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Enabling poor rural people  
to overcome poverty

## **President's report on proposed grants under the global/regional grants window to CGIAR- supported international centres**

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**For: Approval**

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## Abbreviations and acronyms

CA	conservation agriculture
CGIAR	Consultative Group on International Agricultural Research
CLCA	crop-livestock conservation agriculture
CWANA	Central and West Asia and North Africa
ICARDA	International Centre for Agricultural Research in Dry Areas
ILRI	International Livestock Research Institute
LUSIP	Lower Usuthu Smallholder Irrigation Project
NARES	National Agricultural Research and Extension Systems
SWADE	Swaziland Water and Agriculture Development Enterprise

## **Recommendation for approval**

The Executive Board is invited to approve the recommendation for grants under the global/regional grants window to CGIAR-supported international centres as contained in paragraph 7.

## **President's report on a proposed grant under the global/regional grants window to a CGIAR-supported international centre**

I submit the following report and recommendation on proposed grants for agricultural research and training to Consultative Group on International Agricultural Research (CGIAR)-supported international centres in the amount of US\$2,441,905.

### **Part I – Introduction**

1. This report recommends the provision of IFAD support to the research and training programmes of the following CGIAR-supported international centres: International Center for Agricultural Research in the Dry Areas (ICARDA) and International Livestock Research Institute (ILRI).
2. The document of the grants for approval by the Executive Board are contained in the annexes to this report:
  - (i) International Center for Agricultural Research in the Dry Areas (ICARDA): Integrated Crop-Livestock Conservation Agriculture for Sustainable Intensification of Cereal-based Systems in North Africa and Central Asia Programme; and
  - (ii) International Livestock Research Institute (ILRI): Innovative Beef Value Chain Development Schemes in Southern Africa.
3. The objectives and content of these applied research programmes are in line with the evolving strategic objectives of IFAD and the IFAD policy for grant financing.
4. The overarching strategic goal that drives the Revised IFAD Policy for Grant Financing, which was approved by the Executive Board in December 2009, is to promote successful and/or innovative approaches and technologies, together with enabling policies and institutions, that will support agricultural and rural development, empowering poor rural women and men in developing countries to achieve higher incomes and improved food security.
5. The policy aims to achieve the following outputs: (a) innovative activities promoted and innovative technologies and approaches developed in support of IFAD's target group; (b) awareness, advocacy and policy dialogue on issues of importance to poor rural people promoted by, and on behalf of, this target group; (c) capacity of partner institutions strengthened to deliver a range of services in support of poor rural people; and (d) lesson learning, knowledge management and dissemination of information on issues related to rural poverty reduction promoted among stakeholders within and across regions.
6. The proposed programmes are in line with the goal and outputs of the revised grant policy.
  - (i) The programme for Integrated Crop-Livestock Conservation Agriculture for Sustainable Intensification of Cereal-based Systems in North Africa and Central Asia supports outputs (c) and (d) by contributing to the

strategic objective of capacity development, knowledge management, and the dissemination of information to stakeholders to assist in the alleviation of rural poverty.

- (ii) The programme for Innovative Beef Value Chain Development Schemes in Southern Africa is in line with the goal and outputs of the revised IFAD grant policy particularly in that it provides a platform for innovative activities by individual resource-poor men and women, and by groups and communities that in turn demand market-provided services. The programme has a strong knowledge management component both in its own right and in terms of support to existing IFAD-funded projects and other pro-poor livestock projects in the region. It engages the private sector and supports market functions, as well as raising the private sector's capacity to deliver poverty-reducing value chain interventions. As a result of its targeting of extensive cattle production systems as a source of animals for fattening, the programme will forge a strong link between food safety, income generation and value addition on one hand and care of the natural resource base on the other. The provision of models of whole-chain beef cattle development that can be immediately scaled up throughout the region, supported by research findings to assist targeting, define partner and private-sector roles, and overcome constraints, supports IFAD's policy priorities.

