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Enabling poor rural people  
to overcome poverty

## **President's report**

### **Proposed loan and grant to the Republic of Turkey for the**

### **Murat River Watershed Rehabilitation Project**

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

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Executive Board — 107<sup>th</sup> Session  
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**For: Approval**

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## Abbreviations and acronyms

AWP/B	annual workplan and budget
MFWA	Ministry of Forestry and Water Affairs
MRWRP	Murat River Watershed Rehabilitation Project
OGM	General Directorate of Forestry

# Turkey

## Murat River Watershed Rehabilitation Project

President's report



Map of the project area



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

## Republic of Turkey

### Murat River Watershed Rehabilitation Project

#### Financing summary

<b>Initiating institution:</b>	IFAD
<b>Borrower:</b>	Republic of Turkey
<b>Executing agency:</b>	General Directorate of Forestry Ministry of Forestry and Water Affairs
<b>Total project cost:</b>	US\$38.51 million
<b>Amount of IFAD loan:</b>	SDR 17.95 million (equivalent to approximately US\$27.66 million)
<b>Amount of IFAD grant:</b>	SDR 0.28 million (equivalent to approximately US\$0.43 million)
<b>Terms of IFAD loan:</b>	18 years, including a grace period of 5 years, with an interest rate equal to the reference interest rate per annum as determined by the Fund semi-annually
<b>Cofinanciers:</b>	Domestic contribution (provisional) Government Villagers in participating communities
<b>Amount of cofinancing:</b>	Domestic contribution (provisional): US\$7.45 million Villagers in participating communities: US\$2.97 million
<b>Terms of cofinancing:</b>	N/A
<b>Contribution of borrower:</b>	US\$7.45 million
<b>Contribution of beneficiaries:</b>	US\$2.97 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 Republic of Turkey for the Murat River Watershed Rehabilitation Project, as contained in paragraph 32.

## **Proposed loan and grant to the Republic of Turkey for the Murat River Watershed Rehabilitation Project**

### **I. Strategic context and rationale**

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

1. Despite the vigorous growth of the economy, marked regional income disparities persist in Turkey, with the mountainous regions in the east continuing to lag behind. The Government's national development strategy features economic growth, human resource development and infrastructure advances. It maintains a strong commitment to regional development through a coherent poverty reduction strategy that emphasizes support for rural development within an environmentally sustainable framework. About seven million people (10 per cent of the population) live in 21,000 forest villages, some located in the eastern uplands. Per capita income in these areas was just 7 per cent of the national average in 2004 and the gap is widening.

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

2. Upland village households engage in mixed farming, mainly livestock with some horticulture, but production is seldom sufficient even for household consumption. The majority rely on supplementary income from state and/or extended family welfare provision in order to remain in their villages; the alternative is migration. The Murat River Watershed Rehabilitation Project (MRWRP) aims to support government efforts to check further degradation of upland watersheds and to improve the natural resource base. The central development hypothesis for IFAD's involvement is to break the vicious cycle of natural resource degradation and poverty. The project views this degradation as a multisectoral problem requiring site-specific solutions. It will support catchment development involving the integration of forestry investments, soil and water conservation and crop and livestock production in a mutually reinforcing and complementary manner.
3. Project design is aligned with the objectives set out in the country strategic opportunities programme (COSOP) of 2006 and its 2011-2012 addendum, in particular the emphatic statement that sustainable natural resource management is a necessary condition for rural poverty reduction. It is also aligned with government policies more specifically. The National Rural Development Plan (2010-2013) sets the strategic objectives of: "Protection and improvement of the rural environment through adoption of environmentally friendly agricultural practices, protection and sustainable use of forest resources and the management and improvement of protected areas".

### **II. Project description**

#### **A. Project area and target group**

4. The MRWRP primary target group is poor women and men smallholders, living in upland villages in selected microcatchments within Elazığ, Bingöl and Muş Provinces. Together, these groups represent an estimated 80,000 very poor potential direct beneficiaries (12,500 households). Secondary beneficiaries are the general

population living downstream from the microcatchments to be supported under the project.

## **B. Project development objective**

5. The proposed project aims to support government efforts to check further degradation of upland watersheds and to improve the natural resource base as a means to raise incomes and livelihoods in upland villages. The project will specifically focus on village dwellers' involvement in the decision-making and implementation processes relating to the rehabilitation of existing natural resources while facilitating the creation of a strong sense of ownership among upland communities and thereby ensuring sustainability of the investments.

