact of such changes on agriculture is: (i) reduction of the area available for crop production due to a Southward shift in moist agro climatic zones; and (ii) decrease in the food crop yield between 13% and 82% for sorghum and between 20% and 76% for millet, and in the production of the gum Arabic between 25% and 30%.

**Land scarcity.** The current land use is leading to competing claims on the land resulting in disputes that can escalate into violent confrontations between pastoralists and crop farmers especially in North Kordofan. The pastoralists stray into fields where their animals sometimes destroy unharvested crops. Their animals also compete for pastures and water with local livestock during the dry season on migration to the South. Southward migration may be reduced by the changes in the political situation after the secession of South Sudan from the North.

### **4. Potential social and environmental impacts and risks**

The environmental impacts and risks as well as mitigation measures for each component and its activities are described in the table below.

**Table 23: Project's Social and Environmental Impact**

Component/ activities	Environmental and Social Impacts/ risks	Mitigation measures
<b>Component 1: Institutional and Regulatory Environment Strengthening and Development</b>		
Enactment and enforcement of PVP legislation	-Increased number of crop varieties and introduction of new types of crops. -increased area under seed production -Improved food security from better varieties -Improved household incomes from wider choice of cash crops	Monitoring of environmental, production and economic aspects of the new varieties and new crop types
Training of seed administration and extension staff	- Monitoring seed production and marketing	Not applicable
Multi-stakeholder policy dialogue	- Development of sustainable seed industry responsive to environmental challenges	Not applicable
<b>Component 2: Improvement of the Seed Production System</b>		
ARC capacitated for implementation of participatory breeding research	-Seed varieties and technologies that fit with farmers' situations are developed together with farmers -Improved farmer confidence from the acknowledgement of their knowledge systems.	Farmer involvement in technology development
High quality and sufficient quantity of breeder/foundation/registered seeds produced by Agricultural Research Corporation (ARC)	- registered seeds key input in seed value chain	Two year requirements produced in any given year to have a buffer against calamities
Community-based Seed Grower Groups enterprises are enabled to produce certified seeds of improved and traditional varieties	- Diversification of production system of smallholders - Increase supply of certified seed at local level	Monitoring of environmental, production and economic aspects of the new varieties and new crop types
The extension system is strengthened to support target seed producer enterprises	- improved advice to farmers to improve productivity and environmental management	Annual seed production figures
<b>Component 3: Support Seed Market Development</b>		
Licensed seed agents established	- Better supply of quality seeds at local level (timeliness, reliability).	- Individual farmer and group seed demand and grain production figures
Farmers empowered to use certified seeds and improved techniques	- Increased resilience of farmers to climatic shocks	- Household survey
Seed Market Database in place	- Information on market for drought and pest resistant seed varieties	- Monitoring of seed market (supply and demand)
Increased access of farmers/ grain producers to credit and microfinance	- adoption of drought resilient production practices	- Monitoring of land under improved crop practices
<b>Component 4: Project Management and Coordination</b>		
Establishment of the Project management and coordination structure	-Monitoring and management of Project implementation	Not applicable

Component/ activities	Environmental and Social Impacts/ risks	Mitigation measures
<b>Component 3: Support Seed Supply/Market Development</b>		
Aggregation of seed producer groups	- Better coordination of seed production activities to avoid over- or underproduction. - Source credit finance for farmers to improve productivity -Development of entrepreneurship at community level with resulting improvement in wealth	- Individual farmer and group production figures
Training of group leaders and apex staff	- Improved seed distribution and marketing	Market surveys
Training of women groups	- Increased availability of vegetables and garden products -increased income for women that will result in more involvement in family and community decision making	Not applicable
Training of farmers	- Knowledge of production practices to achieve certification quality standards -Increased use of herbicides, pesticides and fertilizers	Use of registered and commended crop chemicals to be monitored
Commodity market information system	-Farm production patterns linked to market demands -Better incomes for farmers	Not applicable
Linkages to traders and agro processors through seed fairs and field days	-Commodity markets active and crop harvests not stored for lack of markets -Agro-processing activities increased at locality level with accompanying improved employment opportunities	Monitoring of environmental, production and economic aspects of the agro processing activities
<b>Component 4: Project Management and Coordination</b>		
Establishment of the Project management and coordination structure	-Monitoring and management of Project implementation	Not applicable

## 5. Environmental category

Given that the Project interventions aim to improve smallholder farmers' access to certified seed of improved varieties that will help cope with climatic variability, the Project environmental classification is proposed as **category B**. This classification is based on technical considerations and on the alignment of Project interventions with proposed climate change adaptation and mitigation measures for Sudan.

## 6. Recommended features of Project design and implementation to improve NRM and mitigate environmental concerns

As the Project is classified as category B, it is the mission opinion that there are no main issues requiring mitigation measures.