## **Part II – Recommendation**

7. I recommend that the Executive Board approve the proposed grants in terms of the following resolutions:

RESOLVED: that the Fund, in order to finance, in part, the Integrated Crop-Livestock Conservation Agriculture for Sustainable Intensification of Cereal-based Systems in North Africa and Central Asia Programme, shall provide a grant not exceeding one million five hundred thousand United States dollars (US\$1,500,000) to the International Center for Agricultural Research in the Dry Areas (ICARDA) for a three-year programme upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

FURTHER RESOLVED: that the Fund, in order to finance, in part, the programme on Innovative Beef Value Chain Development Schemes in Southern Africa, shall provide a grant not exceeding nine hundred and forty-one thousand nine hundred and five United States dollars (US\$941,905) to the International Livestock Research Institute (ILRI) for a three-year programme upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

Kanayo F. Nwanze  
President

# **International Center for Agricultural Research in the Dry Areas (ICARDA): Integrated Crop-Livestock Conservation Agriculture for Sustainable Intensification of Cereal-based Systems in North Africa and Central Asia Programme**

## **I. Background**

1. Food and livelihood security in Central and West Asia and North Africa (CWANA) depends largely on crop-livestock production systems. Food demand in the region is increasing due to the growing population, increased urbanization and changing food preferences. Environmental threats related to climate change and water scarcity, along with several socio-economic, demographic, and technological drivers have constrained agricultural productivity. This has led to a degradation of the natural resource base and constitutes a major threat to food and nutritional security.
2. Land degradation in CWANA is predominantly the result of water and wind erosion of soil that is unprotected by a cover crop or surface residue layer, often because of excessive grazing and/or excessive soil tillage. The declining productivity trends observed in recent decades raise serious questions about the sustainability of current production practices vis-à-vis the conservation and quality of the natural resource base and the environment.
3. Conservation Agriculture (CA) principles – which include crop residue cover, crop rotation/intercropping and no tillage – have proved to be key interventions for enhancing crop productivity and improving resource use efficiency and soil health.
4. Recent research-for-development efforts by ICARDA and its partners have shown promising results for the impact of CA on crop productivity, farm profitability and sustainability in wheat-based systems in West Asia. This has led to the identification of CA-based technologies that could enable farmers to harvest more or at least achieve the same crop yield at a lower cost through the efficient use of natural and external resources, leading to a long-term improvement in profitability and a reduction in poverty.
5. Within the semi-arid areas of CWANA, mixed farming systems characterized by close integration between sheep husbandry and cereal cultivation predominate. Cereals provide a large amount of the animals' requirements throughout the year, namely as grain and straw during the winter feeding period and through stubble grazing during the mating season in summer. The important role of crop residues in the traditional crop-livestock system has to be evaluated when introducing CA into such a system.
6. The proposed programme will be implemented in three countries: Algeria, Tunisia and Tajikistan. It will work with National Agricultural Research and Extension Systems (NARES) and farmers, focusing on crop-livestock integration within the context of CA. The overall result will be enhanced productivity and profitability. Farmers will be able to understand, calculate and better manage the trade-offs (i.e. residue versus fodder) associated with CA, in order to improve their livelihood options.

## **II. Rationale and relevance to IFAD**

7. The crop-livestock systems in the dry areas of CWANA are under pressure exerted by external drivers such as population growth, development of urban markets, climate variability and climate change. Rural livelihoods in CWANA are mostly dependent on mixed crop-livestock systems.

8. In recent years, frequent droughts have increased the risk of crop failure and have had a severe effect on the livelihoods of agropastoral communities because of the impact on rangeland productivity.
9. The programme aims to harness innovative integrated approaches based on CA research to identify suitable crops/cultivars and efficient crop rotations for maintaining and restoring soil fertility; provide alternative sources of fodder; and resolve the conflict between using residues as either a mulch or feed.
10. To enable communication of outcomes and widespread adoption of CA practices, the programme aims to develop innovation platforms and promote participatory capacity-building for national partners, private sector manufacturers, service providers and progressive farmers.
11. The programme will address the critical need for active farmers to participate in comprehensively assessing the ecological and socio-economic conditions under which crop-livestock conservation agriculture technologies would be adapted for, and adopted by, smallholder farming.

