Document: EB 2017/LOT/G.20
Date: 27 November 2017
Distribution: Public
Original: English

E

Investing in rural people

# President's report on a proposed grant under the global/regional window to AfricaRice (a CGIAR institution) for Enhancing Institutional Breeding Capacity in Ghana, Senegal and Uganda to Develop Climate-Resilient Crops for African Smallholder Farmers

Note to Executive Board representatives

Focal points:

Technical questions:

Malu Ndavi
Lead Technical Specialist
Programme Management Department
Tel : +3954592766
e-mail: m.ndavi@ifad.org

Dispatch of documentation:

William Skinner
Chief
Governing Bodies
Tel.: +39 06 5459 2974
e-mail: gb@ifad.org

For: Approval

## Recommendation for approval

The Executive Board is invited to approve the recommendation for the proposed grant under the global and regional window as contained in paragraph 10.

# President's report on a proposed grant under the global/regional window to AfricaRice (a CGIAR institution) for Enhancing Institutional Breeding Capacity in Ghana, Senegal and Uganda to Develop Climate-Resilient Crops for African Smallholder Farmers

## I. Background and compliance with IFAD Policy for Grant Financing

1. The rapidly increasing demand for food in Africa is being met in large part through imports. However, with better access to inputs and seed distribution channels for smallholder farmers, there is a potential and expectation that crop production in well-defined delivery chains contribute to food and nutrition security and to stemming rural poverty. African plant breeders are expected to play a critical role by developing and testing improved cultivars that will produce more and better crops, in response to local and global market demand. To address this challenge, AfricaRice proposes a project that contributes directly to the objectives set out in the IFAD Policy for Grant Financing.[1] The grant will strengthen breeding capacity within the national agricultural plans in three countries in sub-Saharan Africa where agriculture is key to rural livelihoods: Ghana, Senegal and Uganda.

2. The project aligns with the three strategic objectives (SOs) of the IFAD Strategic Framework 2016-2025: SO1 (increase poor rural people's productive capacities); SO2 (increase poor rural people's benefits from market participation); and SO3 (strengthen the environmental sustainability and climate resilience of poor rural people's economic activities).

## II. The proposed project

3. The overall goal is to contribute to enhanced food security and poverty alleviation by increasing smallholder productivity and income in the three target African countries. The purpose is to develop and disseminate improved crop cultivars that have characteristics that meet smallholder needs and those of the markets, and are able to mitigate agroecological challenges, climate change, and biotic and abiotic stresses. The specific objectives are to:

   (i) Consolidate existing crop value chains to develop and promote climate-resilient and improved crop cultivars for local environments, following a demand-led varietal design;

   (ii) Create a network of partners among the different communities in the crop delivery chain, to learn from each other and share a common knowledge platform;

   (iii) Strengthen the national plant-breeding capacity of four institutions in Ghana, Senegal and Uganda, and support the use of modern plant-breeding technologies and approaches, including digital data management; and

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

(iv) Support education of the new generation of crop breeders and integrate their research activities into national breeding programmes.

4. The project will benefit 30,000 smallholder farmers, since the Integrated Breeding Platform (IBP) will be linked with ongoing national agricultural strategies led by the national agricultural research systems (NARSs) and key project implementation partners. About three to five breeding programmes per institute – with 25 to 50 breeders in total across the four target institutes – will benefit from practical and applied learning in modern breeding methods as they go about implementing country agricultural plans. There will be associated beneficiaries among the additional stakeholders engaged in various aspects of the crop value chains, including small and medium-sized enterprises. The project aims to have at least 40 per cent participation by women, especially at the student level.

5. The project will be implemented over three years, with the following components:

(i) Delivery chain and knowledge platform: Connecting the dots between breeders, extension workers and farmers by providing expertise, tools and technologies for breeders to manage their ongoing breeding programmes effectively and efficiently, delivering improved varieties with traits demanded by farmers, and by engaging entrepreneurs (especially youth) to establish seed businesses so that farmers have access to the new varieties and other inputs necessary to improve productivity, in response to a demand-driven design for development of varieties.

(ii) Improved data management and digitizing of breeding. The IBP will be a valuable resource for breeders by providing them with a complete toolbox to conduct their breeding programmes more efficiently. Thus support will be provided for the use of the Breeding Management System (BMS) software for routine breeding activities and to integrate and analyse data. Other services include support for better data management and assistance for the integration of molecular markers and other modern breeding strategies. The BMS builds a safe, standardized and centralized record of institutional data from one generation to the next.

(iii) Breeding: Integrating modern approaches. In this component, individual breeding programmes will be assessed to see how their efficiency could be improved. The phases will be addressed, including those of objective setting, germ plasm selection, experimental design, resources, and the use of modern information technology systems.

(iv) Capacity enhancement (human and infrastructure). The availability of trained and motivated breeders – together with appropriate infrastructure to implement digital data management and produce reliable phenotypic data – is critical for the sustainable adoption of the new methodologies and approaches deployed in this project. Thus capacity development and improved infrastructure are key.

## III. Expected outcomes

6. The project is expected to have the following outcomes:

(i) Smallholder farmers with improved resilience to climate change and economic vulnerability through adoption of new and better crop varieties that reflect market demand;

(ii) National breeding programmes that are better aligned with and deliver on national agricultural plans, as a result of best plant-breeding practices;

(iii) New crop varieties produced effectively and efficiently by African plant-breeding institutions, following a demand-driven crop variety approach; and

(iv) A network of African universities with the capacity to train the next generation of plant breeders and scientists in modern plant-breeding.