## **C. Components/outcomes**

6. The project has three components: (i) natural resources and environmental management (consultations, empowerment and planning); (ii) investments in natural resources and environmental assets (land, water and vegetation); and (iii) investments in improved livelihoods empowering upland communities to maintain and benefit from the natural resource improvements.
7. The outcome of the natural resources and environmental management component is an environmentally conscious community capable of planning and managing the use of natural resources. The component focuses on assisting the efforts of government institutions to make planning and management more people-oriented, and to build ownership and sustainability into its ambitious programme for investments in the upper watersheds of eastern Turkey. The centrepiece of the project is the generation, negotiation, preparation and implementation of some 25 viable and replicable microcatchment plans. The project will seek to promote participatory co-management modalities under which the village communities' livelihood strategies are aligned with the sustainable use and improvement of public/shared natural resources. Contracted microcatchment planning teams will assist villagers in making informed decisions on committing themselves to work with the implementing agency to rehabilitate their degraded natural resources (in the short term) and manage them sustainably (in the medium and long term). Participatory planning will result in the preparation of village plans addressing both natural management and improved livelihood initiatives.
8. The outcomes of the investments in natural resources and environmental assets component are reduced erosion, improved vegetative cover and a steady flow of water. Under this component, investments will comprise: (i) soil conservation investments, including check dams; (ii) rehabilitation of degraded forests; (iii) development of public nurseries; (iv) rehabilitation and sustainable management of degraded grazing land/rangelands; and (v) livestock watering structures as laid out in the microcatchment plans.
9. The outcome of the investments in improved livelihoods component is improved living conditions through supporting small-scale crop and livestock production on private land. The project will provide opportunities on a cost-sharing basis to raise the incomes of microcatchment communities, reinforcing the adoption of rehabilitation activities. The investments will comprise a possible menu of: (i) improved grain production; (ii) forage crop production; (iii) improved livestock stables; (iv) orchard establishment; (v) improved vegetable production; (vi) small-scale irrigation; (vii) contracted seedling production; and (viii) promotion of energy-saving technologies. The investments under this component will take into consideration the agroecological and socio-economic conditions in each village.
10. Most activities are gender neutral and deliver benefits to whole households. However, due to traditional gender roles in the villages, some activities will mainly target women (energy saving, horticulture) and others mainly men (livestock, erosion control, public works away from the homestead). The planning process will

address these gender differences to ensure that activities affect women positively, and the monitoring and social surveys should pay careful attention to changes in women's workloads and benefits from the project.

### **III. Project implementation**

#### **A. Approach**

11. Community involvement and ownership are facilitated by the project's demand-driven approach, starting from the expressed wishes and needs of the people living in the targeted microcatchments. Selection of activities to be carried out in the individual villages will be flexible and will respond to the communities' expressed needs as well as to activities' physical and economic feasibility. Activities targeting improvement of the village communities' economy and livelihoods will be closely linked to, and dependent on, the rehabilitation and care of natural resources.

#### **B. Organizational framework**

12. The General Directorate of Forestry (OGM), within the recently reconfigured Ministry of Forestry and Water Affairs (MFWA), will be responsible for implementation at the central level in Ankara, the regional level in Elazığ, and the provincial level. Operational units to support field implementation will be established within OGM in Ankara and in Elazığ. Planning and facilitation teams will be recruited from the private sector. A steering committee will be established at the central level, responsible for overall policy guidance and oversight, including approval of the project implementation plan and the annual workplan and budget (AWP/B).

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

13. Planning exercises to be carried out by the microcatchment planning teams will be based on a highly participatory approach that facilitates equal involvement of all groups in the villages, including women, youth and the most resource-poor village dwellers. The resulting microcatchment plans will set out the optimal programme of investments in the rehabilitation of natural resources (soil, vegetation, pastures and water resources), small-scale agriculture and energy-saving.
14. The monitoring and evaluation (M&E) system comprises both performance and impact monitoring. All M&E data will be disaggregated by gender and province. The logical framework indicators, combined with a selection of indicators from the microcatchment plans, will form the basis of the monitoring system. OGM staff have the capacity for and will carry out evaluation of the impact of different techniques and approaches. This will enable the collection and sharing of knowledge within OGM and on a broader national and international level. The main learning for MFWA will come from setting up a system for working with upland communities to co-manage the resources. The processes of microcatchment planning and management will be documented for replication in other areas. Annual planning workshops will provide a forum for documenting lessons learned and identifying promising areas for knowledge generation.

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

15. The Strategic Planning and Budgeting Department (SPBD) of OGM will be responsible for financial management of the project. The AWP/B will be subject to IFAD's prior review and no objection before inclusion in the government budget. The Government will establish two (2) accounts at the central bank designated to receive funds in advance in United States dollars for proceeds from the IFAD loan/grant. SPBD will be authorized to operate this account. It will channel the funds through its OGM corporate account based on the approved AWP/B, and will track the funds through specially assigned codes. For procurement, national procurement procedures as established in the Public Procurement Law will be followed, provided these are consistent with the IFAD Procurement Guidelines. IFAD guidelines will be followed for

procurement of technical assistance and specialists. For each contract to be financed by IFAD proceeds, the types of procurement methods, need for pre- or post-qualification, estimated cost, prior review requirements and time frame will be agreed between the borrower and IFAD in the annual procurement plan.

