

Draft

TERMINAL EVALUATION REPORT

***Mainstreaming Biodiversity Conservation into Production System in
the Juniper Forest Ecosystems***

ID# 1055



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Title of UNDP supported GEF financed project: *Mainstreaming Biodiversity Conservation into Production System in the Juniper Forest Ecosystems*

UNDP and GEF Project ID# 47688 and 41720 respectively

Evaluation time frame and date of evaluation report

12 days (22nd June to 03rd July, 2012)

Draft submitted on:

GEF operational Program/Strategic Program

The goal of the biodiversity focal area is the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services. To achieve this goal, the strategy encompasses four objectives:

1. Improve the sustainability of protected area systems;
2. Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors;
3. Build capacity to implement the Cartagena Protocol on Bio safety; and
4. Build capacity on access to genetic resources and benefit-sharing.

Since the project under evaluation is related to objective 2, the needful account for this objective 2 (*Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors*) is given as under:

GEF's strategy to support biodiversity mainstreaming focuses on the role and potential contributions of both the public and private sector. The strategy aims to strengthen the capacity of the public sector to manage and regulate the use of biological diversity in the productive landscape and seascape while also exploiting opportunities to support the production of biodiversity-friendly goods and services by resource managers and users including the private sector.

Strengthen the Policy and Regulatory Framework for Mainstreaming Biodiversity

- The incorporation of biodiversity conservation, sustainable use, and benefit sharing into broader policy, legal, and regulatory frameworks is not taking place in many GEF-eligible countries because of a number of factors. These factors include poor governance, weak capacity, conflicting policies (e.g., tenure regimes biased against —idle lands), and the lack of scientific knowledge and incentives.
- Mainstreaming may yield substantial social and economic benefits to public or private actors. However, these actors may be unaware of these benefits. In these circumstances, providing information on the economic valuation of biodiversity and its contribution to national

development and corporate interests is a key task. The Millennium Ecosystem Assessment advanced valuable information on biodiversity and ecosystem services on a global scale, but similar efforts are required at the national and local scales where most policy and production decisions regarding land- and ocean-use are made. This could also involve more effective use of national biodiversity strategies and action plans (NBSAPs) to foster mainstreaming of biodiversity into national development strategies and programs.

- Even when public and private actors are aware of the benefits from effecting policy and resource management changes, they may not have the capacity to act. In these cases, capacity building becomes paramount.
- In some cases, public and private actors may not have the incentive to act even if they have the capacity to do so. Incentives can often be created by changing policies and programs that encourage economically inefficient uses of ecosystems and species (e.g., strengthening property rights systems; removing —perverse|| subsidies). In other cases, incentives can be created through the evolving mainstreaming tool of Payment for Ecosystem Services (PES).
- In recognition of the importance that the COP places on the threat that invasive alien species pose to biodiversity, particularly in islands and island states, and most often in productive lands and oceans, GEF will continue to support the development of regulatory and management frameworks to prevent, control and manage these species.

Strengthen Capacities to Produce Biodiversity-friendly Goods and Services

- Environmental certification systems exploit the willingness of the market to pay a premium for goods and services whose production, distribution and consumption meets an environmental standard. This willingness creates market incentives for producers to improve their environmental and/or social practices to receive the price premium. GEF will help remove the barriers to enhancing, scaling up, replicating, and extending environmental certification systems in productive landscapes and seascapes.

Project Support

- Strengthen Policy and Regulatory Frameworks: GEF will support the development and implementation of policy and regulatory frameworks that provide incentives for private actors to align their practices and behavior with the principles of sustainable use and management. To this end, GEF interventions will remove critical knowledge barriers and develop requisite institutional capacities. This will include support for sub-national and local-level applications--where implementation can be more effective--of spatial land-use planning that incorporates biodiversity and ecosystem service valuation.
- In addition, GEF will support the further development of national biodiversity strategy and action plans (NBSAPs) and national reports that incorporate biodiversity and ecosystem service valuation to increase their potential as effective vehicles for mainstreaming biodiversity in sustainable development policy and planning.
- GEF will continue to support national, sub-national and local PES schemes.

Recent STAP guidance will be applied, as appropriate, in the review of PES projects.

- **Implement Invasive Alien Species Management Frameworks:** GEF will support interventions that address the issue of invasive alien species systemically through developing the sectoral policy, regulations, and institutional arrangements for the prevention and management of invasions emphasizing a risk management approach by focusing on the highest risk invasion pathways. Priority will be given to establishing policy measures that reduce the impact of invasive species on the environment, including through prevention of new incursions, early detection and institutional frameworks to respond rapidly to new incursions.

Produce Biodiversity-friendly Goods and Services: To increase production of Biodiversity-friendly goods, GEF will focus its support on: a) improving product certification standards to capture global biodiversity benefits; b) establishing training systems for farmers and resource

Implementing and other project partners

World Conservation Union (IUCN) and the Balochistan Forest and Wildlife Department were the major implementing partners, later joined by the selected community members and their social institutions, subsequently also by other stakeholders, who are listed under relevant section of the report

Evaluation team members:

Ashiq Ahmad Khan

Acknowledgements: The mission feels highly indebted to Mr Inamullah Khan, project Manager of the IUCN for the project under evaluation for his sharing of information about the project, providing the needful documents, reports etc, arranging meetings with community members and showing various activities that were undertaken by the project. The mission was also briefed by Mr Mahmood Cheema, Head of IUCN office in Islamabad and Mr Zabardast Khan Bangash, IUCN Head, Quetta office. The knowledge and information shared by Mr Ghulam Ali Baloch, the Ex-Secretary of Balochistan Forest and Wildlife Department who has been witnessed to various processes of the project and had firm views on most of the project activities is thankfully acknowledged. The generous sharing of information, shared by Mr Abdul Wahid and Mr Taj Mohammad, Chief Conservator of Forests and wildlife, North and South respectively and Mr Mohammad Yousaf Kakar, the Ex-Chief Conservator of Forest and wildlife, is thankfully acknowledged.

Mr Ghulam Mohammad, Conservator of Forests and Ex-Project Manager for IUCN for the Juniper project shared the long institutional history of the project, shared his views on the gaps and educated the mission on the future of the project. The mission is thankful for all this.

Mr Tahir Rasheed from Torghar Conservation Project has been involved in providing training to selected group for undertaking wildlife surveys and has been visiting the site on several occasions for this and other purposes. His findings because of his close interaction with the project and various phases that the project passed through, was of immense use to the mission. This is thankfully acknowledged.

Mr Mira Jan Kakar, Additional chief Secretary, Government of Balochistan was kind enough to cancel his engagements in Islamabad for chairing the Steering Committee meeting to receive briefing from the mission and give his opinion and encourage other members of his committee to give their opinions on various interventions, processes and progress of the project and shared quite useful suggestions during the discussions. Such suggestions and opinions are the sound basis of the findings of the mission. This generous gesture and attitude is thankfully acknowledged. Several individual and social institutions that are listed in one of the annexure gave their frank opinion about the project, the gains and gaps. Their inputs are highly appreciated.

Prof Dr Rasool Bux of the Balochistan University is a knowledgeable Taxonomist and has been associated with the plants of the Juniper for quite some time. It was so useful to listen to his view about the dynamics of the flora of the Juniper Ecosystem. His contribution to the knowledge of the mission is thankfully acknowledged.

There were several others who met with the mission and told about their views about the project. The mission is thankful to them also.

ii) *Executive Summary*

Project Summary Table

Project Title: Mainstreaming Biodiversity conservation into production systems in the Juniper Forest Ecosystems				
GEF Project ID:	47688		<i>at endorsement (Million US \$)</i>	<i>at completion (Million US\$)</i>
UNDP Project ID:	41720	GEF financing:		975000.00
Country:	Pakistan	IA/EA own:		
Region:	Balochistan	Government:		
Focal Area:	Biodiversity	Other:		15
Operational Program:		Total co-financing:		784985.00
Executing Agency:	IUCN	Total Project Cost:		1760,000
Other Partners Involved:	Government of Balochistan	Prodac Signature (Date project began):		
		(Operational) Closing Date:	Proposed:	Actual: 31 March, 2012

Project description

While the first of its kind, the project entitled “Mainstreaming Biodiversity Conservation into production system in the Juniper Forest Ecosystem “is a joint initiative between IUCN and the Government of Balochistan, funded by GEF/UNDP and implemented by IUCN and the Forest and Wildlife Department and other stakeholders. The project was started in April 2007 and , with one year of extension, was terminated on 31st March 2012. The overall goal of the project is to ensure economically, ecologically and socially sustainable utilization of Juniper Forest Ecosystem to conserve biodiversity and enhance ecosystem contribution to sustainable development of the juniper tracts of the province. In order to move towards the goal, the project has been working around the following objectives:

- Conservation of biodiversity in Juniper Forest Ecosystems
- Raising awareness at desirable levels
- Improving of livelihoods of local communities through increasing ecosystem productivity in different sectors
- Strengthen capacities of communities, GoB line departments, Community Social Organizations (CSOs), and NGOs in Biodiversity conservation
- Enhance capacities of local communities in sustainable use of Natural Resources
- Promote integrated natural resource management

With 2 major outcomes and 12 outputs, 8 for outcome 1 and 4 for outcome 2, the project identified initially 3, and finally 4 valleys to test and demonstrate the feasibility of certain interventions that could contribute to the overall goal of the project. Based on ground realities and keeping the socio-cultural background of the area in view, the project developed a comprehensive LFA which remained almost the same except the addition of 2 more outputs to outcome 1. With a field office in *Ziarat*, the core town of the valley, and recruitment of essential staff, headed by a Project Manager, the project first concentrated on the social mobilization of the community around the specific objectives of this project and introduced the culture of jointly deciding upon the priority interventions that were part of the project design and implementation strategy. The people of the selected valleys were first organized into 42 Village Conservation Organizations (VCOs) for males and 10 Community conservation organizations (CCOs) for females and, later, clustered all together into 4 Valley Conservation Committees (VCCs).

With the basic infrastructure in hand, the project established certain targets for it to achieve the objectives and also established the baseline against which the planned activities had to be carried out. A summary of the activities against the set objectives of the project is given below:

1. *Conservation of biodiversity in Juniper Forest Ecosystem*

- Gabions were introduced to be used for the protection of fields against the existing system of cutting and using juniper trees
- Introduction of Fuel efficient stoves to control wastage and excessive use of juniper trees.
- Mapping of Medicinal plants and its ethno-botanic uses.
- Creation of range reserves and restoration of traditional grazing system
- Wildlife population assessment and protection
- Assessment of the use of pesticides
- Moving towards Biosphere reserve, nomination forms submitted
- Development of Ecotourism-manual
- Preparation of operational plan for Medicinal Plants Center
- Developing Valley Conservation plans
- Formulating grazing rules
- Raising, distribution and planting of indigenous plant species
- Conducting nursery trials of regeneration of Juniper
- Assessing Forest cover of Juniper forest ecosystem of Ziarat using Spot 5 satellite image of 2008 in collaboration with WWF Pakistan to assess stand density based classification of the forest ecosystem.
- Combating mistletoe die-back (manual removal) in Juniper forests of Ziarat area in collaboration with BFW
- Developing biodiversity guidelines for Forest, rangelands and agriculture and encourage their sustainable use to conserve biodiversity.