# IV. Implementation arrangements

7. AfricaRice will be the grant recipient responsible to IFAD on all matters related to technical and fiduciary reporting. The IBP, hosted at AfricaRice, will also coordinate project implementation in the three project countries. The Senegalese Agricultural Research Institute (Institut Sénégalais de Recherches Agricoles) will be coordinating activities in Senegal. In Ghana, the Council for Scientific and Industrial Research's Crops Research Institute will be the national coordinator. In Uganda, both the National Semi-Arid Resources Research Institute and the National Crops Resources Research Institute will be project coordinators.

8. There are no departures from the standard procedures for financial reporting and audits. Indeed, AfricaRice will ensure that:

(i) AfricaRice's institutional accounts will be audited annually by reputable, world-class, independent auditors in accordance with internationally accepted auditing standards and in compliance with IFAD guidelines. A copy of its audited financial statements will be submitted to IFAD within six months following each fiscal year-end.

(ii) The project-specific financial report and statement of expenditure for the year will be under the scope of coverage of the auditor's opinion, either within the audited financial statements or separately. The auditor's opinion will make specific reference to the IFAD grant number and will clearly disclose the sources and uses of the IFAD funds.

(iii) The annual audit report submitted to IFAD will cover both IFAD funds and any cofinancing (excluding cofinancing in kind) and will consolidate expenditures incurred by sub-grantees, which will be accountable for the use of sub-grant funds and subject to normal audit oversight.

(iv) The final audit report, accompanied by a management letter, will be submitted to IFAD before the project closing date. Enough time will be reserved for AfricaRice to consolidate the final financial and audit reports and to submit the consolidated final audit report in a timely fashion to IFAD.

# V. Indicative project costs and financing

9. The proposed project budget requested from IFAD over three years is US$2.5 million, complemented by US$1.83 million of cofinancing in kind. Table 1 below provides a breakdown of expected costs per component, while costs broken down by expenditure category are presented in table 2.

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

| *Components* | *IFAD* | *Cofinancing* | *Total* |
|---|---|---|---|
| 1. Delivery chain and knowledge platform | 390 | 300 | 690 |
| 2. Improved data management and digitilizing of breeding | 430 | 830 | 1 260 |
| 3. Breeding: Integrating modern approaches | 1 200 | 400 | 1 600 |
| 4. Capacity enhancement (human and infrastructure) | 480 | 300 | 780 |
| **Total** | **2 500** | **1 830** | **4 330** |

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

| *Expenditure category* | *IFAD* | *Cofinancing* | *Total* |
|---|---|---|---|
| 1. Salaries and allowances | 532 | 520 | 1 052 |
| 2. Equipment and materials | 625 | 60 | 685 |
| 3. Operating costs | 173 | - | 173 |
| 4. Goods, services and inputs | 200 | 900 | 1 100 |
| 5. Travel and allowances | 84 | 40 | 124 |
| 6. Consultancies | 256 | 50 | 306 |
| 7. Training | 190 | 40 | 230 |
| 8. Workshops | 210 | 50 | 260 |
| 9. Management fees | 180 | 170 | 350 |
| Cost-sharing | 50 | - | 50 |
| **Total** | **2 500** | **1 830** | **4 330** |

# VI. Recommendation

10. 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 Enhancing Institutional Breeding Capacity in Ghana, Senegal and Uganda to Develop Climate-Resilient Crops for African Smallholder Farmers, shall provide a grant of two million and five hundred thousand United States dollars (US$2,500,000) to AfricaRice over three years, 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 contribute to enhanced food security and poverty alleviation by increasing smallholder productivity and income in the 3 target countries in Africa. | • Proportion of food secured households in target areas increased by 20%<br>• Proportion of poor households in target areas decreased<br>• Stability of agricultural production increased, hunger gap reduced by 50% | - Base-line and end-of-project surveys on agricultural production, markets and household economy | National agricultural and food policies and regulations do not impact negatively<br>Major natural disasters or civil unrest do not occur |
| Objectives | To develop and disseminate improved crop cultivars that have characteristics that meet smallholder needs (improved grain, fodder, improved quality of produce grain size, colour, milling etc.) and market demands as well as able to mitigate agro-ecological challenges, climate change, biotic and abiotic stresses. | • 20,000 hectares under improved crop varieties<br>• 30 plant breeders using the BMS<br>• Productivity of target crops increased by at least 15-20%<br>• 50 MSc students trained in the use of the BMS<br>• 5 PhD graduates using modern plant breeding technologies<br>• 3 research facilities upgraded (IT or field infrastructure) | - Publications and institutional reports<br>M&E reporting: baseline reports; revised risk matrix<br>- Modules<br>- Training modules/curricula | Adequate staffing for the project across the IBP and partners,<br>Local actors and stakeholders are motivated and pro-active<br>Targeted plant breeding institutes remain accessible |
| Outcomes/ Outputs | Smallholder farmers with improved resilience to climate change and economic vulnerability.<br>National breeding programmes that better align with and deliver on National Agricultural Plans.<br>New crop varieties produced more effectively and efficiently by NARS.<br>A network of African universities with the capacity to train the next generation of plant breeders and scientists in modern plant breeding. | • 4 institutions with data management policy and practices in place<br>• 5 recent PhD students using modern breeding and 50 MSc students trained in BMS<br>• 15 breeding programmes with enhanced breeding capacity<br>• 30 new genetic materials identified<br>• 30 000 farmers reporting production/yield increase<br>• 10,000 primary farmers adopting new cultivars<br>• one functioning value chain, including seed systems, per target country developed | - Documented policies and implementation procedures for data management<br>- Peer-reviewed scientific publications and training reports<br>- MSc theses<br>- M&E reporting: Mlax M&E system 'dashboard' report<br>- Base-line report<br>- Institutional annual reports | Stakeholders willing and pro-active<br>Adequate number of suitable graduate students enrolled in plant breeding courses in the 3 target countries |