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Investing in rural people

President's report on a proposed grant under the global/regional window to the University of Nebraska-Lincoln for Promoting the Sustainability and Resilience of Smallholder Irrigation in sub-Saharan Africa

Note to Executive Board representatives

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For: **Approval**

Recommendation for approval

The Executive Board is invited to approve the recommendation for the proposed grant as contained in paragraph 20.

I. Background and compliance with IFAD Policy for Grant Financing

1. Expanding sustainable irrigated agriculture is an important pathway to improved food and nutritional security and resilient rural economies. In Africa, irrigation adoption has lagged behind other regions, representing a key development challenge. The irrigation systems already in place have performed suboptimally due to lack of timely repair and maintenance. In addition, the performance of water users' associations has been lower than expected. Many studies have focused on analysing the profitability of irrigation after it has been provided to smallholders, without considering the potential difficulties related to customer needs, marketing channels, customer acquisition and the supply chains for spare parts and expertise. IFAD has invested over US$290 million in smallholder irrigation infrastructure and management in East and Southern Africa and West and Central Africa over the last 10 years; however the sustainability of these systems is at risk without robust management arrangements. Gaining an understanding of the conditions needed to scale up and promote in inclusive ways sustainable water service provision to smallholder farmers is therefore important.

2. The proposed project is in line with the goal and objectives of the IFAD Policy for Grant Financing (2015).[1] The project contributes to IFAD's strategic objective 1 (SO1) – increase poor rural people's productive capacities (by creating access to relevant technology and understanding the pathways and benefits of irrigation), SO2 – increase poor rural people's benefits from market participation (by obtaining a clearer picture of the market for irrigation water provision) and SO3 – strengthen the environmental sustainability and climate resilience of poor rural people's economic activities.

3. The recipient was identified through direct selection, which was approved by the Operational Strategy and Policy Guidance Committee meeting of 17 May 2019. The University of Nebraska-Lincoln (UNL) is currently providing 200 Rwandan students with agricultural training. These students will return to Rwanda over the next four years, many to work in an entrepreneurial agricultural environment. UNL is also supporting the launch of the Rwanda Institute for Conservation Agriculture (RICA), a new technical college that started classes in the summer of 2019. The Daugherty Water for Food Global Institute (DWFI), housed and managed by UNL, has been working in Rwanda since 2018. DWFI complements the technical curriculum of RICA by supporting the sustainability of the businesses established to provide irrigation water services. The grant proposes to replicate this approach in other sub-Saharan countries and explore complementing the curriculum of a regional training institution in West and Central Africa.

II. The proposed project

4. The project goal is to identify and promote opportunities for inclusive and sustainable provision of irrigation water services to smallholders by including a rigorous analytical business dimension within the technical capacity-building currently available to irrigation service providers. The objectives are to:

   (i) Identify, analyse and propose successful private sector-linked business models for irrigation water service provision in selected countries in Africa;

[1] See EB 2015/114/R.2/Rev.1.

(ii) Develop comprehensive country-specific curricula for successful local development, testing and validation of business models for irrigation water service provision; and

(iii) Strengthen entrepreneurial expertise and facilitate pilot programmes that can be replicated and scaled up.

5. The project approach is meant to assess whether the identified irrigation water service business models are sustainable within their existing markets. The project will also complement technical curricula proposed in the selected countries with entrepreneurial content focusing on young professionals and other young people engaged in agricultural entrepreneurship.

6. The direct target group will be composed of 200 entrepreneurs engaged in water service provision; 1,000 young professionals and other young people engaged or interested in agricultural development in the selected countries (including university, government, and private sector for-profit and non-profit personnel); and 500 smallholder farmer households in the selected countries.

7. The project will be implemented over three years and will have the following technical components:

Component 1. Field identification and appraisal of alternate business models

Component 2. In- and cross-country analyses and synthesis

Component 3. Development of partnerships

Component 4. Application of findings and insights

8. The five countries were selected on the basis of the level of irrigation development in the identified IFAD-supported projects and potential for increased irrigation activities. The first year of the project will include a rapid and in-depth inventory and analysis of alternative irrigation water service provision business models in the five countries, including entrepreneurial and traditional models. Specific country interventions will be defined with Country Directors (CDs), project staff and other country stakeholders. The project will develop linkages with specific components of IFAD-supported projects, and build on activities under way with IFAD's target groups. Since the grant funding is only sufficient for implementing the second phase (components 2-4) in three countries, the DWFI team will collaborate with the IFAD programme manager and the CDs concerned to allow for the redesign of activities and for in-depth work in additional countries subject to the mobilization of cofinancing from ongoing projects.