16. In terms of governance, all financial and material transactions of the project will be subject to Turkey's robust prevailing governance framework and will comply with IFAD's exacting requirements for transparency and rectitude. Good governance measures built into the project include: (i) undertaking all necessary measures to create and sustain a corruption-free environment for activities under the project; (ii) instituting, maintaining and ensuring compliance with internal procedures and controls for activities under the project, following international best practice standards; and (iii) compliance with the IFAD Policy on Preventing Fraud and Corruption in its Activities and Operations.

### E. Supervision

17. The MRWRP will be supervised directly by IFAD. Supervision and implementation support will be based on IFAD's operational modalities and practices and will include loan/grant administration and project implementation support.

## IV. Project costs, financing, benefits

### A. Project costs

18. Total investment and incremental recurrent project costs, including physical and price contingencies, are estimated at US\$38.51 million. Investment costs make up 96.3 per cent of the total projected baseline costs, whereas recurrent costs amount to 3.7 per cent.

### B. Project financing

19. At current estimates, an IFAD loan of US\$27.66 million and a grant of US\$0.43 million will finance 73 per cent of the total project costs, while the Government will contribute US\$7.45 million (19.3 per cent) of total costs. Approximately US\$2.97 million (7.7 per cent) will be provided by the primary beneficiaries (participating farmers in the project area).
20. As an exception to section 5.01(d) of the General Conditions for Agricultural Development Financing and bearing in mind the provisions of articles 32(c) and 32(f) of the Lending Policy and Criteria, the borrower has requested an increase of the grace period from three (3) to five (5) years. During the "additional grace period" of two years, interest would continue to accrue and would be included in the net present value to be maintained, consistent with article 32(g) of the Lending Policies and Criteria. Moreover, the increase in the grace period would have minimal impact on the country's debt sustainability and debt-servicing capacity.

### Financing plan by component

(Thousands of United States dollars)

	IFAD		IFAD grant		Gov: budget		Gov: taxes		Benef.		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Natural resource and environmental management	2 394.8	75.4	315.0	9.9	-	-	466.4	14.7	-	-	3 176.2	8.2
2. Investments in natural resources and environmental assets	11 568.3	74.8	-	-	1 153.0	7.4	2 721.7	17.4	63.2	0.4	15 506.3	40.5
3. Investments in improved livelihoods	12 617.1	68.2	-	-	126.0	0.7	2 854.3	15.4	2 905.5	15.7	18 502.9	47.9
4. Operations unit	1 081.0	81.4	115.0	8.7	126.0	9.5	5.6	0.4	-	-	1 327.6	3.4
	27 661.2	71.9	430.0	1.1	1 405.0	3.6	6 048.1	15.7	2 968.7	7.7	38 512.9	100.0



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

21. The project is expected to generate substantial net incremental benefits, mainly from two types of investments: (i) natural resource rehabilitation and erosion control measures; and (ii) financing of income-generating and/or expense-reducing activities. The benefits of natural resource rehabilitation and erosion control measures will mainly arise from: reduced erosion as measured by less soil loss, and reduced flood and landslide damage, as well as the additional benefit of short-term employment provided each year through hiring local villagers for soil conservation works. Benefits from investments in improved livelihoods stem from income-generating and/or expense-reducing activities in the form of agricultural and livestock production, as well as decreases in household expenditures. The latter will mainly be achieved through investments in alternative energy resources, comprising solar water heaters, energy efficient stoves and housing insulation. The overall economic internal rate of return (EIRR) is estimated at 8 per cent over 20 years. The sensitivity analysis shows that this base rate is slightly more sensitive to shortfalls in benefits than to cost increases of equal magnitude. The economic analysis assumes a constant production scenario in a without-project situation. Simulations of a degrading production scenario indicate an EIRR in excess of 12 per cent.

### **D. Sustainability**

22. The Turkish Government has the capacity to design and deliver effective remediation of the severely degraded upland watersheds of eastern Turkey, and thereby improve the livelihoods of poor resident communities through more-stable water flow and more-productive soil and vegetation. The MRWRP is embedded in existing well-functioning government structures, which will ensure sustainability. Thorough participatory approaches and incentives in terms of investments under the livelihood component are built into project design to ensure a voluntary gradual change in communities' behaviour in managing shared natural resources, thus breaking the vicious cycle of poverty and natural resource degradation.

