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Enabling poor rural people  
to overcome poverty

## **President's report**

### **Proposed loan to the Democratic Socialist Republic of Sri Lanka for the**

### **Iranamadu Irrigation Development Project**

#### **Note to Executive Board representatives**

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**For: Approval**

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## Abbreviations and acronyms

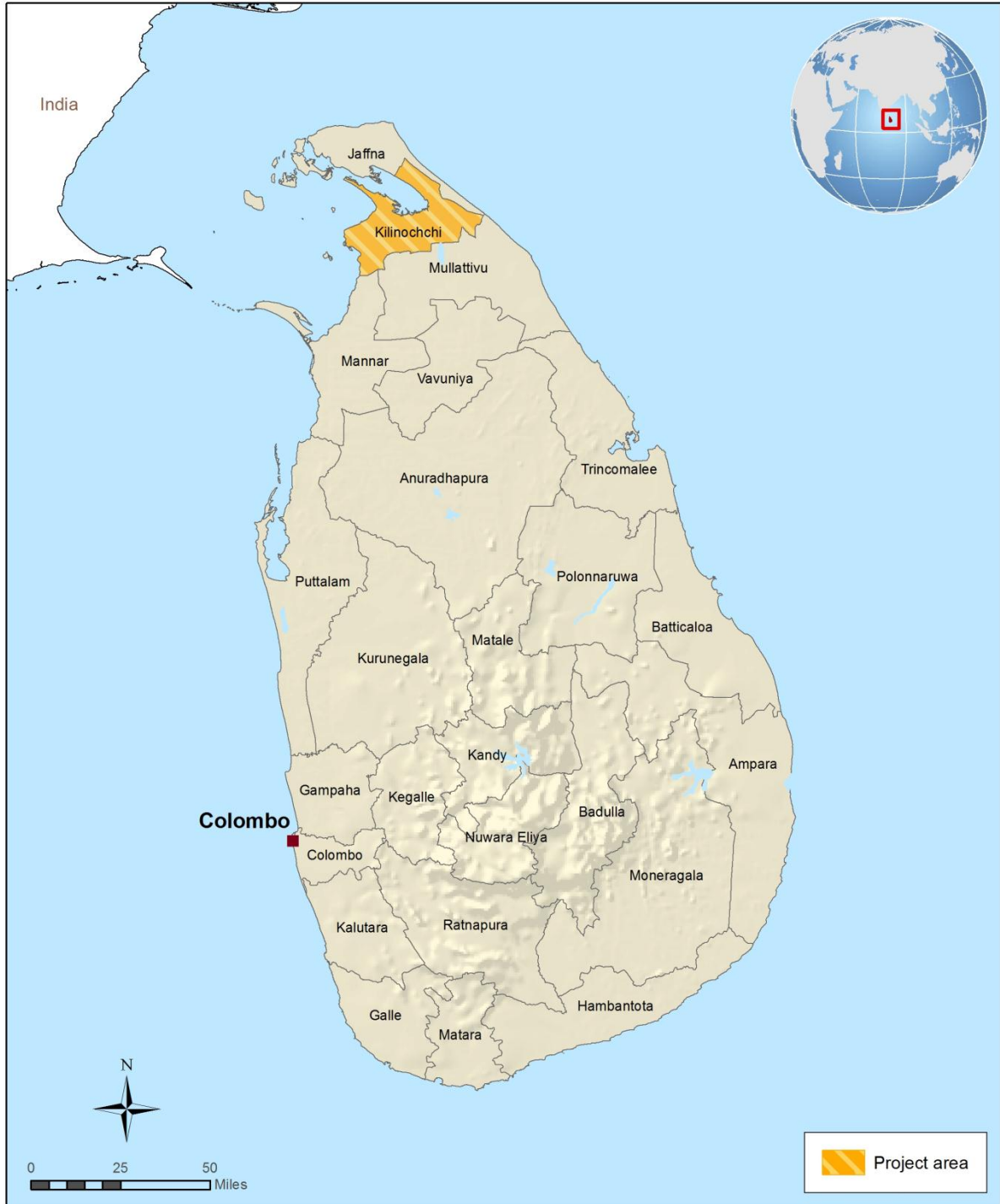
AFD	Agence Française de Développement
AsDB	Asian Development Bank
AWP/B	annual work plan and budget
M&E	monitoring and evaluation
PMO	project management office