2. *Raise awareness among communities, CSOs, NGOs and GoB line departments on biodiversity conservation in Juniper Forest Ecosystem.*
 - Established 9 Green Clubs in local schools and colleges, including the Girls High School Ziarat.
 - The project engaged local communities, local academic institutions, civil society, government officials, legislators and media in its awareness and advocacy programmes.
 - Conducted economic valuation of the Juniper ecosystem goods and services in Ziarat
3. *Improve livelihoods of local communities through increasing ecosystem productivity in different sectors.*
 - Closure of areas for grazing
 - Wildlife protection that has resulted in the increase in population of large ungulates(Markhor)
 - Healthy rangelands and livestock
 - Sustainable management of medicinal plants
 - Construction of small water reservoirs for the replenishment of groundwater resources through recharge of dug wells and *Karezes* .
 - Raising walnuts on agriculture lands for contributing to livelihoods
 - Practicing hospitality services
4. *Strengthen capacities of communities, GoB line departments, CSOs and NGOs in biodiversity conservation.*
 - 527 community members and 110 officials of various government departments were provided training and exposure in related aspects including organizational management, participatory approaches and proposal development; water resources management, sustainable use of natural resources, disaster risks management, livestock management, wildlife survey, forest law, tourism, alternate energy and alternate livelihoods.
5. *Enhance capacities of local communities in sustainable use of natural resources.*
 - Introduced solar energy technologies
 - use of beehive coal briquettes at the community level
 - Social Mobilization
 - Developing and implementing Valley conservation Plans
 - Developing and implementation of Ecotourism Plan
 - Developing and implementation of Medicinal plants Center operational plan
6. *Promote integrated natural resource management.*
 - Although set as an independent objectives, all of the above activities are contributing to the NRM

Based on the background documents, results of discussions with relevant individuals and groups and interventions on ground, the following rating has been done, as summarized in the rating table below:

Evaluation Rating Table

<i>Evaluation criteria</i>	<i>Rating</i>
M&E design at entry and implementation	S
UNDP and implementing partner implementation	S
Overall result(attainment of objectives)	S
relevance	R
Effectiveness	S
Efficiency	S
Sustainability	L
Impacts	S

Summary of conclusions, recommendations and lessons

In summary, the project has done well, has identified a relevant issue to address, and has undertaken interventions that are owned by the community and the implementing partners, especially IUCN and Government of Balochistan. However, since this is the beginning and largely a demonstration project hardly being witnessed and participated by about 18% of the entire juniper ecosystems, a lot is ahead to be done. The cutting of trees if not stopped, and the regeneration if not encouraged, the juniper forest shall stay at risk. Similarly, unless there are alternate fuel wood sources, the people shall continue cutting of Juniper trees to cook food and keep homes warm. The Balochistan Forest and Wildlife Department has been the main partner and is witnessed to the approaches adopted by the current project. However, funding shall stay as a limiting factor for them. Although the 4 valley conservation Committees are trained on proposal writing but this is absolutely insufficient. Linkages with donors for future funding are something that the BFWD has to be serious about. Moreover, the project has successfully been filled the nomination forms for the Juniper Forest Ecosystem to be decreed as a biosphere Reserve. The process needs to be taken to its logical conclusion. In the meanwhile, a number of gaps have been identified, some being extremely insignificant, but have to be addressed in the management planning for the Biosphere Reserve.

The project has revealed a few lessons, the major being the need for keeping consistency in the implementation of the overall philosophy of the project. This is possible when the partners agree not to shift the critical positions so often. Secondly, when there is a need and commitment of gender involvement, it can't be realized without a female Social Organizer, a position that remained absent from the project management for quite some time. Third, any activity that has not been included in the project design, may either be included, if absolutely essential, with in an year or so, or must not be included in the last year of the project. Fourth, the ownership of buildings, furniture or other project assets, if have to be transferred to

other partner at the end of the project, must be decided at least in the middle life of the project. If left to the end, it might induce some sort of conflict that may affect the overall sustainability of the project; and last, the project has gained certain level of progress and has established good examples of wise interventions, this height must be maintained and taken further to cover the remaining parts of Juniper ecosystems not only in Ziarat and Sasnamana valleys but also extended to the Juniper forests of Zarghoon and Herboi

iii) Acronyms and Abbreviations (in light of the UNDP Editorial Manual)

BFWD	Balochistan Forest and Wildlife Department
COP	Conference of the Parties
CSO	Community Social Organization
GEF	Global Environmental Facility
GoB	Government of Balochistan
IUCN	World Conservation Union
LFA	Logical Framework Approach
M&E	Monitoring and Evaluation
NBSAP	National Biodiversity Strategy and Action Plan
NGO	Non Government Organization
PES	Payments for Ecosystem Services
STAP	Scientific and Technical Advisory Panel
UNDP	United Nations development Programme
VCC	Village Conservation Committee
VCO	Valley Conservation Organization
WWF	World Wide Fund for Nature

1. Introduction

Purpose of the evaluation

The purpose of undertaking evaluation of the Project is to provide all stakeholders with impartially derived first-hand information on the status of the Project and its effectiveness towards achieving the objectives as listed in the Project Document. The findings of the Mission will be useful for understanding the management and technical issues of the Project and the progress achieved to date. Furthermore, it would provide a road map and as source of guidance to all stakeholders to plan activities in future. The Final Programme Evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals.

Scope and Methodology

Juniper Forests of Balochistan are known to have the oldest trees with Ziarat as the biggest patch. Owing to the tremendous ecological, biological, scientific, aesthetic and economic values, the forests deserve to be protected for the present as well as the future generations. Contrary to this, the Juniper forests, all over Balochistan, including Ziarat, are exposed to all sorts of threats, from cutting for fuel wood and other domestic reasons to destruction and conversion of their habitats to farmlands and other uses. Any effort to demonstrate techniques or approaches that would protect these forests from immediate and long-term threats is highly desirable. In this regard, the scope of the project is wider than many other initiatives, addressing other threats and issues. The project under evaluation has been working in 4 valleys of Ziarat, covering roughly 18% of the entire Ziarat Juniper Forest Ecosystems and has been working with communities who were willing to be organized in village conservation committees, further grouped in cluster committees called "Valley Conservation Committees (VCCs). Since the project has been working on different aspects of the local economy, mostly related to land use, and initiatives that would ultimately help the conservation of Natural Resources, forests, wildlife, rangelands, medicinal plants in particular, it had a wide range of stakeholders from local community to relevant Government institutions at various levels, who were the targets of evaluation.

Methodology included the study of the relevant documents (list annexed), especially their findings in terms of the strengths and weaknesses of the project at different stages of implementation to develop basis for interaction with the stakeholders, and asking their opinion on various aspects of the process and progress of the project, focusing on elements that shall ultimately contribute to the sustainability of the project. Designing of specific questionnaires and using them in interviews was the next approach adopted by the mission. Meetings with target communities, social institutions and individuals; staff of the Forest and Wildlife department at various levels, operation and management, and discussions with retired officials who have been involved in the project designing and implementation at some point in time and were keen to see the outcome of the project, on their level of involvement, impressions about the relevance and success of various project intervention and impacts on Biodiversity was the main segment of the evaluation process. Sharing the findings of the mission with the Project Steering Committee to get their responses and comments was part of the techniques used by the mission in the process of evaluation that could generate great discussions on the strength and weaknesses of the project on one hand, and on the other, offer ownership to people who own these resources and are responsible for their long-term management. Sharing some of the concerns of different stakeholders with the staff of the project implementation agency(IUCN) for their responses and comments was also included in the scope and methodology of the evaluation to make sure that the information provided to the mission stay unbiased, clear and useful. Cross examination of some of the respondents for certain information that were critical to the findings of the mission was used as a tool, where needed. Informal discussions with senior civil management of Balochistan such as chief Secretary, Additional Chief Secretary and some secretaries was adopted for sharing information about the project and, especially, the evaluation mission with the aim to draw their attention to the importance of the Juniper Forest ecosystems and needs for future management in the post project scenario.

Structure of the evaluation report

The report describes the background of the project highlighting the need for it in the context of the socio-cultural and economic problems that were responsible to degrade the natural health of the Juniper Forest Ecosystem. This is followed by the nature of various interventions that were undertaken to address such issues in specified areas; the impacts of such interventions, the impressions of different stakeholders; elements of sustainability and the way forward for subsequent interventions to address.

The above is the brief structure yet followed in the evaluation format, provided to the mission.

2. Project description and development context

Project start and duration

The UNDP/GEF funded project “Mainstreaming Biodiversity Conservation into production systems in the Juniper Forest Ecosystems” was initially approved for 4 years, April 2007-2011 but was extended further, mainly to consolidate the major interventions of the past to ensure further sustainability, for one year, ending March 2012.

Problems that the project sought to address

The juniper forests have been under pressure to meet the fuel wood demand for local households, offices and hotels, fencing of agricultural lands, and timber for use in construction. Demand for juniper wood kept on increasing with the growing population that have reached about 0.1 million people now. Since the juniper forests have to perform a very useful function of watershed protection besides being home to diverse biological and ecological resources, their conservation has been a top priority for almost all concerned; however no significant efforts are visible through the past for the conservation of these forests. This was a major challenge that the project desired to address.

Though the Ziarat has been known for its pleasant weather in summers, and pristine environment, awareness regarding its values for all of its services was lacking at all levels-communities, tourists, NGOs etc. Creating such awareness was the next challenge which the project wanted to address

The local communities are traditionally engaged in several economic activities-agriculture, horticulture, livestock rearing etc but were sticking to primitive techniques that didn't help them to realize a reasonable level of income from various sectors. Enhancement of income opportunities from traditional practices was the next target that the project wanted to achieve.

The concept of Biodiversity conservation is not known fully and its importance not being understood to the level it deserves. Consequently, the Wildlife species were being killed, forest cut to develop new land for agriculture, rangelands being grazed to over its capacity through free grazing system. All such activities contributed significantly to the degradation of Biodiversity. Protection of Biodiversity against all such elements was the next challenge before the project

The local communities had no capacity to use the natural resources to their optimum levels and as such had big gaps in the livelihood needs and available income to meet such needs. Enhance capacities of local communities was thus a problem that had to be addressed by the project

Each component of the local Biodiversity and Natural Resources was taken in isolation from each other, even when addressed in the past. However, since the lack of the adoption of integrated management techniques was the root cause for the degradation of Natural Resources, promotion of integrated resource management was a problem that had to be addressed through appropriate management techniques.

Immediate and development objectives of the project

The main objective of the project is to bring biodiversity friendly changes into the present production systems employed by local communities for getting their livelihoods. However, the specific objectives of the project were as under:

- Conservation of biodiversity in Juniper Forest Ecosystems
- Raising awareness at desirable levels
- Improving of livelihoods of local communities through increasing ecosystem productivity in different sectors
- Strengthen capacities of communities, GoB line departments, Community Social Organizations (CSOs), and NGOs in Biodiversity conservation
- Enhance capacities of local communities in sustainable use of Natural Resources
- Promote integrated natural resource management

Baseline indicators established

The revised LFA of 2009 has established certain baselines indicators for the expected outcomes and outputs as follows:

Narrative Summary	Indicator	Baseline ¹
Overall Goal: The overall goal is to improve the condition of the Juniper forest ecosystem, in order to conserve biodiversity and increase the ecosystem's contribution to sustainable development.	% change in land use of forest area	Change in land use 18% (with 5% expansion in agriculture)
	% reduction in exploitation of Juniper trees	Deforestation at a 7% rate
	Positive change in groundwater levels	Rate of ground water depletion 15 feet/year
Project Objective: To modify production systems in the Juniper forest landscape and make them more biodiversity friendly.	Forestry and livestock guidelines considering biodiversity are being used	Biodiversity is not considered critical in production systems
	Change in plant diversity in selected valleys	Plant diversity as mentioned in the Vegetation Study

Narrative Summary	Indicator	Baseline ¹
Outcome 1: Economically, ecologically and socially sustainable utilization of Juniper forest ecosystem operationalised at 4-6 selected small valleys.	Valley conservation plans developed and implemented in selected valleys	No valleys conservation plan exists
Output 1.1: Organizational structures in villages in selected valleys	At least 50% of Community Conservation Organizations (CCOs) and Women Community Conservation Organizations (WCCOs) formed are operational	No CCO exists
Output 1.2: Social and needs assessment of selected valleys, including gender assessment	Social and need mapping of selected valleys	No such assessment exists
Output 1.3: Measures to mainstream biodiversity into livestock sector developed and implemented	Increased percentage of livestock farmers of CCO adopt modified grazing practices in select valleys	Free grazing
Output 1.4: Measures to mainstream biodiversity into energy sector developed and implemented	Increased percentage of CCO members adopt fuel efficient technologies	Free access to fuel wood collection
	Increased percentage of CCO members adopt alternate energy technologies	Non-availability of alternate energy sources
Output 1.5: Measures to mainstream biodiversity into hunting, watershed management, construction and/or tourism sectors identified, developed and initiated	Best management practices in watershed adopted	No previous intervention
	Guidelines on ecotourism prepared and adopted	No previous intervention
Output 1.6: Measures to combat die-back developed and implemented	Extent of die-back and Mistletoe problem in Sasnamana Valley decreased	18% of forest in Sasnamana Valley are affected by Mistletoe
Output 1.7: Linkages established with private sector in select sectors	Private sector engagement in conservation supportive activities increased	No private sector involvement