### **III. The proposed programme**

12. The overall goal of the programme is to enhance sustainability of natural resource use, increase farm profitability through greater efficiencies, and improve the livelihoods of resource-poor farmers by large-scale adoption of CA technologies in crop-livestock production systems that capitalize on the synergies existing among crops, livestock and soils.
13. The programme's objective is to use integrated and participatory research to enable farmers and NARES to develop and test innovative approaches, management options and practices for the adoption of integrated crop-livestock conservation agriculture (CLCA) by smallholders in CWANA.
14. The main target groups are farmers and livestock producers whose livelihoods depend on rangeland and rainfed cereal-based systems. Currently, they have limited access to pertinent information and technological developments.
15. Women will be targeted in particular, as they are responsible for many of the activities related to livestock production and the processing of livestock products.
16. Young people – the next generation of farmers – will also receive special attention to ensure intergenerational continuity, and knowledge and skills transfer.
17. The programme will be of a three-year duration and will comprise two main components:
  - Understanding and responding to the trade-offs, constraints and opportunities related to adopting CLCA systems in the project areas of CWANA; and
  - Knowledge management and dissemination of CLCA techniques in CWANA.
18. An initial ex-ante analysis of the regions will be conducted to evaluate opportunities and constraints within the project areas of CWANA.
19. During the first year, on-station trials will evaluate grazing strategies and identify grain and fodder crops for use in an integrated CLCA system. Alternative systems, i.e. alley cropping with forage shrubs, will also be evaluated on-station to determine relevance for the region.
20. A "best bet" multi-year CA cropping system, based on previous ICARDA experience, will be initiated on-farm in year one. Based on a participatory approach, activities will be developed to transfer the concept of CA to the field.

21. Locally made, low-cost zero-tillage seeders will be available through the programme and farmer collaborators will be introduced to the concept of zero-tillage (ZT) within a CLCA system. Providing a ZT seeder unit to a group of farmers will provide them with the opportunity to evaluate it from the operational standpoint without significant cost. This will involve a side-by-side comparison with local management practice, which normally entails several tillage operations prior to seeding. ICARDA has had success with this approach, providing many farmers with the ability to evaluate ZT technology.
22. By year two, grazing systems will be integrated into a CA-based system on-farm, and expanded in year three. At the same time, the multi-year CA-based cropping system will be refined and expanded to meet local requirements.
23. A review of the programme will be ongoing throughout the three-year duration to identify areas of success and areas for improvement, and constraints related to the adoption of CLCA.

#### **IV. Expected outputs and benefits**

24. The expected outputs and benefits are as follows:
  - Ex-ante evaluation for CA-based technologies in CWANA;
  - Enhanced crop-livestock integration in CA through optimized stubble grazing strategies and increased fodder availability from forage or fodder shrubs;
  - Site-specific CA technology packages fine-tuned and disseminated for enhanced farm productivity, resource use efficiency and profitability; and
  - Capacity development, co-learning, knowledge and information dissemination in the target areas and across the CWANA region.

#### **V. Implementation arrangements**

25. ICARDA will be responsible for the overall management of the programme and for financial and technical reporting to IFAD. It will coordinate planned activities in Algeria (via Tunisia), Tunisia, and Tajikistan (via Uzbekistan) through its regional country offices.
26. Designated national coordinators will be responsible for the implementation of the programme in each country. The programme stakeholders will be the participating research institutions, ICARDA, NARES, NGOs and private-sector partners.
27. The programme will be managed by a leader scientist at ICARDA, in close consultation with collaborators from the various NARES. This programme leader will coordinate activities and ensure timely reporting.
28. At inception, a steering committee will be established and assigned responsibility for oversight and for reviewing and approving the annual workplans and budgets.
29. A regional inception workshop will be held at the start of the programme to establish implementation and coordination arrangements and agree on the first year's workplan.
30. The inception workshop will also agree on the mode and level of integration of programme activities with ongoing IFAD country activities, in terms of aligning annual workplans, monitoring and evaluation, and information sharing. Thereafter, annual coordination and planning meetings will be convened where all programme partners, including farmers and service providers, will review the previous year's results and finalize workplans.
31. Coordination of activities will also be addressed during the inception workshop. Joint planning will be ensured through participation of the IFAD programme

coordinator and country programme manager in ICARDA Steering Committee meetings and through ICARDA's attendance at planning meetings for the IFAD projects, if possible.