# Map of the project area

## Sri Lanka

### Iranamadu Irrigation Development Project

*President's report*



20-9-2011



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

Map compiled by IFAD

# **Democratic Socialist Republic of Sri Lanka**

## **Iranamadu Irrigation Development Project**

### **Financing summary**

<b>Initiating institution:</b>	IFAD
<b>Borrower:</b>	Democratic Socialist Republic of Sri Lanka
<b>Executing agency:</b>	Ministry of Local Government and Provincial Councils
<b>Total project cost:</b>	US\$29.32 million approximately
<b>Amount of IFAD loan:</b>	SDR 14.35 million (equivalent to approximately US\$22.23 million)
<b>Terms of IFAD loan:</b>	40 years, including a grace period of 10 years, with a service charge of three fourths of one per cent (0.75 per cent) per annum
<b>Cofinancier(s):</b>	Private companies
<b>Amount of cofinancing:</b>	US\$1.23 million
<b>Terms of cofinancing:</b>	In-kind contribution
<b>Contribution of borrower:</b>	US\$3.16 million
<b>Contribution of beneficiaries:</b>	US\$2.70 million
<b>Appraising institution:</b>	IFAD
<b>Cooperating institution:</b>	Directly supervised by IFAD

## Recommendation for approval

The Executive Board is invited to approve the recommendation for the proposed financing to the Democratic Socialist Republic of Sri Lanka for the Iranamadu Irrigation Development Project, as contained in paragraph 23.

## Proposed loan to the Democratic Socialist Republic of Sri Lanka for the Iranamadu Irrigation Development Project

### I. Strategic context and rationale

#### A. Country and rural development and poverty context

1. Sri Lanka has attained impressive economic growth over the last two years since the end of the civil war in May 2009. GDP grew at 9.1 per cent in 2010 and its sector distribution has remained stable since 2007, with agriculture contributing 12.6 per cent in 2009, industry 29.7 per cent and services 57.7 per cent. Agriculture employs about 2.2 million people or 31 per cent of the total labour force. The Government's policy framework is based on the "*Mahinda Chinthana – Idiri Dekma*" (Vision for the Future) for Sri Lanka, which emphasizes building the economy through a proactive participatory process involving both the private and the public sectors. The Government is committed to providing necessary infrastructure, promoting competition and accelerating growth in a regionally balanced manner. Rural and infrastructure development are high government priorities, especially in the south and north.

#### B. Rationale and alignment with government priorities and RB-COSOP

2. Since May 2009, the Government has treated the development of the Northern Province as a high priority. Improving the drinking water supply of Jaffna has also been a main concern, particularly given the anticipated growth of the city's population. The topography and morphology of Jaffna is such that any improvement in the supply of drinking water is dependent on fresh surface water and the Iranamadu tank is the nearest reliable source. With the support of the Asian Development Bank (AsDB) and the French Development Agency [Agence Française de Développement] (AFD), the Government initiated the Jaffna and Kilinochchi Water Supply and Sanitation Project to increase the capacity of the Iranamadu tank for the purpose of allowing the extraction of water for Jaffna. During the preparation of the AsDB/AFD project, local farmers in the Iranamadu command area indicated that they agreed to the extraction of water from Iranamadu for Jaffna on condition that the downstream irrigation infrastructure would be rehabilitated, so as to enable productive use of irrigation water in the tank command area. Although the proposed project did not appear in the 2002 IFAD country strategic opportunities paper (COSOP) for Sri Lanka, at the request of the Government, IFAD agreed to support the downstream irrigation rehabilitation project as a complement to the AsDB/AFD project. The present project is therefore an integral part of the holistic arrangement for transferring water to Jaffna on the one hand and rehabilitating the downstream canal system as requested by the local farmers on the other.

### II. Project description

#### A. Project area and target group

3. The project is located in the Kilinochchi district of the Northern Province and involves 22 *grama niladhari* divisions.<sup>1</sup> It covers about 8,455 hectares of the

<sup>1</sup> The *grama niladhari* division is the smallest administrative unit in Sri Lanka.

Iranamadu command area. The target group is the total population of farmers in the command area as well as those living outside the command area within a distance of approximately 500 metres from the main canal bunds. An estimated 18.5 per cent of these are households headed by women.

