



UNITED NATIONS DEVELOPMENT PROGRAMME  
Global Environment Facility (GEF)

PROJECT OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

Number and title: IRA/01/G35  
CARBON SEQUESTRATION IN THE  
DESERTIFIED RANGELANDS OF  
HOSSEIN ABBAD

Duration: 6 years

Executing Agency: NEX National Execution  
Forest and Rangeland and Watershed  
Management Organization (FRWO)  
Ministry of Agricultural Jihad

Implementing Agency(s): UNDP

Estimated Start Date: April 2003

Estimated End Date: April 2009

Summary of UNDP & Cost Sharing  
Inputs (US\$)

UNDP/GEF (PDF A) \$ 23,739

UNDP/GEF \$726,200


Government Contribution (cash)  
\$630,000

TOTAL CASH \$1,379,939

Government Contribution (in kind)  
\$ 330,000

TOTAL PROJECT COST  
\$1,709,939

**Brief Description:** From a global standpoint, the over-riding objective of this project is to sequester atmospheric carbon. The project will demonstrate that desertified rangelands can be cost-effectively reclaimed by and for the benefit of the local people and that there is significant potential to sequester carbon in plants and soil in these areas for overall global benefit. Nationally, improving the productivity of semi-arid areas and combating desertification are among development priorities of the government. Locally, rehabilitation of the project site (Hossein Abad) in southern Khorasan and improving the socio-economic status of the local communities is in line with eradicating abject poverty and enhancing the project site's Human Development Index. The project will employ participatory approaches to mobilize and empower the stakeholder communities to rehabilitate designated areas on their own. The lessons drawn in true collaborative rehabilitation and management of natural resources could be applied in similar places in Iran and even in other countries with similar topography.

On behalf of the FRWO:   
H.E. Mr. M. Samadi, Deputy Minister /Head of FRWO

Date: 15 April 2003

On behalf of the United Nations Development Programme:  
Mr. ~~Siba Kumar Das~~, UNDP Resident Representative a.i.

Date: 15 April 2003

## List of Acronyms

BFS	Joint MPO/FRWO/UNDP Baseline and Feasibility Studies
CM	Collaborative Management
CMB	Co-management Board
CTA	Chief Technical Advisor
FRWO	Forest, Rangeland and Watershed Management Organization
G.G.	Governor General
GEF	Global Environment Facility
GHGs	Green House Gases
GIRI	Government of Islamic Republic of Iran
H.A.	Hossein Abbad
HDI	Human Development Index
LPG	Liquefied Petroleum Gas
M&E	Monitoring and Evaluation
MFA	Ministry of Foreign Affairs
MOAJ	Ministry of Agricultural Jihad
MPO	Management and Planning Organization
NGO	Non-governmental Organization
NIOPDC	National Iranian Oil Products Distribution Company
NPD	National Project Director
NPM	National Project Manager
NR	Natural Resources
NRM	National Resources Management
ONA	Office of Nomadic Affairs
PMC	Project Management Cell
PNRO	Provincial Natural Resources Organization
RWO	Regional Water Organization
SC	Social Communication
SHD	Sustainable Human Development
T&E	Training and Extension
TOR	Terms of Reference
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VIC	Village Islamic Council
WFP	World Food Programme

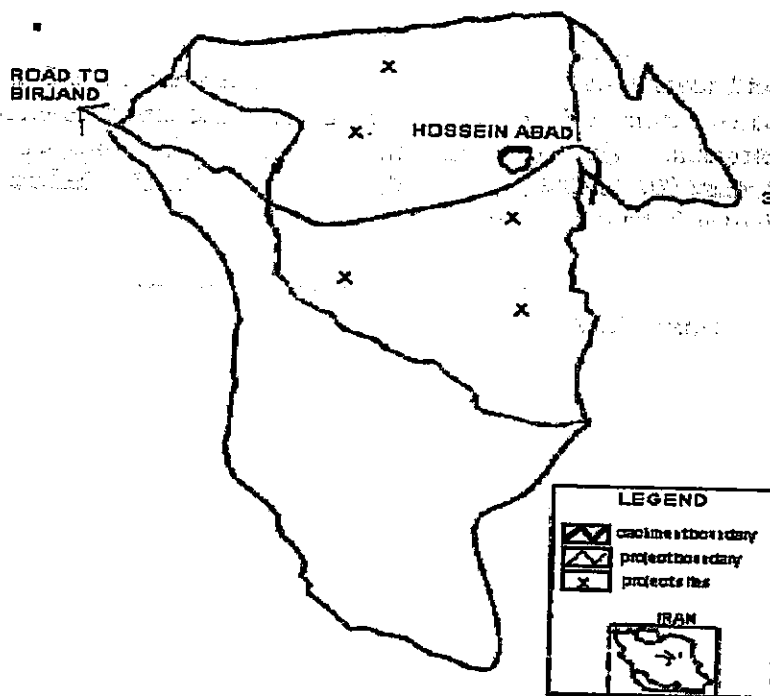
## A. CONTEXT

### A.1. PROJECT BACKGROUND & PROBLEM TO BE ADDRESSED

The GEF co-funded rehabilitation project is in a heavily degraded area, which due to its proximity to Afghanistan's border was previously partially occupied by refugees from Afghanistan. The borders of the sub-watershed/hydrological area will mark the physical boundaries of the project site. The final designation of individual rehabilitation sites within the broader sub-watershed area is subject to the findings of Activity 5.1. (i.e. joint baseline studies by MPO, FRWO and UNDP). The Hossien Abad region (see Fig. 1) has been *tentatively* selected as the area where the rehabilitation activities will be undertaken. Some general information of the area is as follows:

Population	934; 5.7 people per household
Villages	30 (some abandoned) with 164 families
Occupation of local people	Pastoralists with limited farming (300 m <sup>2</sup> /cap)
Domestic animals	12,000 sheep/goats, a few donkeys (12 has./animal)
Hydrological area ( <i>has</i> )	148,000 hectares ( <i>has</i> ), over 50% is hilly/steep
Precipitation (mm)	Average 188, (max. 343, min. 117)
Temperature (Celsius)	Mean 14.5 °, (max. 40.5 °, min. -16 °)
Prevailing wind:	Sistani. 120 days north to south.
Plain elevation (meters)	1,700
Land stability.	Earthquake prone

Fig. 1. Project Area Map



The H.A. area covers some 148,000 *has*, but much of this is hilly and rocky land. It supports just under 1,000 people. There are 30 villages some of which have been abandoned and others only contain one or two families. Animal herding is the main occupation, with the villagers owning about 12,000 sheep and goats, but the land is so degraded that the local herders have to take their flocks to other areas for long periods of time. For four months each year, sand-laden 'sistani' winds blow

almost continuously. This is not only unpleasant, but it makes arable farming difficult because sand covers the fields. There are also areas where sand drifting is active. Belts of trees could filter out sand particulates and shrubs can be used to stabilize dunes.

Two main factors that contributed to land degradation and desertification in the project area : (1) lack of control over the land by the local population and, (2) in the ten-year period to 1996, a large influx of Afghan refugees. This led to overgrazing by local, refugee and migrant animals, and to excessive fuel wood gathering. Now the refugees have been repatriated and the government has provided (subsidized) kerosene and liquefied petroleum gas (LPG) at local distribution centers as a substitute for fuel wood.<sup>1</sup> However, much of the area has been seriously degraded with little if any woody biomass left alive and with only about a 10% ground cover dominated by an unpalatable species *Peganum hamala*. Therefore, there is a serious and urgent need to rehabilitate this degraded rangeland area in order to provide forage for the animals and to reduce the damage caused by wind erosion through re-establishing perennial plants.

The Office of Natural Resources in Birjand received an initial request for the project from the Village Islamic Council of Hossien Abad (H.A.). A general group discussion was held with the villagers, nomads, and two scientists from the university of Mashhad in November 1997 in H.A. The meeting concluded that there is an urgent need to rehabilitate the whole area through a partnership between local people and the concerned local and national government agencies. A further meeting in May 1999, in which representatives of 4 villages were present, reinforced the conclusions of the first meeting. As a result of these meetings, a commitment was made by the Government of the Islamic Republic of Iran (GIRI) and the target communities to convert at least 9,000 *has* of degraded rangelands to grazing woodland. The villagers made a commitment to actively participate *and pledged to extend the proposed project area of 9,000 has*, provided they receive some support in the form of seeds/plants and water during the first two years to ensure plant survival.

By the end of the project, the amount of additional atmospheric carbon, that is stored in above and below ground biomass and in the soil, will be about 2 tonnes per hectare (these figures will have to be verified based on *real* climatic, topographic, socio-economic conditions as well as species mix). This is anticipated to increase to about 14 t/ha after 20 years; to 21 t/ha after 50 years; and, to 30 t/ha after 100 years (these estimates will have to be verified). About 90% of the carbon will be below ground. Due to the prevailing arid climatic conditions and the stability of the sink, the carbon tends to recycle very slowly and the below ground storage of carbon is considered to be a high quality offset.

#### A.1.1. PRESENT RANGELAND MANAGEMENT PRACTICES

To date, the standard practice for land reclamation has been re-seeding temporary enclosed areas with grass and fodder species. This has had limited success, depending on rain water availability and animal exclusion achievement, resulting in a minimal increase in carbon sequestration. In areas with annual rainfall below 200-mm and without significant watering, the success rate is quite low.

The Islamic Republic of Iran, being one of the developing countries most affected by desertification, has made the rehabilitation of degraded lands a top priority. But due to limited resources, it has been unable to cover many areas out of its own budget. Also, it has concentrated on areas with moderate as opposed to low rainfall, where the standard practice of re-seeding followed by closure for five years has a reasonable chance of success. The more expensive treatment of planting, watering and closure, while successful in low rainfall areas, has not been extensively practiced because of cost constraints. Yet if nothing is done in these low rainfall areas, the incidence of desert creep and rangeland degradation will increase with adverse social and environmental consequences. These areas can be rejuvenated at a relatively low cost if a partnership is formed between the people, the government and civil society. Furthermore, incorporating woody plants into the reclamation program

<sup>1</sup> The current cost of kerosene is about US\$ 0.02/liter and that for LPG is about US\$ 0.05/kg.

can reduce desert creep, while at the same time increase the carbon store and provide some animal browse.

#### A.1.2. POTENTIAL FOR CARBON SEQUESTRATION IN IRAN

Iran covers about 164 million *has*, 85% of which (139.4 million *has*) is classified as arid and semi-arid receiving between 30 to 250 mm of annual rainfall. Out of this, there is about 34 million hectares (i.e. 26 % of total land area) of desert receiving less than 50 mm of annual rainfall. The potential for carbon sequestration in the latter areas is very low and the costs prohibitive. There are nearly 20 million *has* of arable land, but because of annual cropping, the potential for carbon sequestration is not attractive. With improved management, it is possible to increase carbon sequestration in forest areas and arable lands, but only about 12.4 million *has* of land are classified as forest, and therefore, the overall potential for increasing the store of carbon in these areas is limited.

The rangeland areas of Iran, because of their size, have the greatest overall potential for carbon storage. These occupy about 90 million *has* with annual rainfall ranging from 50 to 300 mm. Many of these semi-arid areas are degraded with a vegetative cover ranging from 5% to 50%. However, they can be reclaimed with grasses and perennial plants. Although the build up of organic carbon in wood and soils is moderate, some woody biomass species can grow in these low rainfall areas with saline soils. These areas have the potential to store up to an estimated one billion tonnes of organic carbon if they can be reclaimed and managed properly. Moreover, they would give an annual production of about 18 million tonnes of fodder (sufficient to sustain an estimated 10 million small animals), and about 60 million tonnes of woody biomass. The wood could be used for building and construction and the woody biomass as a renewable source of energy.

Because the existing carrying capacity of the land is low, people are abandoning such sites for urban areas and for more productive lands. Yet the potential of these sites, - up to an estimated 90 million *has*, although modest, is much greater than at present. This project is meant as a catalyst for rangeland reclamation via carbon sequestration and natural resource management throughout Iran and possibly in other countries.

#### A.1.3. ALTERNATIVE ACTIONS FOR RANGELAND REHABILITATION AND MANAGEMENT

The current standard practice for land reclamation has had limited success, depending on (rain) water availability and animal exclusion achievement. In areas where annual rainfall is below 200 mm, the success rate is very low without significant watering. The status quo does not auger well for increasing carbon sequestration. In these low rainfall areas, the proposed project will demonstrate the means not only to increase animal fodder production, but also to expand the storage of carbon and provide renewable energy at the same time. It will also enhance the flora and fauna, thus increasing biological diversity and rehabilitating the ecosystem. Thus, by encouraging such initiatives, the government is integrating global environmental protection concerns into national development activities: it is a "Win-Win" strategy.

With the active participation of the local population, low rainfall areas can be rehabilitated at a relatively low cost, using a mixture of woody and non-woody plants. Appropriate woody species and planting methods will be used to rehabilitate degraded "low rainfall" rangeland areas as an alternative to the standard government practice of re-seeding. In low rainfall areas, this standard technique is unlikely to be successful without extensive watering and weeding. The alternative rehabilitation techniques will not only provide global environmental benefits, but if combined with appropriate incentives, local institutional and financial mechanisms will result in increased economic activities in these "marginal" areas. This project combines several of the above goals and is an alternative to the standard practice for land reclamation by re-seeding temporary enclosed areas with grass and fodder species. This alternative can better achieve global, national and local objectives in low rainfall and degraded areas.

## A.2. PREVIOUS EXPERIENCES AND LESSONS

The GIRI, through the Forest, Rangeland and Watershed Management Organization (FRWO) has prioritized the rehabilitation of degraded lands. Hitherto, most of the rehabilitation work has concentrated on areas with moderate rainfall, where the standard practice of re-seeding followed by closure for five years has a reasonable chance of success, depending on (rain) water availability and animal exclusion achievement. This approach, however, has resulted in a minimal increase in carbon sequestration. In areas where annual rainfall is below 200 mm, the success rate is very low without significant watering. All of the rehabilitation work in desertified areas have been carried out by the FRWO with varying success rates and sustainability and invariably without the full-fledged support of the people in the target communities.

The UN has also carried out some rangeland improvement projects in the country. One of these projects has been implemented in a former refugee camp about 50 km from H.A. Trees/bushes were planted in this area to act as a barrier against the *Sistani* winds and sandstorms. Planting seedlings and watering is the only way to establish these, since the standard practice of closure and seeding will not be effective due to the semi-arid nature of the project area and because it is highly degraded.

Based on UNDP's social development experiences in Iran, it is believed that with the active participation of the local population in low rainfall areas, rehabilitation work could be carried out at a relatively low cost and in a more sustainable manner. Present rehabilitation work could be more effective with long lasting impacts if combined with appropriate incentives, local institutional and financial mechanisms with the ultimate objective of achieving human development in target project areas.

## A.3. DEVELOPMENT OBJECTIVE

The following is the development objective of the project:

Development Objective	Indicators	Verifiers
The annual rate of carbon storage in plants/trees and soil is increased in the degraded land areas in Iran.	A cumulative amount of upto 18,000 tons (depending on the area's potential to sequester carbon) carbon stored both above and below ground in the rehabilitated areas under the project is realized by mid 2008.	<ul style="list-style-type: none"><li>Documentation of annual hectarage of rehabilitated land and number of trees/plants planted by the FRWO and the villagers.</li><li>Documentation of estimates of annual carbon sequestration.</li></ul>

## A.4. NATIONAL STRATEGY TO ACHIEVE THE DEVELOPMENT OBJECTIVE

### A.4.1. LINKS WITH ONGOING INITIATIVES

Environmental measures such as tree planting (afforestation); desertification control, and biodiversity protection, rehabilitation of degraded lands, and re-grassing of suitable desert areas are priority issues in the government plans.

The project is consistent with the GIRI's global environmental commitments and programs. The Islamic Republic of Iran is a party to several environment conventions including the United Nations

Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD). As a result, the government has launched a wide variety of activities for reducing the emission of greenhouse gases, including this initiative that will specifically sequester carbon.

This project will demonstrate how desertified areas can be rehabilitated and made more productive for pastoral (and arable) farming, while at the same time the storage of carbon is increased and an enhanced flora and fauna achieved. It will demonstrate the practicability and cost-effectiveness of rejuvenating rangeland areas and making them productive through participatory approaches. The project is consistent with the GEF's short-term project criteria of cost-effectiveness, with a strong likelihood of success because it is country-driven by and for the local people.

#### A.4.2. PROJECT STRATEGY

While the main development objective is to sequester carbon through the rehabilitation of desertified areas, the project will involve capacity building for communities who will carry out the activities to sequester carbon. The project will empower communities, especially the poor and other marginalized groups in *H.A. and within the larger sub-watershed* to manage their own resources, as well as to have the capacity and therefore, the confidence to influence policies and to access support from outside. It encompasses issues of decentralised decision-making and control and ownership of financial, natural and material assets. By inference, the project is also aimed at putting in place the institutional and social systems that provide an enabling framework for people to participate. Devolution of local planning responsibilities to grass-root levels underpins community-based rehabilitation and resource management, thus enabling the target communities to have a greater formal say and responsibility over their livelihoods in line with better management of resources and sustained productivity.

The local people will, therefore, be actively involved at every stage of the project implementation. This project is an exercise in multi-party agreements and institutions. It is based on collaborative<sup>2</sup> rehabilitation and management of natural resources (NR). Collaborative Management (CM) in *H.A.* encompasses community-based and community-run initiatives. It is a pluralist approach to managing NRs, incorporating a variety of partners in a variety of roles, to the end goals of rehabilitation and sustainable use of NRs and the equitable sharing of resources-related benefits and responsibilities. The CM process needs some basic conditions to develop, among which are: (1) Full access to information on relevant issues and options; (2) Freedom and capacity to organize and express needs and concerns; (3) A non-discriminatory social environment; (4) The will of partners to negotiate; and, (5) Confidence in the respect of agreements.

The project's approach recognizes that there is no unique solution for managing NRs but, rather, a multiplicity of different options that are compatible with both indigenous knowledge and scientific evidence and capable of meeting the needs of conservation and development. Thus, there are no blueprints or universally applicable paths for undertaking this initiative. The process will be developed with the assistance of an international Chief Technical Advisor (CTA), who possesses similar experiences in other parts of the world. The approach also recognizes the different values, interests and concerns involved in managing a territory, area or set of NRs both outside the local communities and within them. Cooperation is, therefore, necessary for the effectiveness and efficiency of NR rehabilitation/management. It is envisioned that the project's participatory approach will utilize the capacities of the civil society and harness the complementarities of the comparative advantages of different stakeholders. Moreover, CM is open to various types of entitlements, even beyond the ones legally recognized. In other words there is a "negotiated governance perspective" where there are legal and "customary" points of reference in place. It is at its most effective when it clearly links entitlements and responsibilities.

<sup>2</sup> In this document collaborative, co-management and participatory management are synonymous and therefore used inter-changeably.

Preliminary meetings have taken place and many more will be held with the villagers and their representatives to instigate social mobilization and empowerment processes. Property rights, land ownership entitlements and land management options will be elucidated. The areas to be rehabilitated and their size will be discussed and agreed upon. Additional areas to be rehabilitated, mainly by the people themselves, will be included as part of the plans. The villagers and the FRWO with help and assistance from the CTA, project staff and other identified stakeholders will compile management plans, detailing the operations and timing.

Subject to agreement, at least 9,000 *has* of run-down land in several blocks will be rehabilitated with the active participation of communities in whose ownership the land will be vested. Moreover, the area to be rehabilitated will be close to target beneficiary communities. However, representatives from the other villages and from communities within the watershed will be allowed to participate as well<sup>3</sup>. Time and effort will be spent on training rural people, not only from the area, but also from surrounding regions making up the watershed, which includes H.A. Hence, others will be empowered to rehabilitate similar semi-arid areas. Such an approach will be based on "integrated watershed management", a domain that is little understood but has repercussions for widespread sustainable watershed development and enabling the communities to address their vulnerabilities to global climate change and adapt through wise use of water resources.

Social Communication is a necessary ingredient for the successful launching and replication of the project. Not only will the local people be made aware of the benefits of being fully involved in the project formulation and execution, but also the experience gained in the field will be used to replicate these concepts in other semi-arid areas of the country. To this end, emphasis will be placed on community-based NR management regimes and/or household or group ownership and management.

The socio-economic status of all strata of the village communities in the project area will be closely monitored over (and beyond) the project's lifetime. Once the management plans are negotiated, the Government has to formally agree to vest the land and its products in the local people and draw up legal documents to that effect. There will be scope to also identify other livelihood approaches as a long-term strategy to strengthen the socio-economic conditions in line with sustainable human development principles of the project. An important caveat is that alternative livelihood strategies should be integrated with natural resources constraints and social equity principles.

#### **A.5. BENEFICIARIES**

The immediate target beneficiaries are the people living in the project area and communities in the watershed basin. Through the involvement of selected national and provincial level stakeholders who are in a position to disseminate lessons and replicate the community-based models, it is anticipated that beneficiary circle will gradually widen first to surrounding areas and then to other similar areas within the country and even beyond. The FRWO and possibly other governmental entities, including those at local levels would also benefit from experimenting with new approaches to the collaborative rehabilitation and management of NRs. The people in the area are a homogeneous group with similar socio-economic status. A minor concern is that the nomads may not respect the planted areas and graze their animals within the project boundaries before the plants are established. Thus, in the preparatory phase (see Immediate Objective 1) they may be identified as an important stakeholder.

#### **A.6. REGULATORY FRAMEWORK**

<sup>3</sup> This approach will ensure that both integrated watershed management concepts and replicability is built in from the inception of project implementation.



The rehabilitation of desertified areas in the country is a mandate of the FRWO as the government body that implements GIRI's programs in desertification combat and provides improved grazing through rangeland management.

There are also certain regulatory issues that will be considered in the implementation of the project. Although all the range areas are national lands, the government always respects the traditional rights of users. "The Law for the Reclamation of Land," ratified by the "Expediency Council" gives user rights of the resources to individuals and groups of people who reclaim land. Article 34 of this law addresses land and tenure/ownership issues. The law empowers the Ministry of Jihad-e-Keshavarzi to encourage and promote a participatory approach to desertification combat projects. Individuals and communities are encouraged to submit operational plans for implementation of land reclamation projects supported by government's provision of the necessary inputs including land and seedling. The law also allows for transfer of land ownership after five years, subject to successful reclamation of the land. It vests the land in the hands of the local people, provided they adhere to appropriate land management guidelines. They will have principal rights to the produce of the area, provided the management plans are adhered to. Thus the law could provide the legal incentive/framework to ensure active participation of local communities. People will be made aware of the different provisions of this law, one of which provides access to nomads as a result of activities defined under community-based management regime.

This law could be but one of the legal pillars to induce active participation of local communities. As stated above, CM is open to various types of entitlements, even beyond the ones legally recognized. In other words there is a "negotiated governance perspective" where there are legal and "customary" points of reference in place.

#### **A.7. INSTITUTIONAL FRAMEWORK**

Please see section F.

#### **A.8. NATIONAL RESOURCES**

Rangeland rehabilitation has been and is still being carried out in Iran by the FRWO. However, FRWO's rehabilitation work can still be improved to make it more cost-effective, sustainable, and amenable to sequestering carbon. Currently, FRWO has limited knowledge of enhancing carbon sequestration in soils and plants/trees through land rehabilitation. It could also benefit from the application of innovative participatory approaches based on social mobilization in land rehabilitation projects. The country also lacks the relevant policy environment, as well as financing mechanisms that would allow sustainable management of rehabilitated areas. The proposed project will address these issues by building in-country capacity (particularly in the rural communities) for improved carbon storage and for the development and application of participatory approaches in the implementation and management of land rehabilitation projects.

To execute this project, the GIRI is committed to assign personnel with adequate experience in land rehabilitation and in management of similar internationally funded projects as part of its in-kind contribution, including the use of its facilities. In-kind personnel contribution includes the time spent by professional and administrative support staff that will participate in the implementation of project activities. The GIRI will also contribute cash amounting to US\$ 630,000. Details of the in-kind and cash contributions from these entities are in Annex 3B.

### **B. STRATEGY FOR USE OF UNDP RESOURCES**

#### **B.1. PROJECT LINKAGE TO UNDP MANDATE**

The paramount feature of the project is that it will be run by and for the local stakeholders. Participation forms a central tenet in the people-centered approach to development that UNDP supports. The temptation to exclude from the co-management process the groups less socially powerful should be resisted. A main feature of UNDP's work in Iran is capacity building for less socially powerful groups as part of the sustainable human development (SHD) agenda in the country. UNDP recognizes capacity-building as a part and parcel of improving quality of life among the population and facilitating local participation.

