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**Environmental and Social Monitoring and Evaluation of
PPAF Interventions**

Final Report (9th July, 2012)

**World Wide Fund for Nature
(WWF-Pakistan)**

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List of Acronyms

Acronym Used	Name
AJK	Azad Jammu Kashmir
AKPBS	AKPBA – Water and Sanitation Extension Program
AKRSP	Agha Khan Rural Support Program
BEEJ	Baluchistan Environmental Educational Journey
BHU	Basic Health Unit
BMP	Better Management Practices
BRDRS	Badin Rural Development & Research Society
CDF	Chenab Development Foundation
CED	Credit and Enterprise Development Unit
CHC	Community Health Center
COs	Community Organizations
CPI	Community Physical Infrastructure
CRM	Customer Relationship Management Unit
DMPP	Drought Mitigation and Preparedness Program
DWSS	Drinking water supply scheme
EIA	Environmental Impact Assessment
ERD	Evaluation, Research and Development
EPS	Environmental Protection Society
ESM	Environmental and Social Management Unit
ESMF	Environmental and Social Management Framework
F&A	Finance & Accounting
FPAP	Family Planning Association of Pakistan
GB	Gilgit-Baltistan
GBTI	Ghazi Brotha Taraqiatee Idara
HADAF	Hazara Development and Advocacy Foundation
HID	Human and Institutional Development
HR	Human Resource
HWF	Himalayan Wildlife Foundation
IA	Internal Audit
IEE	Independent External Evaluation
IER	Integrated Environmental Review
IRC	Indus Resource Center
IWEIP	Integrated Water and Energy Infrastructure Projects
KP	Khyber Pakhtunkhwa
LEPs	Livelihood Enhancement Programs
MER	Monitoring Evaluation & Research
MARAFIE	Marafie Foundation
MGPO	Mountain & Glacier Protection Organization
MIED	Mountain Institute of Education Development
MRDO	Marvi Rural Development Organization

NGO	Non Governmental Organization
NRSP	National Rural Support Program
PIDS	Participatory Integrated Development Society
POs	Partner Organizations
PPAF	Pakistan Poverty Alleviation Fund
PPESM	PPAF Panel on Environmental and Social Management
RDP	Rural Development Project
SAFWCO	Sindh Agricultural & Forestry Worker's Coordinating Organization
SAP-PK	South Asia Partnership Pakistan
SCOPE	Society for Conservation and Protection of Environment
SIA	Social Impact Assessment
SM	Social Mobilization Unit
SOS	SOS Children's Village of Pakistan
SRSO	Sindh Rural Support Organization
SRSP	Sarhad Rural Support Program
TF	Taraqee Foundation
TRDP	Tardeep Rural Development Program
W&E	Water and Energy
WHO	World Health Organization
WMC	Water Management Centre
WWF-Pakistan	World Wide Fund for Nature - Pakistan

1. INTRODUCTION

1.1. Background:

The Pakistan Poverty Alleviation Fund (PPAF) is one of the primary organizations working with the mandate to reduce poverty within Pakistan. The aim of PPAF is to partner with organizations in initiating and implementing projects at the community level, through its various interventions such as Livelihood Enhancement Programs (LEPs), Community Physical Infrastructure (CPI), Health, Education, Sanitation, Water and Energy (W&E), etc. PPAF works with many Partner Organizations (POs) across Pakistan. The POs then work at the community level with the Community Organizations (COs) for project implementation.

With the overall goal of poverty alleviation, PPAF also gives significant importance to any environmental and social impacts that may occur as a result of projects. PPAF has developed a document in the form of Environmental and Social Management Framework (ESMF) 4th Edition which provides guidelines to keep environmental and social impacts in mind while developing and implementing various interventions. The environmental and social screening in ESMF is based on legal criteria like Pakistan Environmental Protection Act 1997, Pakistan Environmental Assessment Procedures and World Bank Environmental/social assessment requirements. PPAF strives for the compliance of ESMF in all of its projects.