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

23. The main potential risks for the MRWRP include: macroeconomic stagnation and decline after several years of strong growth; extreme events and natural disasters; scaling back of the ambitious national land rehabilitation programme; and a government retreat from its pro-poor policies focused on reducing regional income disparities. The prospects for continuing economic growth remain sound, although the world financial situation is currently critical. In the context of European Union accession, Turkey is adopting measures to meet the required technical and administrative standards for trade and to comply with stringent environmental protection protocols. It is expected that existing progressive forestry and natural resource management policies will continue to be improved and enforced. Turkey is committed to tackling the degraded state of the forest lands in the eastern mountains and the attendant pockets of relatively extreme poverty. The socio-political advances and reforms of the past several years appear solid. Natural disasters, notably earthquakes, are notorious in eastern Turkey and have detrimental impacts on people and infrastructure, but Turkey has an experienced preparedness and is capable of minimizing their impact.

## **V. Corporate considerations**

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

24. The design of the MRWRP is aligned with all relevant IFAD strategies and policies, including: the IFAD Strategic Framework 2011-2015; the IFAD Policy on Targeting; the Plan of Action 2003-2006: Mainstreaming a gender perspective in IFAD's operations; IFAD's Engagement with Middle-Income Countries; the IFAD Climate Change Strategy; the IFAD Environment and Natural Resource Management Policy;

the IFAD Policy on Supervision and Implementation Support; and IFAD's Environmental and Social Assessment Procedures.

25. Concerning environmental impact, the project will promote short, medium and long-term benefits, and the interventions are not subsequently expected to result in any negative environmental outcomes. Project design will inherently help reduce pressure on natural resources and assist men and women in engaging in more productive farming that will help support livelihoods. It will promote more-efficient use of natural resources and energy and thus enhance the resilience of rural households to shocks and reduce their vulnerability to extreme weather events. The thrust of the project's interventions and investments are directed to improving a fragile and damaged ecosystem, thus it is proposed that the MRWRP be classified as Category B.

## **B. Alignment and harmonization**

26. Key international partners for this project will be the World Bank and the United Nations Development Programme (UNDP). The World Bank has substantial prior experience in watershed development in the Black Sea region and Anatolia, and is preparing an analytical and advisory assistance study, along with MFWA and OGM, as part of developing a watershed management strategy. The study will be an important input into MRWRP implementation. IFAD has historically partnered with UNDP in Turkey and this is likely to continue as part of IFAD's commitment to development effectiveness.

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

27. The innovative elements of the project relate to the strong emphasis on village dwellers' involvement in decision-making and implementation processes and the attempts to create a strong sense of ownership among the upland communities to ensure sustainability. While the government entities concerned have a well-documented record in physical stabilization and recovery of degraded natural resources, participatory elements require further strengthening to ensure lasting long-term impact. The participatory approaches to be tested in the project will be of relevance to and can be scaled up to other and bigger watersheds in the country.

## **D. Policy engagement**

28. With this project as a starting point, IFAD, along with other donors involved in supporting the Government in its natural resource management endeavours, will seek to strengthen dialogue with the entities concerned on the introduction of additional incentive structures for forest villagers to improve the environment. In the future this may include the introduction of new systems for allocation of land from the public to the private sphere.

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

29. A project financing agreement between the Republic of Turkey and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. A copy of the negotiated financing agreement is attached as an annex.
30. The Republic of Turkey is empowered under its laws to receive financing from IFAD.
31. I am satisfied that the proposed financing will comply with the Agreement Establishing IFAD and the Lending Policies and Criteria.

## **VII. Recommendation**

32. 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 ordinary terms to the Republic of Turkey in an amount equivalent to seventeen million nine hundred and fifty-five thousand one hundred and sixty-two special drawing rights (SDR 17,955,162) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

RESOLVED FURTHER: that the Fund shall provide a grant to the Republic of Turkey in an amount equivalent to two hundred and eighty thousand special drawing rights (SDR 280,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Kanayo F. Nwanze  
President

NEGOTIATED TEXT  
05/11/2012  
D/F/ICR

IFAD LOAN NO. \_\_\_\_\_  
IFAD GRANT NO. \_\_\_\_\_

## FINANCING AGREEMENT

Murat River Watershed Rehabilitation Project  
(MRWRP)

between the

**REPUBLIC OF TURKEY**

and the

**INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT**

Signed in \_\_\_\_\_

on \_\_\_\_\_

## FINANCING AGREEMENT

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

IFAD Grant Number: \_\_\_\_\_

Project Title: Murat River Watershed Rehabilitation Project (the "Project")

The Republic of Turkey (the "Borrower/Recipient")

and

The International Fund for Agricultural Development (the "Fund" or "IFAD")

(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, except as provided in paragraph B2. 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 and a Grant to the Borrower/Recipient (collectively referred to as "the Financing"), which the Borrower/Recipient shall use to implement the Project in accordance with the terms and conditions of this Agreement.