III. Expected outcomes/outputs

9. The project is expected to have the following outputs:

(i) Online content, focused on agricultural entrepreneurship in sub-Saharan Africa, synthesizing country reports and insights. This will include written and multimedia reports, briefs and training material.

(ii) Online content, country-specific case studies and based on country reports and insights. This will include written and multimedia reports, briefs, and training material.

(iii) Workshops/meet-ups/networking events/other capacity-building programmes and associated content and curricula, and playbooks.

(iv) Agribusiness mentoring/incubation/acceleration programmes and associated content, curricula and playbooks.

10. The expected outcomes are:

    (i) **Change in knowledge** through developing and disseminating outputs and methodologies to describe existing smallholder irrigation models in the selected countries.

    (ii) **Change in action** through developing a pipeline of promising business models that can be piloted in the selected countries and potentially scaled up.

    (iii) **Change in conditions** through capacity-building for young professionals that is designed to connect the entrepreneurial irrigation network within countries and regionally and facilitate scaling up efforts.

    (iv) **Change in conditions** through market growth of irrigation water service provision in the selected countries that can improve smallholder farmers' resilience, welfare and productivity.

11. DWFI action-research will lay the groundwork for pathways to scale up innovative irrigation water business models after analysis, value proposition validation and financial sustainability analysis. Proposals for pilots – including existing and new business models – will be submitted for potential scaling up. Scaling up will be possible within a selected country (scaling up of a business model) or in a new country (through replication of the overall approach).

IV. Implementation arrangements

12. The implementation strategy will leverage existing connections and the engagement of DWFI and UNL in sub-Saharan Africa.

13. DWFI, in close collaboration with in-country partners and the IFAD South-South and Triangular Cooperation and Knowledge Centre in Ethiopia, will be responsible for implementing the capacity-building programmes, and coordinating and supporting partner activities. A DWFI-supported project manager will be responsible for establishing key performance indicators, setting targets, tracking progress, and generating and submitting progress reports. The project will be launched with Rwandan personnel stationed in Rwanda who have been trained in the United States and will work across Africa. They will receive close support and mentoring from personnel in the United States, some of whom will have the option of spending extended periods in the project countries.

14. Entrepreneurial training material developed over the course of the project will be disseminated by DWFI via appropriate channels based on partner needs. DWFI will rely on partners to contribute to data collection and reach stakeholders for capacity-building activities. DWFI will be responsible for the creation of reports and multimedia content, case study material, field interview data collection and summaries of piloted business models.

15. DWFI will continuously evaluate the services it provides through the curriculum it develops and business models assessed. It will also closely evaluate the effectiveness and efficiency of its training modules through feedback from users. DWFI will conduct targeted surveys using both field surveys and surveys administered through mobile telephones to determine the degree of satisfaction. In this way, it can rapidly revise training modules in areas with suboptimal performance.

16. DWFI will provide consolidated annual workplans and budgets, biannual progress reports, a midterm report, a detailed exit strategy and a final report highlighting lessons learned. There are no deviations from the standard procedures for financial reporting and audits.

17. **Adaptation in response to COVID-19 to allow for remote implementation.** During the initial rapid assessment of alternate business models for irrigation service provision to smallholder farmers, grant personnel will contact and

communicate with country partners, undertake desk studies (component 1), and develop general capacity-building programmes (in preparation for component 2). Additionally, personnel will take advantage of the large pool of trained Rwandan students in Nebraska to generate multimedia educational content related to agricultural entrepreneurship for delivery through a variety of means including low-bandwidth cellular connections (e.g. Facebook, WhatsApp, SMS), radio broadcasts and other media. Content will be developed in French, English, Kinyarwanda and possibly other languages. The content generated will be country-specific (component 3) and will allow for the quick launch and testing of materials despite temporary travel restrictions.

V. Indicative project costs and financing

18. The total cost is estimated at US$1,490,000, to be expended over three years. This amount includes an IFAD grant of US$1,000,000 and US$490,000 in cofinancing from DWFI (not including an additional pre-commitment of US$150,000 from DWFI towards activities in 2019 in support of grant outcomes).