In this regard, PPAF has commissioned WWF-Pakistan, the country's largest environmental and nature conservation NGO, to conduct environmental and social monitoring of PPAF interventions. The aim of this study is to assess the implementation performance of PPAF as an organization especially in terms of environmental and social safeguards given under ESMF for PPAF III projects. For this reason, a 5% sample of PPAF's various projects will be assessed in light of ESMF. Through this study, WWF-Pakistan will evaluate the effectiveness of the ESMF as a tool and its compliance by the POs by evaluating a sample of projects

As a compliance tool, WWF-Pakistan has previously completed similar studies for PPAF such as Monitoring and Evaluation study of PPAF II. In addition, WWF-Pakistan also has field and project implementation experience in many of the areas that PPAF has been working in.

1.2. Objectives:

The objectives of this study are as follows:

- (1) To conduct desk and field assessment of a sample of PPAF projects to check compliance with ESMF.
- (2) To provide recommendations for effective environmental and social compliance based on the review of ESMF, desk and field assessments of PPAF interventions.
- (3) To review and critically evaluate the 4th Edition of ESMF and provide recommendations to further improve the document.

2. STUDY METHODOLOGY

To complete the study within the limited time period (from 1st May 2012 to 25th June, 2012), WWF-Pakistan developed the following strategy (Figure 1) to effectively and efficiently achieve the study targets:



Figure 1: WWF-Pakistan Strategy for Environmental and Social Monitoring and Evaluation of PPAF Interventions

2.1. Formation of Teams and Committees:

Three teams were formulated for the study:

- (1) Core Team: The Core Team was formed to supervise the entire assignment including review of ESMF, desk and field assessments and compilation of the final report. It consisted of experts in different fields such as biodiversity, environmental assessment and water.
- (2) Regional Teams: Three regional teams were formed; each team consisted of two members; one Core Team member and one member from the respective region. Together, they

conducted the social and environmental monitoring of PPAF interventions of their respective regions.

- (3) Evaluation Team: The Evaluation Team was appointed to review the methodology, report and conduct a detailed assessment of ESMF. It consisted of senior staff with expertise in biodiversity, Monitoring and Evaluation etc.

2.2. Review of ESMF:

ESMF has been prepared to define the environmental assessment procedures that PPAF and its POs are required to follow in order to determine the environmental consequences of PPAF interventions. The main purpose of ESMF is to prevent execution of interventions that have a significant environmental and social impact through IEE, EIA and SIA standard guidelines.

ESMF was reviewed thoroughly by the team members to identify any gaps and limitations in the document. Based on the review of ESMF, comments were given on integration of environmental and social safeguards into PPAF projects. Initial comments on ESMF were submitted to PPAF almost three weeks into the study (21st May 2012). Furthermore, in order to assess compliance of ESMF and to supplement the review of ESMF, a meeting was also held with PPAF staff members. The focus of this meeting was to discuss in detail ESMF monitoring, dissemination and training regimes.

2.3. Project selection process:

Projects to be evaluated were selected after consultative meetings between WWF-Pakistan and PPAF staff. A detailed list of projects selected is attached in Annex 1. The interventions were selected based on number of factors most importantly:

- (1) Geographical representation: The projects were selected from all regions of Pakistan i.e. Sindh, Punjab, Balochistan¹, Khyber Pakhtunkhwa (KP), Gilgit-Baltistan (GB), Azad Jammu Kashmir (AJK). The numbers of districts were kept low in each province in order to ensure that areas with higher population densities can be penetrated thoroughly through the PPAF interventions. Therefore, two districts with maximum PPAF III investments from each province/region were selected (Table 1). A total of 5 or 6 projects were selected from each district.

¹ On account of non cooperation of one PO "Taraqee Foundation (TF) in Balochistan and lack of response, projects in District Loralai were not assessed. The analysis presented in this draft report excludes District Loralai and includes projects in District Musakhel only. The analysis of the projects in Districts Loralai can be included into the final report if PO cooperate and are able to provide the required information on a timely basis.