32. Programme reports will be disseminated by ICARDA and partners to other countries such as Lebanon, Libya and Morocco through a web-based knowledge-sharing platform. Inter-country cooperation and synthesis of results will be facilitated by regional networks already established by ICARDA through its regional programmes, and by exchange visits and workshops.
33. ICARDA will undertake monitoring, evaluation and reporting. Monitoring will focus on the timely implementation of activities and delivery of programme outputs. Outcomes will be evaluated by monitoring the adoption of the CA technology, the speed of that adoption, and the economic and environmental benefits generated.
34. Research results will be disseminated in the form of journal articles, training manuals and fact sheets and through field days, exchange visits and videos of CA modules. Adoptive trials will be conducted by NARES partners and farmers, and proven interventions will be demonstrated via field days and workshops.

## VI. Indicative programme costs and financing

35. The overall cost of the programme is estimated at US\$2 million over three years (2012-2015), of which IFAD will finance US\$1.5 million. It is proposed that IFAD funding be supplemented by in-kind contributions of US\$0.5 million from NARES.

### Summary of budget and financing plan (in United States dollars)

<i>Number</i>	<i>Type of expenditure</i>	<i>IFAD</i>	<i>Cofinancing</i>
1	Personnel <sup>a</sup>	459 000	173 000
2	Travel costs	195 000	73 000
3	Equipment and goods <sup>b</sup>	193 700	73 000
4	Operational costs <sup>c</sup>	283 800	107 000
5	Training/workshops/publications <sup>d</sup>	197 000	74 000
6	Overheads	171 500	-
	<b>Total</b>	<b>1 500 000</b>	<b>500 000</b>

<sup>a</sup> Personnel costs include: National/regional coordinators and technical officers.

<sup>b</sup> Equipment and goods include: Fences, seeders, computers/printers.

<sup>c</sup> Operating costs include: Surveys, on-farm trials, soil/feed analysis.

<sup>d</sup> Training/workshops/publications include: Field days, farmers training, student workshops.



## Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
<b>Goal</b>	Enhanced sustainability of natural resource use, increased farm profitability, and improved livelihoods of resource-poor farmers through large scale adoption of CA technologies capitalizing on the system synergies of crops, livestock and soils.	Sound component technologies of crop and livestock production have been adopted by farmers and disseminated by national systems partners at least in one site in each target country.  Productivity will be increased by 10%.	Government reports, NARES programme reports, national statistics.  Technology adoption assessment.	<ul style="list-style-type: none"> <li>NARES have the technical and logistic capacity to carry out experimental research and to disseminate the results to extension services and farmers.</li> <li>Risk: Political instability in Region</li> </ul>
<b>Objectives</b>	NARES in Algeria, Tunisia, and Tajikistan will apply and disseminate the proposed integrated conservation agriculture practices for crop-livestock system and optimized use of crop residues for soil health and livestock production.	A total of at least 1000 households will be targeted in target countries; a total of 10,000 thousand women and family members in the target communities will directly benefit from the proposed programme activities. Ultimately, other rural communities in similar agro-ecologies across CWANA will benefit from the improved options identified and promoted by the project.	<ul style="list-style-type: none"> <li>Government reports, NARES programme reports, national statistics.</li> <li>Technology adoption assessment.</li> </ul>	<ul style="list-style-type: none"> <li>NARES have the technical and logistic capacity to carry out experimental research and to disseminate the results to extension services and farmers.</li> </ul>
<b>Outputs</b>	<ul style="list-style-type: none"> <li>Ex-ante evaluation of CA based technologies in CWANA</li> <li>Enhanced crop-livestock integration in CA through optimized stubble grazing strategies and increased fodder availability from forages or fodder shrubs.</li> <li>Site-specific conservation agriculture technology packages fine-tuned and disseminated for enhanced farm productivity, resource use efficiency and profitability.</li> <li>Capacity development, co-learning, knowledge and information dissemination in the target areas and across the CWANA region</li> </ul>	<ul style="list-style-type: none"> <li>Strategies for promoting uptake and out-scaling of CA practices by month 36</li> <li>First report on grazing strategy available by 12th month, validated by month 24 (2nd report).</li> <li>Detailed reports on CA adaptive trials available by months 12, 24, and 36. Recommendations on crop management practices available by month 30</li> <li>At least 15 NARES representatives and 60 farmers (10-30/country) trained in workshops, with 500 trained through field days. Three master's students</li> </ul>	<ul style="list-style-type: none"> <li>Proceedings of policy workshops and seminars, media and programme reports</li> <li>Training manuals, extension materials published; Student's theses. Programme reports</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholders are willing to engage in programme interventions</li> <li>Normal climatic condition prevails and NARES adhere to commitment and cooperate in programme activities</li> <li>Security and stability remain constant or improve</li> <li>Trained human resources contribute to programme activities</li> </ul>
<b>Key Activities</b>	<ul style="list-style-type: none"> <li>Develop baseline data on farming and monitor the adoption of CA technologies.</li> <li>Identify gendered limitations</li> <li>On-station, stubble grazing strategies will be developed in years one and two. 30 on-farm multi-year (15 in Year 2 and an 15 in Year 3) crop residue grazing strategies evaluated</li> <li>Fodder species identified to improve</li> </ul>	<ul style="list-style-type: none"> <li>Baseline data collected by month 6, economic analyses of CA technologies completed by month 18, optimal production under different scenarios developed and shared with stakeholders. The diffusion of CA and impact on women documented</li> <li>Grazing strategies will measure impact of grazing on residue</li> </ul>	<ul style="list-style-type: none"> <li>Research reports, programme reports, policy briefs and report on ex-ante economic analysis</li> <li>Number and type of trainees reported.</li> <li>Training report and programme technical reports</li> </ul>	<ul style="list-style-type: none"> <li>National partners have teams with potential for training in data collection and farm data management</li> <li>At least one average rainfall year during the experimental period to achieve meaningful measures.</li> <li>Trained NARS staffs are active and willing to contribute in project,</li> </ul>

	<b>Objectives-hierarchy</b>	<b>Objectively verifiable indicators</b>	<b>Means of verification</b>	<b>Assumptions</b>
	<p>grazing options and reduce the pressure on farmers to graze crop stubble.</p> <ul style="list-style-type: none"> <li>• Promising lines analyzed for feed quality as a fodder/grain crop and validated in on-farm.</li> <li>• Adaptive trials integrating CA technologies with IPM and nutrient management, and the integration of fodder/grain species in at least 45 multi-year on-farm trials (15 each initiated in years 1, 2, and 3), across target countries.</li> <li>• Capacity Development</li> </ul>	<p>retention, and the trade off between intake, manuring, and residue retention on soil properties, with first estimates by month 18. Fast growing and high nutritive value fodder species identified by month 24</p> <ul style="list-style-type: none"> <li>• CA recommendations prepared and site specific cropping systems tested by month 18</li> <li>• Farmers, service providers, Graduate students, and NARES trained</li> </ul>		<p>and farmers are willing to adopt technologies.</p>

# **International Livestock Research Institute (ILRI): Innovative Beef Value Chain Development Schemes in Southern Africa**

## **I. Background**

1. Southern Africa's smallholder cattle production is characterized by low productivity and generates little income for improving rural poor people's livelihoods. Beyond a few large producers linked to slaughterhouses, animals pass through a trader network that does little to reward quality. This constrains value addition and its retention by producers, while undervaluing the grazing resource and reducing scope for diversification.
2. A number of current projects in the region (including some funded by IFAD) are addressing separately such technical and financial aspects of smallholder production in the region. The current proposal offers an integrating force by way of facilitated access to working capital, and partnership with projects promoting diversification and value addition in commodities with strong and growing demand.
3. The generation and sharing of knowledge on cattle marketing and value chains has to date not addressed actors at all levels of the value chain, nor integrated functions such as working capital and contract-specified linkages between quality, price, and timing of delivery. The proposed programme employs participatory methods to design and test interventions. Knowledge management efforts then promote uptake among value chain actors and disseminate and share experience on a regional scale.