19. DWFI will provide an in-kind contribution of US$301,000 in the form of salaries for a 0.5 full-time equivalent (FTE) research programme manager and 0.75 FTE research programme associate based in the United States, and a portion of the 2.0-3.0 FTE research programme associates who will be based in Rwanda. The cash contribution from DWFI of US$189,000 will include a portion of travel between the United States and Africa, and professional development activities such as training curricula and workshops.

Table 1
Costs by component and financier
(Thousands of United States dollars)

Components	*IFAD*	*DWFI*	*Total*
1. Field identification and appraisal of alternative business models	117	74	191
2. In- and cross-country analyses and synthesis	49	32	81
3. Development of partnerships	281	126	407
4. Application of findings and insights	391	136	527
5. Project management	162	122	284
Total	**1 000**	**490**	**1 490**

Table 2
Costs by expenditure category and financier
(Thousands of United States dollars)

Expenditure category	*IFAD*	*Percentage*	*DWFI*	*Total*	*Percentage*
1. Salaries and allowances	82	8.2	301	383	25.7
2. Training including workshops	424	42.4	140	564	37.9
3. Travel and allowances	334	33.4	49	383	25.7
4. Operating costs	86	8.6	-	86	5.8
Total Direct costs	**926**	**92.6**		**1 416**	**95.0**
5. Overheads/management fees (8% of direct costs)	74	7.4	-	74	5.0
Total	**1 000**		**490**	**1 490**	

VI. Recommendation

20. I recommend that the Executive Board approve the proposed grant in terms of the following resolution:

RESOLVED: that the Fund, in order to finance, in part, the Promoting the Sustainability and Resilience of Smallholder Irrigation in sub-Saharan Africa, shall provide a grant of one million United States dollars (US$1,000,000) to the University of Nebraska-Lincoln for a 36-month project to be implemented by the Daugherty Water for Food Global Institute upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented to the Executive Board herein.

Gilbert F. Houngbo
President

Results-based logical framework

	Objectives hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Goal	To identify and promote opportunities for inclusive and sustainable provision of irrigation water services to smallholder by including a rigorous analytical business dimension within the technical capacity-building currently available to irrigation service providers	Increase in number of people trained in appropriate use of entrepreneurial tools and frameworks in agribusiness, disaggregated by age, gender, and other relevant categories Increase in number of employed water entrepreneurs and other agricultural development professionals as a result of project involvement, disaggregated by age, gender, and other relevant categories Additional funding raised by project-associated water entrepreneurs Number of new households reached by project-associated water entrepreneurs	Baseline and completion surveys Training reports Field observation	
Objectives	a) Identify, analyse, and propose successful private sector-linked business models for irrigation water service provision in selected countries in sub-Saharan Africa (b) Develop comprehensive country-specific curricula for successful local development, testing, and validation of business models for irrigation water service provision (c) Strengthen entrepreneurial expertise and facilitate pilot programmes that can be replicated and scaled up	Country-specific and synthesis summaries and detailed reports completed Number of persons trained in appropriate use of entrepreneurial tools and frameworks in agribusiness, disaggregated by age, gender, and other relevant categories Number of persons provided with targeted support to improve their nutrition Number of new or transferred irrigation service business models proposed Number of partner groups trained in delivery of entrepreneurship curricula Number of training events each year with a nutrition component	Component reports Training reports Study reports	Travel to target countries is possible and is not restricted due to changing political conditions, severe weather events, or other instability
Outcomes/ Outputs	Expected outputs are: (a) Online content, focused on agricultural entrepreneurship in Sub-Saharan Africa, synthesizing country reports and insights. This will include written and multimedia reports, briefs, and training material. (b) Online content, country-specific case studies and based on country reports and insights. This will include written and multimedia reports, briefs, and training material.	by output: (a) and (b): User engagement with new knowledge products created, disaggregated by type and media (e.g. reports, briefs, video content, podcasts, educational curricula, playbooks) (c) Stakeholder participation in and engagement with workshops, meetups, and networking events,	Component reports Web analytics reports Training reports	Partners can be identified that are interested enough in capacity-building activities and in helping to facilitate and participate in project activities