### **B. Project development objective**

4. The project's goal is to reduce poverty and increase household incomes to a level above the poverty line. The specific objectives are: (i) to promote the effective and sustainable management of the irrigation infrastructure; and (ii) to sustainably improve water and land productivity.

### **C. Components/outcomes**

5. The project has two components: (i) infrastructure development, which consists of two subcomponents: irrigation infrastructure rehabilitation; and other infrastructure development, such as rainwater harvesting structures, seedling nurseries and small storage units; and (ii) production and marketing, which has three subcomponents: social mobilization and training; production, extension and marketing; and other agricultural and off-farm development. The main outcomes will be: (i) irrigation infrastructure is rehabilitated, water use is managed by farmers and women participate effectively in water and land management; (ii) crop production is diversified, agricultural productivity is increased and remunerative markets are ensured through forward contracting with private marketing; and (iii) sustainable farmer organizations are in place to deliver irrigation services to farmers.

## **III. Project implementation**

### **A. Approach**

6. The overall project approach is demand-driven by the local farmers and based on: (i) the improvement of irrigation infrastructure; and (ii) the use of improved water supply for diversification into demand-led and sustainable cropping patterns having an ensured market with private marketing firms.

### **B. Organizational framework**

7. The Ministry of Local Government and Provincial Councils will be the lead agency for the project. A national steering committee, a provincial steering committee and a project management office (PMO) will be established. The existing district coordinating committee and district agriculture committee will serve as the project coordination bodies at the district level. The PMO, to be located in Kilinochchi, will be responsible for the daily operations of the project. Key implementation partners include provincial departments for irrigation, agriculture, other related government agencies including *Divineguma* (integrated rural development department), and service providers for social mobilization. Private marketing firms will be engaged through forward contracting arrangements with farmers. Farmer organizations are an integral part of the organizational framework of the project..

### **C. Planning, monitoring and evaluation, and learning and knowledge management**

8. The PMO will be responsible for the planning, monitoring and evaluation (M&E), and learning and knowledge management of the project. The main planning instrument is the annual workplan and budget (AWP/B), which will be formulated with beneficiary participation. M&E is one of the PMO's core responsibilities and will be based on an M&E plan to be drawn up at the start of project implementation. Participatory M&E indicators will be set at the community level during the planning process. Independent impact assessment will be undertaken prior to the mid-term review and at project completion. Learning and knowledge management will be incorporated into the PMO's terms of reference and will entail activities such as the publication of a project newsletter, establishment of a project website and organization of knowledge-sharing events.

## **D. Financial management, procurement and governance**

9. The Ministry of Finance and Planning will open a designated account in United States dollars with the Central Bank of Sri Lanka and a project account in Sri Lankan rupees to be handled by the PMO. The PMO will maintain appropriate financial records and accounts in accordance with government systems. All implementing agencies will keep separate accounts for all transactions involving project finance. At the request of the Ministry of Local Government and Provincial Councils and on the basis of the approved AWP/B, funds from the designated account will be advanced to the project account on a quarterly basis. The project account and designated account will be audited by the Auditor General of Sri Lanka. Procurement will be conducted in accordance with the IFAD Project Procurement Guidelines or, pending assessment, the national procurement guidelines as long as these are in line with the IFAD procurement guidelines. For the purposes of governance, the PMO staff will include an internal auditor and a procurement specialist.

## **E. Supervision**

10. The project will be directly supervised by IFAD. Two supervision and implementation support missions are envisaged for the first two years of the project. The primary focus during this initial stage will be on irrigation engineering, arrangements with private-sector marketing firms, and other legal and technical aspects of project implementation such as the project agreement and financial management.

## **IV. Project costs, financing, benefits**

### **A. Project costs**

11. The estimated total project cost is US\$29.32 million. The cost estimates are based on a local inflation rate of 5.5 per cent per year and a foreign inflation rate of 2.0 per cent per year. Contingencies of 10 per cent have been applied to all civil works and the physical and price contingencies will amount to 25 per cent of the base costs. The exchange rate has been maintained at 110 Sri Lankan rupees to one United States dollar. About 73 per cent of the project base costs is for irrigation rehabilitation, 5.6 per cent for project management and the remainder for production and marketing activities.