## **II. Rationale and relevance to IFAD**

4. This proposal offers an integrated and innovative set of activities centred on enhancing the flow of working capital to the buyers of smallholder-produced cattle in a way that promotes linkages to the market's demands for quality animals. It aims to deliver a tested financial product to the private sector and a scalable model to development actors.
5. The programme addresses several outputs of IFAD's Revised Policy for Grant Financing, particularly in that it provides a platform for innovative activities by individual resource-poor men and women and by groups and communities that in turn demand market-provided services. The programme has a strong knowledge management component both in its own right and in terms of support to existing IFAD-funded projects and other pro-poor livestock projects in the region. It engages the private sector and supports market functions, as well as raising the private sector's capacity to deliver poverty-reducing value chain interventions. As a result of the targeting of extensive cattle production systems as a source of animals for fattening, the programme will forge a strong link between food safety, income generation and value addition on the one hand and care of the natural resource base on the other. The provision of models of whole-chain beef cattle development that can be immediately scaled up throughout the region, supported by research findings to assist targeting, define partner and private-sector roles, and overcome constraints, supports IFAD's policy priorities.
6. Proposed innovations in rural financial services promote smallholders' emergence from subsistence to the cash economy. The programme's income diversification and risk reduction roles promote food and income security. These aspects of the programme support the objectives of IFAD's overall grant policy whereas the programme's regional approach to knowledge management and its promotion of smallholder integration into the regional economy support IFAD's grant objectives in East and Southern Africa.

7. The programme will work directly with three IFAD-funded operations in Swaziland – the Lower Usuthu Smallholder Irrigation Project, Phase I (LUSIP); the Rural Finance and Enterprise Development Programme; and a Global Environmental Fund programme<sup>1</sup> in collaboration with LUSIP – and with a programme currently under preparation in South Africa – the South African Market-led Smallholder Agriculture Development Programme – assuming that it is formally approved and enters into force. The programme will have a number of initiatives with indirect benefits since communication and cross-learning opportunities will be exploited throughout the region. This extends to IFAD-funded projects in Mozambique and possibly Namibia,<sup>2</sup> and two Australian-funded projects involving ILRI in South Africa and Botswana.
8. The proposed programme will add value to past and ongoing investments in physical infrastructure and institutions by helping to improve the enabling environment and encouraging private-sector investment and commercial involvement.

### III. The proposed programme

9. The programme's overall goal is to improve and make sustainable smallholder livelihoods from cattle production and marketing.
10. Its objectives are to:
  - Provide smallholders with a viable cattle value addition mechanism that is coordinated with market requirements;
  - Design and demonstrate effective financial instruments and suitable products for enabling smallholder value addition in cattle systems; and
  - Generate and disseminate knowledge, and encourage its uptake, throughout the Southern African region.
11. The target group is composed of: (a) smallholders facing grazing constraints in dry or remote locations; (b) smallholders with access to fodder/feed but no capital for livestock purchase in irrigated areas; and (c) rural traders and those developing small enterprises for rural economic development.
12. The programme will be of a three-year duration and will comprise three main components, implemented in overlapping phases:
  - **Capacity- and institution-building:** Organizational support to traders and producers, promotion of the programme, engagement of value chain participants and certification of traders;
  - **A proof-of-concept of a value chain finance product:** Value chain analysis and participatory activity design, formulation of effective financial instruments and supporting contracts, introduction of a new product and testing, and action research; and
  - **A scaling-up phase focused on communication and knowledge management:** Outcome mapping, information and experience exchange with projects in neighbouring countries, and a regional conference.

### IV. Expected outputs and benefits

13. Outputs, grouped by component, include:

<sup>1</sup> Sustainable Land Management Programme.