The project's approach to promote "gender equality" will ensure that the interests, needs and the priorities of both women and men are taken into consideration. Gender analysis will be carried out under the project to establish the constructive role of the women in the development of their communities. A principal social issue impacting sustainable human development (SHD) is to ensure that the interests of women are identified and acted upon. UNDP recognizes that gender equality is important as both a moral issue, as well as in relation to improvements in the quality of life. A focus on gender equality is likely to lead to greater agricultural productivity, given that women farmers are as efficient as men farmers, but their limited access to inputs, combined with cultural constraints on women's farm work, tends to reduce the productivity of their labor. The project will strive for "gender equality" and ensure that the interests, needs and the priorities of both women and men are taken into consideration. A representative range of local women will be involved in the formulation of co-management plans. The project will include an adequate gender analysis to ascertain the way women do or do not contribute to the development of their communities. In addition, special activities will be designed for women to raise their interest in the co-management process. The accent should be placed on income generating activities and enhancing women's capacity to negotiate management plans and encouraging their participation in management structures and decisions.

There are no blueprints or universally applicable paths for undertaking this initiative. The participatory process (including methods and tools) that will be utilized is adjusted and bent around the specific situation and environments within the project area. Moreover, the proposed project emphasizes the links between rehabilitation, conservation and sustainable use of natural resources, on the one hand, and poverty reduction on the other. It aims to strengthen human and institutional capacities while learning from local experience.

This project will attempt to incorporate the UNDP's South Asia Poverty Alleviation Programme (SAPAP) best practices on micro-credit modalities for poverty alleviation and sustainable livelihoods generation as well as drawing on lessons learned from the UN-led "Social Mobilization and Micro-credit Project in Sistan and Baluchestan".

## **B.2. NEED FOR UNDP INTERVENTION**

Iran's semi-arid/rangeland areas represent potential areas for sequestering atmospheric carbon. The number of degraded areas in the country and the plight of the people that live in these areas pose one of the major challenges facing the GIRI in its sustainable development efforts.

The global environmental benefit at the project site could be of the order of 125,000 tonnes of carbon (tC) sequestered after 20 years, rising to 270,000 tC after 100 years (these figures will have to be verified based on *real* climatic, topographic, socio-economic conditions as well as species mix). There will also be global biodiversity benefits from improved flora and fauna. The GIRI needs the assistance of the UNDP in implementing this project, which will act as a catalyst for carrying out similar initiatives in other degraded/low rainfall areas in Iran and even in other countries. As earlier stated, there are an estimated 90 million *has* of such areas in Iran alone. Hence, the potential for carbon storage at the national level could be of the order of one billion tC. These degraded areas will be made more productive through the efforts of the local people. Therefore, additional funds to cover the incremental costs, especially to meet social mobilization, M&E and implementation-related costs,

could demonstrate to the local people and the government the practicability of such an initiative. The UNDP and the Global Environmental Facility (GEF) can pave the way for implementing this alternative land rehabilitation project.

Being a signatory to the UNFCCC, Iran has exercised its rights to avail of the incremental cost funding provided by the GEF for national projects that will bring about global environmental benefits like the proposed carbon sequestration project. Since the project also involves capacity building and technical assistance, the GIRI has approached the UNDP, which is an implementing agency of the GEF. The GIRI acknowledges the UNDP's comparative advantage in these areas. Furthermore, the GIRI and UNDP have been working and cooperating closely in implementing activities geared towards sustainable human development in Iran. This project is a priority national initiative and UNDP's assistance in this GEF-assisted project will be instrumental in the promotion of carbon sequestration efforts through sustainable community-based approaches in the country.

### B.3. PROJECT DESIGN COMPONENTS

The global objective and the over-riding aim of the project is to sequester atmospheric carbon. From a national perspective, an important aim is to improve the productivity of semi-arid areas in the country. Thus, the project will rehabilitate degraded lands and increase forage, wood and honey production capability through community-based participation. Ecosystem rehabilitation of the project areas through will involve planting and/or seeding drought resistant grasses and shrubs. Moreover, this project will serve as a training and demonstration initiative to encourage rural people from the other parts of the sub-watershed, as well as provincially and nationally to reclaim similar areas through self-help efforts.

The project's immediate objectives are the following:

No.	Immediate Objective	Success Indicator
1	People in the project area are reasonably well informed, organized and empowered to negotiate co-management plans and agreements for implementing sustainable land rehabilitation models that would bring about increased carbon storage and socio-economic benefits.	Advocacy, planning, programming and information dissemination efforts for co-managed land rehabilitation and natural resource management based on participatory approaches are completed for implementation by end Year 1.
2	Land rehabilitation and NRM activities are assessed, planned, programmed, implemented and managed by people in the project area on their own through community participatory approaches.	Agreed co-management plans among the local H.A. stakeholders are finalized and publicized by 1 <sup>st</sup> Qtr Year 2 and for implementation starting 3 <sup>rd</sup> Qtr Year 2.
	Gain useful collective experience in participatory approaches to evaluation, planning, and decision making for a variety of institutional actors in the area in co- management of natural resources.	Trained self-organized groups in the communities in various aspects of NRM and productive/livelihood support activities by 2 <sup>nd</sup> Qtr Year 2.

No.	Immediate Objective	Success Indicator
3	<p>Rehabilitation of 9,000 <i>has</i> of degraded land.</p> <p>Consistent with agreed co-management plans, improvement in the socio-economic status of villagers resulting from the project activities and from the sustainable natural resource benefits the project generates.</p>	<p>Planting and re-seeding of at least 9,000 <i>has</i> over a number of NRM units with various woody (80% of the cover) and non-woody species completed by mid-Year 4.</p> <ul style="list-style-type: none"> <li>▪ A fully operational micro-credit Fund for supporting livelihood and income generating activities in the rehabilitated areas is established by 3rd Qtr Year 2.</li> <li>▪ At least a 10% increase in the overall productivity and income generating activities in the project areas by end of project.</li> </ul>
4	<p>People in the communities within the project area are capable of thinking, agreeing, deciding and acting together on their own accord facilitated through enabling conditions for informed decision-making, sharing of information, and open discussion of problems, opportunities and alternative options for action.</p>	<p>People in the rehabilitated areas are assisting people in other surrounding degraded areas on all aspects of the design, planning and implementation of community participatory-based NRM and land rehabilitation, including the development of related livelihood support and entrepreneurial activities starting Year 3.</p>
5	<p>The extent of carbon sequestration and changes in the land and microclimate resulting from land rehabilitation is monitored and evaluated systematically and regularly.</p>	<ul style="list-style-type: none"> <li>▪ Baseline data for specified parameters defining the carbon storage, physical, chemical, geographical, climatic characteristics, and economic, social and demographic features and trends in each project area are established by end Year 2.</li> <li>▪ The FRWO, assisted by the people in the project areas monitors the various performance parameters based on the defined procedures, and prepare an evaluation report each year.</li> </ul>

No.	Immediate Objective	Success Indicator
	Local communities benefit from participatory efforts in land rehabilitation and management of natural resources thereby improving socio-economic development, as well as the people's welfare and well being.	An improvement of at least 10% in the HDI of H.A. is achieved as a result of the rehabilitation, human development and alternative livelihood activities by end of the project.

#### B.4. PROJECT COMPONENTS AND EXPECTED OUTCOMES

The project is designed to find sustainable and cost-effective ways to rehabilitate degraded land areas in Iran through the re-seeding and planting of seedlings that would also sequester carbon both above and below ground, as well as in the soil. This project is assisted by the GEF under the short-term response measure window, with the main global environmental benefit of mitigating carbon emissions through carbon storage, while at same time promoting sustainable socio-economic development in the target project areas. The project is organized into five (5) components. **Component No. 1** is designed to prepare people and the relevant institutional actors in participatory approaches to land rehabilitation and NRM. **Component No. 2** is designed to allow for the negotiation and preparation of the co-management plans, by the local people and the institutional actors, for the land rehabilitation work and other NRM activities. **Component No. 3** is the main component of the project and will involve actual land rehabilitation work and the accompanying activities of seedling production, experimentation with types and mix of plant/tree species, and on-the-job training for the local residents of the project areas and sub-watershed level stakeholders. **Component No. 4** is a generic component designed to support the participatory processes throughout the entire project and provide a mechanism for the sharing, transfer and application of knowledge in the areas of participatory approaches to community-based activities, land rehabilitation, NRM and livelihood support and income generating activities. **Component No. 5** is designed to monitor the performance of the land rehabilitation efforts, in terms of the impacts to the global and local environment, and of the socio-economic and human development in the project areas.

The project could result in the following outcomes:

- Self-assisted human development and a strengthening of the social and economic conditions of the local resident and pastoral communities, through the rehabilitation of degraded rangelands and their sustainable management as well as through other sustainable livelihood approaches.
- Replication of this initiative in other semi-arid/rangeland areas throughout the country and in similar areas elsewhere and, therefore, more productive and sustainable use of degraded areas and the potential to increase the nation-wide carbon sequestration and bio-diversity conservation.
- Integrated and sustainable sub-watershed-wide development.

#### C. IMMEDIATE OBJECTIVES, OUTPUTS AND ACTIVITIES

The following describes the various objectives, outputs, indicators and detailed activities that will be carried out under the carbon sequestration project in the desertified rangelands of H.A.

##### C.1. COMPONENT 1: COMMUNITY-BASED MANAGEMENT ARRANGEMENTS

This component will involve partnership-building and will prepare the grounds for social mobilization and empowerment through pluralism of interests and views, and active support of the social actors to organize themselves. To facilitate this, social communication strategies will be employed. Given the socially homogenous fabric of the project site and an expected lack of serious

diversity in points of views (thereby fewer incidences of conflicts), this component will take up to a maximum of one year to complete, provided that all project inputs, in particular the skilled human resources who will lead this phase are identified and in place. In addition, to build in replicability from the outset, representatives from neighboring communities within the sub-watershed will undergo a process of democratic identification and election and will be engaged prior to initiating the activities under this component.

### Immediate Objective 1

<i>Immediate Objective 1</i>	<i>Success Indicator</i>	<i>Verifiers</i>
People in the project area are reasonably well informed, organized and empowered to negotiate co-management plans and agreements for implementing sustainable land rehabilitation models that would bring about increased carbon storage and socio-economic benefits.	Advocacy, planning, programming and information dissemination efforts for co-managed performance of land rehabilitation and natural resource management activities based on participatory approaches are completed and readied for implementation by <u>end Year 1</u>	<ul style="list-style-type: none"> <li>▪ Pre-rehabilitation project assessment reports.</li> <li>▪ Minutes or proceedings of community meetings.</li> <li>▪ Documentation and maps of the identified NRM units.</li> <li>▪ Co-management process.</li> <li>▪ Rules and regulations on the negotiation of agreements and plans.</li> </ul>

### Success Criteria

Once, the activities under this project component are completed, it is expected that the project stakeholders will be reasonably well informed, organized (e.g. having identified their own representatives) and empowered to negotiate co-management plans and agreements. The following results are expected:

- Assessment of the needs for co-management arrangements for NRM, including that of required human resources, modality of financing and budget disbursements, and instruments & mechanisms to raise the local HDI
- An Inception Team that will facilitate the co-management arrangements
- Preliminary assessment of the NRM issues at stake
- Identified NRM units where co-managed rehabilitation activities will be carried out
- Analysis and identification of relevant institutional actors
- Social communication initiatives that will foster a broad discussion of NRM and socio-economic issues
- Clear delineation of stakeholder roles and responsibilities, considering their respective NRM concerns and capacities
- Clearly defined co-management process that is culturally valid and broadly understood and accepted
- Democratically elected representatives from target communities to be appointed as PMC members.
- A set of suggested procedures for negotiating agreements

### Activity 1.1. Joint MPO/FRWO/UNDP Baseline & Feasibility Studies

Please see Component 5, Activity 5.1.

## **Activity 1.2. Assessment of Available Human and Financial Resources**

It is imperative to make a realistic assessment of the human and financial resources before embarking on the initiative. *Human resources* engaged in promoting and supporting the CM process need knowledge and skills in the ecological, social and economic disciplines. In addition, it is important to be able to communicate with all the stakeholders concerned and to obtain and maintain their confidence and trust. The work is certainly not routine and attributes like energy, passion, willingness, creativity, dedication and continuity are required among local and non-local project staff. If such human resources are available locally and are willing to become part of the Inception Team (see Activity 1.3), so much the better.

In *financial resource* terms and in conjunction with FRWO, UNDP and MPO (and even the relevant sub-provincial authorities to ensure financial goal congruence) and the assistance of the CTA and NPM, project fund disbursement modalities will be devised in such a way that the co-managed preparatory, negotiation and rehabilitation phases are promptly and continually supported. The GEF budget will support the community mobilization activities of the first year and two thirds of the costs of the Joint MPO/FRWO/UNDP Baseline & Feasibility Studies (see Activity 5.1). In the second year, Government and GEF co-fundings will support the rehabilitation exercise. Subject to agreement, these funds will be disbursed based on sub-contracts that are awarded to target communities. Funds will be allocated to support strategies for raising the human development index (e.g. through the formation of a community-run revolving fund). Therefore, anti-poverty mechanisms such as micro-finance will be experimented with.

**Output 1.2.** A short report on the requisite human resources, as well as recommendations on modality of disbursements, general budget implications, and instruments & mechanisms to raise the local HDI

## **Activity 1.3. Establishment of An Inception Team**

An Inception Team comprised of up to 4 individuals led by the NPM and advised by the CTA will be established and assigned the role of promoting and facilitating the process through which the stakeholders will negotiate a pluralistic and flexible management system. The team members will be professional facilitators, who shall be jointly selected by FRWO and UNDP with inputs and endorsements from the NPM and the CTA. All stakeholders should trust and feel capable of communicating with at least one person in the Inception Team. The Team is entirely responsible for the phase in which the partnership is prepared and rooted in the local context.

**Output 1.3** Inception Team identified and established.

## **Activity 1.4. Identification of Project Stakeholders**

The Inception Team will identify, contact and involve in the process communities, social groups and individuals who possess a direct, significant and specific stake in the identified NRM units. Although, there are many potential stakeholders, only some will be willing and capable of investing time and resources and organizing themselves. Such true actors will be identified at each level (e.g. at the identified NRM units level as well as at the sub-watershed level). Potential stakeholders could include communities, groups or individuals actually or potentially affected by the management decisions, historic occupants (e.g., indigenous communities or regular transients), local associations or NGOs concerned with natural resources and desertification combat, and various governmental actors and ministerial departments, most importantly FRWO and BNRMO. This activity will also entail a preliminary "Gender Analysis" which will form the basis for more detailed analysis of Activity 2.3.

**Output 1.4.** Analysis and identification of relevant institutional actors, including entitlements, claims, power differentials and NRM conflicts among them, both existing and potential.

**Activity 1.5. Launching Social Communication Initiatives**

The social communications initiatives will be formulated as per Activity 4.1. The Inception Team will execute the recommended strategies. Social communication initiatives generate an on-going flow of information and dialogue between the Inception Team and the stakeholders, and among the stakeholders themselves. The Inception Team will organize specific events (e.g., a community meeting) to launch these initiatives. Such events will serve as communication forums and will meet the information exchange needs that emerge over the lifetime of the project. Preliminary social communication initiatives will promote an open public debate and public's critical understanding of the process of participatory management, the reasons for undertaking it and the way to develop it. The Inception Team will initiate this by promoting social discussion on existing environment and development problems on the one hand, and existing capacities and entitlements to take decisions on the other. Information on the role of the FRWO and other project implementation bodies in the participatory management process will also be made available. The objectives of the project, the Inception Team and what it is doing to set the process in motion and of what steps the process is likely to comprise and how people can participate will also be communicated. The CTA and the NPM, possibly through inputs and guidance from relevant international/national project experts will devise the most optimal media, tools and strategies at local and national levels.

**Output 1.5.** Social communication initiatives that open up and maintain two-way communication channels between the Inception Team and the stakeholders, and foster a broad discussion of NRM and socio-economic issues.

**Activity 1.6. Participatory Appraisal**

The Inception Team will contact the identified potential stakeholders and inform them about the upcoming process of co-management and the opportunities it offers. Participatory appraisal exercises such as land-use mapping, historical mapping, transect walks and key informants will be implemented through a series of discussion meetings. In these meetings the potential stakeholders will identify and clarify their own NR management concerns and capacities, as well as decide on their broad management roles and responsibilities (e.g., advisory, executive or decision-making role).

**Output 1.6.** A clearly defined delineation of stakeholder roles and responsibilities, considering their respective NR management concerns and capacities

**Activity 1.7. Conceptual Internalization of the CM and Organization of Stakeholders**

To participate in the negotiation process, the stakeholders need to arrive at an internal consensus on the values, interests and concerns they wish to bring forward. They also need to appoint people to represent them in the Project Management Cell (PMC) and if warranted vis-à-vis other actors. Although, for the FRWO and other governmental entities this may require little effort, for the villagers, it may require major investment, in terms of time, facilitation and support. In this regard, the Inception Team, possibly with the assistance of relevant project experts will help the stakeholders in organizing themselves, and in electing their representatives to the PMC.

**Output 1.7.1.** Clearly defined co-management process that is culturally valid and broadly understood and accepted

**Output 1.7.2.** Democratically elected representatives with stakes in NRM units who will be appointed as members of the PMC.



### Activity 1.8. Preparation of Procedures for Agreements on Co-management Plans

The Inception team will develop rules, procedures and equity considerations in order to reach agreements on co-management plans. On the basis of the preliminary identification of stakeholders and the level of agreements to be reached, the Team will propose how the negotiations should be held. The Team will take a proactive role in proposing a schedule of meetings, rules and procedures for participation and some support in facilitating negotiations. In this process, the Inception Team is the prime guarantor of fairness and equity in the whole process.

**Output 1.8.** A set of suggested procedures for the negotiation process of Component 2, based on ideas and measures that promote fairness and equity, as well as a schedule of preliminary meetings and events when such agreements will be negotiated.

### Activity 1.9. Agreeing on Rules and Procedures for Negotiating Co-management Plans and Agreements

A series of meetings will be held by the Inception Team to present and discuss with the identified stakeholders, the proposed rules and procedures for negotiating co-management plans and agreements. The meetings will be held in a calm and productive atmosphere to help the stakeholders find out where they stand, establish working relations and start to own the participatory process. The Inception Team members will be supported by appointed facilitators who will assist in dealing with conflicts of interests. The final meeting will come up with an agreed set of rules and procedures for negotiating co-management agreements.

**Output 1.9.** An agreed set of rules for the negotiation phase as well as procedures and schedules of the meetings under component 2 and logistics of such meetings.

## C.2. Component 2: Establishment of Co-Management Plans

This project component aims to explore various co-management regimes and facilitate agreement on an appropriate co-management plan. The villagers and/or households and/or individuals will draw up plans and organize themselves around CM institutions to rehabilitate designated areas, manage the total area and formulate their ownership and access rights to the land, but more importantly their responsibilities and accountabilities.

The critical challenge is to develop a partnership (i.e. between government who possess legal jurisdiction over a territory and the village communities on the one hand and between the target communities themselves on the other) by which, first the responsibilities of rehabilitation and later the benefits of natural resources are shared in the most efficient and equitable manner possible, starting from a situation that may be neither efficient nor equitable. The challenge is in overcoming communication difficulties between governmental officials who are usually used to the top-down communication modes and the local communities who possess their own culture, values, capacities, reference systems etc.

### Immediate Objective 2

<i>Immediate Objective 2</i>	<i>Success Indicator</i>	<i>Verifiers</i>
<ul style="list-style-type: none"><li>Land rehabilitation and NRM activities are assessed, planned, programmed, implemented and</li></ul>	<ul style="list-style-type: none"><li>Agreed co-management plans among the local H.A. stakeholders are finalized and publicized by 1<sup>st</sup> Qtr Year 2 and for</li></ul>	<ul style="list-style-type: none"><li>Preparatory assessments used for developing the co-management plans</li><li>Co-management plans</li><li>Signed Memoranda of</li></ul>

<p>managed by people in the project area on their own through community participatory approaches.</p> <ul style="list-style-type: none"> <li>Gain useful collective experience in participatory approaches to evaluation, planning, and decision making for a variety of institutional actors in the areas of natural resource management.</li> </ul>	<p>implementation starting 3<sup>rd</sup> Qtr Year 2.</p> <ul style="list-style-type: none"> <li>A fully operational micro-credit Fund for supporting livelihood and income generating activities in the rehabilitated areas is established by 3<sup>rd</sup> Qtr Year 2.</li> </ul> <p>Trained self-organized groups in the communities in various aspects of NRM and productive/livelihood support activities by 2<sup>nd</sup> Qtr Year 2.</p>	<p>Agreement on the rehabilitation of self-help areas (i.e., additional 9,000 has of degraded land)</p> <ul style="list-style-type: none"> <li>Established micro-credit fund operating in the communities covered by the project areas.</li> </ul> <p>Community groups led by people trained on NRM and livelihood support and productive activities.</p>
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### Success Criteria

By the time the activities under this project component are completed, the concerned government agencies as well as the target communities would have gained adequate experience in participatory approaches to evaluation, planning, and decision-making in co-management of natural resources. The following results are expected:

- Agreed and binding vision statement of the desired future of the NRM units, and a clearly defined strategy to achieve such a vision
- A participatory analysis of the situation/issues/problems in the NRM units
- An analysis of the contributions and roles of women in rehabilitation activities of NRM units
- Agreed co-management plans among for the NRM units; an overall management strategy for the integrated watershed management of the hydrological area; established working groups and detailed but flexible workplans; agreements on additional (voluntary) areas to be planted; type and number of plant species; preliminary list of possible marketing opportunities for produce from species planted on the sites, (fruit, nuts, honey, fodder, wood etc.) and other alternative livelihood approaches consistent with the agreements of co-management plans.
- A fully operational micro-credit fund for supporting alternative livelihoods and income generating activities in the communities
- Trained self-organized groups in productive skills, income-generating methods, sustainability techniques, use of micro-credit funds and repayments, accounting practices, management, marketing, programming, project analysis and document writing.
- Publicized co-management organizations, plans, and agreements

### Activity 2.1. Establish a Common Vision for Future

One or more meetings will establish a base of common interests and concerns among all stakeholders. The participants will be encouraged to discuss their long-term aspirations for the NRM units (i.e. the kind of environment, natural resources and living conditions they would ideally like to leave their children and grand children). The facilitator will help the participants develop a consensus on a "vision" of such a desired future, with specific descriptions of the ecological and socio-economic situation in the target NRM units. Social consensus on the vision of the desired future is

extremely important for the negotiation of effective co-management plans and agreements. This is because if conflicts and disagreements surface during the negotiation process, the facilitators will be able to bring everyone back to the vision they had all aspired to.

An agreement regarding the common vision will be finalized among the stakeholders. Such an agreement will legitimize the vision, and recognize it as binding by the stakeholders who developed it. It is a sort of a constitutional agreement. An appropriate ceremony will finally be organized to help raise the common vision to the symbolic level, making it valid for the long-term and particularly difficult to disavow. The common vision will act as a common ground where all stakeholders can reconcile the controversies in the course of negotiations.

**Output 2.1.1** Vision statement of the desired future developed jointly by all stakeholders.

**Output 2.1.2** Agreed and binding vision Statement

### **Activity 2.2 Review Social, Economic & Ecological Situations & Trends**

With the help of the Inception Team, the stakeholders will analyze the present ecological, social and economic situation and trends for target NRM units. The discussion can start on the basis of a short illustrated report by the Inception Team. Participatory exercises such as brainstorming, problem analysis, land-use and historical mapping, trend analysis, group interviews with local elders and transect walks could be used as deemed appropriate by the Inception Team.

**Output 2.2** A participatory analysis of the situation/issues/problems in the NRM units.

### **Activity 2.3. Gender Analysis**

A principal social issue impacting sustainable human development (SHD) is to ensure that the interests of women are identified and acted upon. UNDP recognizes that gender equality is important as both a moral issue, as well as in relation to improvements in the quality of life. A focus on gender equality is likely to lead to greater agricultural productivity, given that women farmers are as efficient as men farmers, but their limited access to inputs, combined with cultural constraints on women's farm work, tends to reduce the productivity of their labor.

A gender analysis will be carried out by the CTA/NPM or the appropriate consultant to ascertain the way women contribute to the development of their communities. This will examine the causes of gender inequality, and of the differences between men and women in the project areas. It will also establish as to who will benefit or is negatively affected by the intervention and to what extent. In addition, special activities will be designed for women to raise their interest in the co-management process. The emphasis will be on income generating opportunities and enhancing women's capacity to negotiate management plans and encouraging their participation in management structures and decisions.