Narrative Summary	Indicator	Baseline ¹
Output 1.8: Highlight the significance of Juniper Forest Ecosystem at local, regional and global level	Awareness-raising material (including brochures, posters and documentary) developed and disseminated to wider audience	Non existence of awareness material.
	Webpage of Juniper project developed and updated	No webpage of Juniper project
Outcome 2: Mechanisms for replicating and disseminating the sustainable utilization regimes across the entire Juniper forest ecosystems of Balochistan evolved.	Selected communities and other stakeholders in the Juniper tract exposed to project interventions and results, and are motivated to replicate	No such experience exists
	Evidence of local and district government agencies in Balochistan benefiting from lessons learnt	No effective mechanism for lessons-sharing exists
Output 2.1: Jointly (communities & Government) recommended approaches and lessons from selected valleys identified for replication	Approach proposed by the project endorsed by the communities (CCOs) and the government	Government is not working with local communities
Output 2.2: Capacity for up-scaling, replication and dissemination strengthened, notably in government departments	A realistic and feasible replication/dissemination plan prepared by the government departments for implementation	No replication capacity and/or plans
Output 2.3: Successful approaches from Outcome 1 replicated across all Juniper forest ecosystems in Balochistan	Modified approaches adopted in other areas of the juniper ecosystem	
	An integrated district vision document (IDV) developed for overall support to natural resource management	No IDV exists
Output 2.4: Where appropriate, successful approaches from Outcome 1 disseminated across Pakistan and countries with similar threats and ecosystems.	Research and findings papers presented at relevant forums for knowledge sharing	No information regarding Ziarat Juniper has been presented anywhere so far

Main stakeholders

The following are the main stakeholders of the project

- Local communities of the 4 selected valleys, represented by Valley Conservation Committees, with almost 50% representation of the people of the specified valleys
- The Balochistan Forest and Wildlife Department
- District Administration
- Tourism department
- Livestock department
- Local CBOs/NGOs
- Local schools Boys & Girls
- Local Hotels & guest house owners and managers
- Local transport owners
- Nomads
- Plant collectors

Expected Results

By the end of project the following two results were expected:

1. Economically, ecologically and socially sustainable utilization of Juniper Forest Ecosystem is operationalized in 4-6 selected valleys.
 2. Mechanisms developed for replicating the sustainable utilization regimes across the entire Juniper Forest Ecosystem of Balochistan, and further disseminating the project successes .
3. *Findings* (in addition to descriptive assessment, all criteria marked with* must be rated33)

3.1 Project Design /Formulation

Analysis of LFA/Results Framework (Project logic/strategy; indicators Assumptions and risks)

The project seems to have considered most of the ground realities in its designing stage and has identified the real issues that have to be addressed. The project outcomes and outputs, though highly desired were over ambitious for the nature of the problems and issues, possible political interference, community attitudes towards outsiders, the heterogeneous nature of the local cultures etc. However, most of the interventions that were planned to address the critical issues were achieved to a

greater extent through a well planned LFA, developed through participation of the key stakeholders. Since the people who were responsible to implement the project were part of the consultation process, they hardly suggested anything that is impossible to do. The LFA did rightly identified the assumptions that could affect the project progress if happens the way they were indicated. However, it certainly helps and is required too that what would be the Responses of the project if the assumption of today becomes a reality to-morrow. The midterm evaluation report has mentioned that the revised LFA is better than the earlier one. If so, the reason for its success could be the lamination of the impossible and replaced with interventions that were in the capacity of community and project staff to do. Finally, there is a difference between assumptions and risks that was ignored while developing the framework. LFA didn't identify any risk.

Lessons from other relevant projects (e.g same focal area) incorporated into project designs

Forestry Sector Master Plan, National Conservation Strategy, Baluchistan sustainable development strategy, Income generating project for refugees area and Natural Resource management Projects were some of the projects that emphasized the need for people participation and addressing their needs for the conservation of Juniper forests. Although mentioned as part of the progress or lessons by all such projects and strategies, much more was needed to address the issues of forests in relation to a homogenous community with heterogeneous cultures, attitudes and ways of life, yet the main lessons were definitely incorporated.

Planned stakeholder participation

The problems and issues of the Juniper forests are such that nothing may help to manage these unless the relevant stakeholders are first identified, they are then agreed to give their time and inputs and make sure that all wise advices from stakeholders are incorporated in the design. Failing to do so, shall make the implementation of any initiative of any magnitude. The project under review has passed through a series of consultation, focusing on stakeholder participation not only during designing of the project but its subsequent implementation. Although it is hard to identify all key stakeholders from the first day of the designing of the project, those who did matter were involved. The list of stakeholders grew with the passage of time, as expected for any such initiative.

Replication approach

The project under review could be of little help if it doesn't incorporate the future strategy for its replication. It is obviously not enough for a programme of this financial and technical magnitude to cover the entire Juniper Forest Ecosystems in Ziarat, Zarghoon and Herboi, the only 3 patches of Juniper in Balochistan; it had to demonstrate the feasibility of certain interventions that could be replicated elsewhere also. Formulation of Community organizations around specific set of activities; promoting the culture of consultation amongst the community members for major decisions; building the capacities for undertaking the needful activities, finding ways and means to inculcate the importance of conservation and motivate for taking practical actions such as the adoption of Fuel Efficient stoves (FES), saving of water, tapping the sun etc are just a few examples which were identified as replication approaches that were included in the project design for subsequent implementation.

UNDP comparative advantage

UNDP has a vast experience of funding projects of different magnitude in different parts of the world, including Pakistan. It has thus gained enough experience of how a particular project design may look like, which components are more important than the rest and whether these are possible to be done at all? The process often gets delayed by a long series of queries on the project proposal submitted to UNDP but it helps a lot in improving the design and make it easier for implementation at subsequent stages. The elements of sustainability, monitoring and evaluation etc are further requirements for UNDP funding that are to be included in the design of the project. This kind of advantage is hardly seen elsewhere.

Linkages between the project and other interventions within the sectors

The forest and Wild life department is the custodian department active in the area since decades. The only working plan that is available for the Juniper Forests has been developed by the Forest Department in 1960. The protection of Juniper Forest is the mandate of the Forest Department though they may not have the needful financial resources and technical capacities to identify the actual issue and undertake actions that resolve it. Similarly, the protection of wild life species and rangelands also comes under their jurisdiction. The livestock department has to keep a watch on the livestock diseases and do the needful measures to protect against the spread of diseases. The education department has to make aware the students of their environment, in addition to teaching them the approved courses. The District administration, Works department, irrigation Department and several

others have mandates that are closely linked to the mandate of the project under review.

Management arrangements

IUCN has made the needful arrangements to manage the project. In addition to project staff, headed by a Project Manager, and supported by social mobilization staff, and consultants in different fields. The project works through various committees at Project/district level and a Steering Committee at Provincial level. The project interventions, processes and progress is being regularly shared with them for their inputs and information. The committee at District level comprises of the following:

- Balochistan Forest Department
- District Administration
- Local Communities
- Tourism department
- Livestock department
- Local CBOs/NGOs
- Local schools Boys & Girls
- Local Hotels & guest house owners and managers
- Local transport owners
- Nomads
- Plant collector

Similarly, the progress of the project is regularly being reviewed by a Steering Committee which is headed and Chaired by the Additional Chief Secretary for Baluchistan. Its composition is as under:

- Juniper National Project Coordinator (Secretary Forests);
- Planning and Development (P&D) Department;
- Forest Department;
- Livestock Department;
- SPO;
- Khushhali Associates
- Representatives of local communities;
- IUCN Pakistan; and
- UNDP.

3.2 Project implementation

Adaptive management (changes to the project design and project outputs during implementation

During the inception workshop the implementation strategy originally planned was thoroughly discussed. The resulted in reaching a consensus that instead of the originally conceived completion of outcome-I in the initial two years followed by the last two years for achieving

outcome-II, it would be desirable to follow a strategy to allow simultaneous achievement of both outcomes. This was done due to reasons described in the following sections.

i) Implementation period for outcome-I

According to the original project document, outcome 1 was to be achieved in the first two years of project implementation by undertaking different activities to come up with a successful model. This was to be followed by two years of whereby project would replicate the model. It was felt that this was too short a time for gauging the success of the project. Experience has shown that in natural resource management the activities undertaken in an area take a minimum of four or five years to show impacts. This suggested implementation time along with social mobilization and communities' participation in the interventions is insufficient to fully implement its activities and get the models for replications.

ii Time constraint

According to the original project document, outcome 1 was to be achieved in the first two years of project implementation by undertaking different activities to come up with a successful model. This was to be followed by two years of whereby project would replicate the model. It was felt that this was too short a time for gauging the success of the project. Keeping in view the short life span of the project change in the implementation strategy was made to achieve optimal results.

iii) Interdependence of activities

In achieving both the outcomes I and II, the activities are interrelated because the activities in outcome-II are linked to those listed in outcome-I. Therefore, phasing out of the activities under outcome-I and II in different times would not produce the desired impact. Hence a simultaneous implementation strategy for undertaking of activities outlined under both outcomes would contribute positively to achieving aim of the project.

Project Outputs

Many variables had changed since formulation of the project document. This necessitated changes in the project implementation strategy, project outcomes and activities accordingly. In the outcome-I, taking into consideration the factors mentioned above, two new outputs had been added. The new outputs were aimed address the communication aspect and establishment of linkages with the private sector for complementing/supplementing activities to the project. Besides, the inclusion of two new outputs, an activity had also been added in output-2.3, namely; Facilitating the District Government in the Preparation of Integrated District Vision (IDV).

Readjusting activities

The communities of Ziarat are mostly transhumance and move to warmer areas during winters and upon migrating back in may they are engaged in agricultural activities making implementation of project activities difficult. To overcome this bottleneck, activities were planned keeping in view their agricultural calendar and migration timings.

Logical Framework Analysis of the Project

As mentioned earlier, the document prepared 5-6 years back with baselines for assessing the changes at that time. Situation in the project area had considerably been changed realized

during discussion at the inception workshop. Upon joint UNDP and IUCN stand, it was agreed that assessments surveys would be conducted in first year of the project for re-establishing the new baselines given in the previous one. The LFA was revised and was agreed that it would be followed during monitoring and evaluation of the project by the funding agency.

Partnership arrangements (with relevant stakeholders involved in the country/region)

Overall, the project maintained a good level of collaboration with partners at different levels, as discussed below.

At Community Level:

At the grassroots level, the project maintained good relations and repute with project communities which consider the project's participatory approach as unprecedented. Adoption of participatory and transparent implementation approach has gained IUCN a marked level of trust among the project communities. The participation of women in awareness raising activities organized under the project also reflects existence of a trustful relationship between the implementing agency and the project communities.

According to the project communities, the big achievement of the project is that it has significantly altered the negative perception of local people about NGOs which were believed to be working on a 'western agenda'. This attitudinal change has also benefited other NGOs working in the area, facilitating their access and acceptance at the community level.

Government Partners:

The main government partners involved in the project included BFWD, Livestock Department, Irrigation Department and District Government Ziarat.

A two tiered collaboration was maintained by the project at different levels. At the provincial level, a Project Steering Committee headed by Additional Chief Secretary (P&D) Department was established which provided policy support and guidelines for implementation from time to time. At the implementation level, a Project Implementation Committee headed by the Secretary Forests was established with provided technical and administrative assistance in implementation of project activities at the field level. The project made a good use of these forums to seek required policy and administrative support during the implementation. Some this support included endorsement of the proposal for one year extension of project, free of cost allotment of land for establishment of ecotourism centre at Ziarat, building for medicinal plant centre and endorsement for declaring the Ziarat area as WHS site and as a Biosphere Reserve.

At the local level, the project appears to have enjoyed a mixed level of collaboration with the working partners. The local Livestock and Dairy Development Department and Irrigation and Power Department officials viewed the project collaboration with them remained satisfactory.