## 7. Monitoring aspects

The monitoring and evaluation process is an integral element of the Project extension approach. The Project monitoring includes a baseline study, annual assessments, a mid-term and completion reviews. Given the importance of the variety of seeds in the development of the resilience of smallholders' production systems to shocks, the SDP made provisions for a Seed Market Database which is described in annex 6. The M&E system of the project will also capture the following information:

- **People's knowledge.** The farmers' practices for moisture management, risk spreading and adaptation to drought and use of improved adaptable varieties will be documented.
- **Existing capacity among extension staff.** The extension agents' knowledge of rainwater harvesting and conservation technologies will be assessed. This assessment will be used to tailor their capacity building.
- **Crop yields.** The yields of the main staple and cash crops in the Project area will be estimated and compared with yields at state level and yields under similar agro-climatic conditions. In addition to changes in yields, the stability of yields will also be estimated.



- **Status of resources.** This will include the measurement rainfall and analysis of the trends; level of soil fertility; vegetative cover; incidence of broad leaved grasses (that include nutritive fodder for livestock as well as wild vegetables for consumption in the hunger period); rangeland carrying capacity and forage gap.
- **Household farm economics.** This includes assessing farm size, production system, use of inputs particularly herbicides and improved seed varieties for staple and cash crops, crop and livestock budgets as well as total farm budget.
- **Household food security.** Total production of staple crops; contribution of home gardens(jubraka)/ livestock production/ food purchase to household consumption throughout the year.
- **Adoption rates.** The Project will analyze the adoption rate of the technological packages and the causes between high and low adoption rates.

Provisions were made in the Project budget for the M&E related studies and training.

**8. Components (if any) requiring ESA and scope of assessment needed (elements of TOR for ESA)**

Based on the above assessment and review of the environmental regulations for the Sudan, no ESA is required for the Project components.



## **ANNEX 13: CONTENTS OF THE PROJECT LIFE FILE**

### **A. Programme Generated Knowledge**

- Programme Concept Note, December 2010
- OSC Issues Note (December 2010)
- CPMT Minutes, February 2011
- Detailed Design Mission Aide-Memoire, April 2011
- CPMT minutes: Wrap-up meeting of the detailed design mission dated 7 April in Khartoum with Ministry of Agriculture and Forestry
- CPMT Minutes: Wrap-up meeting of the completion design mission of 8 August 2011
- Maturity Assessment Template, May 2011
- Reviewers Recommendations Note for QE May 2011
- QE Panel Report June 2011
- Project Detailed Design Report and Annexes (Version submitted for QE in May 2011)
- Working Papers:
  - Working Paper 1: Seed Production and Marketing.
- Project Completion Design Report and Annexes (Version for QA) September 2011
- WP 1. Seed Development and Marketing
- WP 2. Cropping systems and models for components 2 and 3
- WP 3. Project Costs
- WP 4. Financial and Economic Analysis
- QA Panel Report, November 2011

### **B. IFAD Knowledge Base not generated by the Programme**

- Result-based Country Strategic Opportunities Paper for Sudan (COSOP), April 2009
- Sudan Country Programme Evaluation, OE, 2008
- IFAD Policies and Strategies (IFAD Strategic Framework 2007-2010, Environmental and Social Assessment, Climate Change, Gender, Targeting, Private Sector Development and Partnership, Rural Enterprise, Rural Finance, Preventing Fraud and Corruption, Procurement, Supervision and Implementation Support, Project M&E, Innovation, Knowledge Management, Environment and Natural Resources Management Policy)
- Country portfolio of loans and grants (PPMS)
- Country Programme Issues Sheets and Project Status Reports
- Recent supervision reports and Mid-Term Reviews of Projects in Sudan portfolio: Western Sudan Resource Management Programme and South Kordofan Rural Development Programme

### **C. Knowledge Base not generated by the Programme**

Comprehensive Peace Agreement between the Government of Sudan and the Sudan People Liberation Movement, 2004

Draft Interim Poverty Reduction Strategy Paper, August 2011

Study commissioned by IFAD on Potential Compensating Sectors for the Reduction in Oil resources for the Sudan Economy, HAT Professional Consultancy Team Ltd, May 2011

Economic Intelligence Unit Report on Sudan March 2011

Sudan Revitalizing non-oil export: Diagnostic Trade Integration Study for the integrated framework programme

Promoting the Growth and Development of Smallholder Seed Enterprise for food security Crops, Best Practices and Options for Decision making, FAO

#### **Lessons learned from similar Projects**

- Seed Value Chain Sorghum Millet in Zambia- USAID Final October 2010
- Seed value chain for Sorghum and Millet in Mali – IFPRI
- Seed Development programmes in Sub-Saharan Africa: A review of Experience, Jayne Myers
- Project agreement of Seed System Development Project between IDA and Ethiopian Seed Enterprise
- Mali Seed Sector Development Plan: Initiative to end Hunger in Africa by Abt