**Output 2.3.** Gender analysis report

### **Activity 2.4 Establish Strategy to Achieve Common Vision**

After a realistic discussion of the identified trends, key problems and obstacles, opportunities, resources and assets to achieve the desired common vision, the stakeholders will focus their attention on identifying the components of a strategy to achieve the common vision from the present starting point. Basically, these components would be necessary to act in the short to medium term in order to achieve some tangible results in rehabilitating the area and changing the socio-economic conditions. Some of the components will deal directly with the rehabilitation, whereas others will bear upon it in more indirect and complimentary ways (i.e. via interventions geared towards economic development, health, education, social organizing, governance, culture and so on- hence, the cross-sectoral spirit in

which this intervention will be executed). Indeed, it would be neither effective, nor wise to conceive a management plan for natural resources rehabilitation in isolation from the contextual socio-economic reality of target communities. Land ownership and land management options and possibilities will be thoroughly discussed. The result of the discussions will be summarized and posted on a wall on the meeting premises. At this stage it is not yet necessary to clarify the details of what needs to happen, but just to specify:

**Output 2.4.** Strategy to achieve the common vision, sub-divided into components with clear objectives and broadly desirable outcomes for each component.

#### **Activity 2.5. Co-Management Plans and Agreements for Each Strategy Component**

For each component of the strategy, the stakeholders will identify the requisite action to progress towards the desired future. The objectives identified up to this point are generally broad and need to be transformed into work plans. The latter will contain a listing of activities, delineation of roles and responsibilities, schedule of activities, the location of NRM units, rules and procedures, financial and manpower requirements, and specific objectives. In addition, for each activity, a number of corresponding follow-up protocols will be articulated, which will make explicit the results each activity is expected to obtain and the indicators which will be used to assess these results and means of verification. The indicators will refer to the status and quality of the natural resources in the NRM units as well as to the social and economic objectives of the accompanying agreements.

The *plans* specify the sharing of functions, entitlements and responsibilities in natural resources rehabilitation/management among the stakeholders. Land ownership and land management options will be thoroughly discussed and agreed upon. The *agreements* deal with a variety of socio-economic issues relating to the co-management plans, and will be designed to complement one another. Plans and agreements are collectively contracted and guaranteed by the partners in the process with specific details. The co-management plans will contain:

- A list of villages and villagers participating in the project.
- Finalised NRM units and self-help areas: the locations and size of plots to be planted and tended. These will be recorded on maps and distributed to each village.
- Land ownership arrangements, agreements, obligations and user rights as well as dispute settlement procedures, management obligations of the participants and a series of penalties for transgressions and if specific obligations are broken (e.g. grazing in newly planted areas) as well as rewards for excellent work. Agreements between the project, participating villagers and nomads as to the rights of each party in the project area, especially the rehabilitation area. This should cover the cutting and collection of fodder/browse within recently planted areas. Contracts should be drawn covering obligations, timing, payment methods, agreements on land ownership/title and usufructory rights, in particular for the nomads;
- Agreed flexible management plans covering all operations from ground preparation to planting, watering, nursery work and tending until the plants are established, as well as guarding and fire protection and animal exclusion. Planting programme (suggested 2 years for the NRM and 4 years for the self-help/additional areas) for the project area should include the phasing of planting, the list of species to be planted and the proportion of each species.<sup>4</sup>
- An agreed sub-watershed management strategy for the whole hydrological area with special emphasis on water resources management (negotiated through the Co-management Board).

<sup>4</sup> The principal species that have been provisionally chosen include *Haloxylon persicum*, *H. aphyllum*, *Atriplex canescens*, *A. leucoclada* and *Calligonum spp.* In addition some of the following trees, shrubs and herbs could be tried namely, *Aeluropus spp.* (tolerant to water logging), *Agropyron elongatum*, *Alhagi camelaron* (pioneer), *Ammodendrum spp.*, (stabilizes sand dunes) & *Astrogales spp.* [legumes], *Amygdalus spp.* [almond], wild pistachio [nut], *Artemisia sariotlina*, *A. sieberi* (herba-alba), [medicinal plants], *Berberis spp.* [fruit], *Calligonum comosum*, *Capparis spinosa* (sand dune fixation), *Ferula spp.*, (edible), *Linonum spp.*, & *Salsola spp.* (landscaping), *Seidlizia rosmarinus*, *Shismus spp.* *Sophora alopecuroide* (pioneer), *Stipa barbata* and *Zygophyllum spp.*

- Feasible alternative livelihood approaches and mechanisms to finance productive activities, including a description of actual and potential marketing opportunities for produce from the area.
- Indicators and follow-up protocols to monitor progress and learn from mistakes;

A working group, comprised of the most directly affected stakeholders will be formed for each component of the strategy. Each group will have its own facilitator/moderator, perhaps one of the parties themselves, who will take on a neutral role learned by watching the Inception Team facilitators at work (the latter could remain available for all eventualities). The groups have to come to terms with the avenues and options open to them to achieve a given objective and, among them, select the one best suited to the conditions and needs of the project. Since different avenues and options will bring different costs and benefits to the stakeholders, each stakeholder may have strong interests and concerns attached to one course of action versus another. Compliance with the management plans, agreements and rules is essential for the effectiveness of the participatory process. If some of the stakeholders violate the rules or do not accomplish what they agreed to do, others may follow suit. To prevent this, the plans and agreements will specify who is responsible for enforcement, what means are at their disposal and what regular checks they ought to carry out. Final plans and agreements will be ready within about 2 years of the start of the project.

The NRM units will have to be finalized as described per Activity 1.5 / 5.1 (i.e. based on the findings of the joint MPO/FRWO/UNDP baseline studies). In addition, the selection of other areas that villagers agreed to voluntarily rehabilitate during the project design will also be based on the sub-watershed-wide socio-economic and ecological feasibilities. It is envisaged that the proposed official area of 9,000 *has* will be planted by the end of the fourth year. In addition, villagers' verbal agreement to undertake a voluntary planting program (with water and tankers supplied by the project) will be verified and reflected in co-management plans and agreements. The rehabilitation of additional areas will be spread over the 6-year lifetime of the project.

An overall management strategy for the integrated watershed/sub-watershed management of the whole hydrological basin will also be compiled. The Co-management Board plays a significant role in ensuring that such a plan is indeed drawn up.

Project experts will provide assistance as maybe required in tackling issues of land ownership, collaborative management of natural resources and alternative livelihoods. The government legal office will be consulted over land titling etc. as legal assistance will be required when drawing up contracts. Marketing advice will also be provided to explore income-generating opportunities for agricultural products from the project areas. The Birjand NRMO and the ONA will also be available to provide assistance with support from the FRWO, other government agencies, and the UNDP.

Seed money from GEF and GIRI will be allocated to co-fund the rehabilitation exercise. The funding will be disbursed based on the costing of the workplans. The precise modality to disburse this funding, including the possibility of awarding sub-contracts to the local communities will be developed and finalized.

- Output 2.5.1.** Agreed co-management plans and agreements among the stakeholders containing specific courses of action (objectives and activities) for each component of the strategy
- Output 2.5.2.** Overall management strategy for the integrated watershed management of the hydrological area
- Output 2.5.3.** Working groups for each component of the strategy
- Output 2.5.4.** Detailed but flexible work plan delineating assigned responsibilities and a corresponding budget that clearly links activities to the finances available as well as corresponding follow-up protocols
- Output 2.5.5.** Agreement on additional (voluntary) sites to be planted and targets and locations (i.e., Self-Help Planting Programme).

**Output 2.5.6.** Agreement on species to be planted on the project and self-help areas and proportion of each species

**Output 2.5.7.** Preliminary list of possible marketing opportunities for produce from species planted on the sites, (fruit, nuts, honey, fodder, wood etc.) and other alternative livelihood approaches consistent with the co-management plans agreements.

#### **Activity 2.6. Establish Micro-credit Fund**

A micro-credit scheme to be jointly financed from GEF and GIRI funds to the tune of US \$ 85,000 will be established to finance feasible alternative livelihoods within the sub-watershed. It is likely that funds for supporting entrepreneurial activities within the sub-watershed will be targeted at self-organized groups. Coagulation of such groups is an important output of the community mobilization exercise. The micro-credit funds will provide catalytic forces to achieve simultaneous equity, efficiency and empowerment. Once the local socio-economic context is re-oriented towards more private and community-based structures, the expected impact on growth and employment could be substantial, given the low starting base and the number of job seekers.

The project will organize the poor social groups within the watershed to become sustainably productive, complemented by the non-collateral granting of micro-credit facilities. The dual approach of micro-credit based on community mobilization has been shown to be the most effective strategy by UNDP's South Asia Poverty Alleviation Programme (SAPAP). The latter has been a comprehensive and multi-dimensional approach to generating sustainable livelihoods by using social mobilization jointly with micro-credit. Incorporation of social mobilization initiatives, human capacity building (i.e. health and education) and civil empowerment complemented by both micro and meso economic modalities and instruments has proven highly successful. Based on the SAPAP best practices on micro-credit modalities for poverty alleviation and sustainable livelihoods generation, the micro-credit scheme will be designed in such a way that:

- Development objectives rather than charity and hand-out goals are pursued;
- Special attention is paid to the poor and vulnerable women with productivity potential and the capabilities of these groups are enhanced and responsibility and self-confidence is instilled;
- Self-organized groups are established and a spirit of cooperation and group work is created; and
- Attainment and maintenance of a viable and sustainable economic system is ensured by demanding repayment of loans with interest linked to productivity and benchmarked for growth;

It is important to have faith in the poor and believe that they are rational, productive and capable of paying installments on long-term loans. Given the conditions of Islamic banking and financing, a locally suitable method for undertaking incentive based financing will be developed. Once developed, these will enable national replication and utilization of new resource allocation measures in structural and institutional adjustment programs.

The project will investigate various models. One proposed model would involve setting aside a proportion of the amount of credit that is to be provided to the group into a central deposit account in order to earn interest. From 16% to 20% of the total allocated credit would be deducted for this purpose. This is considered as a sufficient amount to also cover local cost and inflation in order to sustain the capital fund. The interest earned on this portion would eventually go back into the main capital fund. The deducted sum would then be provided to the group after a predetermined time has passed, and after the repayment period. This method allows for appropriate circulation of funds, operation cost coverage, safety of capital fund against inflation and sound Islamic banking principles.

An important caveat is that micro-credit strategies should be integrated with respect to natural resource limitations and social equity. The fund's financing of selected ventures will be consistent with the ultimate goal of carbon sequestration and the limiting natural resource factors of the target project sites.

The micro-credit operations will be managed and implemented by an NGO. The regulatory context in the Islamic Republic of Iran allows civil society organizations to undertake various activities including social services, development work and project related services. A non-governmental and non-profit organization, with a poverty alleviation mandate, will manage the operations of the fund within the guidelines of the UN and legislative context of Iran. The NGO shall ensure the efficient, effective and sustainable functioning of the fund. The operational, monitoring, evaluation and reporting of all entrepreneurial activities and outputs shall be the responsibility of the NGO. The NGO shall report to the Co-management Board at three monthly intervals. Capacity building will also be undertaken by the NGO, as will networking to develop linkages between the provincial government, the MPO, the implementing NGO, local councils and local communities.

The fund's organization, a dedicated office building and a minimum of necessary personnel for administrative support will be discussed and agreed upon. The NGO shall provide a full-time director from its own resources to manage the implementation of the micro-credit activities. The director shall prepare a work plan by the first month of the fund's start up to outline in detail the various activities and requirements as well as loan criteria and an implementation program. The Fund shall provide the required personnel needed to ensure the appropriate and timely implementation of the work plan. These include personnel to provide benchmarking information and skills training for income generation. The GIRI shall provide in-kind expertise to participate in the monitoring of the fund's activities and performance in order to utilize project success for replication purposes at the country level. The GIRI will also contribute to, and participate in, the capacity building and training activities of the micro-credit component.

**Output 2.6.1.** A fully operational fund with its framework and mandate clearly delineated

**Output 2.6.2.** Identification and support of sustainable, productive and income-generating enterprises within the sub-watershed.

**Output 2.6.3.** Self-organized groups trained in productive skills, income-generating livelihoods, use of micro-credit funds and repayments, accounting practices, management, marketing, programming, project analysis and document writing.

**Output 2.6.4.** Improved social integration through increased group interaction and networking.

**Activity 2.7. Establish Co-Management Organizations and Formalize Agreements on Co-Management Plans**

Socio-economic development and the rehabilitation and management of NRs require a variety of initiatives and activities, as well as continuous experimenting and learning. In fact, the process of negotiating and implementing plans and agreements is never finished and some organizations need to remain in charge of executing and reviewing these plans and agreements on an on-going basis. It is also important to make sure that a pluralistic perspective in NR rehabilitation/management is internalized and becomes the norm rather than exception.

An essential component of the rehabilitation work is the creation of a relatively stable organizational set-up, developed on the basis of the agreed pattern of entitlements. The organizations that may be set-up to sustain the co-management plans may be of different types (e.g. a Board, a Council, a formal or informal Association, etc). Their functions may also be different, including: executive bodies, decision-making bodies, advisory bodies and mixed bodies. The stakeholders could decide to set-up one or more CM organizations to promote the rural development of the sub-watershed, subject to later agreements.

A meeting in which the results of the participatory process are announced to the stakeholders will formalize the binding agreements that will be carried out in the implementation of the co-management plan. At this meeting, the stakeholders can publicly vow to respect and collectively guarantee the co-management plans and agreements, which are presented for all to see. The meeting

will be held in the presence of higher authorities and will be an excellent opportunity to acknowledge the work of the Inception Team and its facilitator members, the negotiators and stakeholders and in general to celebrate the new hope generated for the entire H.A. community.

**Output 2.7.1.** One or more CM organizations, with corresponding functions and rules, expressing the plurality of entitlements recognized in the H.A. community and in charge of the activities and follow-up of the co-management plans and agreements.

**Output 2.7.2.** Co-management plans; agreements and organizations are publicized and made socially legitimate by some public event.

### **C.3. COMPONENT 3: IMPLEMENTATION OF CO-MANAGEMENT PLANS/AGREEMENTS**

To capitalize on the momentum gained during the negotiation of agreements, co-management plans for the NRs and the associated agreements that complement them as part of the same strategy will be implemented immediately. The organizations and rules agreed to by all stakeholders are enforced. A committee / working group of specific individual(s) will be in charge and made accountable for each component of the strategy, reporting to the stakeholders (and/or the organizations set in place by them) on the on-going progress.

Land rehabilitation includes seedling production, ground preparation, planting, weeding and watering, as well as guarding and management for a period of 24 months starting from the completion of Component 2 activities. Provisionally, it has been proposed by the communities to plant, at least 9,000 *has* with additional areas to be planted voluntarily (the so-called self-help areas). How the planting activities is phased will depend on the capacity of the stakeholders, in particular the target communities, the optimal and timely allocation of project inputs as well as the quality of the local co-management plans and agreements. The self-help areas will be planted until the end of the project and hopefully beyond.

An important guiding principle is that of accountability. It is also important that the process is not entrapped in rigid and bureaucratic enforcement systems. Flexibility and people skills are key to solving complex controversies. It often becomes clear during implementation that the effectiveness of an agreed course of action depends on specific changes in the country's policies and laws. This project will be a platform for the FRWO and other governmental stakeholders to pursue such potential upstream interventions.

#### **Immediate Objective 3**

<i>Immediate Objective 3</i>	<i>Success Indicator</i>	<i>Verifiers</i>
<ul style="list-style-type: none"> <li>▪ Rehabilitation of 9,000 <i>has</i> of degraded land.</li> </ul>	Planting and re-seeding of at least 9,000 <i>has</i> over a number of NRM units with various woody (80% of the cover) and non-woody species completed by mid-Year 4.	9,000 <i>has</i> of replanted semi-arid lands maintained by local community people.
<ul style="list-style-type: none"> <li>▪ Consistent with co-management plans, improvement in the socio-economic status of villagers resulting from the project activities</li> </ul>	A 10% increase in the overall productivity and income generating activities in the project areas by end of project.	Documentation of the annual GDP of the region covering the target project sites (i.e. the NRM units).



## Success Criteria

The activities under this project component are to be continuously implemented by the local communities of the target NRM units. By the time this project component is completed, the following results are expected to be achieved:

- Planting and re-seeding of at least 9,000 *has* over a number of NRM units with various woody and non-woody species, with the woody component providing about 80% of the cover.
- Increased and sustainable production of fodder, wood and other products
- Significant increase in the area of and off-take from sheltered lands
- Significant increase in the flora and fauna and an enhanced microclimate
- A trained population in establishment and management techniques for the rehabilitation of similar semi-arid areas
- Established nurseries for seedlings production, and a trained work force in seedling production and nursery management

### Activity 3.1 Rehabilitation

Prior to undertaking of rehabilitation, a thorough assessment of the required logistics will be carried out. This will result in procurement lists of tools, equipment, vehicles, machines and consumables, which will be purchased for and provided to the project.

Rehabilitation will involve the planting and reseeding of at least 9,000 *has* of degraded land with various woody and non-woody species, with the woody component providing about 80% of the cover. The proposed mainly indigenous species, to be verified by the local population, include *Haloxylon persicum*, *H. aphyllum*, *Atriplex canescens*, *A. leucoclada*, *Calligonum spp.*, *Zygophyllum spp.*, *Amygdalus spp.* (Almond), *Berberis spp.*, and wild pistachio. Watering the plants about three times over two years (with 60 liters of water in total) is essential for the successful establishment of trees and shrubs in these low rainfall areas. The government will supply the water that will be used in the rehabilitation work.

Rehabilitation will result in an improved flora and fauna within the plantations and an extended area for arable farming/vegetable growing and/or improved pasture on the leeward side. This may not be very noticeable within the 6 year time frame of the project, because the normal rotation of the woody species is an estimated 20 years. Thus, the plantations may be only fully effective between 10 and 20 years of age. Likewise, the produce of the trees and shrubs, such as fruit, nuts and wood may not start to yield until about year 11. But it is anticipated that after about 4 years, the areas could be opened up for controlled grazing and browsing. It is anticipated that each hectare will annually produce between 30 - 40 kgs of leaves, seeds and grass, of which half or more is suitable for grazing. Thus, each hectare can provide leaf fodder and grass for between 25 and 50 days per small animal. In addition, once the trees start to mature, the annual production of wood will be about 0.64 t/ha and there will be scope for other activities such as honey production. The protection afforded by the plantations will encourage regeneration in adjacent areas. Re-seeding and planting efforts will promote the regeneration process.

Provided the re-planted areas are cordoned off from animals for about 4 years, the rehabilitation activities could double the leafy (and woody) production and increase the fodder off-take to 60 -70 kgs/ha. There would also be a build-up of organic carbon that could reach 3-4 t/ha after 20 years. The greatest benefits to farmers and globally will be through establishing forest-grazing areas. In addition, at the end of year 4, it may be possible to start bee keeping. Thus, once the area becomes productive, the local and global benefits could be significant and sustainable.

The local villagers in the target NRM units will provide the labour for the planting and tending in accordance with the co-management plans and based on negotiated sub-contracts. The women are very adept at raising seedlings and an indispensable stakeholder group. Therefore, based on the findings of the gender analysis, the role of the women would have been incorporated into the agreed plans and their views sought during the negotiation phase on land to be rehabilitated (as well as the vision of their broad socio-economic role), species choice and labor requirements.

**Output 3.1.** Planting and re-seeding of at least 9,000 *has* over a number of NRM units with various woody and non-woody species, with the woody component providing about 80% of the cover.

**Output 3.2.** Improved and sustainable production of fodder, wood and other products, including a considerable increase in the area of and off-take from sheltered lands.

**Output 3.3** Significant increase in the flora and fauna and an enhanced microclimate

**Activity 3.2. Train and Demonstrate Rehabilitation Techniques**  
(Please also see Activity 4.3)

Half the area, i.e., 4,500 *has* will be used to provide on-the-job (OTJ) training on degraded land rehabilitation and natural resource management to pastoralists, farmers and nomads from the sub-watershed. As the land is being rehabilitated, these target groups will receive hands-on training on, among others, the re-seeding, re-planting and plant watering techniques. Training will also be provided under the project for seedling production and nursery management.

Demonstrating rehabilitation techniques to trainees is part of the project's strategy to reclaim similar areas beyond the 9,000 *has* proposed in the project. Rehabilitation techniques will be demonstrated to people in the project areas and the project will provide for the technical assistance.

**Output 3.2.** Trained people in seedling production, nursery management and establishment and management techniques for the rehabilitation of similar semi-arid areas.

**Activity 3.3. Experiment With Various Establishment Methods and Species Mix**

It is also important to experiment, on an on-going basis, with various establishment methods and species mix. Nurseries will be established to provide seeds and seedlings for other projects or used to expand the planting on the existing project area.

Experts will be engaged to provide advice on the choice of species and the experimental layout for species and establishment trials (Annex 4). However, there should be considerable local knowledge on suitable species and this will be tapped. The proposed species are mainly indigenous and include *Haloxylon persicum*, *H. aphyllum*, *Atriplex canescens*, *A. leucoclada*, *Calligonum spp.*, *Zygophyllum spp.*, *Amygdalus spp.* (Almond), *Berberis spp.* (fruit) and wild pistachio (nut). The Office of Nomadic Affairs (ONA), which works with the pastoralists, will be consulted regarding migratory patterns and suitable fodder species. In addition, the assistance of the Birjand Natural Resources Office (NRMO) will be enlisted in the establishment activities.

**Output 3.3.1.** Established plant nurseries.

**Output 3.3.2.** Report on the evaluation and viability of various establishment methods (including the corresponding mix of plant species) highlighting the benefits that can be derived (e.g., magnitude of carbon storage, watershed management, socio-economic benefits), and recommendations on how to implement each of these.

## C.4. COMPONENT 4: SOCIAL COMMUNICATION INITIATIVES

This is an integral and important component throughout project implementation. In a participatory context, ultimately, it is people who will manage natural resources and are agents of rural development. There can be no change for the better without involving them, mobilizing their capacities and energies and enhancing their knowledge and skills. Communication is vital for any activity in which the participation of local people is envisaged and sought. In addition, effective communication generally has remarkable personal effects such as raising moral, enhancing the sense of one's own value and dignity and promoting social solidarity and collaboration.

Social communication (SC) initiatives are very different from conventional information or education initiatives. They do not merely aim at passing a message about an issue but at promoting its critical understanding and appropriation in society. The most important result sought by a genuine co-management initiative is for people to think, find agreements and act together on their own accord. SC will provide the condition for informed decision-making to foster information sharing, the discussion of problems, opportunities and alternative courses of action.

There are various "top-down" approaches in SC that include informing, awareness raising and training & extension. These aim to enhance knowledge, awareness and skills of the receiver and will be used during the project by resorting to various communication media and on-going training initiatives. An additional, but crucial, communication situation is generated by "interactive learning" which aims to enhance common knowledge, awareness and skills by thinking, discussing and acting together. This form of communication is crucial to project's success, as it will seek to overcome the logic of top-down expert authority and prescribed behavior and close the gap between what is "legal" and what is legitimate (i.e. what emerges from social consensus). Efforts at merely transferring information, awareness or skills are likely to be useless. The project will, therefore, primarily use interactive learning that results from direct confrontation and dialogue among different views to overcome the gap or help in managing conflicts.

### Immediate Objective 4

<i>Immediate Objective 4</i>	<i>Success Indicator</i>	<i>Verifiers</i>
People in the communities within the project area become capable of thinking, agreeing, deciding and acting together on their own accord facilitated through enabling conditions for informed decision-making, sharing of information, and open discussion of problems, opportunities and alternative options for action.	People in the rehabilitated areas are assisting people in other surrounding degraded areas on all aspects of the design, planning and implementation of community participatory-based NRM and land rehabilitation, including the development of related livelihood support and entrepreneurial activities starting Year 3.	<ul style="list-style-type: none"> <li>▪ Documentation of training materials and information materials used for extension work.</li> <li>▪ Reports on extension services rendered by FRWO and trained people from the project areas</li> <li>▪ Certification of qualified personnel for providing extension services.</li> </ul>

### Success Criteria

By the time the activities under this project component are completed, people in the communities within the project area, as well as technical personnel from the government (particularly FRWO) are more empowered and experienced in designing, planning, implementing and managing sustainable and cost-effective land rehabilitation projects as well as in communicating effectively. By that time the following results would have been achieved:

- An operational project website
- Regular provision and updating of information through various forms of mass media
- Documented findings and information on proposed seminars, workshops, meetings, study tours, etc. detailing progress, achievements, failures, proposed modifications, expenditures, village participation, and self-help activities.
- Leaflets, posters and newsletters, as well as video materials about specific aspects of the project.
- Teaching materials on rehabilitation methodologies and participatory approaches for schools, farmers, NGOs etc.
- Trained rural communities, as well as FRWO and governmental personnel on project preparation, collaborative management plan formulation and compilation, rehabilitation methods for degraded lands, sustainable development, grazing options, land ownership legalities and entrepreneurial activities (see Activity 2.6) etc.
- Qualified extension workers in natural resource rehabilitation and management.
- Trained personnel for carrying out studies on natural resources and socio-economic matters
- Completed workshops, courses and seminars on project related matters for villagers, government officials, project staff, teachers and NGO's etc.
- Enhanced skills and knowledge of the project staff through on-site training in order to replicate the derived community-based models.