Other Partners:

The project also maintained good engagement with other partners including M/S Agri-business Pakistan, Serena Hotels, Pakistan Council of Renewable Energy Technologies, University of Balochistan, SUSG-CAsia Habitat & Species Conservation Project, Quetta SSGC Hamdard, PFI, MoE Programme for Mountain Areas Conservation, Forestry Planning and Monitoring Directorate, Forest department Khyber Pakhtunkhwa in various project activities. The collaboration with some of these organization facilitated free of cost provision of solar panel systems for installation in twelve remotely located village of the project area, wildlife survey,

academic research on Juniper forest ecosystem and capacity building of project communities in hospitality and tourist management.

Feedback from M&E activities used for adaptive management

The project adapted a quarterly technical and financial review process to monitor and review project implementation progress. The recommendations from review meetings were minuted and implemented through project work plans.

The project also went through external midterm monitoring. The recommendations of the monitoring mission were adhered. In particular, these helped in re-orienting project focus more on biodiversity conservation than implementing community identified infrastructure schemes. The shift in approach led to significant progress toward achievement of overlooked activities related to formation of umbrella organisations and their capacity building, ecotourism, alternate energy, wildlife, establishment of medicinal plant center, Ecotourism Information Center etc.

Project Finance:

A full time Finance Officer supported by a financial assistant undertook regular financial management and review of project.

Monitoring and evaluation: design at entry and implementation ()*

The project M & E design included the following:

- At higher level, a Project Steering Committee headed by Additional Chief Secretary (P&D) Department and represented by other relevant partners and UNDP was established which provided policy support and guidelines for implementation from time to time.
- At the implementation level, a Project Implementation Committee headed by the Secretary Forests was established with provided technical and administrative assistance in implementation of project activities at the field level.
- At organizational level, the project activities were regularly monitored through regular quarterly progress review meetings.
- At the field level, the project activities were monitored by the Project Manager with regular input from project M&E officer.
- Overall, the design of M&E system put in place by the project had been **satisfactory**.

UNDP and implementing Partner implementation/execution () coordination and operational issues*

The project enjoyed a good level of coordination and collaboration with UNDP during execution. UNDP was represented in the project steering committee and project implementation committee. A regular interaction existed between UNDP and the Project manager through e-mails and meetings.

Overall, the collaboration between UNDP and implementing partner has been **satisfactory**.
Operational issues

Operational Issues Faced by Juniper Project

- i) Staff turnover

The project faced the situation of frequent staff turnover and understaffing. During its four years' implementation, the project witnessed a change of three Project Managers, in addition to frequent turnover of other field staff. The project also suffered from initial delays in recruitment of staff.

ii) Staff capacity

The project suffered significantly from finding quality staff locally with required capacities. Although, the project was meant for biodiversity conservation, except for the Project Manager, none of the other project staff had any understanding of natural resources management and biodiversity conservation. The security situation in Balochistan and remoteness appeared to be the main constraints towards hiring staff from outside the province. The socio-cultural situation prevented adequate mainstreaming of women in project activities. The understanding of Project cycle management also appeared lacking among the project team due to inadequate capacity and experience.

iii) Time lags

The project area has been subject to harsh winters during which transhumant communities moved towards the lower grounds. As such, the project field activities remained largely suspended till the communities would return back to the area (after 4-5 months). This means that time period for project implementation was reduced by more than a year than originally conceived. The remoteness and time lags also delayed completion of many project critical project activities.

iv) Higher community expectations

The dependency syndrome created by inflow of earthquake aid during 2008 raised higher expectation of project communities from the project. This resulted in disorientation of project approach with more focus on flood protection and water infrastructure development.

v) Ambitious targets/log frame

The project design appeared too much ambitious for a four year project. Although, an effort was made to revise the logical frame at the recommendations of MTR, the ambitious indicators continued to persist in the revised logical framework. Some of the log-frame indicators appeared too complex to be measured.

vi) Time consuming reporting systems

The project was also subject to frequent-reporting requirements by UNDP and multiple GEF reporting formats which used to change almost every time and at times difficult to understand. These included QPRs, PIRs, Tracking Tools, Issues & Risk logs, etc.

3.3 Project Results (S)

Overall results (attainment of objectives) (*)

The results, based on the internal evaluation of the project, and discussed with project staff, informed individuals and some of the community members of the project, against the expected outcomes and outputs are given below:

Project outcome 1 economically, ecologically and socially sustainable utilization of Juniper forest ecosystem operationalised at 4-6 selected small valleys.

Target: A minimum of 4 Valley Conservation plans developed

Output 1.1: Organizational structures in villages in selected Valleys.

Target: At least 20 CCOs and 5 WCCOs are fully functional

Baseline: No CCO or WCCO existed

Activities:

- 42 Male Community Conservation organizations formed
- 10 Fe-male Community Conservation Organizations formed
- 4 Valley Conservation Committees formed
- Proposal writing training imparted to 13+13 persons
- Exposure visit of VCC members to MACP Gilgit
- Tailoring training to 12 males
- Jam preparation training to 43 female
- Organizational management training to 22+22 VCC/ CCO members

The community in the project area is organized into 42 MCCOs. However, these organizations are more like a family gathering rather than village organizations. Representatives from Based on the results of consultation with 12 MCCOs, none of the CCOs met regularly, did not make regular saving and had no bank account in the name of CCO except the one, that opened a joint account with the project. 11 CCOs informed that they were not involved in any activity while the 2 CCOs got involved in trainings, provided to farmers. These CCOs are functional only when there is some activity to be undertaken. Meetings, instead of villages, were/are held in the project office on need basis.

There is only one Social Organizer in the project. Due to shortage of staff he has to attend to other activities including capacity building and as such cannot concentrate on 42 MCCOs and Four VCCs. This has negative impacts on the efficiency of the

organizations; they stay weak in spite of receiving the needful trainings in organizational management and proposal writing.

Similarly, ten Female Community Conservation Organizations (FCCOs) are formed. The activities with the FCCOs include training in tailoring and Jam preparation. They have also been provided with some poultry birds and fuel efficient stoves. The survey revealed that eight out of ten FCCOs were not meeting regularly, did not maintain any record and had no bank accounts. One organization (Shah Mohammad Kalay) had been maintaining record 2 years ago but since then no meeting had been convened, while one organization (Shah Alam Kalay) is reported to be still active, holding meetings and maintaining records.

The position of the Female Social Organizer is vacant for the last one year and as such the FCCOs seems to be non-functional since as per the existing norms, the communities hardly get together without any specific reason or activity and that too in the absence of social organizer. Although the formation of sustainable female organizations in the given cultural context is next to impossible, female social organizers should have been in place for keeping the activity alive. In such a situation the current activity of forming female organizations seems enough but they need to be kept engaged in certain income generation activities.

The project has clustered the MCCOs into four Valley Conservation Committees (VCCs). These organizations are in infancy yet and require a lot of support for guiding and leading them towards the adaptation of such plans. Unfortunately, some of the community member, even the office bearers of the VCCs didn't know about these plans and need for their implementation.

Output 1.2: Social and needs assessment of selected Valleys, including gender assessment.

Target: Report on social and need mapping of select valleys developed

Baseline: No such assessment existed.

Activities:

- Assessment Study for Juniper Project
- Preparation of valley conservation Plans

A report titled “Assessment study for Juniper project” is prepared that highlights the existing situation and future needs, identified by the communities, in the sectors of biodiversity, water resources, agriculture, Livestock and ecotourism. However, this report is silent about the gender issues and their potentials.

Very elaborate valley conservation plans are developed that highlights the resources, the threats to resources and the possible measures for mitigating the threats. However, these plans are also silent about gender issues.

Output 1.3: Measures to mainstream biodiversity into livestock sector developed and implemented.

Target: At least 50% of farmers in CCOs adopt modified/improved grazing practices in selected Valleys.

Baseline: Free grazing

Activities:

- Animals vaccinated 54000
- Poultry distributed 3000 birds
- Exposure visit to Sibi show (30 members)
- Livestock health, nutrition and management training to 96 persons
- Rotational grazing introduced and about 6 square Km area (600 Ha) closed for two years
- Closing, for five years, of another 25 square KM(2500 Ha) remained under negotiation till last

Juniper is one of the slowest growing species. The natural regeneration takes longer to establish. Therefore, the major cause of degradation and lack of regeneration is free grazing that tramples the seedlings before it gets established. The Project has motivated the communities to close the area for certain period. This will help not only the grasses and herbs for improved density but will also help the juniper regeneration to establish.

In the given context the household based indicator does not seem to be appropriate as violation of the closure by even 10 % of households will not give the desired results. The indicator needs to be on area basis.

The land use data obtained from satellite imageries is annexed as exhibit 7. This data show that the total project area is about 18557 Ha. The closure of 3100 Ha turns to be 16.7 %, which is a big step forward in achieving the goal of mainstreaming biodiversity through habitat improvement. Closure of 3100 Ha if maintained for 5 years will give benefits that will lure other communities to adapt and practice the system.

Output 1.4 Measures to mainstream biodiversity into energy sector developed and implemented.

- Target: At least 40% of farmers in CCOs adopt fuel efficient technologies
- Baseline: Free access to fuel wood collection
- Assumption: No significant changes from outside of Juniper tract in price of gas and wood.
- Activities:
- 750 fuel efficient stoves distributed
 - 14 solar electricity panels installed
 - 8 solar geysers installed
 - 2 solar water pumps installed
 - 17 solar cookers provided on cost sharing basis

The survey revealed that the communities have realized the benefit of using fuel efficient stoves. The number of fuel efficient stoves has increased by 2.5 times. It has happened in a situation where no support could be provided in promoting the availability of the product in the area as no production point or sale point could be seen in local market. A small survey showed that average consumption of firewood is 92 kg per day per Household, but in households where these stoves are used the consumption has come down to 52 kg. Normally the saving is about 30%. In present case the saving is over 43 percent due to use of cow dung as firewood in the stoves. It is a huge saving and will help in juniper protection and habitat improvement. However, the use of cow dung may deprive the agricultural lands from this source of green fertilizer.

Output 1.5: Measures to mainstream biodiversity into hunting, watershed management, and construction and or tourism sectors identified, developed and initiated.

Target: Best management practices in watershed documented and adopted by at least 50% members of CCOs

Baseline: No previous interventions

Activities:

- Biodiversity guidelines developed
- Ecotourism plan prepared and shared
- Zizri huts renovated
- Guest houses and hotel management training given to 19+22 persons
- Medicinal plants center renovated
- 47000 Plants were distributed for planting at appropriate locations
- Flood Protection walls constructed at 12 sites
- Rain water harvesting training to 10 members
- Watershed management training to 26 members
- Disaster risk management training to 4 persons

The climate in general is dry-temperate with an annual average rainfall of 247 mm. The source of precipitation is mostly snowfall. Agriculture is restricted to valley bottom and plateaus where water is available for irrigation.

The crops grown are mostly apple and cherries with a little land under seasonal crops like potatoes and maize. Thus the agricultural land remains covered and is subject to minimum of erosion. The main threat is faced by the land at valley bottom along the streams. Such lands are vulnerable to flood wash. The project has introduced gabion retaining walls against the flood wash. The quantity turns out to be approximately 102000 Cft. The intervention is well received by the communities and other development actors. The survey results showed that in project area 16055 cft works are done by other organizations and about 176000 cft work is done by the farmers on self help basis. Government Line Agencies and parliamentarians are providing funds in other areas for such structures for the protection against floods.

The major threat is being faced by the wasteland and forest land. The resource being common and open has received no attention so far and is not expected to receive any attention in near future. Investment in check dam construction and rejuvenating the area through closure against grazing, may do better and yield more useful results.

The project has involved about 1167 households out of which only 37 households have, so far, adopted the gabion structures within the project area. This indicates a turnover of 3.17 %. The target seems to be very ambitious as the intervention is cost intensive and should not be expected to be readily replicated by the poor farmers

Plants have been distributed among communities but the results of their survival were not satisfactory. The planting of walnuts and poplars has been a success but was too insignificant. The farmers are planting these species in depressions with better moisture regime and along the streams for increasing household income.

Interventions with regard to tourism promotion seem relevant and appropriate. However a separate study, at appropriate time, is needed for assessing the adoption mechanism.

Output 1.6: Measures to combat die-back developed and implemented.

Target: Extent of dieback and mistletoe in Sanmina valley decreased by 10 %

Baseline: 18 % of forest in Sasana mana valley infected by Mistletoe.