### **B. Project financing**

12. IFAD will provide a loan of SDR 14.35 million (equivalent to US\$22.23 million approximately) (75.8 per cent). The Democratic Socialist Republic of Sri Lanka will provide counterpart funding of US\$3.16 million (10.8 per cent), meeting part of the cost of salaries, operation and maintenance, and all taxes and duties. The private sector is expected to finance about US\$1.23 million (4.2 per cent) for incremental farm inputs and training, and the beneficiaries' contribution will be US\$2.70 million (9.2 per cent).

### **C. Summary benefit and economic analysis**

13. The project will directly benefit about 7,000 households in the project area through improved irrigation infrastructure, crop diversification and new market opportunities. The overall economic internal rate of return (EIRR) is estimated at 38 per cent as the base case. The EIRR is relatively high because rehabilitation investments usually are more profitable, and in this case allow a diversification into higher value crops. When the tank rehabilitation cost of the AsDB/AFD project is included, the EIRR decreases to 29 per cent, making the project still economically justifiable. Nonetheless, the project is quite sensitive to delays in obtaining benefits from the project. Proper timing of all works and the simultaneous group formation and training of farmers to improve livelihood activities will reduce this risk.

### **D. Sustainability**

14. The project is a direct response to the request of local farmers and a condition for allowing the extraction of water from Iranamadu for Jaffna through the AsDB/AFD

project. From the outset, the degree of local and beneficiary ownership is higher than usual in such projects. The sense of ownership and sustainability will be further strengthened by the participatory planning of the irrigation works. The introduction of the bulk water allocation system has a proven effect on sustainability as it leads to fewer water conflicts, reduced incidence of crop failures and increased irrigation intensity.

## **E. Risk identification and mitigation**

15. The main country-level risk is the occurrence of natural disasters such as floods, which could have a significant impact on the achievement of the project objectives as a result of: (i) resources being diverted for emergency purposes; and (ii) damage caused to rehabilitated infrastructure. In such cases, the project would need to be redesigned. The main project-related risks are: (i) disruption of beneficiaries' livelihoods during the rehabilitation of irrigation, which will be mitigated by proper planning and setting aside alternative land for affected households; (ii) reluctance to accept the bulk water allocation system; (iii) breach of forward sale contracts; and (iv) weak management systems. The latter three risks will be mitigated through pilot testing and demonstrations, awareness and capacity-building programmes, and enhanced implementation support.

## **V. Corporate considerations**

### **A. Compliance with IFAD policies**

16. Gender considerations have been mainstreamed throughout the project design, ranging from a series of gender-sensitive activities at the community level, the composition of the PMO and provision for the preparation of a gender action plan and gender-sensitive indicators, to capacity-building among implementing agencies. The project is aligned with the IFAD Climate Change Strategy and the IFAD Environment and Natural Resource Management Policy, with many of the proposed activities likely to generate multiple environmental benefits. Pursuant to IFAD's environmental and social assessment procedures, the project has been classified as a Category B operation.

### **B. Alignment and harmonization**

17. The project was initiated at the request of the Government and is fully aligned with the Government's development priorities, which place particular emphasis on rural and infrastructure development, especially in the north and south of the country. The project responds directly to the demands of local farmers. The project complements the AsDB/AFD-supported project for the transfer of water from Iranamadu to Jaffna.

### **C. Innovations and scaling up**

18. The project will introduce an innovative system of farmer-managed water allocation, the bulk water allocation system, similar to the Mahaweli System H. The new system will replace the normally adopted top-down process of water allocation.

### **D. Policy engagement**

19. Based on experience and learning acquired through the project, primarily in relation to the bulk water allocation system, policy dialogue will be undertaken with the Government and other stakeholders through specific channels and events such as workshops and seminars. The aim of such events will be to promote knowledge sharing and to facilitate a wider introduction of the system, particularly in the northern part of the country, as an alternative to the normally adopted top-down approach.

## **VI. Legal instruments and authority**

20. A project financing agreement between the Democratic Socialist Republic of Sri Lanka and IFAD will constitute the legal instrument for extending the proposed



financing to the borrower. A copy of the negotiated financing agreement is attached as an annex.