#### **Activity 4.1. Formulation of a Social Communication Strategy**

Prior to undertaking each component, the National Project Manager (NPM), in conjunction with the CTA, and if need be with inputs from relevant international/national project experts will formulate a SC strategy for each of the first 3 main components (1 to 3) of the project. For the two first components, the strategies will be executed by the Inception Team of which the NPM is a member. As necessary, the strategy will be subject to reviews and assessments and will contain guidance on target groups, activities and requisite inputs. The project will provide national experts to support the SC initiatives throughout the life of the project. The NPM will organize and coordinate various SC initiatives for the villagers and/or their legitimate representatives both at target NRM units and at the sub-watershed-level. The necessary personnel required to assist in the implementation of SC initiatives will be identified and contracted by the NPM as human resource inputs to the SC strategy. A budget will also be drawn up to finance the implementation of the latter initiatives.

**Output 4.1.** A set of recommended strategies for SC initiatives with accompanying operational guidelines (i.e. budgets and estimates of human resources).

#### **Activity 4.2. Information Dissemination**

Through various activities, all stakeholders, other interested parties and the public at large will be informed about the progress of the project, in particular, the description, benefits and bottlenecks of its participatory approaches and processes, rehabilitation techniques, management mechanisms and socio-economic and environmental benefits. All too often, information is not disseminated properly with the result that mistakes are often repeated and successful initiatives are not always known about. Interactive workshops, meetings and seminars may be held at frequent intervals. Since the project will also be seeking policy-level reforms and upstream interventions, other national and international agencies concerned with rural development and global climate change are potential SC beneficiaries. The following are the various information dissemination strategies that would be considered for implementation:

- Design and establishment of a web page to inform interested parties about the project
- Regular provision and updating of information through various forms of mass media
- Documentation of findings and information on proposed seminars, workshops, meetings, study tours, etc. (e.g. visually documenting specific aspects of the project and its progress).

- Submission of annual reports, detailing progress, achievements, failures, proposed modifications, expenditures, village participation, self-help activities and so on.
- Publication and distribution of leaflets, posters and newsletters about specific aspects of the project (e.g., establishment techniques, species success and failures, management plans and agreements, alternative livelihood approaches etc)
- Production of teaching materials for schools, farmers, NGOs etc.

These set of activities will inform interested parties and the public at large about the project and its socio-economic and environmental benefits. It will help the project's findings reach a wide audience. To be successful, the project has to be replicated, not only in suitable terrain of the relevant hydrological area, but also in other areas of Iran and even beyond. It is important to engage other sub-watershed-wide stakeholders at early stages of implementation in order to familiarize them with participatory processes of NR management/rehabilitation.

**Output 4.2.** A set of information dissemination materials and mechanisms that would be used to promote, update and inform individuals and/or group of individuals and organizations in the project sites, within and outside country about the project (e.g. objectives, methodologies and expected outputs and outcomes).

#### **Activity 4.3. Training and Extension**

Aside from the training that will be provided as part of the rehabilitation activities, technical and entrepreneurial (i.e. in conjunction with the micro-credit system) training and extension services will be provided to various target groups. These include the target communities on the one hand and government officials (in particular FRWO staff) on the other. The project will target M&E as an area of capacity-building for selective FRWO staff through short-term overseas training courses. A Study Tour to Pakistan for the benefit of key community members and project staff will be undertaken to learn from similar and already successful projects. Specific target groups will be identified at early stages of project implementation. In addition to benefiting the direct stakeholders of the project, T&E activities will promote the replication of the project at other locations within the watershed as well as nationally. Nomads and other transient groups, if identified as stakeholders in the project, will be included in the T&E activities.

The training provided under Component 3 of the project is directly related to the land rehabilitation activities. Moreover, the T&E activities will focus more on transfer of knowledge on various aspects of sustaining the rehabilitation activities. For example, training will be provided on the integrated management of the sub-watershed, and/or the provision of technical advice on best practices (including livelihood support activities that could sustain the application of such practices).

The nature of training activities could either be on-the-job and informal or formal and specifically targeted. The experiences, both positive and negative, in participatory project management and the rehabilitation of degraded lands will be documented and used for future training purposes. Thus, training workshops and refresher courses including teaching techniques and methodologies would be conducted. The workshops/courses could include rehabilitation methods, management of rehabilitated areas, contracting arrangements, participation attainment, grazing schemes and sustainable human development concepts and practices. The trainers will include promising individuals from sub-watershed communities who could relate their experiences in community empowerment. T&E activities could address the following:

- Collaborative NR management, especially those dealing with woody biomass & forage crops;
- Formulation of community-based management regimes and options in relation to pressing rural development issues;
- Legal aspects of land ownership;
- Alternative livelihoods and entrepreneurial activities;

- Rangeland management and animal health;
- Entrepreneurial activities, project design and proposal preparation; and,
- Micro-credit systems and other applicable financing mechanisms.

T&E will also be provided to people who are engaged in arable and pastoral farming activities. Many rural children will remain in rural areas and they could learn useful lessons from this project. Therefore, training courses could target teachers from the surrounding schools and even those in higher education establishments to introduce the project and its solutions in reclamation of degraded lands. Finally, training could be provided in project proposal formulation and presentation, report compilation and information dissemination etc. for the benefit of project staff and government personnel, as well as loan application submission for the benefit of villagers. Training is also envisaged to benefit the members of the Co-management Board in relation to integrated watershed management concepts and principles. The CTA with the collaboration of appropriate consultants should produce a training plan by the end of the first six months. The plan could be updated at various intervals over the six year life of the project.

Technical training will also be provided to people who will be involved in the monitoring of specific indicators of the project. These would involve survey methodologies, covering aspects of measuring various parameters, interpreting information such as soil analysis (especially an assessment of the organic carbon content of soils); an inventory of flora and fauna (both wild and domestic); an assessment of woody biomass and the carbon content in woody biomass and grass both above and below ground; determining the socio-economic status of the population.

**Output 4.3.1.** A comprehensive training plan which will be updated at regular intervals over the lifetime of the project.

**Output 4.3.2.** Trained personnel among community members, FRWO and governmental staff in project preparation, collaborative management plan formulation and compilation, rehabilitation methods for degraded lands, sustainable development, grazing options, land ownership legalities and entrepreneurial activities etc.

**Output 4.3.3.** Qualified extension personnel in natural resource rehabilitation and management etc.

**Output 4.3.4.** Trained people who are capable of conducting studies on natural resources and socio-economic information.

**Output 4.3.5.** Completed workshops, courses and seminars on project related matters for villagers, government officials, project staff, teachers and NGO's etc.

**Output 4.3.6.** Trained people from other parts of the sub-watershed (on-the-job training) to enable the dissemination of learned techniques and methodologies, thereby facilitating replication.

**Output 4.3.7.** Completed study tour to rehabilitation project(s) in Pakistan.

**Output 4.3.8.** Enhanced skills and knowledge of the project staff through on-site training, enabling them to provide extension services to similar projects in other areas.

#### **C.5. COMPONENT 5: PERFORMANCE MONITORING & ASSESSMENT OF REHABILITATION**

This component will involve an initial joint MPO/FRWO/UNDP baseline and feasibility study (BFS) as well as a participatory M&E scheme to monitor the build up of carbon storage in plants and the soil in the rehabilitated areas. Improvements in the socio-economic well being of the people of the target communities will also be monitored over the lifetime of the project. This component, therefore, involves monitoring and evaluating project performance against the impacts, outputs and the outcomes that the project is seeking to achieve.

By establishing the baseline at the beginning of project implementation, progress will be monitored and findings evaluated and results assessed. The BFS will also make possible the identification of NRM units and will enable project authorities to make necessary project design adjustments if warranted. The degree to which the target communities are already empowered prior to the initiation

of participatory activities, midway through project implementation and right at the end of the 6-year project duration will also be monitored. To build national capacity and in relation to more technical measurements, students from the University of Mashhad or other universities/colleges could assist in measurements as part of their undergraduate and graduate work in the area. The baseline studies will be conducted in two stages. The initial stage would address the entire sub-watershed. However, once the NRM units are identified, detailed baseline studies would be required to establish the status quo of the targeted project sites.

A participatory monitoring and evaluation plan will be designed with particular attention to assessing the progress and the extent of atmospheric carbon sequestration. An international expert will be engaged to produce an articulate and clear, albeit flexible, participatory M&E scheme (including procedures) in consultation with local communities. Such a scheme will involve the regular monitoring of specified physical, chemical, ecological, geographic, economic and demographic parameters throughout the project's life and beyond. The M&E scheme will be prepared based on the agreed work plans to be implemented and individuals identified to apply them. Records will be kept of flora and fauna, local climate and enhanced opportunities for the population. As part of the technical training activities that will be provided by the project, selected individuals from local communities, project staff and pertinent government personnel will be trained in survey work. National and international consultants will be engaged to provide inputs in drawing up the carbon monitoring procedures and socio-economic surveys of the project sites.

Other outputs of this component include a carbon sequestration model.

#### Immediate Objective 5

<i>Immediate Objective 5</i>	<i>Success Indicator</i>	<i>Verifiers</i>
<ul style="list-style-type: none"> <li>▪ The extent of carbon sequestration and changes in the land and microclimate resulting from land rehabilitation is monitored and evaluated systematically and regularly.</li>   <li>▪ Local communities benefit from participatory efforts in land rehabilitation and management of natural resources thereby improving socio-economic development, as well as the people's welfare and well being.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Baseline data for specified parameters defining the carbon storage, physical, chemical, geographical, and climatic characteristics, and economic, social and demographic features and trends in each project area are established by end Year 2.</li> <li>▪ The FRWO, assisted by the people in the project areas monitors the various performance parameters based on the defined procedures, and prepare an evaluation report each year.</li>   <li>An improvement of about 10% in the HDI of H.A. is achieved as a result of the rehabilitation activities by end of the project.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Documentation of baseline data (carbon storage; physical, chemical, geographical, climatic characteristics; social, economic and demographic features and trends)</li> <li>▪ Performance M&amp;E reports</li>   <li>▪ Evaluation report of the co-management process applied in the project.</li> <li>▪ Annual evaluation reports on socio-economic and human development in the region covering the rehabilitated areas.</li> </ul>

## Success Criteria

The local residents of the project areas will monitor activities to ascertain carbon build-up in the rehabilitated areas, as well as evaluate project impacts with regard to the socio-economic and human development in these areas. The following results are expected to be achieved:

- Completed baseline and feasibility (BFS) studies of the entire sub-watershed to be jointly commissioned by the MPO, FRWO and UNDP. Baseline data will be collected for the physical, chemical, geographical, climatic characteristics, economic, social, demographic features and trends of the entire hydrological area.
- Participatory performance monitoring and evaluation (M&E) scheme based on the participation of local communities, and with clearly defined procedures and reporting formats.
- A model for assessing the magnitude of carbon storage in woody biomass and soil in rehabilitated areas considering all the relevant factors such as type and mix of species, soil type, watering and tending techniques, climate conditions, etc.
- Monitoring of the human development index of target NRM units including regular monitoring of critical socio-economic indicators as well as recommended interventions to improve the welfare and well being of the populace in each area.
- A terminal evaluation of the effectiveness of co-management processes in the delivery of degraded land rehabilitation activities (or similar community-based activities), highlighting the successes that were achieved and difficulties that were encountered, as well as recommended interventions to improve the process or the delivery of such an approach

### Activity 5.1. Joint MPO/FRWO/UNDP Baseline & Feasibility Studies (BFS)

These studies will cover the entire hydrological basin of which H.A. is a part. The studies will involve collecting baseline data for the sub-watershed against which all M&E activities will be carried out and progress gauged. The detailed Terms of References will be jointly articulated by the MPO, FRWO and UNDP immediately after the signing of the project document. The work will be sub-contracted to a firm of reputable consultants based on MPO's procedures for recruiting such consultants. Whilst the detailed TOR will be jointly decided, in broad terms the primary objectives of the BFS may include the following:

- Establishing the physical/topographic, ecological, geographic and climatic baseline data/parameters. The essential baseline data could include the following
  - Soil studies
  - Hydrological studies
  - Flora and Fauna
  - Daily climate parameters (rainfall, temperature, wind speeds, etc.);
- Collection of economic and social and demographic data/information to establish the existing socio-economic conditions of the rural communities:
  - Population centers and gender distribution (Male/Female),
  - Within each population center, household size, employment, income & expenditure, energy use, social facilities.
  - Animal population by types & grazing pattern
  - Animal migratory patterns
  - Other information, e.g., family members living away from home, income from outside, government assistance etc.
  - Production of fodder and leafy biomass;



- Production and use of other products, e.g., wood, honey, fruit, nuts;
- Problems, opportunities, history of conflicts, authority relationships
- Descriptions of the territory (maps are useful tools).

▪ **Legal, political and institutional analyses**

The analysis will not only cover the existing power delegation system and entitlements to manage NRs but also the unrecognizable claims (e.g., the relevant entities who draws up the plans, advises, take decisions, access resources, benefits from the resources, and evaluates whether NRM activities need to change). Legal, political, institutional, economical and socio-cultural feasibility conditions do not need to be absolutely ideal to decide to embark on a co-management process, but thinking about the feasibility factors highlights the obstacles and hot spots to expect along the way). A realistic evaluation of the existing NRM situation including the framework prescribed by the existing laws and norms and the de facto or on-the-ground situation.

▪ **Identification of the rehabilitation units (or NRM units)**

On the basis of the baseline studies of the sub-watershed, the consultants will present their findings to the sponsors of the study and together will identify possible rehabilitation / NRM units, which make ecological, economic, demographic and social sense. Within the larger sub-watershed, it is also imperative for the consultants to confirm the feasibility of including H.A. as a main project site (e.g. by examining factors such as the sparse collective population of the 11 H.A. villages as a feasibility factor).

The consultant report should evaluate the NRM context listing, for example, historical, social, cultural, legal, political and institutional issues. The report must contain information and tools (e.g., maps) on the main ecological and social issues at stake in the immediate project site and the sub-watershed. The report, the maps and other relevant data and information must be made available to all the stakeholders, particularly to local communities who may otherwise be deprived of the information they contain. An evaluation report on the human development index of the sub-watershed area, highlighting factors that bring about the present conditions relevant to human development, as well as recommended interventions to improve the welfare and well being of the populace in each area.

It is possible to envisage a series of NRM units consisting of land conducive to rehabilitation and on which the beneficiary communities can rely on for their livelihoods and have the incentive to rehabilitate during the project. When the units are small, the stakeholders who negotiate the co-management plans and agreements are likely to be the ones who will implement it. In general, it is best to negotiate at sub-watershed levels, among the communities, agencies, individuals and people directly involved in NRM activities, while maintaining links with actors involved in the larger watershed area (i.e. through the Co-management Board and through watershed-wide grassroots representatives identified for training). This is because from an integrated planning perspective it is important to consider the larger watershed area of which H.A. is a part, based on principles of Integrated Watershed Management.

**Output 5.1.1** Complete set of baseline data and a baseline assessment of the issues at stake summarized in a report to be offered to the sponsors of the BFS.

**Output 5.1.2** A set of selection criteria for use in the selection of areas that will be rehabilitated (i.e. the NRM units). Several proposed NRM units, identified on the basis of ecological, economic, demographic, and social considerations and agreement on their location and size. These will be recorded on maps and verified during negotiation phase.

### **Activity 5.2. Baseline Studies: Post-Identification of the NRM Units**

Because there is very little recorded data about the growth of woody biomass in low rainfall areas that will be covered under the project, and even less information about carbon sequestration in wood and soil, it is imperative that an initial data gathering exercise be carried out. This is mainly to establish the baseline information against which the achievements of the project will be measured in the identified NRM units. Moreover, as far as the initial amount of carbon storage in the area is concerned, this baseline data will verify or contradict the models that have been drawn up to estimate the growth patterns of wood and the amount of carbon sequestered (Annex 5).

In order to estimate the growth of woody biomass beyond the six-year life of the project, other areas will be chosen containing similar trees of older age classes. These will be measured for growing stock, carbon sequestration in wood and soil, annual production of fodder, wood and any other production such as honey.

More detailed socio-economic surveys may also be undertaken in these target project areas. The following are examples of the possible baseline parameters that will be surveyed and monitored initially (as well as throughout the life of the project at regular intervals):

- Biomass production
- Soil carbon and nitrogen contents;
- The growth in carbon stock above and below ground;
- Production of fodder, wood and other non-wood product (volume and value);
- Land-use patterns and changes over time; and
- Economic activities in the target NRM sites.

**Output 5.2.1.** Baseline data for specified parameters that define the carbon storage in the woody materials plants (above and below) and in the soil in each project area

**Output 5.2.2.** Baseline data for specific parameters that define the physical, chemical, geographical, and climatic characteristics of each project area that could change during the project lifetime and beyond, due to the rehabilitation activities.

**Output 5.2.3.** Baseline data for specific parameters that define the economic, social and demographic features and trends in each project area that could change during the project lifetime and beyond, as a result of the rehabilitation activities

### **Activity 5.3. Participatory Monitoring & Evaluation Scheme to Gauge Agro-Economic And Ecological Impacts**

Under this activity, an international monitoring consultant together with the CTA and with the advice of national project experts, will draw up a participatory M&E scheme. In order to learn by doing, it is not only important to collect data and information, but also to have a constructive attitude. A great deal of learning takes place while the co-management plans and agreements are being implemented and the NRM organization(s) are tried out on the ground. This may include the gathering of data and information not even mentioned in the M&E scheme that will be employed. Such data and information will also be documented and analyzed, to understand in detail the main factors that have an impact on the natural resources and the stakeholders. This will cover both negative impacts and positive influences and accrued benefits.

The project staff, together with trained local people, will monitor and evaluate the various performance parameters to which baseline information were established. Procedures will be prepared

for used in the monitoring and reporting of the measured/quantified/assessed values of the various parameters. Project experts will do the evaluation of the data gathered during the initial years of the project. Thereafter, the local people will be the ones who will also do the evaluation under the supervision of the project experts. They will be doing the monitoring and evaluation work even after the completion of the GEF-assisted project.

Regular household surveys will be conducted as prescribed by the on-going M&E scheme to determine project-specific income generation resulting from the rehabilitation activities. Changes in the flora and fauna of the NRM units will also be monitored. The results of these surveys and investigations will be analyzed to determine the impacts on the agro-economy as well as ecology of the rehabilitated areas. Among other things, the following will be monitored:

- Growth of woody biomass over a time period of at least 20 years;
- Carbon sequestered in above and below ground wood;
- Number of communities that have significantly changed the ecosystem/natural resource usage pattern;
- Area of land that has restored ecosystems;
- Quantification of the changes to the physical and socio-economic parameters, brought about as a result of the project (the incremental gains/losses); and,
- Quantifying replication rates elsewhere over the medium and long terms.

From this information the project outputs concerning the impacts of the project from a physical, environmental, social and economic viewpoint will be quantified.

**Output 5.3.1** A participatory M&E Scheme, complete with timelines and follow-up protocols

**Output 5.3.2** Periodic reports on the measured/quantified/assessed values of the performance parameters, including the evaluation of these values. The data gathered in the periodic monitoring and evaluation will be used in the development and updating of the carbon sequestration model.

#### **Activity 5.4. Develop a Carbon Sequestration Model**

With the information gathered from the data gathering activities that will be carried out under Activity 5.3 above, a carbon storage model will be designed. Such model will estimate the degree/magnitude of carbon sequestration that will be achieved periodically over a period of at least 20 years. The outputs of such model will be used to anticipate environmental, social and economic consequences and impacts of the project.

**Output 5.4.** A model for assessing the magnitude of carbon storage in plants/trees and soil in a rehabilitated land considering all the relevant factors such as type and mix of species, soil type, watering and tending techniques, climatic conditions, etc.

#### **Activity 5.5. Evaluate Effectiveness of Co-management Process**

Besides monitoring results, however, the process of co-management itself deserves to be monitored. Thus, a variety of qualitative or process indicators such as the following will be monitored as part of project activities, for comparison against the baseline at the start of the co-management process:

- Knowledge and understanding of the stakeholders about the participatory process;
- Existence of regular mechanisms for exchange and dissemination of NRM information and platforms to communicate and negotiate participatory management plans and agreements;
- Availability of facilitators to assist during meetings, mediate conflicts and help institutional actors to communicate among themselves;

- Active participation of stakeholders in the preparation of co-management plans and agreements and their willingness to take responsibility;
- Existence of co-management plans and agreements linking various stakeholders;
- Specific definitions of functions, entitlements and responsibilities of each stakeholder in co-management plans;
- Stakeholders adhering to and complying with their agreed entitlements and responsibilities;
- Existence of CM organizations (with executive, advisory, decision-making and mixed roles);
- Availability of competent personnel to clarify entitlements and responsibilities and mediate in the event of conflicts;
- Stakeholders adhering to and complying with their agreed entitlements and responsibilities;
- Stakeholders satisfied with the co-management plans, agreements and organizations;
- Stakeholders committed to and active in promoting the political and legal changes that facilitate the implementation of the co-management plans and agreements;
- Timely receipt of plans and agreements extended in both scope and complexity; and,
- Timely institutionalization of co-management plans, agreements and organizations in society.

Moreover, throughout the project implementation, meetings will be held at regular intervals to evaluate the results of the co-management plans and agreements. In addition, given the scope of the proposed activities and the concomitant financial and human inputs as well as UNDP-GEF's M&E requirements, both internal (participatory) and external (independent mid-term initiated by UNDP) evaluations must be carried out. The results of these evaluations should be compared and analyzed together. Various participatory methods can be used, including methods that may already be known by the stakeholders who have participated so far, such as the strengths, weaknesses, opportunities and threats (SWOT) analysis. Participatory evaluation will ascertain whether the co-management plans and agreements succeeded in progressing towards their own objectives and common vision, and thus whether the hypotheses on which the work was based are correct. It will also establish whether the contextual setting has changed, what lessons have been learned from experience and whether the process is on the right track. Most importantly, it will examine the environmental, economic and social results and impacts achieved in relation to those expected.

**Output 5.5.** An evaluation report on the effectiveness of co-management processes in the delivery of degraded land rehabilitation activities (or similar community-based activities), highlighting the successes that were achieved and difficulties that were encountered, as well as recommended interventions to improve the process or the delivery of such approach

## D. INPUTS

The total project budget is US\$ 1,709,939. This includes the US\$ 23,739 PDF-A grant from the GEF. About 44% of this total amount is provided by the GEF (US\$ 749,939) and the rest (56%) is from the GIRI (US\$ 630,000 cash and US\$ 330,00 in-kind).

### D.1. GEF INPUTS

US\$ 140,000 of GEF funds will be allocated to recruiting international consultants, with US\$ 53,000 allocated to engage local consultants. A sum of US\$ 100,000 will finance sub-contracts, which shall be mainly awarded for undertaking rehabilitation activities. Rehabilitation will also be supported by US\$ 100,000 worth of specialized expendable and non-expendable equipment. An inventory of the latter equipment will be decided as per activity 3.1. A micro-credit fund allocation of US\$ 50,000 is also part of the GEF budget. In support of capacity building activities, US\$ 178,900 has also been allocated for training and study tours. The following table shows the breakdown of the general budget line items supported by the GEF. GEF funds will also finance two thirds of the costs of the joint BFS. In addition, GEF will finance most of the community mobilisation activities over 2003.