Activities:

- Mistletoe infected branches of juniper trees were cut over 1000 acres
- Study on the status and eradication of Mistletoe conducted

The output is to develop measures for combating die back, a disease that is common all over the project area. The reasons of this disease are not known fully. The target is fixed for Sasna Mana valley where mistletoe is prevalent and dieback common since 1980s. The activity is limited to the cutting of the infected and dried branches to minimize the prevalence. Same was done in late 1980s by PFI but with no further solution. Same is the case with this intervention that though the target of cutting infested branches has

been achieved, a long term solution has not been sought. The parasite resurrects after every 5-6 years. Therefore, it needs to be a continuous process for 10 to 15 years to eradicate the parasite completely. It was also told that the parasite has an alternate host (*Caragana ambigua*). Furthermore, it might have linkages with change in climate that also need further investigations.

Output 1.7: Linkages established with private sector in selected sectors.

Target: At least 5 initiatives are undertaken jointly with the private sector

Baseline: No private sector involvement

Linkages with Hamdard University established for training of communities in identification and collection of medicinal plants and its marketing. The community members last year collected Berberis seed and sold to Hamdard foundation at the rate of Rs.200/kg.

Similarly, linkages were also developed with Serena Hotel Management for promoting tourism in the area. The expertise of the Serena people were utilized in designing of tourist information center, preparing renovation plan of Zirat huts and building capacities of staff of local hotels and guesthouses.

Besides above, linkages were developed with,

- a) Pakistan Forest Institute Peshawar for securing support in juniper regeneration techniques, MAPs cultivation and capacity building of BFWD staff and communities.
- b) Sustainable Use Specialist Group- central Asia for natural resource management and habitat improvement.
- c) Linkages were also developed with UNDP in promoting efficient use of water.
- d) Qarshi would be providing cuttings of *Rosa damascena* for propagation to contribute to meeting some of the demand of Eastern Medicine companies and contribute to improving local livelihoods.

Presently negotiations are under way with Sui Gas for expansion of gas line into the select valleys in the project area and with Agri Business Support Fund for cereal and vegetable seed to farmers.

Output 1.8: Highlight the significance of Juniper forest ecosystem at local, regional and global level.

Target A: At least one project brochure, one poster and one documentary are developed and disseminated.

Baseline: Non existence of awareness material

The target has been achieved. Project brochure and posters have been developed and disseminated. Project documentary is also prepared. Several other analytical documents have been prepared and disseminated. At local level the impact is unprecedented. The awareness level is very high. This high impact can be attributed more to the activities

done with and through the communities than the material produced for awareness raising. The frequent interaction/ meetings with the communities in connection of implementation has helped a lot as the communities now understand that the support provided to them is because of the juniper forest. They now also realize that the boom in tourism is mainly because of the presence of juniper forest.

Target B: Webpage of juniper project developed and up loaded.

Baseline: Non existence of juniper project webpage

The webpage has been developed and provisional domain name is registered as (<http://ziarat.pk>)

Outcome 2: Economically, ecologically and socially sustainable utilization of Juniper forest

Ecosystem operationalized at 4-6 selected small valleys

Target: At least 4 valleys conservation plans are developed

Baseline: Non existence of valley conservation plans

Assumption: Community willing to develop and implement the valley conservation plans

The target has been achieved and very elaborate valley conservation plans have been developed, through a participatory approach, for the valleys including Ziarat valley, Chautair valley, Nishpa valley and Zizri-Koshki valley. Implementation is in progress through various activities in the sectors of social mobilization, energy, water conservation, watershed management, range management, capacity building, agriculture, forestry, tourism and awareness raising.

Output 2.1: Jointly (Communities & government) recommended approaches and lessons from selected valleys are identified for replication.

Target: CCOs practice the approach developed by the project

Base line:

Government is not working with local communities

Assumption: No adverse political development in the coming years. Politicians and communities cooperate fully.

Though experience sharing workshops have been organized and several meetings of the steering committee held where the successes and failures were discussed, but no document could be traced that specifically records the activities to be replicated. Informally various organizations, community members and the parliamentarians allocate funds for replicating the following activities.

- Construction of mini dams, stock water ponds, karez rehabilitation, water supply schemes and water channels improvement. (Tarraqi Foundation and Parliamentarians)

- Gabion flood protection walls (Parliamentarians, farmers and NGOs)
- Medicinal plants collection and marketing (Community members)
- Closure of ranges for rehabilitation and improvement (communities)
- Fuel efficient Stoves (Community members and Tarraqi Foundation)
- Walnut and poplar growing (Farmers and Nursery growers)
- Solar panels (Taraqi foundation)

Output 2.2: Capacity for up scaling replication and dissemination strengthened notably in Government departments.

Target: At least one large scale initiative planned by the government to upscale the project efforts.

Baseline: No replication Capacity or Plans

Assumption: GoB is interested in replication and staff of the government line department is willing to learn and replicate.

The activities are such that do not require any special capacity building program in the public sector. The government line departments particularly forest and wild life department, irrigation department and livestock departments are very well equipped with the required knowledge and skills. However, the communities (377 members) have been imparted trainings in various disciplines.

One large scale project in the name of “Mega Project” was planned by the federal government and its execution was initiated. However, with the 18th constitutional amendment the project was devolved to the province where the project is in doldrums on the pretext of shortage of funds.

Output 2.3: Successful approaches from output 1 replicated across all Juniper forest ecosystems in Balochistan

Target: A- Government adopts the project approaches in other valleys

Assumption: No significant adverse social and cultural developments take place during project lifetime.

As explained earlier, the successful approaches are being replicated by the NGOs and community members in other valleys. It was told that the use of fuel efficient stoves is on rise in district Zhob and other districts. Similar is the position of solar panels and guessers and gabion walls. However, in public sector no such effort, in a planned manner, could be heard of.

Target: B- Ziarat IDV developed and presented at appropriate forum for approval

Baseline: Non existence of IDV

Assumption: All relevant stakeholders are involved in the participatory and consultative process to develop IDV.

District Integrated Development Vision (IDV) has been developed involving all the stakeholders and submitted to the Deputy Commissioner for final review and consent. The appropriate forum was to be the district assembly of the district government. These assemblies are dissolved and no fresh elections could be held, so far, due to some political exigencies and security problems in the country. The approval forum, under the situation, is limited to the office of the Deputy Commissioner with whom the document is pending.

Output 2.4: Where appropriate and successful, approaches from outcome 1 disseminated across Pakistan and countries with similar threats

Target: Research findings of the project presented to at least 2 international forms

Baseline: No information regarding Ziarat Juniper has been presented anywhere so far

This target could not be achieved as the success stories could not be presented to any national or international fora. However, these are available

Outcome 2: Mechanism for replicating disseminating the sustainable utilization regimes across the entire Juniper forest ecosystems of Baluchistan evolved.

Target: At least 5 project initiatives are replicated

Baseline: Non existence of such experience.

Assumption: GoB will provide incentives and enabling environment if interest shown by the communities and relevant organizations.

Conscientiously, no such mechanism is evolved and approved. The proposed Mega Project was meant to scale up and replicate the successful approaches and initiatives. However the project is kept in abeyance for want of funds. Therefore, the initiatives could not be replicated in an organized way. However, the scaling up and replication is being done by some of the NGOs and by the farmers on their own and according to their capacities.

Project objective: To modify production system in the Juniper forest landscape and make them more biodiversity friendly.

Target A: Biodiversity is considered critical in majority of the population production systems

Baseline: Biodiversity is not considered critical in production systems

The target seems to be a bit ambitious keeping the resources and time span in view. This objective is partially achieved. The people have started realizing the importance but the immediate needs, no doubt, are the priority. The interventions are afresh and will take time to yield and be followed by the communities at large. However, the modification process has set in which can be seen from the following.

- Green tree cutting is declining in Nishpa valley and Ziarat valley while in Karbi katch area it is banned by the local Sardar.
- One agreement is already signed for closure for grazing while another is under negotiation.
- The use of fuel efficient stoves is on rise.
- Soil conservation through gabion wall construction is becoming popular day by day.
- Planting of wild almond as live hedge is on rise.
- Use of solar panels and geysers is on rise.
- Water conservation and efficient use techniques are getting popularity.
- The commercial use of medicinal plants is being promoted.
- Ecotourism is being promoted.

All the above changes in the production system are in support of biodiversity conservation directly or indirectly reducing the use pressure and improving the habitat.

Target B: Plant diversity as mentioned in the Vegetation study, is maintained.

Baseline: Plant diversity as mentioned in the Vegetation study.

Assumption: The departments and communities cooperate in using the sectoral guidelines.

Communities willing to implement the sustainable use practices. This target can be assessed, quantitatively, through a detailed vegetation survey at appropriate times. However, the impression of the communities is that with the unusual drought many of the species totally disappeared. Then with the precipitation all of them reappeared. It was also observed that some new species in the ground flora have come up which were not seen before. The general impression among the communities is that flora particularly ground flora has improved with the normal precipitation.

Overall Goal: The overall goal is to improve the condition of the Juniper forest ecosystem in order to conserve biodiversity and increase the ecosystem contribution to sustainable development.

Targets: A- Change in land use reduces to 15%

Baseline: Change in land use 18% (5% expansion in agriculture)

Assumption: Government of Baluchistan has the political will to conserve the Juniper forest ecosystem. Alternative Juniper fuel wood and fencing will be available and

accepted. Rainfall pattern remains within the latitude of historical records. Water use pattern remains the same

The baseline seems to be an average for the whole of Baluchistan as no document could be traced that documented the land use change within the project area.

In order to assess the situation, the project procured satellite imageries for the years 2005 and 2010 and analyzed for land use classes in the four valleys covered under the project. The results of analysis are given in exhibit -7. The data is re-arranged in the following table for assessing the overall situation.

Table showing Change in land use Classes in the project area

S.NO	Land Use Class	Area (Ha) in 2005	Area (Ha) in 2010	Change in Area (Ha)	Change in %
1	Dense Forest	5881.83	5319.16	-562.67	-9.57
2	Sparse Forest	2765.93	2386.49	-379.44	-13%
3	Total	8647.76	7705.65	-942.11	-10.89
4	Shrubs	4876.28	6786.27	+1910.07	+39.17
5	Total	13524.04	14491.92	+967.88	+7.16
6	Agriculture Land	362.15	669.91	+307.76	+84.98
7	Barren Land	2484.80	1254.59	-1230.21	-49.51
8	Rocks	1939.84	2035.14	+95.30	+4.91
9	Shadow	241.36	98.52	-	-
10	Water body	5.06	6.37	-	-
11	Total	18557.25	-	-	-

The above table indicates that overall forest land has got reduced by about 11 % in 5 years period, which is within the fixed target and as such the project has achieved its objective. The project has also been successful in increasing the area under vegetation by over 39 % that indicates improvement in habitat and consequently in improved biodiversity.

Agriculture land has also increased by about 307.76 ha (85 %). This increase seems to be from conversion of cultivable waste (barren land) as barren land has got reduced by about 50 % or 1230.21 ha. It can safely be assumed that part of barren land is brought under cultivation and part under shrubs.

Target: B: Deforestation rate reduces to 5%

Baseline: Deforestation at 7% rate

The term deforestation is, probably used in the sense of forest degradation. In five years period, dense forest is reduced by about 10 % and sparse forests is reduced by about 14 %.

Target C- Rate of ground water depletion reduces to 12 feet/year

Baseline: Rate of ground water depletion 15 feet /year

Activities:

- Four Mini dams constructed
- Pipelines laid at four sites
- A few Karez rehabilitated
- Two drinking water supply schemes constructed
- Four water channels constructed
- Six water reservoirs constructed
- One bubble irrigation system installed
- Two Karez modified and remodeled

To assess the rate of water depletion, continuous data is to be collected on rise and fall of water table for a longer period of time than the project life. Accordingly, it is hard to draw a definite conclusion on it.

In fact the project area is mountainous and the water table is comparatively far down. The conservation measures would contribute somewhat to the conservation/ rise in water table down in the planes of Balochistan. However, the size of the treated area is too small to produce any obvious impact downstream

The communities in project area informed that during the drought periods, the water level in their wells went down but was recovered back to normal with the rains and snowfall. As such it is assumed that unless monitored very closely for many years, the water level in the wells in the project area remains almost constant though with seasonal fluctuations because of wet and dry seasons.