21. The Democratic Socialist Republic of Sri Lanka is empowered under its laws to receive financing from IFAD.
22. I am satisfied that the proposed financing will comply with the Agreement Establishing IFAD and the Lending Policies and Criteria.

## **VII. Recommendation**

23. I recommend that the Executive Board approve the proposed financing in terms of the following resolution:

RESOLVED: that the Fund shall make a loan on highly concessional terms to the Democratic Socialist Republic of Sri Lanka in an amount equivalent to fourteen million three hundred and fifty thousand special drawing rights (SDR 14,350,000), and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Kanayo F. Nwanze  
President

**Negotiated financing agreement:**  
**“Iranamadu Irrigation Development Project (IIDP) ”**  
(Negotiations concluded on 2 December 2011)

Loan Number: \_\_\_\_\_

Project Title: Iranamadu Irrigation Development Project (IIDP) (the “Project”)

The International Fund for Agricultural Development (the “Fund” or “IFAD”)

and

The Democratic Socialist Republic of Sri Lanka (the “Borrower”)

(each a “Party” and both of them collectively the “Parties”)

hereby agree as follows:

**Section A**

1. The following documents collectively form this Agreement: this document, the Project Description and Implementation Arrangements (Schedule 1) and the Allocation Table (Schedule 2).
2. The Fund’s General Conditions for Agricultural Development Financing dated 29 April 2009, as may be amended from time to time (the “General Conditions”) are annexed to this Agreement, and all provisions thereof shall apply to this Agreement. For the purposes of this Agreement the terms defined in the General Conditions shall have the meanings set forth therein.
3. The Fund shall provide a Loan to the Borrower (the “Financing”), which the Borrower shall use to implement the Project in accordance with the terms and conditions of this Agreement.

**Section B**

1. The amount of the Loan is 14 350 000 SDR.
2. The Loan is granted on highly concessional terms.
3. The Loan Service Payment Currency shall be the USD.
4. The first day of the applicable Fiscal Year shall be 1 January.
5. Payments of principal and service charge shall be payable on each 15 May and 15 November.
6. There shall be a Project Account managed by the Project Management Office (“PMO”) in a commercial bank acceptable to the Fund.
7. There shall be an account designated to receive funds in advance (“Designated Account”) in USD for the exclusive use of the Project in the Central Bank of Sri Lanka.

8. The Borrower shall provide counterpart financing for the Project in the amount of USD 3 158 000 to finance part of the civil works, salaries and operating costs and all taxes and duties.

### **Section C**

1. The Lead Project Agency shall be the Ministry of Local Government and Provincial Councils ("MLGPC").

2. The following are designated as additional Project Parties: Department of Irrigation, Northern Province; Department of Agriculture, Northern Province; other related government agencies including Divineguma Integrated Rural Development Department; service providers; and Farmers Organizations of Iranamadu scheme.

3. The Project Completion Date shall be the fifth anniversary of the date of entry into force of this Agreement.

### **Section D**

The Loan will be administered by the Fund and the Project supervised by the Fund in collaboration with the Borrower.

### **Section E**

1. The following are designated as additional general conditions precedent to withdrawal:

(a) The Project Coordinator and Project Manager have been appointed in accordance with Schedule 1 paragraph 8 of this Agreement; and

(b) A Project Implementation Manual ("PIM"), acceptable to the Fund and Borrower, has been finalized.

2. The following are the designated representatives and addresses to be used for any communication related to this Agreement:

For the Fund:

The President  
International Fund for Agricultural Development  
Via Paolo di Dono 44  
00142 Rome, Italy

For the Borrower:

Secretary  
Ministry of Finance and Planning  
Attention: Director General  
Department of External Resources  
The Secreteriat  
Colombo 01  
Sri Lanka

This Agreement, dated \_\_\_\_\_, has been prepared in the English language in six (6) original copies, three (3) for the Fund and three (3) for the Borrower.

\_\_\_\_\_  
For the Fund

\_\_\_\_\_  
For the Borrower

## Schedule 1

### *Project Description and Implementation Arrangements*

#### **I. Project Description**

1. *Target Area.* The Project is located in Kilinochchi District of the Northern Province of Sri Lanka, involving 22 Grama Niladhari Divisions. It covers about 8 455 ha of the area under the Iranamadu tank ("Command Area"). The Project shall benefit the total population of farmers in the Command Area as well as those living outside the Command Area within a distance of approximately 500 metres from the main canal bunds.