Budget Line Items	Amount, US\$
PERSONNEL	
International Consultants	140,000
Administrative Support	42,000 ?
Monitoring and Evaluation	35,000
Mission Costs	20,000
National Consultants	53,000
Sub-contracts	100,000
Training	178,900
Equipment	100,000
Miscellaneous	7,300
Micro-capital Grants	50,000
TOTAL	726,200

### D.2. GOVERNMENT INPUTS

The GIRI, through the FRWO under the Ministry of Jihad-e-Keshavarzi, and in particular, the Birjand Natural Resource Management Office (BNRMO), will provide the necessary counterpart and support staff to implement the proposed activities. FRWO and BNRMO will also provide office space, garage, repair shop, store, nursery, pump, reservoir and facilities for training including a meeting room and a guesthouse for trainees and trainers. Subject to agreement, throughout the project, the government will ensure the release of trainees and trainers/resource persons from its staff. It will provide local transport to the project site and the surrounding area for consultants during training, monitoring and evaluation. It will also make other necessary logistical arrangements for the experts. The following is a breakdown of the general budget lines to be financed by the GIRI's contribution (cash and in-kind).

Budget Line Items	Amount, US\$
Rehabilitation Activities*	120,000
Monitoring & Evaluation	66,000
Social Communication Initiatives	
Study Tours	4,000

Training & Extension	50,000
Other	35,000
Publications	5,000
Sub-contracts (e.g. personnel etc..)	140,000
Vehicles and Equipment	100,000
Utilities and Service of Buildings etc.	90,000
Alternative Livelihoods	20,000
<b>Total Cash Contribution</b>	<b>630,000</b>
IR Iran in-kind Contributions (Buildings, transportation etc.)	<b>330,000</b>
<b>TOTAL</b>	<b>960,000</b>

\*Including the cost of water supply

The government will also pay the salaries and wages of the local non-professional staff including, two or more support staff, three drivers, five guards, one cleaner and five servicemen. The villagers will supply the tractor drivers for watering purposes. Innovative ways to compensate these drivers would be to allow them limited use of the tractors. The local guards could be trained in extension and will act as a liaison between the five village groups and the project. Each guard will be supplied with a motorcycle. The government will also pay, on a contract basis, for the planting of half the area to be rehabilitated by the project, but in return, the villagers have pledged to undertake self-help planting and tending with the government providing seedlings and water. The areas to be planted by the villagers themselves will be decided during the course of the project and much will depend on the success of the training and extension activities. The cost of this contribution is not given, but as stated above, if an additional 9,000 *has* will be rehabilitated by the villagers on a self-help basis, it would be worth about US\$ 380,000. The government would also contribute about US\$ 65,000 in plants and water plus the cost of taking the water to the planting areas.

The government will pay for food for trainees and electricity, consumables and upkeep of the guesthouse, training facilities, office and garage for six years. Their in-kind contribution will be the buildings, nursery, tube well, pump and reservoir. These facilities are estimated to be valued at US\$ 330,000 over the six-year period. The total government budget including in-kind contributions amounts to US\$ 960,000 or 56.1% of the total budget.

## E. RISKS AND SUSTAINABILITY

### E.1. RISKS

Through systematic M&E, it will be possible to quickly assess the effectiveness of the various activities and to determine if the project is not only successful in rehabilitating the degraded lands through community mobilization, but also whether the process applied is cost effective as well. There is a risk that in some years, despite watering, plants could die because rainfall levels and available water are well below average. The minimum recorded rainfall of 117 mm is only about 60% of the average. However, mitigating steps can be taken to counter this natural occurrence. If records are kept of precipitation (a task in the project's activity sheet), then in years of low rainfall, additional water can be applied to the young plants. Once plants are established they should survive such adverse conditions. Also in dry years, there is a risk of fires, but again, built in safeguards should minimize this risk. The following is a list of possible risks that the project could encounter.

#### Risks and Mitigation Measures

Risk	Likely Occurrence and Remedial Measures
Staff under-performing.	This is possible, but through project feedback, staff can be replaced.

Consultants/CTA fail to perform adequately.	Again this is possible, but unlikely. The stringent selection process at national and international levels should prevent such an occurrence.
Equipment procurement delayed or breakdown incidences prevalent.	The critical equipment namely the water tanker is on site and tractors are not difficult to procure. A mechanic/driver in the project site should maintain the vehicles and machines properly.
Lack of seed source or seeds with low viability.	The risk is low if seeds are obtained from certified sources and/or they are first tested for viability.
Low rainfall in some years.	The risk is moderate, but species choice and additional watering should overcome this factor.
Fire could destroy plantations	This is a moderate risk, but measures should be undertaken to offset it including firebreaks, fire patrols and, if necessary, controlled burns.
Plants buried by the sistani winds	This is possible, especially those on the leading edge. However, replanting is one of the options and some of the chosen species are very resilient and will send up shoots.
Villagers do not perform their tasks adequately.	This is a village driven participatory project and therefore, if a sense of ownership of the project is instilled, this risk is low.

## E.2. SUSTAINABILITY

Collaborative management regimes not only facilitate the project management aspects, but also are an important feature for any future replication of the project and its sustainability.

The local people are well aware of the problems, but they do not have sufficient expertise, suitable seeds or funds to tackle their sustainable rural development. On the other hand, from a policy standpoint, the government estimates that it is too expensive to undertake intensive rangeland reclamation by itself due to the vastness of such degraded lands and because of budget constraints. With assistance from the people themselves, the government will be in a position to commit sufficient funds, provided suitable models are seen to work. Fortunately, the current legal context in Iran supports tenurial rights of the local population if they directly participate in reclaiming desertified lands. Such rights combined with strategies to improve socio-economic conditions will go far to ensure the sustainability of project outcomes and the achievement of its development objectives.

## F. MANAGEMENT

### F.1. STAKEHOLDERS PARTICIPATION

The crucial stakeholders in this project are the local people in the project areas. Already, they have cooperated fully in preliminary discussions and some, especially women are already employed in local tree nurseries. They will be the principal participants in the planning and execution of the various activities. The Birjand Natural Resources Management Office (NRMO) will assist the local people. The NRMO will have a manager on site and various officers will help the villagers to compile management plans and supervise the activities. The Office of Nomadic Affairs (ONA), which works with the pastoralists, will be consulted regarding migratory patterns and suitable fodder species. Migratory nomads, who spend about three months in the vicinity will be provided with practical training on land rehabilitation and resource management. With the help of the ONA, they will be consulted on acceptable ways to exclude their animals from the planting areas during the establishment phase. One of the ways the nomad issue could be addressed, is allocating specified and agreed areas to them during their migratory journey. The villagers and migrant nomads are well

aware of the proposed project activities and they see it as a way to provide improved grazing and a better environment for the area. Other stakeholders who will be fully involved in the project include the Forest and Range Organization (FRWO), the Government of I.R. Iran through the Ministry of Foreign Affairs, GEF and UNDP.

This project will be executed by the FRWO, which is the implementing agency for the GIRI's land rehabilitation policies and activities. It will be implemented through coordinated efforts and close working relationships with relevant institutions such as the National Resources Management Office (NRMO) in Birjand, and the Office of Nomadic Affairs (ONA). As GEF's Implementing Agency, UNDP will also be fully involved in ensuring that the stated project objectives are met. Other potential stakeholders may include MOAJ's Deputy for Extension, Training, Research and Integrated Planning.

## F.2. IMPLEMENTATION ARRANGEMENT

The co-management plans and agreements will be formulated and executed by the stakeholders of whom the target local communities are the most prominent. A systematic stakeholder analysis will determine all the parties including those in the government who have mandates to manage natural resources.

This project has been careful to distinguish between project level decisions and decisions involving the management of sub-watershed-level natural resources from policy decision. Vis-à-vis operational and project level decisions, and for a project of this nature, it is proposed to form a locally-based "Project Management Cell" (PMC) with oversight responsibilities with regard to project management issues. The PMC, in effect, performs the function of a local executing agency (see Organization Chart in Annex 2). In addition, the Tehran-based Project Steering Committee has been replaced with a "Co-Management Board".

The Forest and Rangeland Organization (FRWO) through its designated National Project Director (NPD) will take overall responsibility and accountability as the governmental executing agency of the project. Over and above its execution responsibilities, the FRWO is also one of the main stakeholders in the project and one side of the partnership agreements and co-management plans to be signed with local communities. The FRWO will ensure that the project is executed in accordance with the participatory approaches delineated herein. The Ministry of Jihad-e-Keshavarzi, through the FRWO will initiate the formation of the Co-Management Board (CMB) and the Project Management Cell (PMC) and appoint a National Project Director. A number of bodies are required to help in implementing the various stages of the project and catalyzing social mobilization. These are described as follows:

1. At the project level, a "Project Management Cell" (PMC) will guide the day-to-day activities of the project according to the prescriptions and the general spirit of this document and under overall supervision of CMB (see below). The members could initially include the National Project Manager (NPM), the Deputy National Project Manager (DNPM) and an international Chief Technical Advisor (CTA). At a later stage, three community representatives from local villagers will join the PMC. The latter three, including a local woman, will be identified at preliminary stages of project implementation. They could join the PMC only subject to democratic identification, nomination and election by the indigenous communities. The bi-monthly meetings will be chaired by the NPM, subject to delegation of authority from the project's NPD who is designated by the FRWO, in order to decide on workplans and revisions to such plans as well as monitor project indicators. The NPM will exchange information and establish the links between the project-level activities and CMB.
2. At the level of policy decision-making, a Co-Management Board (CMB) will be formed and comprise of representatives from the FRWO (National Project Director as the chair), Provincial



Natural Resources Organization (as the co-chair), CTA, the Governor General (or his/her representative), MPO (Management and Planning Organization), MFA (Ministry of Foreign Affairs), NIOPDC (National Iranian Oil Products Distribution Company), RWO (Regional Water Organization), UNDP, NGOs (to be determined) and NPM (as the Secretary). CMB will be chaired by the NPD who, after consulting with other members of the Committee, will make the final suggestions and decisions to be followed by the PMC.

CMB meetings will convene on a bi-monthly basis at the Provincial Natural Resources Office. The CMB will act as a strategic decision-making body and will refrain from interfering in day-to-day project activities. The CMB may, therefore, find it appropriate to establish linkages with parliamentary groups and high-level decision-making bodies within key ministries. The CMB will also act in a policy-making and strategic capacity and ensure that the requisite legislative and policy-making reforms are instigated and lessons learned are incorporated in government's development plans. The CMB meetings will always start with a briefing from the NPM and the CTA with the agenda of the meetings set by the FRWO. An important mandate of the of the CMB relates to active promotion of integrated watershed management principles and ensuring cross-sectoral dialogue and coordination in line with the sustainable human development of the watershed. A comprehensive discussion of integrated watershed management principles within the CMB and facilitated by the CTA is envisaged at the beginning of project implementation.

3. The Inception Team: This Team will only be responsible for the activities under Component Nos. 1 and 2. The Team is entirely responsible for the phase in which the partnership is prepared and rooted in the local context. Its main functions are to facilitate the circulation of information among the stakeholders, spark up dialogue and provoke a social discussion on the phenomena and trends affecting the rehabilitation and management of NRs and the measures needed to avoid their depletion.

The Team unites all the conditions necessary for the initiation of negotiations among the stakeholders. It will comprise of up to four individuals led by the NPM and advised by the CTA. The initiators of the participatory processes in H.A. (i.e., jointly with FRWO and UNDP) will select the members of the Team, with inputs and endorsements from the NPM and the CTA. The three members of the Team must be professional facilitators with extensive experience in participatory approaches and knowledge of the local context. These individuals would be pivotal to the success of the negotiation phase.

## **MONITORING AND EVALUATION**

The project activities will be subject to UNDP-GEF's standard Monitoring, Evaluation and Reporting procedures.

The project will be subject to a mandatory Tri-partite Review (TPR) organized by UNDP. The Executing Agency will prepare and submit to UNDP an Annual Project Report (APR) two months prior to the TPR meeting. Annual Project Reports (APRs) would provide a more in-depth summary of work-in-progress, measuring performance against both implementation and impact indicators. APRs would inform decision-making by the Co Management Board (CMB), which would evaluate whether any adjustment in approach is required. A Terminal Report would be completed prior to the completion of the project detailing achievements and lessons learned. The project will also be subject to an annual GEF Project Implementation Review (PIR).

UNDP will also undertake annual monitoring visits to the project site to assess project developments in accordance with UNDP procedures for Monitoring and Evaluation.

*Financial Monitoring:* Financial Reports will be prepared by the PMC and submitted to UNDP on a quarterly basis in accordance with the Guidelines for National Execution.

## G.1. REPORTING AND DISSEMINATION

The Executing Agency (FRWO) will be required to prepare quarterly and annual work plans and to report to UNDP on progress in achieving targets. The Quarterly Progress Reports (QPRs) would provide a brief summary of the status of input procurement and output delivery, explain variances from the work plan, and present work-plans for each successive quarter for review and endorsement. These quarterly reports will include financial statements and the work plan for the subsequent quarter. The accomplishments reports shall be concise describing activities undertaken, issues confronting the project and the progress of work with respect to work accomplished and budgets expended. The National Project Director, UNDP-GEF and the CMB will review the Quarterly progress reports from the PMC. These quarterly reports shall describe activities undertaken, issues confronting the project and progress of work with respect to what is accomplished and budget expended. These reports shall be made available to the mid-term evaluators (see below).

## G.2. MONITORING AND EVALUATION

The project will be subjected to an independent mid-term evaluation in its third year of implementation. The evaluation, organized by UNDP in consultation with FRWO, will examine the effectiveness of implementation and recommend to the CMB and the PMC any necessary action to ensure that the objectives of the project are successfully achieved. The terms of reference and the timing of the review will be determined after consultations. However, it should be no later than the end of year three.

The National Project Director, UNDP-GEF and the CMB will review periodic reports from the PMC. These quarterly reports shall describe activities undertaken, issues confronting the project and progress of work with respect to what is accomplished and budget expended. These reports shall be made available to the mid-term evaluators.

## H. LEGAL CONTEXT

The Islamic Republic of Iran is not one of the signatories of the Standard Basic Assistance Agreement (SBAA). This Project Document shall be the instrument envisaged in the Supplemental Provisions to the Project Document, attached as Annex 7. As this is a project that will be undertaken with the full cooperation and participation of the local people, the size and location of the areas to be rehabilitated is subject to their approval. Thus, this document is provisional and is subject to final agreement by the stakeholders or their representatives on the locations and areas to be rehabilitated. The following types of revisions may be made to this project document with the signature of the UNDP Resident Representative (RR) only, provided the RR is assured that the other signatories of the Project Document have no objections to the proposed changes:

- Revisions of or additions to any of the annexes of the Project Document;
- Revisions, which do not involve significant changes in the immediate objectives, outputs or activities of the project but are caused by the rearrangement of inputs already agreed to, or by cost increases due to inflation;
- Mandatory annual revisions, which re-phase the delivery of agreed project inputs or reflect increased expert costs or other costs due to inflation or take into account agency expenditure flexibility.
- An agreement as to the size and locations of areas to be rehabilitated.

The government executing agent designated on the cover of this Project Document has been duly delegated by the Government coordinating authority, the Ministry of Foreign Affairs: Department for International Economic Affairs and Specialized International Organizations, to carry out this project. Accordingly it will follow the UNDP NEX guidelines including accounting, financial, reporting and

auditing procedures, some of which are set forth in supplementary documentation/Annexes of this Project Document. Such guidelines may be amended from time to time. The above documents are an integral part of the UNDP Programme Manual, although incorporated herein only for reference.

Auditors to the project will be officially designated. Such auditors and/or other officially appointed auditors shall undertake periodic management and financial audits of the project in accordance with the UNDP-GEF's auditing procedures for nationally executed projects, pursuant to the Government's overall nationally execution responsibilities under the Project Document and as set out in the documents listed above.

In addition, all accounts maintained by the Government for UNDP resources may be audited by the UNDP internal Auditors and/or the United Nations Board of Auditors or by public accountants designated by the United Nations Board of Auditors.

## I. WORK PLAN

Participatory approaches to NRM and land rehabilitation activities are complex, often lengthy processes, involving frequent changes, surprises, contradictory information and the need to retrace one's own steps. The lifetime of the project is six years. It is envisaged that the planting of 9,000 *has* of degraded land will be completed after the first 40 months. Additional planting by the villagers themselves is expected to continue over the last two years and beyond. Following the mobilization of project inputs in the first two months after the signature of the project document, the preparatory work for the formulation of co-management plans, social communication initiatives, etc will commence by mid-Year 1 and will take about 6 months to complete. The slow but sure process of getting agreements on the co-management plans and other activities that will help facilitate the implementation of the co-management plans is expected to take about 8 months to carry out. By that time, it is expected that detailed budgets and work plans are already prepared.

The proposed work plan for the project is as shown in Annex 1B.

The general work plan and budget should be further detailed out and if necessary revised by the CTA at the outset of the project to be approved by the PMC and subsequently updated at least once per year. The work plan will form the basis of budget revisions.

At the beginning of the project, the institutional mechanisms for project implementation and management will be established and the following activities carried out:

- Formation and first meeting of the Co-Management Board (CMB)
- Appointment of Chief Technical Advisor and Administrative Assistants
- Recruitment of project staff members
- Convening of inception workshop, and preparation of detailed work plans for the first year, including detailed TORs for all activities to be implemented in the first year
- Training of FRWO staff in participatory approaches for community-based activities
- Establishment of an appropriate monitoring system based on indicators.

It is anticipated that the above activities will take a period of about 3 months after final approval from GEF.

For purposes of project implementation Year 1 in the work plan is to begin after this inception phase and selection of local/international consultants.

## J. BUDGET

The UNDP-GEF and the GIRI budgets are presented in Annex 3.

## List of Annexes

- Annex 1A Project Planning Matrix**
- Annex 1B Project Schedule of Activities**
  
- Annex 2 Project Organizational Chart**
  
- Annex 3A GEF Budget**
- Annex 3B GIRI Budget**
  
- Annex 4 Proposed Project Personnel (Terms of Reference)**
  
- Annex 5 Estimated Growth and carbon Sequestration in Wood and Soil**
  
- Annex 6 Standard Text: Legal Context**
  
- Annex 7 Personnel Recruitment**
  
- Annex 8 Financial Management and Reporting**

## Annex 1A

### Project Planning Matrix

Objective	Success Indicator	Means of Verification	Critical Assumption
<b>COMPONENT 1: COMMUNITY-BASED MANAGEMENT ARRANGEMENTS</b>			
People in the project area are reasonably well informed, organized and empowered to negotiate co-management plans and agreements for implementing sustainable land rehabilitation activities that would bring about increased carbon storage in the soil and plants above and below ground.	Advocacy, planning, programming and information dissemination efforts for co-managed performance of land rehabilitation and natural resource management activities based on participatory approaches are completed and readied for implementation by end Year 1.	<p>Documentations of pre-rehabilitation project assessment reports.</p> <p>Minutes or proceedings of community meetings.</p> <p>Documentation and accompanying maps of the identified NRM units.</p> <p>Documentation of the co-management process.</p> <p>Documentation of rules and regulations on the negotiation of agreements and plans.</p>	FOR agrees to the concept of participatory approaches to community-based development activities like NRM and land rehabilitation.
<b>ACTIVITIES</b>			
Assessment of the need for co-management and the process feasibility	Assessment for the need for participatory management of natural resources and land rehabilitation work completed by 2 <sup>nd</sup> month Year 1.	Documentation of the assessment results and recommendations	There is a wide appreciation of participatory approaches in community development work.
Assessment of available human and financial resources	Evaluation of human and financial resources requirements as well as instruments/mechanisms to carry out planned NRM in the project areas completed by 1 <sup>st</sup> Qtr Year 1.1	Documentation of the assessment results and recommendations	GIRI will provide co-funding for the project activities.
Establishment of an Inception Team	Inception Team made up of qualified members established by 2 <sup>nd</sup> Qtr Year 1.	Inception Team members working on the project.	Qualified facilitators with track record of experience in participatory approaches are found.
Evaluation of main ecological and social issues	Preliminary assessment of the ecological and social issues prepared and presented to the stakeholders by 3 <sup>rd</sup> Qtr Year 1.	Documentation of the assessment results and recommendations	
Identification of the rehabilitation units (or NRM units)	Selected NRM units, identified on the basis of ecological and social considerations and agreement on their	Documentation and accompanying maps of the identified NRM units.	Project sets clear criteria for the selection of NRM units.

	location and size by 3 <sup>rd</sup> Qtr Year 1.		
Identification of stakeholders participating the rehabilitation activities	Identification and participation analysis of stakeholders completed by end 3 <sup>rd</sup> Qtr Year 1.	Documentation of the participation analysis results.	Stakeholders who directly and indirectly benefit from the project will actively participate.
Launching social communication initiatives	Agreed/approved social communication initiatives that will be used in the co-management plan preparations launched by end 3 <sup>rd</sup> QTR Year 1.	Documentation of the proposed social communication initiatives.	
Participatory appraisal exercises	Clearly defined delineation of stakeholder roles and responsibilities agreed and approved by 3 <sup>rd</sup> Qtr Year 1.	Documentation of the agreed roles and responsibilities of the project stakeholders.	
Organization of stakeholders	Clearly defined co-management process agreed/approved by 4 <sup>th</sup> Qtr Year 1.	Documentation of the co-management process.	
	Democratically elected representatives from local H.A. communities appointed to PMC by 4 <sup>th</sup> Qtr Year 1.	H.A. communities' representatives attending PMC meetings.	There are suitable candidates for H.A. communities' representation in the PMC.
Preparation of procedures for agreements on co-management plans	Suggested procedures for the negotiating agreements, including a schedule of preliminary meetings and events for negotiating such agreements presented by 4 <sup>th</sup> Qtr Year 1.	Documentation of suggested procedures.	
Finalization of rules and procedures for negotiating co-management plan agreements	Set of rules for the negotiation of agreements as well as procedures and schedules of the meetings and logistics completed by end Year 1.	Documentation of rules and regulations on the negotiation of agreements and plans.	The rules and regulations are understood by the stakeholders and abide by them.

Objective	Success Indicator	Means of Verification	Critical Assumption
<b>COMPONENT 2: ESTABLISHMENT OF CO-MANAGEMENT PLANS</b>			
Land rehabilitation and NRM activities are assessed, planned, programmed, implemented and managed by people in the project area on their own through community participatory approaches.	<ul style="list-style-type: none"> <li>Agreed co-management plans are finalized and publicized by 1<sup>st</sup> Qtr Year 2 and for implementation starting 3<sup>rd</sup> Qtr Year 2.</li> <li>A fully operational micro-credit Fund for supporting livelihood and income generating activities in the rehabilitated areas is established by 3<sup>rd</sup> Qtr Year 2.</li> </ul>	<p>Documentation of preparatory assessments used for developing the co-management plans</p> <p>Documentation of co-management plans</p> <p>Signed Memoranda of Agreement on the rehabilitation of self-help areas (i.e., additional 9,000 has of degraded land)</p> <p>Established micro-credit fund operating in the communities covered by the project areas.</p>	<p>The successful processes and methodologies that will be developed and employed in the project will be replicated in other semi-arid areas in the country.</p> <p>FRWO and trained people in the project areas will support such replication activities.</p>
Gain useful collective experience in participatory approaches to evaluation, planning, and decision making for a variety of institutional actors in the areas of natural resource management.	Trained self-organized groups in the communities in various aspects of NRM and productive/livelihood support activities by 2 <sup>nd</sup> Qtr Year 2.	Community groups led by people trained on NRM and livelihood support and productive activities.	People in the project areas are willing to get trained and will contribute their applied knowledge to the project and in the self-help areas.
<b>ACTIVITIES</b>			
Establishing a common vision for the future	Vision statement of desired future developed by 2 <sup>nd</sup> Qtr Year 1	Vision statement known to all stakeholders and printed in posters displayed in community meeting halls and project offices.	People in the project areas understand the meaning of the Vision Statement.
	Agreed and binding vision statement by 3 <sup>rd</sup> Qtr Year 1.		
Review of social, economic and ecological situations and trends	Assessment of the current situation, issues, problems in the NRM units completed by 4 <sup>th</sup> Qtr 2001.	Documentation of the assessment results and recommendations.	
Gender analysis	Gender analysis report completed by end Year 1	Documentation of the analysis results and suggestions made.	
Establishing strategy towards common vision	Strategy to achieve the common vision (e.g., objectives, desirable outcomes) finalized by end Year 1.	Documentation of the strategies.	
Co-management plans and agreements for each strategy component	Agreed co-management plans among the local H.A. stakeholders by 1 <sup>st</sup> Qtr Year 2.	Documentation of the agreed co-management plans.	The active involvement of local communities in the plan formulation is ensured by UNDP.