Relevance (R)

The results are relevant to various development priorities, including poverty alleviation, sustainable development, and sustainable utilization of resources and, over and above these, the conservation of biodiversity of national and global development and conservation policies and strategies.

The community of the project area (Ziarat Forest ecosystems) is basically a rural one; their development through sustainable livelihood programmes is a priority not only for local and national Governments but also for UNDP and GEP. Since the project has demonstrated certain activities that address directly the issues pertaining to a rural and forest community like this; and such interventions were carried out through the consent and participation of the rural community, the results are encouraging and reveal a significant difference over the past. The results are also pertinent and relevant to what has been asked by the National and Provincial Conservation Strategies.

Effectiveness and efficiency (S)

The project has undertaken most of its activities through social mobilization and mass awareness, especially at school and community level; however, this has been mostly through the engagement of the Government of Balochistan and media that such activities and their results are being appreciated which indicates the effectiveness of the results. The way the project has demonstrated the solutions for various issues such as Gabion, rangeland uses, uses of medicinal plants, introduction of solar energy and introduction of fuel-efficient stoves and the community has adopted these, shows the efficiency of the project. Both seems relevant.

Country ownership

Juniper Forests is one of the threatened ecosystems of Pakistan which is not only close to the hearts of the Federal Government but the Provincial Government of Balochistan is equally interested in its conservation. Not only ecological, social and biological, Ziarat is important for many other reasons. Accordingly, any effort to conserve this precious yet fragile landscape, the Provincial as well as the federal Governments have to support it and the findings, especially the future directions shall be taken seriously. In addition to being party to CBD with focal Ministry in Islamabad but the implementers sitting in Quetta, Juniper Forest has been identified as candidate for protection and conservation by the National and Provincial Conservation strategies, hence a part of the obligations at all levels,

Mainstreaming

If we analyze the results of the projects in the context of the UNDP country programme strategies, these are very much in line with other UNDP priorities. The project has been addressing the women issues, the first time in the history of this area. It has been helping in developing alternate livelihood resources for the people and has been trying to build their capacities in skills that shall help them earn more. The Gabions were introduced to prevent the agricultural and fruit crops from floods that are major sources for the people's livelihoods. The creation and building capacities of social organizations is a step towards better watch and ward of the natural resources. The first time, the communities are involved in protecting wildlife from illicit hunting that has brought the population of markhor to threatened level. In light of the above and several other interventions outlined in the results, it can be concluded that the project has been mainstreaming other UNDP/GEF priorities

Sustainability (ML)

The project has done a good job of creating *social institutions* which is in a way the revival of indigenous system whereby they used to decide upon conflicting issues. Same system is now available for decisions related to improved livelihood options and better management of land and water resources and different land uses. Though they are not yet ready to commit firmly for the protection of trees, their

valley Conservation Plans oblige them to be doing this also in the future. The social institutions are trained in generating money through professional contacts that the project has developed between them and donors in the area, and through writing good proposals for local donors such as the Poverty Alleviation fund. Since a few such institutions were successful in this, it could be rightly expected that there will no dearth of financial resources for the community to continue with their wise practices.

The sustainable use of medicinal plants has been introduced in the area (though it would have been far better if the people were trained on cultivating medicinal plants and were lesser dependent on wild plants). Even then, since they see it an opportunity of earning, they may ultimately divert to the cultivation of medicinal plants.

Saving for development works were the lessons given to them and accepted by them. Practicing this will enable them to continue with the things the project has been doing for them.

There are very few inter and intra communal conflicts that could be attributed either to the prevailing social norms or to the project. The project has even trained them in conflict management. This will not allow any socio-economic issue to emerge and affect negatively the results of the project.

The government, the local custodian institutions and all others at higher levels have been actively involved in the project. They are witness to the processes that the project adopted and the progress that the project made. They were well aware of the end date of the project and have been giving advices also in this regard. Accordingly there is no such worry that they will stop owning the project. Through my interactions at various levels, I got the understanding that all stakeholders are really enthusiastic to undertake the mission of the conservation of juniper forest ecosystem forward. The only risk that couldn't be reduced to the desired level is the use of pesticides on crops and fruit plants. This has been detrimental to the pollinators and also to the health of people but through frequent discussions on the subject, a realization has emerged that shall certainly help the people to start thinking on it. This is very much in notice of the department also and hopes that they shall pay attention to it. The mission very clearly mentioned about the potential risks to human health and to the natural ecosystems by the use of pesticides to the members of the steering committee of the project which was chaired by the Additional Chief Secretary for them to work with the relevant departments. The project has not only identified the problem but has collected relevant data also that has been shared with Government. Over and above this, the Government of Balochistan has agreed to nominate the Ziarat Juniper Ecosystem as Biosphere

Reserve. The papers are already gone to the nomination committee. When done, UNESCO shall be paying for its management planning which shall work towards not only the continuation with some of the issues but shall include the rest of the Juniper area in the plan. In brief, there is no major risk that shall jeopardize the sustainability of this project.

Last is the problem of floods that couldn't be perceived and anticipated as a risk at the start of the project and, subsequently when it occurred, consumed a lot of project time and resources on an aspect that was not included in the list of interventions at the beginning. However the sustainability aspect of the project was not affected by this, rather it strengthened the linkages between people and the project for its ultimate sustainability

Impact: The project seems to have far reaching impacts. The biggest change that has been inculcated in the minds of people is related to the attitudes of people who have been always looking at such conservation efforts in the past with doubts and reactionary manner. Having this being cleared by the UNDP/GEF funded project, and provided that the local stakeholders take it forward in same manner, the dream of protecting Juniper forests may come true. The project has done enough with the available project resources and time to build the capacities of local people and also the FWD in things they were not much familiar with before. The impacts of that shall be visible in the form of better management of the Juniper Forest Ecosystem. Similarly, the project has established base lines for several components of the socio-economic and ecological aspects of the local environment. This has converted Juniper Forest Ecosystem to a living Laboratory for students and researchers from all over the country and also abroad who may tackle the recently emerging issues such as climate change adaptation, in addition to exploring linkages between Biodiversity and the livelihood options and opportunities. The people could be easily convinced when they see a link. The link is there and they are using it but no one could ever tell them about the risks that such linkages have been put to. The impacts shall be visible thus in the form of better custodianship of the Biodiversity of Juniper Forest Ecosystems.

The project has developed an eco-tourism promotion plan and has established linkages with several institutions for various interventions which could be helpful for the custodian department to become stronger and better equipped for tackling issues in other parts of Balochistan; Zarghoon forest conservation stands as a good candidate for the next step, followed by others. Moreover, the findings and lessons from this project could be used all over the world , from North America to South Asia where ever there are juniper and have almost similar problems to improve upon the management of Juniper forests. In brief, the project shall have positive

impacts on the local community for them to protect the local Biodiversity; the department to go for better management; for the governments to replicate it in other parts of the juniper forests and beyond;; for the international community to get benefit from its lessons; and for the UNDP to use the lessons from this project in deciding upon the funding of any such initiative in the future.

4. Conclusions, Recommendations & Lessons

Besides minor gaps in the designing, planning and consequent implementation, monitoring and evaluation, the project has been a respectable success. The community seems motivated enough to continue with the needful interventions that are in their best interest of long term survival; there is better understanding regarding the goods and services that the juniper ecosystem provides; more realization on part of the general public regarding the importance and need for the conservation of Juniper ecosystem; the target community are better trained, especially the women who got training in income generation activities and there are better linkages between the community of juniper ecosystems and the custodian department and other key stakeholders; and the Balochistan Government is keen to continue with the efforts of protecting the juniper landscape against odds.

There are minor gaps in the outcomes of the project but not big enough to cause serious setback to the sustainability and impacts of the project. The gaps are mostly related to the non availability of appropriate professionals, educated and trained enough in Biodiversity related activities. The non availability of female staff for addressing the women issues rather more effectively, delay in start of the project, seasonal migration of people from Ziarat to down valleys and the unexpected floods during the implementation did some damage to the project in achieving its objectives in full. The issues of pesticides and die back of juniper, the cutting of juniper trees and their frequent burning by tourists; thinning out of certain activities because of their late inclusion and frequent transfers of Project Managers and out turns of other staff, did affect the performance of the project to certain levels. However, in spite of this, the process of awareness raising, use of alternate energy sources, control of wastage in the consumption of fuel wood and use of alternate materials to fence their croplands or protect these from floods are some of the activities that shall go a long way in protecting the natural resources of Ziarat juniper ecosystems in a sustainable manner.

Having said the above, the system is not firm enough to go now by itself without any care and firm custodianship of the relevant stakeholders. The project has demonstrated certain interventions to be essential for the conservation of the Biodiversity resources of juniper ecosystem, however, it is essential and highly recommended that the project partner and the major stakeholder, the Balochistan Forest and Wildlife department, may maintain this level of success and spread and replicate it, not only in rest of the

juniper ecosystem but to other biodiversity areas, using the successful lessons and interventions from this project.

The Ministry Of Science and Technology may take quicker action to notify the Ziarat Juniper Forest Ecosystem as a Biosphere Reserve with organizations such as IUCN, WWF and BRSP being actively engaged in the planning process for the effective management of this important ecosystem, and linking it to international network of such reserves to make its resources known to the outside world for realizing its global benefits.

The project has revealed several lessons not only for use by the custodian department of Forest and Wildlife but for all those who are engaged in similar initiatives as planners, implementers or donors.

The need and planning for keeping *consistency* in aspects related to project management, its staff particularly, is of utmost importance. The project has to decide in advance of what type of staff, with what qualifications and experience and their commitment for availability to the project for the required period is crucial to the success of the project. The likelihood of recruitments for being politicized at certain stage of the project, selection of area being influenced in certain ways or pressurizing to do something new at the end stage of the project are detrimental to the outcomes of the project. These have to be regulated or managed in advance through MoU between partners or stakeholders.

Secondly, a project that has committed the involvement of women in project interventions must commit it after a thorough analysis of the socio-cultural situation and history of the area. Most of the time, a culture like this doesn't allow frequent contact with women of the area, however, if some kind of trust develops in between, like this project did, the availability of full time female staff to such contacts and women-related interventions is a must. Absence of this element may cause a serious setback to the success of the project in the form of being making the women organizations dormant. When this happen, any claim of gender development may not stand true and useful.

Third, any activity that has not been included in the project design but absolutely essential, may either be included with in an year or so of the start of the project, or may just be ignored. It is perhaps better to ignore such activity at all than including it at the last minute of the project either as internal decision or external pressures. When done otherwise, it gives a bad name to the project and affects its overall reputation

Fourth, the ownership of buildings, furniture or other project assets, if have to be transferred to other partner at the end of the project, must be decided at least in the

middle life of the project. If left to the end, it might induce some sort of conflict that may affect the overall sustainability of the project.

The project must have a focus, elaborated enough in the design of the project, before it is approved for funding. If the protection of Juniper ecosystem is a focus, the protection of Juniper trees against cutting for various domestic uses, and protecting these from incidental fires by tourists must be reflected in the project interventions, from designing to implementation stage. Moreover, if the term Biodiversity is used in the documents, it should be explained in its true meaning and context. Biodiversity is a vast term including all species, big and small, all genetic varieties and all ecosystem varieties and a representative of each has to be addressed through relevant and appropriate interventions. The progress and success of a project like this could be measured in several different ways but if the project design ignores it for some reasons, subsequent activities may not address any of these in ways these deserve.

Last, but not the least, a project with this level of success must have an exit strategy that transfers its role to local stakeholders in a rather clearer language, approved and endorsed by concerned authorities at the Provincial levels. Having a look at the success of the project, it comes immediately to mind as to who shall coordinate all this in the future? If the forest department, do they accept it all or do they feel obliged to be doing it the way the project has been doing. If the question the availability of financial support for continuing with it, what shall be the answer? Is there an M&E system in place for the department to take over the project activities immediately after the project goes out, and if yes, has it been mentioned anywhere in the form of written document?