2. *Goal.* The goal of the Project is to contribute to poverty reduction and increase in household incomes.

3. *Objectives.* The objectives of the Project are:

- (a) to promote the effective and sustainable management of the irrigation infrastructure; and
- (b) to achieve sustainable improvement of water and land productivity.

4. *Components.* The Project shall consist of the following Components, besides from the Project Management:

4.1 Infrastructure Development. This component consists of two subcomponents:

(a) Irrigation infrastructure rehabilitation. The Project shall contribute to the rehabilitation of the downstream canal system of the Iranamadu Tank which provides irrigation water to 8 455 hectares. Under this subcomponent, the Project shall design, implement and supervise works to render the Iranamadu scheme fully operational. This includes the rehabilitation of the two main canals, the drainage canals, and all the distribution and field canals. Farm roads shall also be improved and repaired. The Project shall also introduce an innovative system of farmer managed Bulk Water Allocation System. This shall be facilitated by strengthening existing Farmer Organizations ("FOs") and establishing new FOs and Women and Youth Groups.

(b) Other infrastructure development. The Project shall support about 2000 families experiencing water shortages with water saving techniques, rain water harvesting tanks for drinking water and other small earth structures to capture rainwater runoff and ground water recharging. A limited allocation of resources shall be included in the Project to support marketing infrastructure at the level of FOs and women and youth groups.

4.2 Production and Marketing. This component consists of three sub-components:

(a) Social mobilisation and training. In addition to the support provided to strengthen the existing FOs for water management activities, women groups including youth for non-paddy crop production shall be formed and strengthened from the second year of the Project and thereafter. The Project shall organise and finance training programmes for the women and youth in social leadership, accounting and financing, non-paddy crop cultivation, off-farm income generation activities, agricultural processing, and organic fertiliser production etc.

(b) Production, extension and marketing. The Project shall finance non-rice crop diversification programmes during yala and intermediate seasons that will be initiated and supported by the Department of Agriculture, Northern Province. In addition, the Project shall discuss and liaise with financial institutions in the Northern Province to

create credit linkages with farmers. The required extension services and farmer training to meet market quality standards shall be provided by the relevant government institutions including Department of Agriculture, Northern Province, Divineguma Integrated Rural development Department and by the partner private sector marketing firms. In addition the Project shall also support farm demonstrations on good agricultural practices, related farmer training and conducting validation workshops of such demonstrations.

To ensure effective market demand for Project farmers for specific crops, the Project shall seek partnership with the private sector marketing firms, to create marketing contracts. The partnerships shall include providing their expertise both in sustainable production and direct marketing through forward contracting with farmer groups. These farmer groups shall be supported by the Project in their negotiations of forward contracts.

(c) Other agricultural development and off-farm activities. The Project shall support upland agriculture in rain fed fields and homesteads, training of voluntary community professionals on processing and value addition of non-paddy crops and provide matching grants to purchase agro-processing equipment once the women and youth groups are matured.

The Project shall also finance a soil suitability study to identify areas that are suitable for non-paddy crops.

The Project shall support the formation of women and youth groups for micro enterprise development. Potential sectors shall include agro-processing, agro-business, local craft industry, livestock based value addition work, production of organic fertiliser.

## **II. Implementation Arrangements**

5. A National Steering Committee ("NSC") shall be established for the Project under the chairmanship of the Secretary of the MLGPC. It shall ensure that the Project is implemented in accordance with this Agreement and the agreements between the Project beneficiaries and the private sector marketing firms. The composition of the NSC shall be acceptable to IFAD and the Borrower.

6. A Provincial Steering Committee ("PSC") shall be established for the Project under the chairmanship of Chief Secretary, Northern Provincial Council and responsible for provincial level coordination and Project implementation oversight over performance of functions. It shall recommend the Annual Work Plan and Budget ("AWPB") and procurement plan and closely monitor the Project performance and outputs. The composition of PSC shall be approved by the NSC.

7. A District Coordinating Committee ("DCC") and District Agriculture Committee ("DAC") shall facilitate the Project coordination at the district level. These are existing committees that meet regularly to coordinate and report on development projects implemented in the district.