### Section B

1. A. The amount of the IFAD Loan is SDR 17 955 162.  
B. The amount of the IFAD Grant is SDR 280 000.
2. The IFAD Loan is granted on ordinary terms with a maturity period of 18 years. As an exception to section 5.01(d) of the General Conditions, the applicable grace period shall be five years.
3. The Loan Service Payment Currency for the IFAD loan shall be the US dollar.
4. The first day of the applicable Fiscal Year shall be 1 January.
5. Payments of principal and service charge of the IFAD loan shall be payable on each 1 June and 1 December.
6. The Borrower/Recipient shall provide counterpart financing for the Project in an amount approximately equivalent to USD 1 601 600 in cash contribution and approximately USD 6 850 300 to cover taxes.

**Section C**

1. The Lead Project Agency shall be the General Directorate of Forestry (OGM) of the Borrower/Recipient.
2. The Project Completion Date shall be the seventh anniversary of the date of entry into force of this Agreement.

**Section D**

The Financing will be administered and the Project supervised by the Fund.

**Section E**

1. The following is designated as an additional general condition precedent to withdrawal: A Central Operations Unit (OU) shall have been established, embedded in the Lead Project Agency, to coordinate Project implementation, and a Deputy Manager acceptable to the Fund shall have been recruited nationally on a competitive basis to head the OU.
2. This Agreement is subject to ratification by the Borrower/Recipient.
3. The following are the designated representatives and addresses to be used for any communication related to this Agreement:

For the Borrower/Recipient:

Prime Ministry  
The Undersecretariat of Treasury  
General Directorate of Foreign Economic Relations  
Inonu Bulvari NO 36  
06510 Emek – Ankara  
Turkey

Facsimile Number: +90 312 204 73 66; and +90 312 204 73 67

Copy (for correspondence regarding payment of principal and interest only) to:

General Directorate of Public Finance  
Inonu Bulvari NO 36  
06510 Emek – Ankara  
Turkey

Facsimile Number: +90 312 204 73 66

For the Fund:

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

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/Recipient.

REPUBLIC OF TURKEY

\_\_\_\_\_  
[Authorized Representative]  
Title

INTERNATIONAL FUND FOR  
AGRICULTURAL DEVELOPMENT

\_\_\_\_\_  
Kanayo F. Nwanze  
President

## Schedule 1

### *Project Description and Implementation Arrangements*

#### I. Project Description

1. *Target Population.* The beneficiaries of the Project shall be poor women and men smallholders, living in upland villages in selected Micro-Catchments (MCs) within Elaziğ, Bingöl and Muş provinces (the "Project Area").
2. *Goal.* The overall goal of the Project shall be to reduce poverty among the upland communities of the Murat river watershed.
3. *Objective.* The objective of the Project is to support Government's efforts to check further degradation of watersheds and to improve the natural resource base as a means to raise income and livelihood in upland villages. The Project will specifically focus on village dwellers' involvement in the decision-making and implementation processes relating to the rehabilitation of the existing natural resources while facilitating the creation of a strong sense of ownership among the upland communities and thereby ensuring sustainability of investments.
4. *Components.* The Project shall consist of three components: (i) *Natural Resources and Environmental Management* (consultations, empowerment and planning); (ii) *Investments in Natural Resources and Environmental Assets* (land, water and vegetation); and (iii) *Investments in Improved Livelihoods* empowering upland communities to maintain and benefit from the natural resources improvements.

#### 4.1 **Component 1: Natural Resources and Environmental Management.**

This Component shall seek to promote the establishment of environmentally conscious communities capable of planning and managing the use of natural resources. The Component will focus on assisting Government institutions' efforts to make planning and management more people-oriented, and to build ownership and sustainability into its programmes for investments in the upper watersheds of Eastern Turkey. The Project will support the generation, and implementation of viable and replicable micro-catchment plans under which the village communities' livelihood strategies are aligned with the sustainable use and improvement of public/shared natural resources. Contracted micro-catchment Planning Teams shall assist villagers to make informed decisions about committing themselves to work with the implementing agency to rehabilitate their degraded natural resources (in the short-term) and manage them sustainably (in the medium and long-term). The participatory planning will result in the preparation of village plans addressing both natural management and improved livelihood initiatives.

#### 4.2 **Component 2: Investments in Natural Resources and Environmental Assets.**

Under this Component investments will comprise: (a) soil conservation investments, including check dams; (b) rehabilitation of degraded forests; (c) rehabilitation and sustainable management of degraded grazing land/rangelands; and (d) livestock watering structures as laid out in the micro-catchment plans. This will result in reduced erosion, improved vegetative cover and a steady flow of water.