<sup>2</sup> IFAD does not currently support any projects in Namibia, but discussions are under way to explore a possible IFAD re-engagement with the country. Previously IFAD supported a livestock project in Namibia (the Northern Regions Livestock Development Project). Any future engagement in the livestock sector would build on lessons learned in that project and would likely entail a greater focus on targeting poor small-scale livestock farmers in communal areas and strengthening their involvement in livestock value chains.

- New organizational arrangements, equipment, and consensus on the design of new transaction arrangements;
  - New contract and transaction forms designed, a loan product developed and a trial conducted using action research; and
  - Knowledge disseminated.
14. Projected outcomes will share an overlapping timetable and include:
- Smallholder cattle producers and fatteners practise commercial farming, using objective measures of quality and animal performance;
  - Private financiers advance working capital to value chain participants that contract and deal with smallholder value addition in cattle;
  - Knowledge on how to improve access of smallholder cattle producers in the region into value chains and the identification of key determining factors that makes them applicable; and
  - Incomes of all value chain participants are higher. Contributing directly to the programme goal, poor smallholders' incomes (both graziers and fatteners) will increase and become more reliable and sustainable.
15. The programme will facilitate delivery of smallholders' fattened cattle to slaughterhouses, to quality and logistic specifications. Access to finance provides a start-up package for fattening cattle on irrigated fodder, and on crop by-products and residues. The programme will deploy cattle traders as "market makers" since they are the best-placed market participants to bring about market-led change. Traders supported and certified by the programme will receive loans to finance the purchase of cattle and their placement with a contracted fattening household.
16. The grant-funded (demonstration) credit facility for traders is predicated on contracts between traders and client beef fatteners, traders' weight-designated purchasing from dryland producers, and contracts between traders and buyers (slaughterhouses and possibly retailers). In addition to funding the credit facility, innovative aspects of the programme include pre-intervention research and preparation activities, which generate reductions in transaction costs, help to manage risks, as shed light on the needs of the separate value chain actors.
17. A three-bull fattening model supported by a US\$2,000 credit facility yields a projected incremental income of US\$685 per cycle to that fattening household and the trader, as well as an incremental 150 kilograms of beef, based on an entry liveweight of 250 kilograms and an average daily gain of 0.75 kilograms, leading to an exit liveweight of 340 kilograms after 120 days.
18. The US\$685 surplus is to be divided between the trader and the fattening households. The mechanism for such a division, and other transaction arrangements such as risk-sharing, will feature strongly in the programme's research and stakeholder engagement.

## **V. Implementation arrangements**

19. ILRI will be responsible for programme implementation in both Swaziland and South Africa. In Swaziland, a partnership will be formed with the Government of Swaziland via LUSIP, and based on elements of three related IFAD-funded projects (the Agribusiness Diversification and Environmental Management Unit and the LUSIP-Global Environmental Fund project (both within the Swaziland Water and Agriculture Development Enterprise (SWADE)) and the Microfinance Unit of the Rural Finance and Enterprise Development Programme. In South Africa, the proposed South African Market-led Smallholder Agriculture Development Programme, as and when it enters into force, will provide a similar implementation partnership across two of its three components (rural finance, in partnership with

South Africa's Land Bank, and value chain development). In both countries, private-sector partnerships will be formed with banks as programme activities proceed and the profile of the programme is raised. The outcome mapping activity will be tasked with establishing and maintaining such partnerships.

20. The programme will be overseen by an advisory programme steering group composed of a senior ILRI staff member (representing ILRI as the budget holder and programme implementer), and senior staff in the associated IFAD-funded projects in Swaziland and possibly South Africa. The IFAD senior technical adviser for livestock and farming systems (the IFAD grant manager) and the IFAD country programme manager for Swaziland and South Africa (or a representative nominated by IFAD) will supervise the programme. Separate detailed programme designs and workplans, and separate research and communication strategies will be established in each country. Local staff will be engaged in both countries to help implement the programme. A programme coordinator will be seconded from SWADE's Agribusiness Diversification and Environmental Management Unit in Swaziland, and funded under the grant.
21. Reporting on programme implementation progress will be the responsibility of the programme steering group and IFAD. Less formally, a programme website will provide reports and updates on programme activities, project the outcome mapping activities, and highlight lessons learned as data and analysis come to light. Financial reporting from ILRI to IFAD will follow prescribed procedures, and ILRI audits will be in compliance with the new IFAD Guidelines on Project Audits.