8. A Project Management Office ("PMO") shall be established in the Office of Deputy Director of Irrigation at Kilinochchi. It shall be the executive authority of the Project and shall be headed by the Project Coordinator. The Project Coordinator shall be appointed from among high level qualified permanent government officials, on a secondment basis and on a part-time basis. The appointment shall be acceptable to IFAD. A Project Manager shall be recruited from the open market with qualifications and experience acceptable to the Borrower and to IFAD, and shall be in charge of daily management of the Project. The Project Coordinator shall take the overall responsibility of the Project management and answerable to the NSC and PSC. The Project Manager shall be responsible for Project implementation and answerable to the Project Coordinator.

## Schedule 2

### Allocation Table

1. *Allocation of Loan Proceeds.* (a) The Table below sets forth the Categories of Eligible Expenditures to be financed by the Loan and the allocation of the amounts of the Loan to each Category and the percentages of expenditures for items to be financed in each Category:

Category	Loan Amount Allocated	Percentages Net of taxes and co- financiers/beneficiaries contributions.
1. Civil Works	10 110 000	100%
2. Vehicles, Equipment & Materials	310 000	100%
3. Advisory Services & Studies	870 000	100%
4. Training Groups in Operation and Maintenance	660 000	100%
5. Training, inputs and marketing	220 000	100%
6. Salaries & Allowances	415 000	100%
Unallocated	1 765 000	
<b>TOTAL</b>	<b>14 350 000</b>	

(b) The terms used in the Table above are defined as follows:

“Training Groups in Operation and Maintenance” means eligible expenses incurred under Category 4 with respect to training to be provided for farmer groups for the operation and maintenance of the irrigation and other infrastructure constructed or rehabilitated under the two components of the project; and

“Training, inputs and marketing” means eligible expenses incurred under Category 5 with respect to training, incremental inputs and marketing linkage support to be provided under the “Production and Marketing” component of the Project.

## Logical framework

Results hierarchy	Indicators	Means of Verification	Assumptions
<b>Goal</b>			
Contribution to overall poverty reduction, increases in household incomes	<ul style="list-style-type: none"> <li>- Increased hhs assets</li> <li>- Increased hhs incomes</li> <li>- Reduced malnutrition of children below 5 years – weight &amp; height</li> </ul>	<ul style="list-style-type: none"> <li>- Provincial statistics</li> <li>- Household surveys</li> </ul>	
<b>Development objective</b>			
The irrigation infrastructure of the Iranamadu scheme has been rehabilitated, farm productivity improved and women's participation in water and land management and marketing enhanced	<ul style="list-style-type: none"> <li>- No. of hhs with secured access to water</li> <li>- Effectiveness of the O&amp;M arrangements</li> <li>- No. of hhs reporting production increase</li> <li>- No. of hhs with forwarding contracts with the private sector</li> <li>- No. of functioning community infrastructure projects <i>(all the 1<sup>st</sup> 4 indicators are gender disaggregated)</i></li> </ul>	<ul style="list-style-type: none"> <li>- Household surveys</li> <li>- Poverty analysis</li> <li>- M&amp;E reports</li> </ul>	<ul style="list-style-type: none"> <li>- Individual and group incentives as well as farmer institutional development will sustain infrastructure, cropping, marketing arrangements, and women participation in the medium term</li> </ul>
<b>Outcomes</b>			
Irrigation infrastructure is rehabilitated, water in distribution and field canals is farmer managed and on demand, women effectively participate in water and land management	<ul style="list-style-type: none"> <li>- Water productivity in grain equivalent/m<sup>3</sup></li> <li>- % Reduction in average duty</li> <li>- Increase in overall irrigation intensity</li> <li>- No. of farmers using irrigation, by gender</li> <li>- Average rate of water saving during <i>maha</i> season</li> <li>- Proportion women office bearers in FOs</li> <li>- No. of FOs effectively maintaining D and F canals</li> </ul>	<ul style="list-style-type: none"> <li>- Reports of the Prov. Irrigation Department (PID)</li> <li>- Project Progress Reports</li> <li>- Project Review Mission including annual outcome study reports</li> <li>- M&amp;E &amp; Mid Term Review</li> </ul>	<ul style="list-style-type: none"> <li>- Severe weather events do not substantially damage rehabilitated infrastructure</li> <li>- Continued policy support for irrigation development</li> </ul>
Sustainable agricultural productivity of diversified crops is increased and forward contracting with private corporate buyers ensures remunerative markets.	<ul style="list-style-type: none"> <li>- Crop diversification by area grown by season</li> <li>- Productivity by crop, decrease in use of chemicals</li> <li>- Seasonal turn-over under forward contracts</li> <li>- Average contract farm gate price compared to market price</li> <li>- % increase in return to labour (female and male)</li> </ul>	<ul style="list-style-type: none"> <li>- Reports of the Prov. Agriculture Department</li> <li>- Project Progress Reports</li> <li>- Project Review Mission reports</li> <li>- M&amp;E &amp; Mid Term Review</li> </ul>	<ul style="list-style-type: none"> <li>- Severe weather events do not substantially damage crops</li> <li>- Climate change effects are mitigated</li> <li>- Continued policy support for diversification</li> </ul>
Sustainable FOs delivering irrigation services to farmers	<ul style="list-style-type: none"> <li>- No. FOs managing bulk water allocations</li> <li>- Irrigation – organization performance measured by financial &amp; management audit (&gt;50% pass after 2 yrs &amp; &gt;75% after 4 yrs)</li> </ul>	<ul style="list-style-type: none"> <li>-Management and financial audit</li> <li>-Annual outcome studies</li> <li>-Project review report</li> </ul>	<ul style="list-style-type: none"> <li>-heterogeneity of land sizes and different water volume requirement could be a limitation for smooth operations.</li> </ul>