	Objectives hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
	(c) Workshops/meet-ups/networking events/other capacity-building programmes and associated content and curricula, and playbooks. (d) Agribusiness mentoring/incubation/ acceleration programmes and associated content, curricula, and playbooks. Expected outcomes are: a) *change in knowledge* through developing and disseminating outputs and methodologies to describe existing smallholder irrigation models in the selected countries. (b) *change in action* through developing a pipeline of promising business models that can be piloted in selected countries and potentially scaled up. (c) *change in condition* through capacity-building for young professionals that is designed to connect the entrepreneurial irrigation network within countries and regionally and facilitate scaling up efforts. (d) *change in condition* through market growth of irrigation water service provision in the selected countries that can improve smallholder farmers' resilience, welfare and productivity.	disaggregated by age, gender, and other relevant categories (d) Stakeholder participation in and engagement with business mentoring, incubation, and acceleration curricula, disaggregated by age, gender, and other relevant categories by outcome: (a) Increase in participant knowledge as a result of engaging with online content (a) Increase in participant knowledge as a result of workshops, meetups, and networking events, disaggregated by age, gender, and other relevant categories (a) Increase in participant knowledge as a result of business mentoring, incubation, and acceleration curricula, disaggregated by age, gender, and other relevant categories (b) and (c) Increase in participant entrepreneurial activities as a result of workshops, meetups, and networking events, disaggregated by age, gender, and other relevant categories (b) and (c) Increase in participant entrepreneurial activities as a result of business mentoring, incubation, and acceleration curricula, disaggregated by age, gender, and other relevant categories (d) Increase in positive entrepreneurial outcomes (e.g. new employees, contracts, geographic or product/service markets) as a result of workshops, meetups, and networking events, disaggregated by age, gender, and other relevant categories (d) Increase in positive entrepreneurial outcomes (e.g. new employees, contracts, geographic or product/service markets) as a result of business mentoring, incubation, and acceleration curricula, disaggregated by age, gender, and other relevant categories (d) Increase in positive smallholder outcomes as a result of availability of new entrepreneurial irrigation products or services	Baseline and completion surveys Field observation Additional methods (e.g. online quizzes and follow-up interviews with stakeholder participants of events and mentoring, incubation, and acceleration activities). This includes both irrigation service providers and smallholder farmers. The goal will be to identify both changes in the availability of irrigation services through new entrepreneurial activities and any positive impacts resulting from service provision to smallholder farmers.	Project objectives are perceived as a real need by relevant stakeholders including smallholder farmers and water and agribusiness entrepreneurs Sufficient resources are budgeted to develop necessary materials and to build project awareness at the local and regional levels Irrigation service provider stakeholders are provided with sufficient resources to start and scale enterprises that positively impact smallholders

	Objectives hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Key activities by component	**C1. Field identification & appraisal of alternate business models** *1.1. Rapid assessment of alternate business models for irrigation service provision to smallholder farmers* *1.2. Evaluation and ranking of country needs and likely activity impact, and follow-up analysis of business models* **C2. In- and cross-country analyses and synthesis** *2.1. In- & cross-country analyses & synthesis of key insights & lessons* *2.2. Targeted curriculum and content development* **C3. Development of partnerships** *3.1. In-country partner training & country-specific curriculum co-development* *3.2. Delivery, testing and iteration of online content, with a general focus on agricultural entrepreneurship in Sub-Saharan Africa, synthesizing country reports and insights (English and French)* *3.3. Delivery, testing, and iteration of online content, country-specific case studies and based on country reports and insights (English, French, and selected other languages)* *3.4. Delivery, testing and iteration of workshops/meetups/ networking events based on needs of partners & entrepreneurs in each country* **C4. Application of findings and insights** *4.1. Identification, prioritization & onboarding of most promising business models, teams & entrepreneurial mentors across target countries* *4.2. Delivery, testing and iteration of business mentoring/ incubation/ acceleration activities (cohort-based & for individual companies/ entrepreneurs; advisory services, facilitation, convening, help with business model canvas development and validation)*	Number of new knowledge products created by type and media (e.g. reports, briefs, video content, podcasts, educational curricula, playbooks) Number of persons participating in workshops, meetups, and networking events, disaggregated by age, gender, and other relevant categories Number of persons participating in business mentoring, incubation, and acceleration curricula, disaggregated by age, gender, and other relevant categories	Study reports Component reports	