**4.3 Component 3: Investments in Improved Livelihoods.** The investments under this Component shall comprise a possible menu of: (i) improved grain production; (ii) forage crop production; (iii) improved livestock stables; (iv) orchard establishment; (v) improved vegetable production; (vi) small-scale irrigation; (vii) contracted seedling production; and (viii) promotion of energy saving technologies. Investments under the component shall take into consideration the agro-ecological and socio-economic conditions in each village. The investments in small-scale crop and livestock production shall be on a cost-sharing basis on private land and shall seek to reinforce and underpin the adoption of rehabilitation activities.

## **II. Implementation Arrangements**

**5. Project Steering Committee.** A Project Steering Committee to provide overall oversight project implementation shall be established within the Ministry of Forestry and Water Affairs (MFWA), the implementing agency. The Committee shall be chaired by the Deputy Undersecretary for Forestry and membership shall comprise the Director General of the General Directorate of Forestry (OGM) and Director General of the General Directorate of Combating Desertification and Erosion Control (CEM) and the Department Heads of (i) Afforestation; (ii) Soil Conservation and Watershed; (iii) Forest-Village Relations Department; (iv) Strategy Planning; (v) Data Processing; (vi) Nursery and Seed Activities; and (vii) Watershed Planning and Land Rehabilitation (CEM), or such other membership as the Fund and the Borrower/Recipient may agree. A Deputy Project Manager, to be recruited externally, shall act as secretary to the Committee. The Committee shall provide overall policy guidance and oversight, approve the Annual Work Plans and Budgets and ensure that overall operations are within the legal and technical framework agreed between the Government and IFAD.

**6. Central Operations Unit.** A Central Operations Unit (OU) shall be established within the Lead Project Agency in Ankara to support implementation of the Project. The Unit shall comprise a Project Manager, a Central Focal Point, five technical staff members and contracted support staff. The Deputy General Director of the Lead Project Agency shall assume the position as Project Manager and the head of the Afforestation Department of the Lead Project Agency shall be the Central Focal Point. The OU staff members seconded by the Lead Project Agency shall be on part time basis. The Deputy Project Manager shall work closely with the OU. The OU's main functions shall be: (i) to provide broad based management support to the field operations in terms of planning, programming, budgeting, monitoring and documenting progress; (ii) to elevate experiences and lessons learned through the Steering Committee to the policy level; and (iii) to report to the Ministerial level and General Directorate level and IFAD.

**7. Field Operation Unit** A Field Operation Unit (FOU) shall be established at the Regional Directorate of Forestry (OBM) level in Elazığ, with seconded staff from OBM and support from the Deputy Project Manager who will be based at this level. The principal functions of the Unit shall be: (i) to provide management support to the implementation at the provincial level; (ii) to coordinate planning

and reporting between OBM and the Lead Project Agency in Ankara; and (iii) to handle day-to-day management and implementation of the Project. The Unit shall take the lead in the procurement of all civil works, goods and services, and technical assistance that relate to the field activities. The staff of the FOU shall include a senior forest engineer, a procurement officer, a monitoring and evaluation (M&E) officer, and a finance officer, all staff seconded from OBM on a part time basis.

8. **Provincial Level.** At the provincial level seconded forest engineers shall be appointed in Elazığ, Bingöl and Muş. Their tasks shall be to ensure coordination between their respective units and Deputy Project Manager in Elazığ. The Provincial level staff shall initiate screening of the potential micro-catchments in the three provinces. The final selection of micro catchments eligible for Project support shall be done jointly by the provincial units and (OBM) based on physical as well as socio-economic criteria. A Micro-Catchment Planning Team shall be contracted to work with the communities in the selected micro-catchments. The resulting micro-catchment plans shall stipulate the optimal programme of investments in the rehabilitation of natural resources (soil, vegetation, pastures and water resources), small-scale agriculture and energy saving. Once agreed, the micro-catchment plan will be carried out jointly by the provincial staff and the village communities.

9. The monitoring and evaluation function shall be integrated in the management system, and be guided by the Project's logical framework. The monitoring and evaluation activities will be carried out in coordination with the General Directorate of Combating Desertification and Erosion and the Lead Project Agency.

10. **Project Implementation Manual.** The Lead Project Agency shall prepare a draft Project Implementation Manual (PIM), which will be forwarded to the Fund for comments and no objection before being formally adopted.

11. **Mid-Term Review.** A Mid-term Review (MTR) shall be conducted at the end of Project Year three, to assess the progress, achievements, constraints and emerging impact and likely sustainability of the project and make recommendation and necessary adjustments for the remaining period of disbursement. The MTR shall be carried out jointly by the Lead Project Agency and IFAD.