<b>Outputs</b>			
Irrigation development	<ul style="list-style-type: none"> <li>- Length of canals rehabilitated (km, by type)</li> <li>- No. of structures repaired or rebuilt (by type)</li> <li>-No. of bulk water supply contract that has been arranged which include water distribution arrangements, maintenance arrangements and financing procedures</li> <li>- No. of water meters installed by type of canal</li> <li>- No. of farmers trained in meter reading</li> <li>- No. of volunteer <i>jalapalaka</i> (Water Duty Controllers) appointed by FOs/Project IE per Branch canal system by cultivation year</li> <li>- Volumes of water allocated by season</li> <li>- Area of the command area effectively irrigated (ha, by type)</li> <li>- No. of women members of FOs who are managing irrigation</li> </ul>	<ul style="list-style-type: none"> <li>- Reports of the PID</li> <li>- Project Progress Reports</li> <li>- Project Review Mission reports</li> <li>- M&amp;E reports</li> <li>- Mid-Term Review Report</li> </ul>	<ul style="list-style-type: none"> <li>- System H experience in demand led water management successfully transferred to project farmers</li> </ul>
Production and marketing	<ul style="list-style-type: none"> <li>- Areas irrigated by crop per season (ha, by type)</li> <li>- Diversification of cropping patterns</li> <li>- Volumes and proportion of crops sold under forward contracting</li> <li>- No. of women groups for fruits, vegetables and other crops</li> <li>- No. of hhs covered by extension and marketing services provided by the private sector (by gender)</li> </ul>	<ul style="list-style-type: none"> <li>- Reports of the Prov. Agriculture Department</li> <li>- Project Progress Reports</li> <li>- Project Review Mission reports</li> <li>- M&amp;E reports</li> <li>- Annual Report Corporate Buyer</li> <li>- Mid-Term Review Report</li> </ul>	<ul style="list-style-type: none"> <li>- Agricultural and other staff supporting adoption of sustainable cropping techniques</li> </ul>
Project management	<ul style="list-style-type: none"> <li>- PMO staff appointments</li> <li>- AWPB approvals</li> <li>- Tender procedures and procurement</li> <li>- Flow of funds</li> <li>- M&amp;E reporting</li> <li>- KM activities</li> <li>- Implementation Gender Action Plan</li> </ul>	<ul style="list-style-type: none"> <li>- Project Progress Reports</li> <li>- Project Review Mission reports</li> <li>- Mid-Term Review Report</li> </ul>	<ul style="list-style-type: none"> <li>- Timely appointment of key project staff</li> <li>- Government and project incentives sufficient to keep qualified staff in place</li> <li>- Fiduciary procedures well understood by all involved, no major delays in fund flows</li> <li>- Transparent procurement</li> </ul>