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

# Food and Agriculture Organization of the United Nations

### Note to Executive Board representatives

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For: Approval

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### Recommendation for approval

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

# President's report on a proposed grant under the global/regional grants window to a non-CGIAR-supported international centre: Food and Agriculture Organization of the United Nations

I submit the following report and recommendation on a proposed grant for agricultural research and training to a non-Consultative Group on International Agricultural Research (CGIAR)-supported international centre in the amount of US\$1.2 million.

### Part I - Introduction

- 1. This report recommends the provision of IFAD support to a research and training programme of the following non-CGIAR-supported international centre: Food and Agriculture Organization of the United Nations (FAO).
- 2. The document of the grant for approval by the Executive Board is contained in the annex to this report:
  - Food and Agriculture Organization of the United Nations (FAO): Adapting Small-Scale Irrigation to Climate Change in West and Central Africa
- 3. The objectives and content of this programme are in line with the evolving strategic objectives of IFAD and the Fund's 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 programme is in line with the goal and outputs of the revised IFAD grant policy.

### Part II - Recommendation

7. 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 programme Adapting Small-Scale Irrigation to Climate Change in West and Central Africa, shall provide a grant not exceeding one million two hundred thousand United States dollars (US\$1.2 million) to the Food and Agriculture Organization of the United Nations 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

# Food and Agriculture Organization of the United Nations (FAO): Adapting Small-Scale Irrigation to Climate Change in West and Central Africa

### I. Background

- 1. For many years to come, agriculture will continue to play a crucial role in poverty reduction in West and Central Africa (WCA), where the sector accounts for 30 per cent of total economic activity and more importantly for 60 per cent of the economically active population. This extremely diverse region comprises a very broad variety of agricultural ecosystems, ranging from extremely dry zones (e.g. 100 mm annual rainfall in parts of Mauritania) to extremely wet ones (over 3,000 mm annually in Sao Tome and Principe). Farmers have always had to deal with weather-related risks, but the resilience of farmers in WCA is coming under new and particularly severe pressures as a result of climate change.
- 2. In this region, small-scale irrigation accounts for most of the land currently under some form of water control, where the distribution of crop water to small plots is managed by farmers themselves, either individually or through their community, organization or association. In Burkina Faso, Mali, the Niger and Nigeria, for example, it accounts for about 75 per cent of total irrigated area. WCA governments are increasingly aware of the need for more active support to irrigation, including small-scale irrigation, which is particularly appropriate in improving the food security and revenues of smallholder families.
- 3. Although a great deal of knowledge and experience in this domain have been accumulated over the years, they need to be revisited and updated in order to take adequate account of the impact of climate change. This is emerging as a major and crucial gap in the body of knowledge required by stakeholders (farmers, governments and development partners). They need better guidelines on the design and construction of new irrigation infrastructures resilient to climate change, and on the rehabilitation/upgrading of existing ones.
- 4. Current and future climate trends are likely to increase the costs of investments in and protection and maintenance of small-scale irrigation schemes. Updated information and decision support tools are needed to help investors and, first, small farmers, be aware of the extra costs related to increased climate risks, and factor them adequately into the different types of irrigation investments.

#### II. Rationale and relevance to IFAD

- 5. The proposed grant is designed to pursue the overarching goal of the IFAD Strategic Framework 2011-2015 by enabling poor rural people to improve their food security and nutrition, raise their incomes and strengthen their resilience. Two specific objectives are emphasized: "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" and "Poor rural women and men and their organizations able to manage profitable, sustainable and resilient farm and nonfarm enterprises or take advantage of decent work opportunities". It will also contribute to IFAD's ongoing efforts to: support agriculture based on small-scale farming; help countries scale up successful experiences from IFAD-financed interventions; expand IFAD's policy engagement; strengthen the Fund's pro-poor partnerships with a range of actors, including public and private sectors; and enhance the sharing of knowledge among these partners.
- 6. The grant is also in line with the WCA Division's Strategic Work Plan, in which increased agricultural production, particularly through enhanced productivity, is recognized as a key priority for most countries in achieving food security, reducing food imports and increasing rural incomes and employment. Improvements to