	Overall management strategy for the integrated watershed management of the hydrological area completed by 2 <sup>nd</sup> Qtr Year 2.	Documentation of the overall management strategy and plan.	
	Working groups identified and commissioned by 2 <sup>nd</sup> Qtr Year 2.	Group members working on the project.	
	Detailed but flexible work plan, including follow-up procedures finalized by end 2 <sup>nd</sup> Qtr Year 2.	Documentation of the work plan.	The work plan will be revised if necessary as the project progresses.
	Agreement on additional (voluntary) areas to be planted and agreed targets and sites finalized and signed by end 1 <sup>st</sup> Semester Year 2.	Signed Memoranda of Agreement stipulating self-help areas that will be planted, including hectarage, and types and mix of plant/tree species that will be planted on them.	Trained people from the local communities will provide assistance to self-help areas, but funding for the activities in these areas will have to be from other sources (FRWO/GIRI).
	Agreement on species to be planted on the project and self-help areas and proportion of each species confirmed by 2 <sup>nd</sup> Qtr Year 2.		
	Preliminary list of possible marketing opportunities for produce from species planted on the sites, and other alternative livelihood approaches prepared by 3 <sup>rd</sup> Qtr Year 2	Documentation of assessment results and recommendations.	
Establishment of a Fund for financing alternative livelihoods in watershed areas	A fully operational Fund with its operational framework and mandate established by 3 <sup>rd</sup> Qtr Year 2.	Documentation of the micro-credit fund establishment, its framework, mandate, capitalization, rules and regulations, loan eligibility criteria.	This will be a revolving fund and the loan terms have to consider the present paying capability of people in the project areas.
	At least 2 sustainable productive and income-generating enterprises within the watershed are financed through the Fund starting Year 3.	Signed loan agreements	
	Trained self-organized groups in the communities in various aspects of NRM and productive/livelihood support activities by 2 <sup>nd</sup> Qtr Year 2.	Community groups led by people trained on NRM and livelihood support and productive activities.	
	Monthly community meetings discussing economic development plans and issues are held in the project areas starting 3 <sup>rd</sup> Qtr Year 2.	Minutes of meetings. Programs organized and launched by community groups.	



Establishment of co-management organizations and agreements on co-management plans	CM organizations, with corresponding functions and rules in the H.A. communities are established by end Year 1.	Co-management organizations operating in H.A. communities.	
	Co-management plans and agreements and organizations are publicized and made socially legitimate by 1 <sup>st</sup> Qtr Year 2.	Documentation of the co-management plans.	

Objective	Success Indicator	Means of Verification	Critical Assumption
<b>COMPONENT 3: IMPLEMENTATION OF CO-MANAGEMENT PLANS</b>			
Rehabilitation of 9,000 has of degraded land.	Planting and re-seeding of at least 9,000 has over a number of NRM units with various woody (80% of the cover) and non-woody species completed by mid-Year 4.	9,000 has of replanted semi-arid lands maintained by local community people.	The people in these areas will do the actual rehabilitation activities using funds/equipment and technical backing from the project.
Consistent with agreed co-management plans, improvement in the socio-economic status of villagers resulting from the project activities and from the sustainable natural resource benefits the project generates.	A 10% increase in the overall productivity and income generating activities in the project areas by end of project.	Documentation of the annual GDP of the region covering the project areas.	The local government (covering the project areas) will monitor economic activities and outputs.
<b>ACTIVITIES</b>			
Rehabilitation of semi-arid lands within the hydrological area	At least 9,000 has over a number of NRM units are rehabilitated and replanted by mid-Year 4.	9,000 has of replanted semi-arid lands maintained by local community people.	
	Additional 9,000 has of degraded land are replanted through self-help programs by end of project.	Additional 9,000 has of rehabilitated land with plants/trees in areas other than those in the project areas.	The project will just facilitate this.
Monitoring of agro-economic and ecological impacts	<ul style="list-style-type: none"> <li>▪ Nearly 100% increase in the production of fodder, wood and other products by end of project.</li> <li>▪ Significant increase in the area of and off-take from sheltered lands, as well as increase in the variety of flora and fauna by end of project.</li> </ul>	<p>Documentation on the amount of fodder, wood and wood products produced in the rehabilitated areas each year.</p> <p>Documentation of the hectareage of shelterbelts, as well as the population of flora and fauna.</p>	Local surveys and investigations will be carried out for this purpose. There is very minimal wood and fodder production at present. Improvement in the population of flora and fauna is estimated qualitatively.
Training on, and demonstration of, techniques on degraded land rehabilitation	At least 10 trained people in establishment and management techniques for the rehabilitation of semi-arid areas work on the project and provide assistance in the self-help areas starting Year 3.	Trained people working on the project and in the self-help areas.	Local people are willing to be trained and utilize their learned skills in the project.
Experimentation with various establishment methods and species mix	At least one plant nursery with a trained local work force in seedling production and nursery management established in each project area by end Year 2.	Operating plant nurseries producing seedlings used for use in the project areas.	

	<p>Identified appropriate mix of plant/tree species suitable for growing in the rehabilitated areas for greater carbon storage and agricultural produce by 1<sup>st</sup> Qtr Year 3.</p>	<p>Documentation of the recommended type and mix of plant/tree species for the rehabilitation areas.</p>	
	<p>Report on the evaluation of the viability of various establishment methods highlighting the benefits that can be derived and recommendations on how to implement each of them completed by end 2<sup>nd</sup> Qtr Year 3.</p>	<p>Documentation of the study report and its recommendations.</p>	

Objective	Success Indicator	Means of Verification	Critical Assumption
<b>COMPONENT 4: SOCIAL COMMUNICATION INITIATIVES</b>			
People in the communities within the project area become capable of thinking, agreeing, deciding and acting together on their own accord facilitated through enabling conditions for informed decision-making, sharing of information, and open discussion of problems, opportunities and alternative options for action.	People in the rehabilitated areas are assisting people in other surrounding degraded areas on all aspects of the design, planning and implementation of community participatory-based NRM and land rehabilitation, including the development of related livelihood support and entrepreneurial activities starting Year 3.	Documentation of training materials and information materials used for extension work.  Reports on extension services rendered by FRWO and trained people from the project areas  Certification of qualified personnel for providing extension services.	Trained extension workers are certified by the FRWO.
<b>ACTIVITIES</b>			
Formulation of social communication strategy	A set of recommended strategies for social communication initiatives completed by 2 <sup>nd</sup> Qtr Year 1	Documentation of the recommended strategies.	
Information Dissemination	A set of information dissemination materials and systems for the project promotion completed by 2 <sup>nd</sup> Qtr Year 1	Initial set of information materials disseminated to relevant organizations in Iran as well as to the people of H.A. communities.	Information materials are distributed all over the country to promote and publicize the project.
	Production of information dissemination materials for subsequent awareness campaigns starts Year 2.	Production plans and information materials prepared for subsequent information campaigns.	
Training and extension services	Trained personnel among the villagers, FRWO and governmental staff are providing extension services to other semi-arid locales on community-based NRM and land rehabilitation starting Year 3.	Reports on extension services rendered by FRWO and trained people from the project areas.	
	At least 5 personnel each year from the local communities and government become qualified for providing extension services on NRM & land rehabilitation and management starting Year 3.	Certification of qualified personnel for providing extension services.	

	At least 5 persons each year from the local communities and government become knowledgeable and skilled in conducting studies on natural resources and socio-economic analysis starting Year 4.	Reports on studies conducted by trained people from the project areas.	
	Completed 1 workshop and 2 courses and seminars on project related matters for villagers, government officials, project staff, teachers and NGO's each year during the period Year 2 to 4.	Documentation of workshop proceedings and the training course materials.	
	At least 10 people from other parts of the country are trained each year on the techniques and methodologies used in the project starting Year 3.	Documentation of the training provided and the training course materials.	
	Completed 2 study tours to visit rehabilitation project sites in Pakistan in Years 2 and 3.	Study tour reports.	The rehabilitation projects in Pakistan are regarded successful.

Objective	Success Indicator	Means of Verification	Critical Assumption
<b>COMPONENT 5: PERFORMANCE MONITORING &amp; ASSESSMENT OF REHABILITATION WORK</b>			
The extent of carbon sequestration and changes in the land and microclimate resulting from land rehabilitation is monitored and evaluated systematically and regularly.	<ul style="list-style-type: none"> <li>▪ Baseline data for specified parameters defining the carbon storage, physical, chemical, geographical, and climatic characteristics, and economic, social and demographic features and trends in each project area are established by end Year 2.</li> <li>▪ The FRWO, assisted by the people in the project areas monitors the various performance parameters based on the defined procedures, and prepare an evaluation report each year.</li> </ul>	<p>Documentation of baseline data (carbon storage; physical, chemical, geographical, climatic characteristics; social, economic and demographic features and trends).</p> <p>Performance M&amp;E reports</p>	Local people are adequately trained to monitor and evaluate performance parameters.
Local communities benefit from participatory efforts in land rehabilitation and management of natural resources thereby improving socio-economic development, as well as the people's welfare and well being.	An improvement of about 10% in the HDI of H.A. is achieved as a result of the rehabilitation activities by end of the project.	<p>Annual evaluation reports on socio-economic and human development in the region covering the rehabilitated areas.</p> <p>Evaluation report of the co-management process applied in the project.</p>	Associated surveys from local government are used to verify results gathered from the project.
<b>ACTIVITIES</b>			
Design of performance monitoring and evaluation (M&E) scheme	Performance monitoring and evaluation (M&E) scheme, with clearly defined procedures and reporting formats completed by end 2 <sup>nd</sup> Qtr Year 2.	Documentation of the performance M&E procedures and reporting formats.	The local people easily understand the M&E methodology.
Baseline data establishment	Baseline data for specified parameters that define the carbon storage in the woody materials plants and in the soil in each project area established by 3 <sup>rd</sup> Qtr Year 2.	Documentation of baseline data (carbon storage).	Data is comparable to that in other semi-arid areas in other regions with almost the same plant cover.
	Baseline data for specific parameters that define the physical, chemical, geographical, and climatic characteristics of each project area	Documentation of baseline data (physical, chemical, geographical, climatic characteristics)	

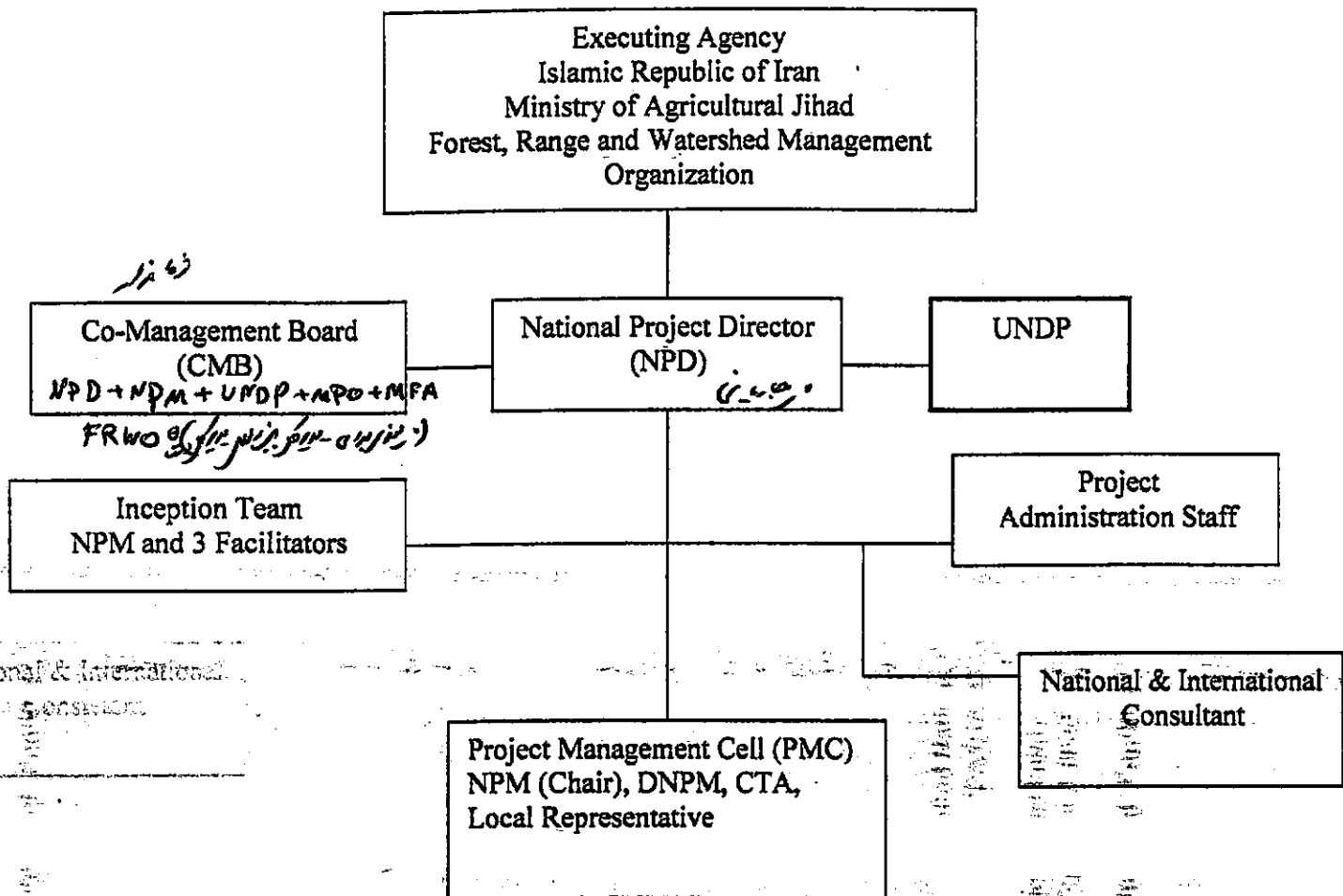
	established by 4 <sup>th</sup> Qtr Year 2.		
	Baseline data for specific parameters that define the economic, social and demographic features and trends in each project area ascertained by 4 <sup>th</sup> Qtr Year 2.	Documentation of baseline data (economic, social, demographic features and trends).	
Development of a carbon sequestration model	A model for assessing the magnitude of carbon storage in plants/trees and soil in a rehabilitated land considering all the relevant factors completed by end Year 3.	Working model of carbon sequestration used by local communities and the FRWO.	
Monitoring and evaluation of NRM performance parameters, particularly carbon storage in plants (above and below ground), and in soil.	Regular monitoring and evaluation of NRM performance parameters starting Year 3.	Reports on M&E of NRM performance based on the M&E procedures.	
Assessing HDI Index of the project areas	Annual evaluation report on the HDI of the region covering the project areas, is prepared and submitted starting Year 4.	Annual evaluation reports.	
Evaluation of the effectiveness of co-management schemes	An evaluation report on the effectiveness of co-management processes in the delivery of degraded land rehabilitation activities (or similar community-based activities) is prepared and submitted by end Year 5.	Documentation of the assessment results and recommendations.	





Annex 2

Project Organizational Chart





**United Nations Development Programme**  
**IRA/01/G35 - Carbon Sequestration**  
**Budget " A "**

Main Source of Funds: 1G - Global Environment Trust Fund  
 Executing Agency: MOA/JFRO - Ministry of Agricultural Jihad

Sbln	Description	Implementing	Funding	Total	2003	2004	2005	2006	2007	2008	2009
<b>010</b>	<b>PERSONNEL</b>										
<b>011</b>	<b>International Consultants</b>										
011.01	CTA Consultant	NEX			Net Amount 110,000	55,000	55,000				
					Total	110,000	55,000	55,000			
011.02	Social Communication Consultant	NEX			Net Amount	10,000	5,000	5,000			
					Total	10,000	5,000	5,000			
011.03	Monitoring & Evaluation	NEX			Net Amount	20,000	10,000	10,000			
					Total	20,000	10,000	10,000			
<b>011.99</b>	<b>Line Total</b>				Net Amount	140,000	65,000	70,000	5,000		
					Total	140,000	65,000	70,000	5,000		
<b>013</b>	<b>Administrative Support</b>										
013.01	National Project Manager	NEX			Net Amount	42,000	7,000	7,000	7,000	7,000	7,000
					Total	42,000	7,000	7,000	7,000	7,000	7,000
<b>013.99</b>	<b>Line Total</b>				Net Amount	42,000	7,000	7,000	7,000	7,000	7,000
					Total	42,000	7,000	7,000	7,000	7,000	7,000
<b>015</b>	<b>Monitoring and Evaluation</b>										
015.01	M+E (Mentoring team & mid-term)	NEX			Net Amount	35,000	2,500	2,500	2,500	25,000	2,500
					Total	35,000	2,500	2,500	2,500	25,000	2,500
<b>015.99</b>	<b>Line Total</b>				Net Amount	35,000	2,500	2,500	2,500	25,000	2,500
					Total	35,000	2,500	2,500	2,500	25,000	2,500
<b>016</b>	<b>Mission Costs</b>										
016.01	Mission Cost	NEX			Net Amount	20,000	5,000	5,000	5,000	5,000	5,000
					Total	20,000	5,000	5,000	5,000	5,000	5,000
<b>016.99</b>	<b>Line Total</b>				Net Amount	20,000	5,000	5,000	5,000	5,000	5,000
					Total	20,000	5,000	5,000	5,000	5,000	5,000
<b>017</b>	<b>National Consultants</b>										
017.01	M&E	NEX			Net Amount	15,000	7,500	7,500			

017.02	Other	NEX	15,000	7,500	7,500	
	Net Amount		38,000	3,000	5,000	10,000 10,000 10,000 10,000
	Total		38,000	3,000	5,000	10,000 10,000 10,000 10,000
017.99	Line Total					
	Net Amount		53,000	10,500	12,500	10,000 10,000 10,000 10,000
	Total		53,000	10,500	12,500	10,000 10,000 10,000 10,000
019	PROJECT PERSONNEL TOTAL					
	Net Amount		290,000	90,000	97,000	29,500 47,000 19,500 7,000
	Total		290,000	90,000	97,000	29,500 47,000 19,500 7,000
020	CONTRACTS					
021	Contract A					
021.01	Rehabilitation	NEX	100,000		10,000	35,000 35,000 10,000 10,000
	Net Amount		100,000		10,000	35,000 35,000 10,000 10,000
	Total		100,000		10,000	35,000 35,000 10,000 10,000
021.99	Line Total					
	Net Amount		100,000		10,000	35,000 35,000 10,000 10,000
	Total		100,000		10,000	35,000 35,000 10,000 10,000
029	SUBCONTRACTS TOTAL					
	Net Amount		100,000		10,000	35,000 35,000 10,000 10,000
	Total		100,000		10,000	35,000 35,000 10,000 10,000
030	TRAINING					
031	Fellowships					
031.01	Fellowship	MOAJ/FRO	30,000	15,000	15,000	
	Net Amount		30,000	15,000	15,000	
	Total		30,000	15,000	15,000	
031.99	Line Total					
	Net Amount		30,000	15,000	15,000	
	Total		30,000	15,000	15,000	
032	Other Training					
032.01	Study Tours	NEX	45,000		45,000	
	Net Amount		45,000		45,000	
	Total		45,000		45,000	
032.02	Community Mobilization Workshop	NEX	70,000	30,000	40,000	
	Net Amount		70,000	30,000	40,000	
	Total		70,000	30,000	40,000	
032.03	T&E	NEX	33,900			7,900 20,000 6,000
	Net Amount		33,900			7,900 20,000 6,000
	Total		33,900			7,900 20,000 6,000
032.99	Line Total					
	Net Amount		148,900	30,000	85,000	7,900 20,000 6,000
	Total		148,900	30,000	85,000	7,900 20,000 6,000
039	TRAINING TOTAL					
	Net Amount		178,900	45,000	100,000	7,900 20,000 6,000
	Total		178,900	45,000	100,000	7,900 20,000 6,000
040	EQUIPMENT					
045	Equipment					
045.02	Non-expendable Equipment	NEX	100,000			50,000 50,000
	Net Amount		100,000			50,000 50,000

045.99	Line Total	Total	100,000	50,000	50,000
	Net Amount	100,000		50,000	50,000
049	EQUIPMENT TOTAL	Total	100,000	50,000	50,000
	Net Amount	100,000		50,000	50,000
050	MISCELLANEOUS	Total	100,000	50,000	50,000
053	Sundries				
053.01	Sundries				
	NEX				
053.99	Line Total	Net Amount	7,300	2,500	2,300
	Total	7,300	2,500	2,300	2,500
059	MISCELLANEOUS TOTAL	Net Amount	7,300	2,500	2,300
	Total	7,300	2,500	2,300	2,500
070	MICRO-CAPITAL GRANTS	Net Amount	7,300	2,500	2,300
072	Micro-Capital Grants (other)	Total	7,300	2,300	2,500
072.01	Revolving fund				
	NEX				
072.99	Line Total	Net Amount	50,000	50,000	50,000
	Total	50,000	50,000	50,000	50,000
079	MICRO-CAPITAL GRANTS TOTAL	Net Amount	50,000	50,000	50,000
	Total	50,000	50,000	50,000	50,000
099	BUDGET TOTAL	Net Amount	726,200	137,500	259,300
	Total	726,200	137,500	259,300	117,000
					139,900
					49,500
					23,000
					0
					0

# GIRI BUDGET

Description	Total	2003	2004	2005	2006	2007	2008	2009
<b>Administrative Support</b>								
National Project Manager	Net Amount	40,000	6,600	8,350	8,350	8,350	8,350	8,350
	Total	40,000	6,600	8,350	8,350	8,350	8,350	8,350
Line Total	Net Amount	40,000	6,600	8,350	8,350	8,350	8,350	8,350
	Total	40,000	6,600	8,350	8,350	8,350	8,350	8,350
<b>Monitoring &amp; Evaluation</b>								
	Net Amount	66,000	11,000	13,750	13,750	13,750	13,750	13,750
Line Total	Total	66,000	11,000	13,750	13,750	13,750	13,750	13,750
	Net Amount	66,000						
<b>National Consultants</b>								
other	Net Amount	100,000	30,000	25,000	15,000	15,000	15,000	15,000
	Total	100,000	30,000	25,000	15,000	15,000	15,000	15,000
Line Total	Net Amount	100,000	30,000	25,000	15,000	15,000	15,000	15,000
	Total	100,000	30,000	25,000	15,000	15,000	15,000	15,000
<b>CONTRACTS</b>								
<b>Contract A</b>								
Rehabilitaion	Net Amount	120,000	10,000	40,000	40,000	15,000	15,000	15,000
	Total	120,000	10,000	40,000	40,000	15,000	15,000	15,000
Line Total	Net Amount	120,000	10,000	40,000	40,000	15,000	15,000	15,000
	Total	120,000	10,000	40,000	40,000	15,000	15,000	15,000
<b>TRAINING</b>								
<b>Fellowships</b>								
	Net Amount	40,000	20,000	5,000	5,000	5,000	5,000	5,000
	Total	40,000	20,000	5,000	5,000	5,000	5,000	5,000
Line Total	Net Amount	40,000	20,000	5,000	5,000	5,000	5,000	5,000
	Total	40,000	20,000	5,000	5,000	5,000	5,000	5,000
<b>Other Training</b>								
<b>Study Tours</b>								
	Net Amount	54,000	54,000					
	Total	54,000	54,000					

Community Mobilization Workshop		Net Amount	54,000	54,000				
		Total	54,000	54,000				
<b>EQUIPMENT</b>								
Line Total	Net Amount	100,000	12,500	12,500	12,500	12,500	12,500	12,500
	Total	100,000	12,500	12,500	12,500	12,500	12,500	12,500
<b>EQUIPMENT TOTAL</b>								
	Net Amount	100,000	12,500	12,500	12,500	12,500	12,500	12,500
	Total	100,000	12,500	12,500	12,500	12,500	12,500	12,500
<b>MISCELLANEOUS</b>								
Sundries	Net Amount	75,000	15,000	15,000	15,000	15,000	15,000	15,000
	Total	75,000	15,000	15,000	15,000	15,000	15,000	15,000
<b>MISCELLANEOUS TOTAL</b>								
	Net Amount	75,000	15,000	15,000	15,000	15,000	15,000	15,000
	Total	75,000	15,000	15,000	15,000	15,000	15,000	15,000
<b>MICRO-CAPITAL GRANTS</b>								
Micro-Capital Grants (other)								
Revolving fund	Net Amount	35,000	35,000	35,000	35,000	35,000	35,000	35,000
	Total	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Line Total	Net Amount	35,000	35,000	35,000	35,000	35,000	35,000	35,000
	Total	35,000	35,000	35,000	35,000	35,000	35,000	35,000
<b>BUDGET TOTAL</b>								
	Net Amount	630,000	119,600	109,600	84,600	84,600	84,600	84,600
	Total	630,000	231,600	119,600	109,600	84,600	84,600	84,600
<b>In kind Contributions</b>								
	Net Amount	330,000	0	0	0	0	0	0
	Total	330,000	0	0	0	0	0	0
<b>Overall Budget</b>								
	Net Amount	960,000	960,000	960,000	960,000	960,000	960,000	960,000
	Total	960,000	0	0	0	0	0	0

## Annex 4

### Proposed Project Personnel Terms of Reference

#### A. Managerial

##### 1. National Project Director (NPD)

The National Project Director (NPD) will be designated by the FRWO. S/he is the focal point for responsibility and accountability in the National Executing Agency. The NPD should be a staff member of the Executing/Implementing Agency at a senior level. S/he must devote enough time to supervise over the course of project implementation in performing the following functions:

- Acting as the responsible focal point for the project in the Government executing agency;
- Ensuring that all Government inputs committed to the project are available to the project in a timely manner as well as ensuring the timely delivery of all project outputs;
- Appointing the National Project Manager (NPM) subject to endorsement by UNDP and identifying the project office/site, if necessary;
- Ensuring that the project office is empowered to implement the project;
- Resolving implementation problems, as necessary;
- Approving candidates for project expert and consultant positions;
- Supervising the work of the project office;
- Signing financial and other correspondence according to the procedures of UNDP requirements, including requests for advance/direct payments, financial report, Combined Delivery Reports, annual/quarterly reports, transfer of title of equipment, etc.;
- Bearing responsibility/accountability of advance funds received and prepare quarterly financial reports and work plans for endorsement by SC and further provision to UNDP;
- Representing the national executing/implementing agency in the CMB meetings and other programme review forums as well as any other project official meetings;
- Taking responsibility for the project activities and coordination of these activities with other involved government/non-government organization; and

##### 2. National Project Manager (NPM) (UNDP)

The National Project Manager (NPM) is a qualified person who is appointed, on a full-time basis, to manage day-to-day implementation of project activities. The NPM must be selected through a competitive and transparent process undertaken by the National Project Director (NPD) in consultation with UNDP. The NPM is responsible for the following:

- In general, operations management according to this project document and the procedures in the UNDP's "NEX Guideline", in line with achieving the stated objectives and outputs of the project;
- Identification of human resources and making recommendations to the NPD on final selection of project's human resources through a competitive process;
- Coordination and supervision of technical personnel and national/international consultants;
- In collaboration with the UNDP country office, ensuring that all implementation arrangements are carried out in a smooth manner;
- Mobilization of all project inputs, in line with UNDP's "NEX Guideline";
- Preparation and updating of the project work plans in collaboration with PMC colleagues and in consultation with the UNDP office;
- Organization and management of project activities based on the finalized work plan;
- Ensuring timely preparation and submission of financial reports and settlement of advances;
- Timely preparation and submission of the Annual Progress Report (APR) and any other necessary reports and assurance that reports prepared by project personnel or participants are prepared as required;
- Reporting to the NPD on a regular basis;
- Acting as the Secretary of the CMB and arranging its meetings; and
- Identification and resolution of implementation problems, with the guidance of the NPD.