## VI. Indicative programme costs and financing

### Summary of budget and financing plan

(in United States dollars)

<i>Number</i>	<i>Type of expenditure</i>	<i>IFAD</i>	<i>Cofinancing*</i>
1	Personnel	310 789	16 520
2	Consultants	142 356	-
3	Travel	139 395	-
4	Operating expenses	134 980	95 300
5	Equipment and supplies	99 520	-
6	ILRI overhead and related costs	114 865	128 093
	<b>Total</b>	<b>941 905</b>	<b>239 913</b>

\* The cofinancing partners are beneficiaries and ILRI.

## Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
<b>Goal</b>	To improve and make sustainable smallholder livelihoods from cattle production and marketing			
<b>Objectives</b>	<p>1. Provide smallholders with a viable cattle value addition mechanism that is coordinated with market requirements;</p> <p>2. Design and demonstrate effective financial instruments and suitable products for enabling smallholder value addition in cattle systems;</p> <p>3. Generate and disseminate knowledge, and encourage uptake, throughout the Southern African region.</p>	<p>Smallholders producing cattle to market specifications</p> <p>Value chain finance products in use</p> <p>Products and materials in use</p>	<p>Outcome Mapping proceedings</p> <p>Project reporting</p> <p>Knowledge management products</p>	<p>No major beef market disruptions</p> <p>No major rural financial disruptions</p>
<b>Outputs</b>	<p>1.1, 1.2, 1.3 Groups established to improve market access and facilitate contact with certified traders and project participation</p> <p>1.4 Equipment delivered to the relevant actors</p> <p>1.5 The project promoted to value chain actors</p> <p>2.1, 2.2 Contracts and/or improved sales arrangements identified</p> <p>2.3 A loan product and arrangements for its introduction and use designed</p> <p>2.4 Working capital loans disbursed</p> <p>2.5 Data and analysis delivered from action research.</p> <p>3.1 Value Chain assessed</p> <p>3.2.1 Baseline and repeat surveys completed and analysed</p> <p>3.3.1 Outcome Mapping established and functioning</p> <p>3.4.1 Communicated results of the project, and conference proceedings</p>	<p>20 groups established, equipped, aware of value chain finance opportunities, and traders certified.</p> <p>1 value chain finance product designed and available in each county</p> <p>100 Loans disbursed and recovered in each fattening cycle</p> <p>Data, analysis and results communicated within and beyond the project, partner projects, and countries</p>	<p>Outcome mapping proceedings</p> <p>Transactions using value chain finance products recorded by banks and slaughterhouses</p> <p>Proceedings of conference</p>	<p>Willingness of value chain actors to commit to value addition activities</p> <p>Willingness of rural financiers to experiment with value chain finance directed to market maker actors</p>

	<b>Objectives-hierarchy</b>	<b>Objectively verifiable indicators</b>	<b>Means of verification</b>	<b>Assumptions</b>
<b>Key Activities</b>	1.1.2, 1.2.1, 1.3.1 Group formation and support to various value chain actors 1.4.1. Equipment supply 1.5.1 Project promotion 2.1.1, 2.2.1 Contract design (at respective stages of the chain) 2.3.1 Meetings and promotion with financiers 2.3.2 Financial instrument design 2.4.1 A trial of the loan product 2.5.1 Action research and analysis 3.1.1 Value Chain mapping and assessment 3.2.1 Surveys (baseline and repeat) 3.3.1 Outcome mapping 3.4.1 Communication of project results, using a variety of media including regional platforms (e.g. IFADAFRICA) and a regional conference.	Value chains identified in 6 project locations  30 promotional and design meetings held  Action research established at 4 sites and producing knowledge products in appropriate forms	Meeting minutes and reports by partner projects and participants.  Outcome mapping proceedings	Willingness of value chain actors to participate