## Schedule 2

### Allocation Table

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

Category	IFAD loan Amount Allocated (expressed in SDR)	IFAD Grant Amount Allocated (expressed in SDR)	Percentage
1. Civil Works	10 194 162		100% Net of Taxes, Beneficiary and Government Contribution
2. Vehicles, Equipment and Goods	4 261 000		100% Net of Taxes, and Beneficiary Contribution
3. Technical Assistance, Training, Studies and Workshops	2 991 000	280 000	100% Net of Taxes, and Government Contribution
4. Recurrent Costs			
(a) Salaries	257 000		100% Net of Government Contribution
(b) Other Operating Expenditures	252 000		100% Net of Taxes, and Government Contribution
<b>TOTAL</b>	<b>17 955 162</b>	<b>280 000</b>	

# Logical framework

Results Hierarchy		Verifiable Indicators	Means of Verification	Assumptions
<b>Goal</b>				
Reduced poverty among the upland communities of the Murat river watershed.		Number of village HHs living below the poverty line reduced (10%).	Official statistics, Baseline (MCP) and impact assessment studies.	Government maintains and pursues pro-poor policies. No extreme economic, seismic, or climatic shocks.
<b>Development Objective</b>				
Improved livelihood and natural resources management in the upper catchment areas in the Murat watershed.		<ul style="list-style-type: none"> <li>➢ 30% increase in vegetative cover in treated micro-catchments, three years after project completion (include tree survival rate).</li> <li>➢ 80% of participating families have improved livelihood (nutrition, income, reduced workload).</li> <li>➢ 10% reduction in government expenditures on rehabilitation of public works damaged due to floods and landslides.</li> </ul>	GIS –based data collection including photos. Vegetation plot/afforestation data Social survey. Improved livelihood measured by nutritional diet, income and women workload. Provincial records.	Existing forestry and natural resource policies are improved & enforced.  Infrequent staff turnover.
<b>Components/Outcomes</b>				
<b>1. Natural resources and environmental management</b>				
1.1	Environmental awareness enhanced in MC communities.	50% of villagers in targeted micro catchment areas have agreed to MC management plans.	OGM records.  Baseline survey.	Awareness raising effective.
1.2	Modalities for participatory & sustainable natural resource management operational.	Consensus in planning and management decision-making is reached through participatory processes with equal gender representation and inclusion of vulnerable groups.	Impact assessment. Meeting attendance and minutes.	Existing village and OIM structures for decision making allows for the establishing effective modalities for NRM co-management.
<b>2 Investments in natural resources and environmental assets</b>				
2.1	Rehabilitation of soil and vegetation.			
2.1.1.	Soil erosion reduced.	10% reduction in sediment load from selected micro catchments.	Sediment traps. Erosion field plots. Vegetation field plots. OGM records.	Physical conditions (soil, rainfall) and management practices (fire wood collection, livestock rearing) adequate for soil and vegetation rehabilitation.
2.1.2.	Vegetative/forest cover increased.	20% reduction in erosion from treated areas.		
2.1.3.	Improvements in grazing/rangeland.	30% increase in vegetation cover in rangelands.		
2.2.	Improved livestock productivity due to improved access to clean water.	75% of livestock in rangeland benefit from water points (possible proxy: livestock mortality).	OGM/PPT records Social surveys	Improved water access translates into better livestock management.
<b>3 Investments in improved livelihood</b>				
3.1.	Diversified and more efficient use of energy.			
3.1.1.	Fuel wood consumption reduced.	30% reduction in annual HH fuel wood use.	-	OGM/PPT records.
3.1.2.	Energy saving technologies adopted.	25% increase in number of HH using renewable technologies.		
3.2.	Improved agricultural productivity.			
3.2.1.	Improved stables and livestock management.	20% productivity increase per livestock head	HH and focus group interviews. PPT records. HH and focus group interviews.	Villagers demonstrate an interest and are willing to invest in new management practices Sufficient water availability. Possible to provide sufficient no. of villagers without irrigation access to irrigation.
3.2.2.	Output from horticulture, orchards, forage and field crops increased.	10% increase in rain fed crop production and yields/ha. 30% increase in overall value for irrigated crop.		
3.2.3.	Increased access to irrigation for horticulture/agriculture, forage and orchards).	20 % increase of number of households with access to irrigation.		