The project has gained certain level of progress and has established good examples of wise interventions, this height must be maintained and taken further to cover the remaining parts of Juniper ecosystems not only in Ziarat and Sasnamana valleys but also extended to the Juniper forests of Zarghoon and Herboi

Corrective actions for the design, implementation, monitoring and evaluation of the project

The future projects may consider the ground realities before deciding upon the interventions at designing stage. Too much spreading may not allow the project to demonstrate correctly of what is expected from it. Moreover, it must be seen right at the designing stage of what the project wants to achieve, through which interventions and expecting what and when? As far implementation is concerned, the availability of full time staff, especially at crucial levels, must be ensured. Selection criteria must be in place for the key positions for the political interference(though hard to deal with) to be

reduced to the minimum. The support of the host Government is vital for the success of the project. It will help if the plans for project interventions are agreed for the entire year and, based on their results, decisions for continuing with the same or alternate options, may be considered.

Regular monitoring and evaluation of the project activities shall not allow the gaps to get wider. Similarly, regular monitoring of the community activities shall keep them active, vigilant and enthusiastic about the project

Actions to follow up or reinforce initial benefits from the project

The actions regarding the closure of certain range lands closed to grazing for certain period of time; protection of ungulates from hunting; motivation of community to procure and use fuel efficient stoves; grow plants for use as fuel wood instead of Juniper are some of the activities that need to be continued for receiving continuous benefits of the ecosystem services. For all this, the interventions that the people have already started doing in selected valleys of Ziarat may need to be replicated in other parts of the ecosystem. Continuous interactions with the social institutions, formed by the project, shall keep these institutions alive and thus the height that the juniper project has gained shall not be lost. Creation of similar institutions in other parts of the ecosystem or juniper landscape shall further strengthen the conservation efforts for the biodiversity conservation. The project couldn't do much to cope with the unwise uses of pesticides. It didn't realize it at the start and when done, had little time to motivate community to undertake corrective measure. This shall be useful if this undertaken as an objective of the future interventions. Similar, linkages have already been developed by the project with various other institutions and corporate sectors for the promotion of research and sustainable harvest of medicinal plants. If not monitored regularly, the medicinal plants may start suffering from unsustainable uses and needful research may not take place. Firing by tourists in the air, followed by cooking meals near the trees has caused damage to the human lives and loss to the juniper trees. Although results of firing in the air were not noted in Ziarat, these have caused serious damages elsewhere. A constant vigilance is required to safeguard against these, and minimize such damages/potential sources of damages.

Proposal for future direction underlining main objectives

The project has completed the nomination forms for the designation of Ziarat Forest Ecosystems as a "Man and Biosphere Reserve "and after being approved by the Balochistan Forest and Wildlife Department (BWFD), tremendous opportunity exists for the custodian department and its partners to arrange for its management planning, extending over the scope of the current project and focusing on the lessons that could be replicated conveniently.

The BFWD has already inherited a mobilized community because of the project to work with. They have been part of the project and are aware of the practices that have proved to be vital not only for the conservation of Juniper Forest Ecosystems but also for those who are living in there, or visit the valley for pleasure and enjoyment.

The Valley Conservation plans, though completed in all respect may need constant follow up and interactions with the community not only to implement these but prepare similar plans for the rest of the forest area also.

The Markhor population is on the increase but there are people in the community who see this as an opportunity to invite hunters to kill them for money. The BFWD has to keep a strict vigilance so that no hunting is done till the population of marcher increases to a level when trophy hunting could be initiated that would generate income for the community to continue with tasks related to sustainable development.

The communities have been trained in proposal writing but would need a push for them to develop viable proposals for undertaking activities that may help in protecting the biodiversity of the area on one hand and promote their sustainable economy on the other

The insects and birds are too sensitive to pesticides that are being commonly used in the area. The future interventions must keep it as an important target to handle and thus help the safety of humans and smaller animals, especially the pollinators.

Medicinal plants have been emerged as a good source of sustainable income. The future initiative may tie this income source with investment on alternate fuel sources and saving of juniper and other local flora. Encouraging farmers to grow medicinal plants on their agricultural land may overcome the potential danger of community being using the medicinal plants resources rather unwisely and to the degradation of the health of the juniper ecosystems.

Eco-tourism has big potential especially if done through the private entrepreneurs for needful investment in light of the guidelines that have been prepared by the project.

Best and worst practices in addressing issues relating to relevance, performance and success

The project has been doing, mostly, well; is relevant to the development targets at national and global level; has performed well and has achieved a reasonable level of success. The interventions that have contributed to most of such progress is rooted in project's participatory approaches, organizing and involving communities in decision making and building their capacities to undertake independent initiatives. Awareness enhancing activities of the project has also contributed to the progress. However, the contribution of activities that have helped to protect a rangeland from overuse and motivated people to use fuel-efficient stoves are some of the best practices. Efforts to

nominate the Juniper Forest Ecosystem for the Man and Biosphere Reserve are commendable and are included in best practices of the project.

Although there is not a practice that could be rated as worst but still the lack of rational planning at the designing stage and permitting the management issues to crop up, and affect the overall performance to some extent, could be the bad practice. Lack of a clear understanding with the custodian department on the follow up on various interventions could be another one.

Annex 1

TOR

Management Arrangements, Timeline and Deliverables:

The evaluation mission through consultation with all key stakeholders will undertake the following:

Critically examine the programme objectives and arrangements for its execution and implementation:

- i. assess and report an account of the progress achieved towards the production of project outputs, emergent achievements of the project stated objectives and its contribution for achieving the national objectives set by the Ministry of National Disaster Management and corporate objectives of UNDP, GEF, and IUCN;
- ii. Assess project results seeks to determine the extent to which the project objective was achieved, or is expected to be achieved, and assess if the project has led to any other short term or long term and positive or negative consequences.
- iii. While assessing a project's results, determine the extent of achievement and shortcomings in reaching the project's objective as stated in the project document.
- iv. Identify and analyze major technical, management and operational issues and impediments encountered in project implementation, if any;
- v. to determine the level of achievement of the project's objective and outcomes, the following three criteria will be assessed in the terminal evaluation:
 - A. **Relevance:** Were the project's outcomes consistent with the focal areas/operational program strategies and country priorities?
 - B. **Effectiveness:** Are the actual project outcomes commensurate with the original or modified project objective?
 - C. **Efficiency:** Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost effectiveness? Wherever possible, the evaluator should also compare the costs incurred and the time taken to achieve outcomes with that of other similar projects.
- vi. assess the monitoring and evaluation system in place;

SCOPE OF WORK

Methodology

The evaluation will be based on an analysis of various documents and consultations with key stakeholders. The key documents to be reviewed are: Country Programme Action Plan, GEF operational strategy, project document, Memorandum(s) of Understanding, Project Cooperation Agreement (ex. cost-sharing), notes to files, UNDP guidelines for monitoring and evaluation, studies conducted for the Programme, progress reports related to the programme, Annual Work Plan (up to 2011), budget and financial reports and agreements for sub-contract(s). The mission will also undertake field visits to interview key beneficiaries, including the local communities and government officials of line departments.

Tasks to be performed

Having reviewed all the key documents and holding consultations with key personnel, the mission will critically assess the following:

A. Project concept and design

1. Assess whether the objectives and outputs of the project were stated explicitly, precisely and in terms that are observable and verifiable.
2. Consider whether the objectives are achievable, and whether the relationship between the objectives, outputs, activities, and inputs is clear, logical and commensurate, given the time and resources available.
3. Examine the project relevance, i.e. were the project outcomes consistent with the GEF Biodiversity Focal Area Strategy and country priorities?
4. Assess ownership of the project at the national and local levels

B. Implementation

1. Assess the efficiency of project management, its organizational setup, rules and procedures for its functioning, decision-making process, compliance with the decisions adopted for implementation, including financial management and the delivery of inputs in terms of quality, quantity and timeliness.
2. Identify, analyse and record major factors that have facilitated or impeded the progress in achieving the intended outputs and their outcomes (planned and unplanned).
3. Assess extent that the project was able to achieve its objectives with its implementation strategy, management arrangements and pace of work.
4. Analyse the level of stakeholder involvement and ways and means to effectively involve all the stakeholders, including women, in the implementation of the project.
5. Analyse the effectiveness of monitoring and evaluation and the application of adaptive management principles (including effective use of log frame, indicators, UNDP risk management system, the annual Project Implementation Reviews, and other monitoring tools and mechanisms as appropriate)
6. Analyze the adequacy of financial planning by the programme including the timely delivery and use of co-financing and recommend how this could be improved if needed.
7. Examine the cost-effectiveness of the project

C. Progress towards achievement of results

1. Record progress of the programme and the production of outputs against established schedules, indicators and expenditures incurred. Specifically, review the achievements of the programme in terms of its contribution towards the GoP, UNDP, GEF and IUCN goals of environmental sustainability, viz., development and promotion of sound environmental practices; that contribute to environmental protection and education & awareness.
2. Assess contribution of the programme in capacity building of local institutions in line with the Programme Document.
3. Determine the programme contribution at the community level and in the context of national efforts for biodiversity conservation and promoting community based management approach.
4. Assess the potential of the programme to replicate its approach¹. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic areas) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources).
5. Consider preliminary indications of the degree to which the project results are likely to be sustainable² beyond the project's life time, and provide recommendations for strengthening sustainability.

D. Lessons

1. Record the significant lessons that can be drawn from the experience of the project and its results, in particular, anything that worked well and that can be potentially applied to other projects.

E. Recommendations

1. Based on the above findings, formulate a set of specific recommendations and identify necessary actions required to be undertaken by the stakeholders, in order to sustain the initiatives in the post programme era.

F. EXPECTED OUTPUTS FROM THE EVALUATION

The main products expected from the evaluation are:

1. Presentation(s) to key stakeholders;
2. Draft report;
3. A final comprehensive Final Programme Evaluation report including completed Tracking Tools for GEF Strategic priority;

At least three, and possibly two, verbal presentations will be made to all major stakeholders on conduct of the Final Evaluation and its preliminary findings. Attendance at the presentations will include representatives of local communities, government, programme team, relevant local and national stakeholders as well as representatives from UNDP and IUCN.

The main final output of the evaluation will be an independent and comprehensive Final Programme Evaluation report with annexes as needed. However, the main report should not exceed 50 pages

ANNEX – 2

**MAINSTREAMING BIODIVERSITY CONSERVATION INTO PRODUCTION
SYSTEMS IN JUNIPER FOREST ECOSYSTEM
Terminal Evaluation Mission (June – July 2012)**

ITENERARY ACHIEVED		
Date	Action	Notes/Comments
20-06-2012	Discussions on phone with Environment and Climate change unit in the UNDP-departure for Islamabad in the evening. Night stay in Islamabad	
21-06-2012	Fore noon: Meeting with deputy Country Director and his staff in UNDP office; Collection of relevant documents, security briefing and signing of agreement. Afternoon: Meeting with Hamid Sarfaraz, and IUCN team; and briefing about the project Collection of relevant materials Evening: Study of documents	
22-06-2012	Left by air for Quetta at 0730, reaching by 0845 Meetings in the IUCN office with Tahir Rasheed from Torghar project; Ghulam Mohammad, Conservator Forest, and IUCN staff of Quetta office Afternoon: Travel to Ziarat Meeting with project staff and local inhabitants	
23-06-2012	Meeting with Principal, Al Hijra School Meeting with Chutair valley Conservation Committee+ Field vist Meeting with Deputy Conservator Forest, DFO Eco-tourism in their office in Ziarat Meeting with ADC Ziarat, and Ziarat community+ Field visit Visit to VCC Koshki Zizri + Field visit Travel to Quetta-night stay in Quetta	
24-06-2012	Meeting with Principal Secretary to Governor of Balochistan Meeting with prof Dr Rasool Bux Tareen, Chairman Botany Department, Balochistan University Travel to Islamabad	
25-06-2012	Collect other needful documents, work on the compilation of data for the presentation to Steering Committee of the project in Quetta	
26-06-2012	Forenoon: Continue work on the data After noon: Travel to Peshawar by road Night stay in Peshawar	
27-06-2012	Visit PFI to obtain information from library and	

	field staff about their work on mistletoe in Ziarat in the past Afternoon: Travel back to Islamabad by road Night stay in Islamabad	
28-06-2012	Travel to Quetta by air, leaving at 0830, reaching 0945 Meeting with Mira Jan Kakar, Additional Chief Secretary; Meeting with Yousaf Kakar, Ex Chief Conservator of Forests Meeting with Ghulam Ali Baloch, Ex- Forest Secretary Second Meeting with Ghulam Mohammad, Ex Project Manager	
29-06-2012	Fore noon: Presentation to the Steering committee, chaired by the Additional Chief Secretary Afternoon: Meetings with Chief Conservator of Forest, North and Chief Conservator South	
30-06-2012	Meeting with IUCN staff Meeting with Mazhar Rana, DFO Travel to Islamabad Night stay in Islamabad	
01-07-2012 to 03-07-2012	Ccollection of additional information from IUCN; Compilation of data and writing report Stay in Islamabad	
04-07-2012	Forenoon: Continued with the above Afternoon: Travel to Peshawar by road	
05-07 July	Writing report	
08-07-2012	Submission of report	