natural resource management through better water management and greater consideration of the impact of climate change are recognized as essential conditions for success. Grant-related work will be conducted in the context of irrigation projects financed by IFAD and other development partners. Analyses of climate risks to irrigation infrastructure will be verified at the field level in four countries, to be selected at the end of the first phase. Advice on "climate-proofing" of structures will be developed for use by the projects concerned, in the design of other IFAD projects, and by other partners (designers, implementers, governments, etc.).

7. The grant also pursues IFAD's policies and strategies on the environment and natural resource management. It focuses on the need to respond to climate change by: enhancing the environmental sustainability and resilience of small-scale agriculture; developing technologies for sustainable intensification of this agriculture; building the capacities of rural women and men, including young people; and capitalizing on opportunities to introduce more productive technologies appropriate for use at farm and community levels.

### III. The proposed programme

- 8. The overall goal of the proposed grant is to improve the sustainability and adaptation of small-scale irrigation schemes across key agroecology systems in WCA. Its specific objectives are to: (i) define the needs of climate change adaptation, in terms of design, operation and costing, for small-scale irrigation infrastructure in the main WCA contexts; and (ii) assist small-scale farmers of WCA in climate-proofing small-scale irrigation schemes.
- 9. The beneficiaries of the proposed grant are small-scale farmers (including women and young people) involved in small-scale irrigation in the region. Working through IFAD-funded projects, it is estimated that the grant should benefit 140,000 small farmers, but other farmers will benefit from the outcomes of the grant through knowledge-sharing. Other stakeholders such as policymakers, implementers of IFAD projects, regional and national partners, and project designers will participate in the research and will benefit from updated information, training and knowledge products (tools, guidelines, etc.).
- 10. The proposed three-year programme comprises three components:
  - Component 1 Regional stocktaking: the first phase will consist in a thorough review of existing knowledge and information on the impact of climate change on irrigated farming structures and operations, as well as on existing climate-proofing technologies and practices implemented by the farmers, diverse institutions and donors working in WCA. The objective is to characterize climate risks affecting small-scale irrigation structures in the region's main agroecological zones and to define the gaps to be filled in terms of knowledge and the corresponding tools. The results of this stocktaking exercise will be submitted to IFAD. After approval, the second phase will start with identification of four pilot countries (participating countries) where in-depth analyses will be conducted in the context of IFAD-financed projects.
  - Component 2 Country-level support for the technical aspects of climateproofing small-scale irrigation schemes: in-depth analyses of the situation and experiences under several IFAD-financed projects in participating countries will identify the social, hydrological, engineering and agronomic factors that must be taken into account to design/upgrade small-scale irrigation schemes that allow farmers to cope with the adverse effects of climate change.
  - Component 3 Country-level support for integrating the incremental costs of climate-proofing small-scale irrigation investments: in participating countries, the focus will be on a detailed analysis of the incremental costs of designing/upgrading climate-proofed small-scale irrigation schemes.
     Reference guides will be developed on estimating and minimizing these

incremental costs. Knowledge-sharing, technical assistance and training in planning investments in these irrigation schemes is foreseen. These will be provided first to farmers, mainly through farmer field schools, and will also improve the capacities of staff and institutions involved in small-scale irrigation at local, national and regional levels, including governments and development partners.