The NPM should have credentials that include extensive community-based experience and full familiarity with participatory processes and approaches. In addition, S/he should have qualifications in rangeland and/or forestry management and hands on experience in dry land reclamation. Over the first three years of the project the NPM will be supported by the international CTA. Based in Birjand, the NPM must be willing and able to work in the project site for the long duration of this project. S/he must be fluent in written and spoken English, computer literate and at ease when dealing with villagers. The NPM will be subject to an assessment of his/her performance in the bi-annual meetings of the CMB.

### **3. Deputy National Project Manager (Finance/Administration/Logistics) (CMB Secretariat)**

As with the NPM, the Deputy National Project Manager will be competitively recruited by the FRWO in consultation with UNDP. Reporting to the NPM, he/she will work full-time assisting the National Project Manager on management of Finance, Accounting and Administration matters. The incumbent would probably have an accounting/finance background and is well versed in the use of microcomputer and in particular familiar with accounting and spreadsheet applications. Fluency in both written and spoken English is a must. Based at the project site, the incumbent's responsibilities will include assisting the National Project Manager on the following activities:

- Management of project inputs including personnel, contracts, training, equipment and miscellaneous items according to project work plan and approved budget.
- Managing project resources to achieve the expected results and planning financial disbursements in accordance with the agreed quarterly work plan.



- Justifying the quarterly expenditures made from the "advance of funds" in order to receive further quarterly allocations from UNDP, should the Advance disbursement modality is adopted.
- Keeping an accurate track of expenditure and recording transactions in an accounting system.
- Helping in compilation and completion of a signed Financial Report (which contains both a justification of previous expenditure and a request for new funds).

The Deputy NPM should have the necessary qualifications to keep accounts according to government regulations and consistent with the accounting and financial reporting procedures of the UNDP as per provisions of Annex 8 below. The incumbent should be computer literate, but training could be provided on an as needed basis. He/she will support the other members of the team and make arrangements for visiting trainees, trainers and consultants etc. when they come to the project site. The Deputy NPM should be in charge of hiring and managing people who will service the accommodation and provide facilities for the visiting people.

The Deputy National Project Manager will be subject to an assessment of his/her performance by the National Project Manager, who will report on such assessment at bi-annual meetings of the PMC.

#### 4. Chief Technical Advisor

An international Chief Technical Advisor (CTA) will work on a full-time basis in order to provide technical advice concerning implementation of project activities during community mobilisation and negotiation phase. S/he will build the capacity of the national project team to continue the work. The incumbent's inputs are particularly critical in relation to Social Communication and participatory M&E activities. The CTA should have broad international experience and strong credentials in leading participatory processes and impeccable understanding of Monitoring and Evaluation and Social Communication initiatives. Experience in participatory carbon sequestration and Natural Resource Management projects are a definite asset. The Co-Management Board will sanction the recruitment process, which shall be based on competitive procedures initiated by UNDP-GEF. The responsibilities of the CTA will include:

- Technical support to the project team in the execution of all participatory project activities.
- Effective running and smooth integration of project activities for the first two years.
- Liaison with UNDP and FRWO concerning the need for additional technical support and inputs.
- Training and mentoring of the project team (in particular the NPM) and associated agencies in order to promote more effective implementation of project activities.
- Rendering technical assistance to the NPM in reviewing and assessing project impacts, and designing modifications to project activities in the light of such assessments.
- Rendering technical assistance to the NPM in financial and technical reporting to the PMC, Co-Management Board and UNDP.

#### B. Participatory Approaches

##### 1. Inception Team (UNDP)

The Inception Team is entirely responsible for one phase of the process only: the one in which the partnership is prepared and rooted in the local context. After that, the stakeholders themselves need to take control. Tasks performed by the Team include visits to the potential (as against responsible and empowered) stakeholders, participatory assessment exercises and social communication initiatives as well as resources to support the negotiation phase (including meetings, independent facilitation and the technical support that may be required along the way).

The Inception Team comprises of up to a total of four individuals, including the NPM and three professional facilitators, who agree to be in charge of the CM preparatory and negotiation phases.

The group will be selected by the initiators of the CM process-which in this case include the FRWO on the basis of strong personal motivation. In selecting the Team, assuring the public perception of impartiality is important.

All institutional actors should trust and feel capable of communicating with *at least* one person in the Inception Team, even if they do not feel represented by him/her. The members of the team should be collectively familiar with participatory appraisal exercises such as land-use and historical mapping, transect walks, brainstorming, problem analysis, trend analysis, and group interviews with local elders.

Some key characteristics of appropriate Team members are: diversity, credibility, personal motivation, and excellent communication skills. Some key qualities of a good team are: being active, efficient, fair, multi disciplinary, and transparent in decision-making; acting on the basis of consensus and collaboration; being determined to launch but not to lead or dominate the CM process.

The three facilitator members will work full-time at the project sites and will, as far as possible:

- Be recruited from the same ethnic/tribal group, or will have extensive experience in working with the local ethnic/tribal group, and will be fluent in the local language/dialect.
- Have completed secondary education.
- Have knowledge of and experience in working with local communities
- Have demonstrated capacity for team building and project management.
- Recognized as independent;
- Generally respected by all those involved;
- Capable of relating with everyone on his or her own terms;
- Able to listen and understand objectively the view of stakeholders concerned;
- Able to pose key questions (for example, on the root causes of the various problems and the feasibility of the options put forth);
- Capable of getting the best out of the participants and helping them to see a better future for themselves and their communities;

The following are the specific tasks of facilitators:

- Helping the stakeholders to identify and agree upon the rules and procedures of the negotiation meetings;
- Being responsible for the logistics of the meetings (e.g., agenda, seating arrangements, translation services, discussion tools, etc.);
- Ensuring that the process takes place in accordance with the agreed rules, that the meetings' atmosphere is comfortable and that everyone has a fair chance to participate;
- Ensuring that the representatives of the stakeholders truly represent them (e.g., they are not merely self-appointed);
- Promoting the best possible communication among institutional actors, e.g., by rephrasing points, asking questions, suggesting the exploration of new ideas;
- Helping a group to be conscious of itself and of its goals, mission and opportunities;
- Helping a group to broaden its range of options;
- Pointing out the positive aspects of the process, i.e., when the actors' old habits have given way to more constructive attitudes, for example:
  - When the stakeholders actually talk to each other directly, if this was impossible before;
  - When new points of doubt and self-doubt are raised;
  - When stakeholders clarify and enhance their perception of the others;
  - When new information is brought to the attention of everyone;
  - When an agreement that has a chance of being sustainable has been found.
  - Avoiding stating his/her opinion on substantive issues and influencing decisions.

### C. Implementation Bodies

#### 1. Project Management Cell (PMC) (Gov't)

A "Project Management Cell" (PMC) will undertake the day-to-day activities of the project under overall supervision of the CMB. The members could tentatively include National Project Manager (NPM), Deputy National Project Manager (DNPM), international CTA (Chief Technical Advisor) and *three* community representatives from local people. The latter should be identified and carefully selected at preliminary stages of project implementation while one of them will be selected from local women. They could join the PMC only subject to democratic identification, nomination, and election by the indigenous communities.

The meetings will be chaired by the NPM subject to delegation of authority from the project's NPD who is designated by the FRWO. PMC will meet twice a month and the NPM will exchange information and establish the links between the project-level activities and CMB at the level of political decision-making. National and International Consultants will support the PMC as warranted.

The PMC will also evaluate funding requests. In relation to micro-capital grants, the PMC would review, select, and approve applications for such grants forwarded by local institutions and NGOs as well as individuals. The National Project Manager will prepare a written report summarizing the conclusions of each PMC meeting, for approval and transmission to UNDP.

#### 2. The Co-Management Board (Gov't)

At the level of political decision makers, a "Co-management Board" is proposed, made up of representatives from the FRWO (National Project Director as the chair), Provincial Natural Resources Organization (as the co-chair), CTA, Governor General (or his/her representative), MPO (Management and Planning Organization), MFA (Ministry of Foreign Affairs), NIOPDC (National Iranian Oil Products Distribution Company), RWO (Regional Water Organization), UNDP, NGOs (to be determined) and NPM (as the secretary). The list of the members is not exhaustive and subject to later revisions by the same Board. The CMB will only act in an advisory and support role (e.g. trouble-shooting) and refrain from interfering in day-to-day project activities. The CMB will also act in a policy-making and strategic capacity and ensure that the requisite legislative and policy-making reforms are instigated and lessons learned are incorporated in government's development plans. The CMB meetings will always start with a briefing from the NPM and the CTA with the agenda of the meetings set by the FRWO. The Board meetings could convene, as appropriate, on a bi-monthly basis and are chaired by the National Project Director (NPD).

#### 3. Operations (Gov't)

Subject to the human resource assessments at the early stages of the project and the provisions of the co-management plans and agreements, the following people, who are preferably indigenous, may be hired from time to time.

- Cleaners and cooks to clean the hostel accommodation and to prepare meals for the visiting trainees/trainers/consultants
- Nursery workers and plantation establishment workers
- Watermen and tractor drivers

These people could be recruited from the local villagers involved in the project and will be paid on a contract basis. The tractor drivers will be volunteers, but as compensation, they could be allowed to use the tractors for farm work for a specified period to be agreed between the Project and the drivers.

this may  
not be  
a good  
idea?

### *Professional Officers*

The equivalent of two full-time professional officers may be recruited for the project. It is suggested that there should be one full-time person with expertise in rehabilitation and three or four part-time people (equivalent to one full-time person) with expertise in community management, management planning, species selection, training and extension, marketing, survey work, mensuration, etc. The professional officers should be computer literate, but training will be provided on an as needed basis.

### *Cleaner/messenger*

The cleaner/messenger will keep the office and meeting hall clean and provide support to the rest of the staff. This person will deliver inter-office papers and provide other appropriate services that the NPM and other staff assign to him/her.

### *Drivers*

The drivers shall be in charge of the tanker vehicle and the 2 pick-ups. They will also drive the tractors on an as needed basis. At least one should be a mechanic and be able to undertake simple repairs and maintenance. During watering periods, tractor drivers will be recruited from the villagers in the project. Alternatively, the guards could double up as tractor drivers.

### *Guards*

Guards will be in charge of protecting the NRM units that are to be rehabilitated and be a liaison between the villagers and the project staff. They will keep in close touch with the villagers who are rehabilitating each of the five areas and report to the project personnel any problems and suggestions from the villagers and or project staff. They will be present at all meeting between villagers and the project. They should receive training in land rehabilitation and extension work and be able to undertake training and extension work.

### *Other Project Personnel.*

The NPM or his staff will hire these people on an as needed basis.

## **4. Consultancies**

Based on the project preparatory activities, the following assignments to be contracted out to national consultants are proposed:

<b>Consultancy Work</b>	<b>Person months</b>
Land ownership and land titling	4
Contractual arrangements for villagers/project workers	1
Social surveys (3 times)	6
Soil surveys (3 times)	7.5
Surveys of biomass to determine growth/carbon content (3 times)	6
Flora and fauna surveys (2 times)	2
Computer training	2
Market surveys	1
Business promotion/entrepreneurial activities	1
School curricula/adult education	1

In addition, money can be used from the relevant line items to hire short-term personnel. These people could reinforce the above consultancy efforts or provide additional expertise in publication production, best farming practice, training and extension methods including farmer-to-farmer training, mensuration techniques, measuring shelter belt effects, general social surveys and economic studies. Also, there is scope for students to undertake undergraduate and graduate studies in species selection, establishment methods on degraded area, timing and quantity of water to apply to seedlings, regeneration of grasses and herbs, soil carbon determination, measurement of below ground (and above) biomass, grazing techniques, social set-up in villages, the role of and opportunities for women in village societies, and marketing opportunities for rangeland products etc.

The following are proposed consultancy assignments to be contracted to international consultants:

Consultancy Work	Person-months
Baseline survey of organic carbon in plants & soil in/around project area	2
Monitoring, evaluating and advising on project's performance	1
Social Communication Initiatives	1

## National Consultancies

### 1. Land ownership and land titling

A national consultant and/or a Government Legal Specialist is required to explain to the villagers, the nomads, the Project Officers and other interested parties the property rights and the land ownership entitlements of the villagers to the land within the Project Area (148,000 ha.). Special attention will be paid to the area to be rehabilitated by the project and by the farmers on a self-help basis and its immediate hinterland, which will be cropped or put under pasture. The expert(s) should provide legal advice about the ownership and use of products from the project area, the rights of nomads passing through the area and the agreements, legal or otherwise that can be drawn up by the villagers to restrict the movement of animals from newly rehabilitated areas for up to three years or until such a time as the area is established.

The expert should also provide legal opinion about the drilling and use of water for agricultural, horticultural and forestry use. Standard Land Ownership Deeds should be provided for the individual villagers and/or the Village/Village-Islamic Council to sign. The expert(s) should provide other timely advice or information on topics related to land ownership and titling. As there are 12 villages and five or more areas to be rehabilitated, a total of 4 person months spread over 2 years is envisaged. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: Legal or par-legal degree with full knowledge of the Land Ownership, Land Titling and related laws

### 2. Contractual arrangements between interested parties and the Project

The legal expert will provide advice about contracting arrangements. There are several possibilities. One option is to establish an individual or household contracting responsibility system, with the land divide up with recognizable boundaries. A second option is to contract the land and the establishment tasks to or through the Village Islamic Council (VIC). A third option is a combination of these two options, depending on what benefits can be maximized from the existing setup. Such contracts should create incentives for the contracting parties to operate and maintain the planting area. Each contracting party can volunteer specific areas and/or additional land so as to demonstrate their commitment to the fullest extent. The consultant will advise the villagers (and nomads) and the

project personnel on the various options and draw legal documents that cover the obligations and rewards for rehabilitating the project areas. The legal expert could be the same as 1 above. One person month is provided for this task.

Qualifications: Legal/Para-legal degree with full knowledge of the contracting and related laws.

### 3. Social surveyor(s)

A social surveyor is required to undertake baseline surveys of the villagers involved in the rehabilitation. This will include population, number of villages, houses per village (including abandoned ones), population per village, household size by age group, employment, energy use, social facilities, animal numbers (by type, household and migratory pattern), other information (family members living away from home, income from outside). A questionnaire will be designed by the social surveyor and approved by the local advisory committee. The project staff including the five guards may assist the social surveyor. Additional part time women may have to be recruited to question the women on some aspects of the questionnaire. Throughout the lifetime of the project, the project staff will monitor changes in the social structure of the project area. Two resurveys will be undertaken, one in the third year and one in the fifth year. Six person months are provided for this task. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: A degree in the social sciences and experience in undertaking social surveys.

### 4. Soil surveyor(s)

A baseline survey has to be undertaken to determine the amount of soil carbon in a sample of the areas to be rehabilitated. Also, to help with the estimate of accumulated organic carbon over time, sites will be selected in nearby areas that contain shrubs of various ages (particularly *Haloxylon persicum*) and undertake soil samples in these areas to determine the quantity of soil carbon on these sites. Soil samples at least to 1 meter deep should be taken and tested for organic C and possibly N. The equivalent of 0.5 person months has been set aside for the testing of the soil in the laboratory. Additional funds may be required to complete the tests. If this is the case, then money will have to be found from the un-allocated consultancy budget and/or the equipment budget. It is also possible that a Master's student may be part of this survey. This survey will be undertaken at the start of the project, in year 3 and again in year 5. The project staff, including the guards, will assist in this work. The time allocated for the surveyor for each of the 3 surveys is 2 person months with the equivalent of 0.5 person months for analysis (1.5 person months in total). Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget. The Soils Department at the University of Mashhad, may be the most appropriate institution to undertake the soil analysis.

Qualifications: The consultant should have a (higher) degree in soil science and have experience in undertaking such soil surveys. He/she should train the project staff in sampling methodology and techniques.

### 5. Biomass surveyor to determine growth/carbon content

The consultant will assist the international consultant during the baseline survey and then will be in charge of the two resurveys in years 3 and 6. The project staff including the guards will assist in the survey work. The baseline survey will be mainly undertaken at the project site. Also, to help with the estimate of accumulated organic carbon in wood over time, sites will be selected in nearby areas that contain shrubs of various ages (particularly *Haloxylon persicum*). Measurement of woody biomass will be undertaken in these areas to determine the quantity of biomass and hence wood carbon on

these sites. A special study may have to be undertaken to estimate below ground woody biomass and the amount of carbon in grass roots etc. This may be a suitable topic for a graduate student. Data analysis may have to be undertaken by a data specialist. Such a survey will be undertaken three times. The information required is outlined in the International TOR. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The local consultant should have a degree with experience in mensuration and have undertaken fieldwork in measuring trees and shrubs.

#### 6. Expert(s) in flora and fauna surveys

The expert(s) in flora and fauna will undertake a survey of the quantity and quality of plants and animals on the project site at the start and the end of the project. The project staff and farmers living in the area will assist the expert(s). Throughout the lifetime of the project staff and local villagers should record any new plants and animals sighted in the area. The length of each consultancy is 1 month. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The local consultant(s) should have a degree in biology or botany and zoology with experience in working in areas similar to the project. The national/university herbarium and the zoology department at the University of Mashhad could assist him.

#### 7. Computer trainer

Computer-programming training will be given to the project staff in all aspects of computer use. The computer expert will also be available through E-mail to answer queries. Two person months have been set aside for this training. In turn, the Project Staff can train other interested parties. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The consultant should have qualifications in the most common software programs and have run training courses previously.

#### 8. Market survey expert

The expert in marketing should undertake a survey of actual and possible markets for products from rangeland areas, particularly from Hossien Abad. He/she should consult with the plant specialist concerning the types of plant proposed for planting in the area, especially fruit and nut trees. He/she should also examine the possibility of raising small animals and the use of animal products and by-products. One month has been allocated for this consultancy and it should occur sometime in year 2 or 3. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The expert should have market research qualifications and have undertaken market research studies.

#### 9. Business promotion/entrepreneurial activities expert

The expert should have knowledge about business promotion and business establishment in rural areas. Knowledge of cottage industries such as bee keeping would be advantageous. The expert should give talks to villagers and the Village Islamic Council on business opportunities and train project staff on simple business accounting procedures. The staff to train and advise the villagers can

use this. This study should be undertaken in year 3. One month has been allocated for this activity. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The expert should have Business promotion qualifications and have undertaken activities in this subject.

#### 10. School curricula/adult education expert

In order to promote reclamation of degraded areas training will be given to local villagers and other interested parties from outside the area. Equally important is to give school children some basic education in environmental matters, pastoral agriculture and natural resources. The purpose of this consultancy is to explore ways of incorporating natural resource development and environmental education into the school curricula and into adult education courses both formal and informal. After the project has been running for about three years, the lessons learnt could be codified and a curricula specialist should visit the project (with the cooperation of the Ministry of Education) to look at ways and means of incorporating environmental education into the school syllabus. The length of the consultancy is one month. Accommodation will be provided at the project site as will local transport. Transport to the site will come from the equipment and transport budget.

Qualifications: The expert should have qualifications in writing science/natural resources syllabi and have undertaken activities in this subject.

### **International Consultants**

#### 1. Training project personnel/other interested parties in survey techniques

This consultancy will be combined with the "Baseline Survey" consultancy. It will consist of training local staff, including field teams and other interested parties, in survey methodology, questionnaire design, field measurement requirements, data compilation and analysis and report writing. This will include, species identification (with the assistance of local experts), mensuration requirements (height, diameter, branch/twigs, canopy, edible biomass) carbon content determination, soil carbon determination and carbon accumulation. One week has been allocated for this task.

#### 2. Monitoring & Evaluation

The consultant will undertake a baseline survey of the biomass on the site, particularly woody biomass and root mass of grasses and herbs. This will be done with the help of a local consultant and field teams. Sites outside the project area will be chosen that have established woody biomass of varying ages. A sample of these will be measured. This should enable a model to be compiled of the biomass and carbon content of similar sites at different ages. The consultant will write the TOR for the analysis of soil carbon (and nitrogen). This survey will be undertaken at the same time as the biomass survey. A data analysis expert will analyze the data from the surveys. The consultant will then use the information to compile a report on the existing biomass and carbon content on the areas to be rehabilitated and the likely accumulation of biomass and carbon over time. Two person months have been allocated for this consultancy and it may be divided into two stages with a gap between the stages for data analysis.



## Annex 5

### Estimated Growth and Carbon Sequestration in Wood and Soil

#### 6.1. *Haloxylon persicum*

##### Estimate of woody biomass and organic wood carbon

According to the Management Department of the Forest and Range Organization (FRWO), the above ground measured growth of *Haloxylon persicum*, with rainfall ranging from about 50 mm to 250 mm per year, varies from 5 m<sup>3</sup> to 20 m<sup>3</sup> per ha. after 20 years. The FRWO also states that about two-thirds of the tree growth is below ground. The average annual rainfall at the site is recorded at 188 mm., thus the anticipated above ground growing stock after 20 years is about 15 m<sup>3</sup>, - 12.8 dry t/ha. The build up of above ground wood is shown in Table A 4.1.

Table 6.1. *Haloxylon persicum*: Build-up of Above-ground Woody Biomass on a 20-year Rotation.

units: tonnes of air-dry and dry wood per hectare in a fully stocked stand.

Age (years)	0	2	4	6	8	10	12	14	16	18	20
Production (a.d.)	0.0	0.7	1.8	3.3	5.4	8.5	11.3	13.5	15.0	15.7	16.0
Production (dry)	0.0	0.56	1.44	2.64	4.32	6.80	9.04	10.8	12.0	12.6	12.8

Note. The average annual rainfall for the above growth curve is 185 – 195 mm.  
The average moisture content of the wood is 20% (wet-basis). Dry wood is 80% of the air-dry wt.