Annex 3

List of persons interviewed

- i) *Government of Balochistan*
 - Mr Mirajan Kakar, Additional Chief Secretary
 - Mr Ghulam Ali Baloch, ex-Secretary forest, Government of Balochistan
 - Mr Abdul Jabbar, Principal Secretary to the Governor of Balochistan
- ii) *Forest and Wildlife department*
 - Mr Taj Mohammad, Chief Conservator South
 - Mr ghulam Mohammad, Conservator Forests/ ex Project Manager
 - Mr Abdul Wahid, Chief Conservator North
 - Mr Zaigham, Conservator Quetta
 - Mr Niaz Kakar, Deputy Conservator forests, Ziarat
 - Hafiz Mazhar Rana, DFO
 - Mr Imran, DFO Tourism, Ziarat
- iii) *Other organizations*
 - Mr Zabardast Khan Bangash, Head IUCN Quetta
 - Dr Tahir Rasheed, Torghar Conservation Project
 - Mr Tariq, Principle, Al Hijra school and college, Ziarat
 - Mr Yousaf Khan Kakar, Ex-Chief Conservator of forest
- iv) *Community organizations*
 - Chutair Valley Conservation Organization, represented by Ms.Nizamuddin and Khair Gul
 - Ziarat valley conservation Organization, represented by Ms Mohammad Asim, Noor Mohammad, Abdul Karim, Rehmatullah, Sarwar Khan, and Abdul Malik
 - Koshki-Zizri valley conservation Organization, represented by Ms Said Mohammad, AbdulGhaffar, Ali Marjan, Dilawar Khan and Pao Khan

In addition to the above, many more were met and the project discussed in an informal way, yet focusing on the progress and process of the project

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- v) *List of people who attended the SC meeting in Quetta*

Mr. Miran Jan Kakar	ACS (D) GoB
Mr. Ghulam Ali Baloch	Ex Secretary Forests & W/L GoB
Mr. Ashiq Ahmad Khan	Consultant
Mr. Mohammad Tahir Durrani	Director EPA

Mr. Ghulam Rasool Jamali	Additional Secretary Livestock
Mr. Khudaidad Kakar	Chief of section P&D
Mr. Faqir Mohammad	Assistant Engineer Forests P&D
Mr. Nauman Hassan	Research Officer P&DD
Mr. Faiz Kakar	Project Coordinator SLMP
Mr. Mohammad Mazhar	DCF Admin BFWD
Mr. Syed Ali Imran	CF Planning BFWD
Mr. Mohammad Azam	DS Forests

Annex 4

Summary of Field visits

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Date	Activity
20-06-2012	Travel to Islamabad
21-06-2012	In Islamabad
22-06-2012	To Quetta and onward to Ziarat-meet project staff
23-06-2012	Forenoon in Ziarat to meet VCCs and visit Field activities, also meet Staff of Forest Department stationed at Ziarat(Sites include Koshki valley;Main Ziarat valley;Main Chutair valley;Nishpa valley Afternoon to Quetta
24-06-2012	Travel to Islamabad
25-06-2012	In Islamabad
26-06-2012	To Peshawar
27-06-2012	To Islamabad
28-06-2012	To Quetta-meet people relevant to project
29-06-2012	In Quetta-briefing to steering committee and meet relevant officials and individuals
30-06-2012	To Islamabad
01-03 July 2012	In Islamabad –compile data
04-07-2012	To Peshawar
05-07 July, 2012	Write report
08-07-2012	Submission of report

Annex 5

List of documents reviewed

- Guidance for conducting terminal evaluations of UNDP-supported, GEF-financed projects
- project document
- Inception report of the project
- Midterm evaluation report
- LFA
- Baseline, indicators and target documents of the project
- Valley conservation and development plans
- Periodic reports of the project
- Tracking tools for strategic priorities 1&2
- Biodiversity guidelines for the conservation of juniper ecosystem of Balochistan
- net survey for similar approaches applied elsewhere, or approaches that have made projects rather sustainable

Annex 6

Questionnaire used and summary of results

QUESTIONNAIRE FOR THE VALLEY CONSERVATION COMMITTEES AND SUMMARY OF RESPONSES

1. What have been/ are the main issues of your area that were/are of major concern to you?
 - Crops-enhanced production and protection against insects*
 - protection against floods*
 - shortage of irrigation water*
2. Why did you agree to join the Valley Conservation Committee?
 - To find support for our requirements*
3. What were your expectations from the project?
 - help in agriculture*
 - availability of water for irrigation*
 - Enhanced production of fruits*
4. What benefits did your area get by forming the VCC?
 - *We are better organized to discuss and manage our local issues*
 - *Conflicts are reduced by 60%*
 - We have learnt the art of developing project proposals for donors*
 - *Exposure visits did help us to understand the solutions better than before*
 - *the values of the Natural Resources are being better recognized than before*
5. What were the major limitations with regard to VCCs?
 - *These should have been formed in the early days of the project, instead of the last stages of the project*
 - *Valley conservation plans were developed but these are hardly being understood or implemented*
 - *No record is being maintained*
6. What limitations did you notice of the project?
 - Frequent changes of the managers, each did come with his own thinking*

- *Some of the managers were better received by the community than others*
 - *Much time has been wasted in petty issues that were not of major concern to the people - --*
 - *Something was always wrong between the IUCN and the Forest Department at the levels of DC forest and above, that kept the community confused*
7. What is the status of juniper cutting in your area?
 - *the people who have no alternatives, have to cut, but no cutting for commercial gains*
 8. What are the things you will not agree to do, for whatever returns from the project?
 - *They will hardly agree to stop cutting of trees unless there are alternatives; and they will not allow the foreign projects to work with our women*
 9. What do you plan to do after the project is ended?
 - *We have learnt to develop proposals, we will do that*
 - *We are expecting IUCN to come up with another project, bigger in scale than this*
 10. How much of the animals/birds/insects or their populations are being lost from your area in the last 10-15 years
 - *Only about 20% of the butterflies, both varieties and populations are left in nature of Ziarat*
 - *honey bees and Dragon flies are almost finished*
 11. Have you thought of the consequences of such loss?
 - *No, not really but we see that the production of certain crops has been reduced.*
 11. What did you learn from the project?
 - *A lot in the form of organizational skills, methods for protection against floods, saving water etc*
 12. Anything of the project that you think has gone the wrong way?
 - *Yes, extra water that the project helped save, has been used in some places for further encroachment on juniper forest land*

QUESTIONNAIRE FOR THE EDUCATIONISTS (PRINCIPLE AL HIJRA SCHOOL-ZIARAT)

1. What is the major contribution of the project to awareness raising?
 - *the project has created love and care among the students and general public than it was before*
2. What is the main issue that you see around, related to the juniper forests?
 - *The trees are being burnt by tourists while cooking meals very close to the trees, however, such damages are done more by locals than outsiders*
 - *Because of conversion of forest land to farms and orchards, 1-2 % trees disappear each year*
 - *forest guards are never available when there is a problem related to trees*

3. Is there coordination between schools about the awareness program that the project has been working on?
-there is as such no coordination between different schools of Ziarat, which will certainly a good thing to do
4. What is your view of the ownership of land in Ziarat?
-the land belongs to the government, a green tree can't be cut, allotment is done by the Deputy Commissioner of Ziarat of land for purposes other than forest conservation
5. What is needed to cope with the situation?
-awareness
-Execution of law
-resolving inter-communal conflicts that results in the loss of trees
- Educating tourists

QUESTIONNAIRE FOR THE LOCAL FOREST OFFICERS (AND THEIR RESPONSES)

1. Where do you stand at the moment regarding:
 - 1.1 Encroachment upon the forest land?
-Forest laws are weak
-We are not being heard in the courts
-Even when witnesses are produced, nothing happens in the form of fines or punishments
 - 1.2 Land degradation issues
-Pollution is increasing day by day
-water is getting shorter in supply and more polluted than before
-land erosion has been enhanced in the recent years
 - 1.3 Forest Department vs IUCN
- We are not being involved in major decisions
- Conflicts are there with them but don't really know if it is affecting the project
2. What are the pluses of the project?
-The project has imparted training to the Forest Guards
-the project has provided uniform to the staff
3. What are the shortcomings/weaknesses of the project?
-the department has expectations from the project but it has always certain limitations
-There is no representation of the Forest Department in the valley conservation committees
4. How do you plan to promote eco-tourism in light of what the project has done in the form of building eco-tourism centre and writing a tourism guide?
-the centre is there but the project has left no funds to run it
-the guidelines are there but no money to implement
5. How do plan to utilize the medicinal plants centre built by the project and use the trainings given to communities?
- We don't have budget to run it, nor do we have the needful staff

6. How do you see the future of the project?
 - the forest department feels that a tourism information Centre was built and a plan prepared but is not endorsed by the department, hence no future of it
 - Forest Department should implement a similar project through other donors but IUCN should provide the bridging funds
 - UNDP may help award a bigger project to cover the entire ecosystem since the current project is too limited in scope
7. What are your overall impressions of the conservation of juniper ecosystem?
 - Protection of forests or forestry is not a priority of Government of Balochistan
 - Partnership with IUCN was not a good experience because of several reasons

QUESTIONNAIRE FOR THE CHIEF CONSERVATOR OF FORESTS (AND THEIR RESPONSES)

1. How do you see the Juniper project in terms of its relationships with the Balochistan Forest and Wildlife Department?
 - there were some professional jealousy in the beginning but it got diluted over time
 - Some of the project responsibilities should have been given to the forest officers
2. How do you see the cooperation level of the Forest Department, what were the weaknesses?
 - It depends entirely on the attitude of person posted in Ziarat whether he extends full cooperation to the project or not? To us, it was not satisfactory
 - There were better officers available to work as focal point for this project but political interference and preferences doesn't allow this to be realized and resultantly, the level of cooperation didn't stay at satisfactory level
3. What were the biggest blunders the project commits during implementation?
 - The project encouraged activities that resulted in the expansion of Agriculture which is already a threat for the survival of Juniper
 - the project kept on changing people at the top which shouldn't have been done
4. What should have been done, that was not done by the project?
 - Regeneration of juniper was not addressed the way it deserves
 - development activities should have been closely linked with conservation activities with more attention to the problems of juniper trees
 - Its expansion to other districts
 - If a person deputed by the department was not working to the satisfaction of the project, a system should have been in place to replace him immediately through the department and reasons conveyed for doing this
5. How do you rate the success of the project at the scale of 10?

-Social mobilization of the project stays at 9 for agriculture, but at around 5 for Biodiversity protection

-Including enhanced awareness, Fuel-efficient stoves and attitudinal change, the project stands at 7.

6. What was the biggest contribution of the project to the department?

-The staff was trained and included in courses on Forest and wildlife laws and management of rangelands, medicinal plants

-The Forest officers were trained in wildlife surveys

-The biggest one is the attitudinal change that was inculcated in the brains of the officers to sit with the people

-The project provided a new line of thinking to the staff of the department. They now try to adopt the integrated land management approach which is better than what they were doing before

7. What were the major weaknesses of the project

- Frequent changes of staff at Manager level

- High turnover of other staff for different reasons

- Insufficient focus on things that were more important like the protection of juniper trees

- Its confinement to a very small area, juniper tract is a big one

Annex 7
Evaluation Consultant Agreement Form

Annex 8
Tracking Tools for Strategic Priorities 1 and 2

Annex 9

Co-financing and Leveraged Resources

Source of co-financing and other support	Amount(in US\$)
IUCN	784985/-
Balochistan Program for sustainable development	5000/-
Pakistan Poverty Alleviation	About 3000/-
Total	about 79 2,589