### IV. Expected outputs and benefits

- 11. The grant is expected to produce the following main outputs:
  - Fully updated information on the vulnerability to climate change of small-scale irrigation schemes in the main agroecological systems in WCA.
  - Reference guides on the climate-proofing of small-scale irrigation schemes, with corresponding unit and incremental costs.
  - Tested procedures for the dissemination of findings to key national, regional and local stakeholders.
- 12. The main benefit of the project will be an improved knowledge base on the adaptation requirements of small-scale irrigation across the WCA through: maps on climate change impacts in the different agroecological zones; technical reports on stocktaking of irrigation technologies and best practices adapted to climate change with cost tables; and a reference manual for engineering design and adaptive management of climate-proof small-scale irrigation schemes.
- 13. This extended and updated knowledge will lead to the design of more resilient small-scale irrigation projects in WCA in favour of small-scale farmers. The information will be gathered through four IFAD-supported projects that will be familiarized with, technically assisted and trained in designing, costing and operating small-scale irrigation schemes adapted to climate change. This knowledge will benefit other small irrigation projects in WCA and other regions.

### V. Implementation arrangements

- 14. The grant will allow the recipient, FAO, to build on its substantial and proven technical and managerial capabilities with a view to updating the knowledge base on the impact of climate change on small-scale irrigation. FAO has created an extensive network of regional irrigation specialists in water management and adaptation to climate change. It is also experienced in: designing specific projects for clients, including IFAD; creating and maintaining specialist data sets and tools; stimulating discussion and knowledge-sharing; and formulating policy advice.
- 15. FAO will be fully responsible for managing the proposed grant in compliance with IFAD's financial management procedures and guidelines on procurement, financial reporting, audit and funds flow. IFAD's role will be limited to supervision. Implementation, coordination and management will be assured by FAO's Land and Water Division in close collaboration with its Investment Centre Division.
- 16. FAO will partner with regional institutions and networks specialized in climate change and irrigation to implement the grant in each of its components. This approach will particularly facilitate the regional stocktaking exercise and the sharing of the knowledge accumulated through the grant. Collaboration will also be sought with national government institutions dealing with irrigation development.
- 17. FAO will provide regular reports to IFAD, including six-month financial (reporting also on the FAO contribution), progress and event reports. A dedicated monitoring and evaluation system to monitor project activities, outputs, outcomes and impact will also ensure that reporting is disaggregated by country and agroecological zone, as well as by sex and age of beneficiaries where appropriate. FAO will submit a copy of its audited financial statements and trust fund reports covering any part of

- the grant proceeds, within six months following the official publication of its financial statements.
- 18. The grant will be disbursed based on a two-phase approach, with a first advance based on the inception phase budget (US\$244,000), and the second advance to be disbursed upon receipt of a satisfactory inception report. The second and subsequent advances will be based on work programmes and budgets. In addition, FAO will submit statements of expenditure with respect to the use of at least 75 per cent of the immediately preceding advance (and 100 per cent of previous advances).
- 19. FAO will bear all costs attached to the services of its own staff. The costs of all FAO staff and resources apart from the half-time coordinator will represent FAO's contribution as cofinancier of the IFAD grant. Any funds due to any national or regional partner and/or consultant engaged to carry out grant-funded activities envisaged in the approved annual work plans and budgets will be disbursed directly by FAO.

### VI. Indicative programme costs and financing

20. The total budget of the proposed IFAD grant is estimated at US\$1.2 million, equivalent to 79 per cent of the total cost estimated at US\$1.51 million. FAO's contribution is estimated at US\$310,000 or 21 per cent, equivalent to the costs attached to the direct involvement of FAO regular staff. About 82 per cent of the IFAD budget includes direct costs, whereas overhead/management fees represent 8 per cent of the expenses to be incurred under the IFAD grant (or 6 per cent of the total expenses to be incurred).