The total above and belowground weight of woody biomass is an estimated 38.4 dry t/ha. at year 20 for a plantation of *H. persicum* with 100% cover. However, it is proposed to plant 20% of the area with shrubs of *Atriplex spp.* and *Calligonum spp.* These species have very little woody biomass in their stems and roots, and it is assumed for this calculation to be zero. Thus, the total growing stock of woody biomass is an estimated 80% of 38.4 tonnes, namely 30.7 t/ha. at year 20 and the carbon content of this wood is 15.4 t. C. It has been observed that *H. persicum* starts to die back between year 20 and year 30. Therefore, in order to prevent this, the rotation age has been fixed at year 20.

A model has been drawn up assuming that there will be an equal representation of all age groups of *H. persicum* once the project cycle is normalized. The total above and below ground growing stock between year 0 and year 20 (after felling), assuming 80% cover with trees, is 15.2 dry t./ha. and 7.6 t. C. Once the area is in a steady state, it is assumed that the organic carbon in wood will remain constant at an average of 7.6 t. per hectare. Similarly, the annual production of wood is estimated to be 0.64 t/ha. (air-dry) or 0.51 dry t./ha., equivalent to about 0.67 m<sup>3</sup>/ha.

##### Accumulation of soil carbon

A soil scientist at the University of Mashhad estimated that, at the project site, in its degraded condition, there are between 10 and 12 t. of organic soil carbon per hectare. Most organic soil carbon comes from the death of roots, rootlets and root hairs. After trees are planted on the site, there should be a steady build-up of soil carbon, especially since the decomposition of organic matter is slow in

dry areas. It is estimated that 90% of the soil carbon will come from the plant roots and 10% from leaf litter. There is very little data concerning soil carbon accumulation. Therefore, a model has been compiled to estimate the soil carbon build up over time. This model is based on the estimates of annual leaf and rootlet/root hair production of all the plants (not just the trees) and the percentage of these items retained in the soil as organic soil carbon. At first, the additional soil carbon accumulation will build up slowly, then accelerate until year 20. After this, because of tree felling, the accumulation of soil carbon will gradually slow down. Table 6.2 gives the estimated incremental accumulation of soil carbon over a 100-year period. After 5 years, the additional accumulation of soil carbon is estimated to be 1 tC. per hectare. This is anticipated to increase to 7.9 tC. ha. by year 20. After 50 years, the accumulation is anticipated to be 14.9 tC. per hectare and this may grow to 24.1 tC. per hectare after 100 years. Thus, the total amount of soil carbon, including the existing store, could reach about 35 tC. per hectare after 100 years.

**Table 6.2. Model of Organic Soil Carbon Accumulation under *Haloxylon* spp./*Atriplex* spp.**

units: tonnes of carbon per hectare.

Age (years)	0	5	10	15	20	30	40	50	75	100
Incremental carbon	0.0	1.0	3.7	6.5	7.9	10.5	12.7	14.9	19.7	24.1

Note. The figure represents the accumulation of *additional carbon* in the soil, including dead root and leaf matter, for a plantation of 80% woody species and 20% of shrub/grass species with an annual rainfall of about 190 mm. The existing organic carbon store in the soil is estimated to be about 11 t. C per hectare. The total organic soil carbon is the addition of the existing and accumulated store.

As stated previously, this model is built up on scant data. This is why it is vital to undertake measurements in the field of soil carbon in *H. persicum* plantation of various ages, taking into consideration the cover of each stand. There should be a phased build-up of organic soil carbon, including dead plant material, over time, but how much this build-up is, is speculative at present.

Table 6.3 gives the estimate build-up of organic soil carbon in wood and soil over a 100-year period with the proposed tree planting option. Under the "standard" practice of re-seeding, the build-up of additional soil carbon is expected to reach 0.4 tC. per ha. after 5 years and grow to 2.0 t. ha. after 100 years. The incremental accumulation of organic carbon is the difference between these two figures; this is given in the table. Also given in the table is the percentage of below ground carbon in wood and the soil, together with the accumulated production of wood/carbon.

**Table 5.3. Estimated Carbon Accumulation and Wood Production.**

unit: tonnes of carbon per hectare, unless otherwise stated.

Organic carbon accumulation/Year	5	20	50	100
Wood, (67% below ground).	2.0	7.6	7.6	7.6
Soil, (including dead biomass).	1.0	7.9	14.9	24.1
<i>Total.</i>	3.0	15.5	22.5	31.7
% below ground (in roots and soil).	78%	84%	89%	92%
<i>Standard accumulation (re-seeding)</i>	0.4	1.2	1.6	2.0
<b>Incremental accumulation</b>	2.6	14.3	20.9	29.7
Production of wood (air-dry t. wood/ha.).	-	(12.8)	(32.0)	(64.0)
Production of carbon in the wood	-	5.1	12.8	25.6
<i>Incremental accumulation plus production.</i>	2.6	19.4	33.7	55.3

Note. The amount of carbon in air-dry wood (20% moisture content) is 0.4 t C. per t. of wood.

### Cost of carbon sequestration

The cost of the 5-year carbon sequestration project is estimated to be US\$ 1550. This amounts to US\$172.2 per hectare (including training and monitoring) of which US \$ 80.7 is the GEF contribution and US \$ 91.5 is the IR contribution. The standard re-seeding procedure will cost an estimated US \$ 44.3 per hectare, therefore, the *Incremental Cost* of the project is US \$ 127.9 per ha. Because the build-up of carbon takes time, the cost of carbon sequestration is relatively high after five years, but this drops considerably after 20 years and so on. The cost of sequestering wood alone remains constant from 20 years onwards at US \$ 16.8 per t. C, but if production is included, then the cost per t. of C is US \$ 10.1 at year 20, US \$ 6.3 by year 50, falling to US \$ 3.9 at year 100. Table 6.4 gives the incremental cost of carbon sequestration in different time periods.

**Table 6.4. Incremental Cost of Carbon Sequestration at Different Time Periods**

unit: US \$ per tonne of carbon sequestered per hectare, unless otherwise stated.

Incremental carbon sequestration cost/Year	5	20	50	100
Wood, only (67% below ground).	64.0	16.8	16.8	16.8
Soil, only (including dead biomass).	213.2	19.1	9.6	5.8
<b>Total (wood and soil)</b>	<b>49.20</b>	<b>8.9</b>	<b>6.1</b>	<b>4.3</b>
<i>Incremental sequestration plus production of C.</i>	<i>49.20</i>	<i>6.6</i>	<i>3.8</i>	<i>2.3</i>

Note. It is assumed that for the "standard" treatment, the accumulation of carbon is principally in the soil. Therefore, the incremental accumulation of soil carbon has been calculated by subtracting the "standard" accumulation from the estimate of the project's soil carbon accumulation given in Table 5.3.

The incremental cost for sequestration plus production is given on the assumption that the wood will be substituted for fossil fuel and/or the wood will be substituted for steel or concrete etc.

The estimated incremental cost of carbon sequestration is US \$ 49.2 per tonne of carbon after five years. This falls to US \$ 8.9/tC by year 20 and to US \$ 4.3/tC after 100 years. From year 20, the cost of carbon sequestration is below US \$ 10 per tC, whereas the cost of carbon sequestration using the standard re-seeding method is well above US 10 even by year 100, (Table 6.5). What is more, the standard method will only sequester about one-thirteenth the amount of carbon that the project will sequester, and at a higher unit cost. Only if the additional accumulated carbon is more than 4.4 t/ha. by the year 100 with the standard method, will the cost per sequestered tonne of carbon be about US \$ 10 per tonne. This does not seem probable.

**Table 6.5. Cost of Carbon Sequestration at Different Time Periods with the Standard Re-seeding Method.**

Carbon sequestration cost/Year	5	20	50	100
Additional carbon accumulation with standard method, principally in the soil (t./C ha.)	0.4	1.2	1.6	2.0
Cost of carbon sequestration. (US \$ /t.)	110.7	36.9	27.7	22.2

Note. The estimated cost of establishment using the standard method is US \$ 44.31 per hectare. If the area is watered and weeded to achieve a better cover then the cost will be about US \$ 90 per hectare and the sequestration costs may be about double those given above.

## Annex 6

### STANDARD TEXT

#### Legal Context

General Responsibilities of the Executing Agency, the Forest and Rangeland Organization (FRWO) and UNDP:

1. All phases and aspects of UNDP assistance to this project shall be governed by and carried out in accordance with the relevant and applicable resolutions and decisions of the competent United Nations organs and in accordance with UNDP's policies and procedures for such projects, and subject to the requirements of the UNDP Monitoring, Evaluation and Reporting system.
2. The FRWO shall remain responsible for this UNDP assisted development project and the realization of its objectives as described in this Project Document.
3. Assistance under this project document is being provided for the benefit of FRWO and the people of the Islamic Republic of Iran. FRWO shall bear all risks of operations in respect of this project.
4. FRWO shall provide to the project the national counterpart personnel, training facilities, land, buildings, equipment and other required services and facilities.
5. The UNDP undertakes to complement and supplement the FRWO participation and will provide, through the international project partners, the required expert services, training, equipment and other services within the funds available to the project.
6. Upon commencement of the project, the FRWO shall assume primary responsibility for project execution and shall have the status of an independent contractor for this purpose. However, that primary responsibility shall be exercised in consultation with UNDP.

#### (a) Participation of the FRWO

1. The FRWO shall provide to the project, the services, equipment and facilities in the quantities and at the time specified as per regularly updated project work plans and budgets.
2. The FRWO shall assign both a National Project Director (NPD) and National Project Manager (NPM) for the project on a full-time basis. He/she shall carry out such responsibilities in the project as are assigned.
3. Minor adjustments of individual assignments of project personnel provided by the FRWO (NPM and NPD) may be made by the FRWO in consultation with UNDP, if this is found to be in the best interest of the project. UNDP shall be so informed in all instances where such minor adjustments involve financial implications.
4. The FRWO shall continue to pay the local salaries and appropriate allowances of national counterpart personnel (e.g. the NPD)
5. The FRWO shall defray any customs duties and other charges related to the clearance of project equipment, its transportation, handling, storage and related expenses within the country. It shall be responsible for its installation and maintenance, insurance, and replacement, if necessary, after delivery to the project site.
6. The FRWO shall make available to the project-subject to existing security provisions any published and unpublished reports, maps, records and other data which are considered necessary to the implementation of the project.
7. Patent rights, copyrights and other similar rights to any discoveries or work resulting from UNDP assistance in respect of this project shall belong to the UNDP and FRWO. Unless otherwise agreed by the Parties in each case, however, the FRWO shall have the right to use any such discoveries or work within the country free of royalty and any charge of similar nature.

8. The FRWO shall assist all national project personnel in finding suitable housing accommodation at reasonable rents.

(b) Participation of the UNDP

1. The UNDP shall provide to the project, either directly or through the international partners, the requisite services, equipment and facilities. Budgetary provision for the UNDP-GEF contribution as specified shall be set forth in the project budget.
2. The FRWO shall consult with UNDP on the candidature of the National Project Manager and his/her deputy whose responsibilities are already delineated in the Annexes to this project document. The National Project Director who will be assigned by the FRWO, shall supervise the experts and other agency personnel assigned to the project, and the on-the-job training of national counterpart personnel. He/she shall be responsible for the management and efficient utilization of all UNDP-financed inputs, including equipment provided to the project.
3. The FRWO shall assign professionally qualified and experienced staff and other personnel to the project as specified in the project document annexes.
4. The FRWO may, in agreement with UNDP, execute part or the entire project by subcontracts. The selection of subcontractors shall be made by the FRWO, in accordance with its procedures.
5. All material, equipment and supplies which are purchased from UNDP resources will be used exclusively for the execution of the project, and will remain the property of the UNDP in whose name it will be held by the FRWO. Equipment supplied by the UNDP shall be marked with the insignia of the UNDP and of the FRWO.
6. Arrangements may be made, if necessary, for the temporary transfer of custody of equipment to local authorities during the life of the project, without prejudice to the final transfer.
7. Prior to completion of UNDP assistance to the project, the UNDP and the FRWO shall consult as to the disposition of all project equipment provided by the UNDP. Title of such equipment shall normally be transferred to the FRWO or to an entity nominated by FRWO, when it is required for continued operation of the project or for activities following directly there from. The UNDP may, however, at its discretion, retain title to part or all of such equipment.
8. At an agreed time after the completion of UNDP assistance to the project, FRWO and the UNDP, shall review the activities continuing from or consequent upon the project with a view to evaluating its results.

Rights, Facilities, Privileges and Immunities

1. In accordance with the Agreement concluded by the United Nations Development Programme (UNDP) and FRWO concerning the provision of assistance by UNDP, the personnel of UNDP and other United Nations Organizations associated with the project shall be accorded rights, facilities, privileges and immunities specified in said Agreement.
2. The FRWO shall grant UN volunteers, if such services are requested by the FRWO, the same rights, facilities, privileges and immunities as are granted to the personnel of UNDP.
3. The FRWO shall either bear the (possible) cost of any taxes, duties, fees or levies which it may impose on any firm or organization which may be retained by the project and on the personnel of any such firm or organization, except for nationals of the host country employed locally, in respect of:
  - The salaries or wages earned by such personnel in the execution of the project;
  - Equipment, materials and supplies brought into the country for the purposes of the project or which, after having been brought into the country, may be subsequently withdrawn there from;
  - Any substantial quantities of equipment, materials and supplies obtained locally for the execution of the project, such as, for example, petrol and spare parts for the operation and maintenance of equipment mentioned above, with the provision that the types and approximate

quantities to be exempted and relevant procedures to be followed shall be agreed upon with the FRWO and, as appropriate, recorded in the Project Document; and

4. The FRWO shall ensure the prompt clearance of experts and other persons performing services in respect of this project; and the prompt release from customs of:
  - Equipment, materials and supplies required in connection with this project; and,
  - Property belonging to an intended for the personal use or consumption of the personnel of the UNDP, its international partners, or other persons performing services on their behalf in respect of this project, except for locally recruited personnel.

#### Suspension or Termination of Assistance

1. The UNDP may by written notice to the FRWO, suspend its assistance to any project if, in the judgment of the UNDP any circumstance arises which interferes with or threatens to interfere with the successful completion of the project or the accomplishment of its purposes. The UNDP may, in the same or a subsequent written notice, indicate the conditions under which it is prepared to resume its assistance to the project. Any such suspension shall continue until such time as such conditions are accepted by the FRWO and as the UNDP shall give written notice to the FRWO that it is prepared to resume its assistance.
2. If any situation referred to in paragraph 1, above, shall continue for a period of fourteen days (14) after notice thereof and of suspension shall have been given by the UNDP to the FRWO, then at any time thereafter during the continuance thereof, the UNDP may by written notice to the FRWO terminate the project.

The provisions of this paragraph shall be without prejudice to any other rights or remedies the UNDP may have in the circumstances, whether under general principles of law or otherwise.

## Annex 7

### Personnel Recruitment

1. **Government staff.** Since UNDP-supported programs and projects form part of the development activities of the program country, the Government assigns its own personnel to participate in program or project activities as part of their work responsibilities. Such personnel are referred to as "government staff".
2. **National director.** For each UNDP-supported program or project the government must appoint a national director. The national director supports the program or project and serves as a focal point on the part of government. This responsibility normally entails ensuring effective communications between the partners and monitoring of progress towards expected results.
3. **Job description.** The designated institution is responsible for ensuring that job descriptions are prepared for all UNDP-supported personnel. Job descriptions are an essential part of the recruitment process. The partners concerned must agree on their content. Job descriptions must be updated regularly and must clearly identify the outputs the person is expected to produce. This also serves as a basis for measuring performance.
4. **Remuneration and entitlements.** The following are key policies on remuneration and entitlements:
  - (a) UNDP finances program and project personnel who have skills that are needed to attain the program or project objectives but that are not available within or to the government;
  - (b) The salaries and other entitlements of locally recruited personnel must not exceed those within the United Nations system for comparable functions and types of contracts in the country concerned. The designated institution and the UNDP resident representative determine the salaries and other entitlements of UNDP-supported program or project personnel;
  - (c) In principle, government officials cannot be funded under the UNDP contribution to a program or project since this would undermine national ownership and sustainability. There is a United Nations policy statement on payments to government staff. This statement explains the policy and the circumstances in which exceptions may be made, namely that the country must be facing serious economic difficulties that have drastically reduced the purchasing power of civil service salaries. The policy provides also that such payments be coordinated among donors and an exit strategy be developed with the government and the other donors whereby such payments are gradually phased out;
  - (d) The entitlements for travel of personnel funded by the program or project must not exceed those for UNDP staff.



## **Annex 8**

### **Financial Management & Reporting**

This annex explains how to manage UNDP resources under national execution, direct execution and NGO execution.

#### **6.5.1. Financial accountability**

1. Sound financial management is an integral part of the process of achieving results through UNDP support. This includes adequate reporting to identify problems and adjust activities, budgets and inputs to be provided.

2. The designated institution is accountable for:

(a) Managing the UNDP resources allocated to the program or project to achieve the expected results and planning financial disbursements, in accordance with the work plan, PSD and project document;

(b) Maintaining an up-to-date accounting system that contains records and controls to ensure the accuracy and reliability of financial information and reporting;

(c) Recording the receipt and disbursement of UNDP funds and verifying that disbursements do not exceed the available funds or the amount allocated to each approved budgetary category;

(d) Maintaining an inventory that records the acquisition and disposal of equipment.

3. The UNDP resident representative ensures that the UNDP country office has an internal control system that allows it to monitor effectively the financial activity of the program or project and to support and monitor the progress towards achieving results.

4. There must always be an appropriate separation of committing and verifying functions.

#### **6.5.2 Management of funds**

1. The management of program and project funds must be based on an updated work plan with a corresponding budget. It requires planning and close consultation between the partners involved. UNDP provides funds in accordance with progress towards achieving results.

2. The UNDP country office provides funds to the designated institution through advances of funds. The institution is then responsible for spending the funds as agreed in order to achieve the results.

3. The designated institution may request UNDP to pay such advances directly to contractors or other government entities undertaking program or project activities in line with the work plan and budget. UNDP may also reimburse expenditures already incurred by the designated institution, provided that they are in accordance with the work plan and budget.

4. Advances and direct payments are made when there is continued progress towards the achievement of the expected results. The UNDP country office sets up a system enabling it to verify such progress in conjunction with releasing advances of funds.

5. When a United Nations agency undertakes program or project activities on behalf of a designated institution, UNDP headquarters provide funds directly to the agency, in accordance with the schedule

of advances in the letter of agreement between the designated institution and the United Nations agency.

6. Direct execution. When a UNDP country office itself takes on the role of designated institution, the Resident Representative ensures that within the country office there is a separation of responsibilities among the functions of a) planning and supervising project activities and taking decisions; and b) technical and operational implementation of activities.

7. The designated institution, the government coordinating authority and UNDP each monitor continuously the progress made and the disbursement of funds and take steps to prevent any problems. However, if progress is not made despite such monitoring, if mismanagement of funds is suspected or if reporting is inadequate, UNDP may withhold advances of funds while seeking a solution.

### 6.5.3 Advances of funds

1. The UNDP country office makes advances of funds to the designated institution only on receipt of a completed and signed financial report. The financial report contains both an explanation of previous expenditures and a request for a new advance.

2. The designated institution requests an advance of funds on the basis of the work plan and its corresponding budget. The request is documented in the financial report and specifies the cash required under two headings, as follows:

(a) **Outstanding obligations:** the costs of inputs that have been contracted for but for which payment has not yet been made. Only obligations that will be paid in the next period are included;

(b) **Planned expenditures:** the costs of new inputs that will be procured and paid for during the next period.

3. Advances of funds are normally made in the local currency. Any request for advances in currencies not available to the UNDP country office must be forwarded to the Treasury Section at UNDP headquarters.

4. Advances are made for a three-month period or less, depending on the needs of the program or project. The frequency is agreed on between the designated institution and the UNDP country office at the outset of the program or project.

5. The key steps in requesting and making an advance of funds are:

(a) The designated institution sends the request for the advance to the UNDP country office in the standard financial report format. To ensure efficient use of UNDP resources, the request must reflect a realistic forecast of expenditures for the next period, in line with the program or project work plan;

(b) The UNDP country office verifies that resources are available and uses the work plan to verify that the amount requested does not exceed the expenditures that may reasonably be expected during the next period. It also verifies the use of funds for the previous period and whether progress is being made towards the achievement of the expected results;

(c) The UNDP country office pays the advance of funds into the program or project bank account of the designated institution, and records the advance using the government interoffice voucher through the Financial Management Information System (FIM).

(d) The designated institution disburses funds against the advance and records the transactions in its accounting system;

(e) The designated institution prepares the financial report, showing the actual expenditures in each month of the period covered by the report. The designated institution makes the request for advance for the next period, repeating step (a).

6. **Bank account.** The designated institution operates a separate bank account in order to receive and disburse UNDP funds. Under national execution, where the government has confirmed in writing that local circumstances prohibit the opening of a separate bank account, the resident representative may approve the use of a consolidated central bank account, provided that the disbursement of UNDP funds can be easily traced and audited. Separate record keeping is mandatory, no matter what bank account arrangements are used.

7. **Unused advances.** At the end of a program or project, the designated institution returns any unused advances to the UNDP country office. The funds are credited to the operating fund account through a UNDP-GOVT IOV.

8. Any interest earned on the program or project bank account from the advances is recorded as miscellaneous income through the UNDP-GOVT IOV.

9. The following special procedures apply for projects with budgets of less than \$150,000 and a duration of less than one year:

(a) The UNDP country office may provide the advance of funds to the designated institution in a single installment at the start of the project. This disbursement is recorded as expenditure against the approved budget lines, through the UNDP-GOVT IOV;

(b) The designated institution must send a final financial report marked "Project previously expended on (date)" to the UNDP country office, showing the amount advanced and the expenditure by budget sub-line. Any significant changes from the original budget and remaining funds must be adjusted on the GOVT IOV.

#### **Direct Payments**

1. The designated institution may request UNDP to make direct payments to other parties for goods and services provided to the program or project.

2. The designated institution may forward to the UNDP country office a standard form "Request for direct payment", duly completed and signed by the designated institution. The designated institution keeps original documents. The UNDP country office provides the relevant documentation (inter-office vouchers, disbursement vouchers, copies of cheques, and other documents) to the designated institution.

#### **Recording and Authorizing Advances and Direct Payments through FIM**

1. FIM is designed to facilitate the management and monitoring of project budgets, expenditure and financial reporting by UNDP country offices. The system provides information on the availability of funds and produces the Combined Delivery Reports (CDR). FIM also maintains requests for advances and direct payments and electronically transfers authorized payment requests to WINFOAS that generates the proper payment instruments.

2. To verify that sufficient funds are available prior to making payments, and to ensure the validity, consistency and integrity of financial data processed through FIM and WINFOAS, the following internal controls must be put in place:

(i) The staff that record and authorize payments through FIM must be different from the staff that operates WINFOAS.

(ii) The committing and verifying officers who check and verify the must ensure that all payments to or on behalf of a NEX project and/or NGO execution project and charged to UNDP-GOVT IOV are supported by a request form approved by the designated institution.

**6.5.6 Financial reporting. The three main reports are:**

- (a) The financial report;
- (b) The combined delivery report;
- (c) The expenditure statement from United Nations agencies (also called project delivery reports or expenditure reports).

**1. The financial report**

The designated institution prepares the financial report in order to:  
Record the expenditures in the current period against the advance of funds received; an advance of funds for the next period in line with the program or project work plan and corresponding budget.

(b) The designated institution must submit the financial report to the UNDP country office each time a request for advance is made. The review of the financial report should be linked to the substantive reporting on progress towards results and to monitoring;

(c) The key steps in processing a financial report are: i. The designated institution sends a signed financial report to the UNDP country office no later than 15 days after the end of the period covered by the last advance; ii. The program officer in the UNDP country office reviews the financial report, verifies that resources are available and uses the work plan to verify that the amount requested does not exceed the expenditures that may reasonably be expected during the next period. The officer also verifies the use of funds for the previous period and whether progress is being made towards the achievement of the expected results; iii. The UNDP country office records the expenditures into the FIM and uses the financial report to prepare the combined delivery report; iv. For the final period of the program or project, the designated institution certifies "FINAL" on the financial report.

(d) UNDP considers any funds transferred by the designated institution to its contractors as expenditures, which are consequently recorded against the appropriate budget sub-lines.

(e) If there are errors in the financial report, the designated institution makes corrections in consultation with the UNDP country office. The UNDP country office must follow-up with the designated institution if the financial report has not been received 15 days after the end of the period or if the institution reports no expenditures against the advance. In such cases, the country office must promptly examine any problems with reporting, disbursement or accounting, and propose measures to overcome them. The country office informs the Country Programme Accounting Unit of the actions taken to solve the problems.