## Logical framework (cont'd)

Outputs				
<b>1</b>	<b>Natural Resources and Environmental Management</b>			
	<p>NRM awareness raised in MC communities.</p> <p>25 MC plans produced with operational modalities for participation.</p> <p>Staff trained in NR and environmental management including: Multifunctional participatory planning; participatory monitoring &amp; data management; poverty and gender sensitization</p> <p>Studies and workshops in: NR economics; carbon sequestration; energy efficiency and alternative energy sources</p>	<p>Percentage of villagers in MC area taking part in preparing MC plans.</p> <p>Selected elements in the MC plans are NRM oriented.</p> <p>Numbers of plans produced (pro-poor/gender sensitive/participatory).</p> <p>Number of TA contracts, workshops and training.</p> <p>OGM, OBM, OIM staff and PPT attendance and results.</p>	<p>Supervision reports.</p> <p>OGM records.</p> <p>Audits.</p> <p>OGM records.</p> <p>Post training test/evaluation charts.</p>	<p>Procurement systems in place and functioning.</p> <p>Sufficient Government counterpart funds available in a timely manner.</p> <p>No community segment excluded from participating.</p> <p>Beneficiaries accept terms of cost sharing.</p>
<b>2</b>	<b>Investments in Natural Resources</b>			
	<ul style="list-style-type: none"> <li>• Soil conservation works (9 000 ha).</li> <li>• Forest and rangeland rehabilitation and afforestation (22 160 ha).</li> <li>• Two public nurseries completed in Elaziğ and Muş.</li> <li>• Erosion measurement field trials installed (25).</li> <li>• Sediment measurement stations installed (25).</li> </ul>	<ul style="list-style-type: none"> <li>• Soil conservation investments effective.</li> <li>• Forests rehabilitated (% increase vegetation cover), afforestation (number of trees/survival rate).</li> <li>• Rangelands rehabilitated (ha. and % increase in vegetation cover): <ul style="list-style-type: none"> <li>◦ No. of livestock drinking facilities operational; and</li> <li>◦ No. of shelters for communal use operational.</li> </ul> </li> <li>• Public nursery that includes cold storage for seedlings developed (production increase).</li> <li>• Erosion field plots and gully erosion (stick measurement) operational and participatory.</li> <li>• Sediment measurement stations operational.</li> </ul>	<ul style="list-style-type: none"> <li>• Erosion/sediment measurement.</li> <li>• MFWR records/photo (time and GPS marked).</li> <li>• Audits.</li> <li>• Data collected for erosion/water run-off/sediment yield.</li> </ul>	<ul style="list-style-type: none"> <li>• OGM pursue best practices for NRM and erosion control</li> <li>• OGM and village collaboration in operation and data handling</li> <li>• OGM and village collaboration in operation and data handling</li> </ul>
<b>3</b>	<b>Investments in Improved Livelihood</b>			
	<ul style="list-style-type: none"> <li>• Demonstrations and farmer training events (308).</li> <li>• Farmer exposure visits (292).</li> <li>• Improved wheat and barley production (1 381 ha).</li> <li>• Improved forage crops (1 230 ha).</li> <li>• Improved horticultural production (247 ha) including 180 ha of new orchards.</li> <li>• Water storage ponds built and connecting earth canals rehabilitated (250).</li> <li>• Drip irrigation installed (127 ha).</li> <li>• New contracted seedlings producers operational and selling (4).</li> <li>• New solar panels installed and in use (1 250 hh's).</li> <li>• Insulation (625hh's).</li> <li>• Energy saving stoves installed (1 250 hh's).</li> <li>• Improved stables (100).</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration and farmer training program conducted (number of participants).</li> <li>• Farmer exposure visits carried out (number of participants).</li> <li>• Sustained increase in grain yields (%).</li> <li>• Sustained increase in forage crop production (%).</li> <li>• Sustained increase in horticultural production (%).</li> <li>• Small scale irrigation developed: <ul style="list-style-type: none"> <li>◦ Water storage ponds functioning (increase in water collection); and</li> <li>◦ Increase in water supply from rehabilitated earth canals (%).</li> </ul> </li> <li>• Increase in crop yield and value from irrigated land (%).</li> <li>• Contracted seedling production introduced as a profitable business model.</li> <li>• Energy saving technologies (solar, insulation and stoves) have led to reduced fuel consumption.</li> <li>• Increases revenues from increased yield o meat and milk and savings from less disease.</li> </ul>	<p>Supervision reports.</p> <p>OGM records.</p> <p>PPT records.</p> <p>Audits.</p> <p>Number of trees in orchards and survival rate (OGM records).</p> <p>PPT records.</p> <p>Number of seedlings produced/revenues. (Sale Record.)</p> <p>Fuel consumption (PPT record/survey).</p> <p>PPT records.</p>	<ul style="list-style-type: none"> <li>• Village communities interested in participating in training/exposure.</li> <li>• Sufficient land available and farmers interested in applying new technologies.</li> <li>• (Improved crop production, crop rotations and soil conservation measures.)</li> <li>• Interest to engage in seedling production.</li> <li>• Possible to produce seedlings at competitive prices sufficient demand for seedlings.</li> <li>• Improved efficiency translates into less use of fuel.</li> <li>• Existing stables have negative impact on livestock production and health.</li> </ul>