## **Proposed budget and financing plan** (United States dollars)

Number	Category of expenditure	IFAD (79%)	FAO (21%)	Total
1	Salaries and allowances	369 000	260 000	629 000
2	Consultancies	222 111		222 111
3	Travel and allowances	190 000	10 000	200 000
4	Training	160 000	20 000	180 000
5	Equipment and materials	10 000		10 000
5	Workshops, forums	120 000	20 000	140 000
6	Operating costs	40 000		40 000
7	Overhead/management fees	89 889		89 889
	Total	1 200 000	310 000	1 510 000

## Results-based logical framework

	Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
Goal	Improve sustainability and adaptation of small-scale irrigation systems across key agro-ecology systems in WCA region	% of small-scale irrigation schemes in climate change affected areas are adapted and sustainable	Baseline surveys     Impact assessment reports	Governments and donors are willing to use the knowledge and evidence generated Conducive policy environment to support the recommendations
Objectives	Define for climate-proof small-scale irrigation schemes in the main WCA contexts      Assist small-scale farmers in WCA in climate-proofing small-scale irrigation schemes	Country investments projects and programmes on small scale irrigation in WCA are more adapted to climate change     Additional funding is mobilized for climate proofing small scale irrigation infrastructure     Knowledge base is improved on the adaptation requirements for small scale irrigation across the WCA region	<ul> <li>Investment project stocktaking</li> <li>Country strategic opportunities programme (results-based)</li> <li>Monitoring and evaluation reports</li> <li>ASAP and other climate finance follow-up</li> </ul>	Continued availability of financing instruments and incentives for investing in climate adaptation
Outcomes	(i) Up to date information on vulnerability of small-scale irrigation schemes to climate change is available for the main agroecology systems in WCA (ii) Reference guides on climate proofing of small scale irrigation schemes and related unit and additional costs are defined. (iii) Processes of dissemination of the information to key stakeholders are proposed and tested.	<ul> <li>At least 1 regional and 4 national maps are available to inform on small-scale irrigation schemes vulnerability in WCA agro-ecology systems</li> <li>10 reports and manuals for engineering design, adaptive management and related costs are produced</li> <li>FAO web is updated accordingly</li> <li>1 regional and 4 national existing networks are supported</li> </ul>	<ul> <li>Supervision reports</li> <li>Project progress reports</li> <li>Interviews of national project staff and counterparts</li> <li>Expert review of reference guides</li> </ul>	Active engagement of regional and national counterparts, IFAD supported projects and country programme managers
Key Activities	1.1 Stocktaking of information and spatial analysis on climate change impacts on irrigated agriculture in the different agroecological zones of in WCA region  1.2 Stocktaking and analysis of available irrigation technologies and best practices adapted to climate change in WCA region  2.1 Participatory diagnostic to characterize climate change shocks and adaptation needs on small-scale irrigation schemes of IFAD projects  2.2 Development of reference guides on hydraulic, hydrological and agronomic requirements for climate-proofing of small-	one technical report inclusive of maps on climate change impacts in the different agro-ecological zones is developed     one technical report on stocktaking of irrigation technologies and best practices adapted to climate change with cost tables is developed     four participatory diagnostic reports are developed     one reference manual for engineering design and adaptive management of climate proof small-scale irrigation schemes, including planning water development at watershed level under	Supervision reports     Project progress reports     Training and dissemination events reports	Availability of information and data at country and regional level     Willingness to participate in training and dissemination events

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	Appendix

Objectives-hierarchy	Objectively verifiable indicators	Means of verification	Assumptions
scale irrigation schemes  2.3 Knowledge exchange, technical assistance and training of key national stakeholders in designing and operating climate-proof small-scale irrigation schemes  3.1 Development of reference guides on how to estimate and minimize climate-proofing incremental costs in planning investments on small-scale irrigation  3.2 Knowledge exchange, technical assistance and training of key national stakeholders in planning investments on climate-proof small-scale irrigation schemes	different climate change scenarios is developed  • four national reports describing climate change impacts on small-scale irrigation and requirements to design, upgrade and adaptive management climate proof small-scale irrigation schemes are produced  • four national reports presenting up-to-dated and additional costs for climate change adaptation are produced  • at least 4 IFAD supported projects are familiarized, technically assisted and trained in designing, costing and operating small-scale irrigation schemes adapted to climate change		