Table 1: District wise Investment of PPAF for the Selected Districts

Provinces	Total ESM Investments in Each Province (Rs.)	Selected Districts	Total Investment in Each Selected District (Rs.)	Percentage of Total Provincial Investment (%)
AJK	23,018,957	Poonch	4,164,422	88.64%
		Neelam	16,240,505	
Balochistan	620,679,562	Loralai	50,786,725	15.90%
		Musakhael	47,949,852	
GB	249,440,517	Ghizer	117,001,639	65.38%
		Skardu	46,077,091	
KPK	327,201,995	Haripur	77,263,614	42.64%
		Swat	62,252,458	
Punjab	743,153,636	Kasur	74,945,130	21.69%
		Layyah	86,230,343	
Sindh	667,092,267	Khairpur	106,791,837	31.62%
		Sanghar	104,172,705	

- (2) Diversity of Partner Organization (PO): PPAF has numerous POs across different regions of Pakistan; therefore it was decided to select a diversity of POs as a representative sample. Both small scale POs working in a specific area (village or district level) to a larger POs working at provincial or country level were selected. A limit was also set on the number of projects for each PO (maximum 5 projects per PO) to maintain diversity. A total of 20 POs were selected for this study (Table 2).

Table 2: Diversity of Partner Organization for the Selected Interventions

	Partner Organizations	Region	Intervention Type				Total Projects
			CPI	W&E	Health	Education	
1.	AKRSP	Gilgit Baltistan	3	2	-	-	5
2.	BEEJ	Balochistan	-	2	-	-	2
3.	BRDRS	Balochistan	2	-	-	1	3
4.	CDF	Punjab	-	-	-	1	1
5.	EPS	KP	3	-	2	-	5
6.	FPAP	KP and Punjab	-	-	2	-	2
7.	HADAF	KP	3	-	-	-	3
8.	HWF	AJK	-	5	-	-	5
9.	MARAFIE	Gilgit Baltistan	-	-	-	2	2
10.	MGPO	Gilgit Baltistan	1	-	-	-	1
11.	MIED	Gilgit Baltistan	-	-	-	2	2
12.	MRDO	Sindh	1	-	1	1	3
13.	NRSP	AJK	5	-	-	-	5
14.	PIDS	Balochistan	2	-	-	-	2
15.	RDP	KP	1	-	-	-	1
16.	SAFWCO	Sindh	2	2	-	1	5
17.	SAP-PK	Punjab	3	1	-	-	4
18.	SOS	Punjab	3	-	-	1	4
19.	SRSO	Sindh	1	1	-	-	2
20.	TF	Balochistan	-	1	1	1	3
	Total		30	14	6	10	60
DMPP							
1.	HRDS	Punjab	-	-	-	-	1
Micro Credit							
1.	CDF	Punjab	-	-	-	-	2
2.	SRSO	Sindh	-	-	-	-	1

(3) Encompass maximum types of projects/interventions: A total of 60 various types of projects were selected for desk and field assessments under this study (Table 2). These interventions include 6 Health, 10 Education, 30 Community Physical Infrastructure (CPI) Interventions, 14 Water and Energy (W&E). In addition to these 60 projects, 1 Drought Mitigation and Preparedness Program (DMPP) and 3 Mirco-credit interventions were evaluated. While DMPP was pre-selected by PPAF, micro-credit interventions were selected by WWF-Pakistan.

The selection of projects in each district was based on diversity of both interventions and POs. A minimum of 3 CPI/W&E² Interventions and 2 Health and Education Interventions were selected in each district. Maximum types of CPI projects/interventions supported by PPAF were selected for project diversity.

2.4. Desk Assessment of selected projects

The POs of the selected projects were contacted to obtain relevant information such as progress reports, proposal and other documents such as Form A and Form B which show compliance with ESMF. A thorough desk assessment based on the project documents was carried out. All documents and progress reports provided by PPAF and its POs were evaluated. The purpose was to understand the status and progress of the projects, compliance with ESMF and obtain an overview of the PPAF interventions.

2.5. Development of questionnaires

After the review of the selected projects, questionnaires were prepared for each type of project intervention. For the preparation of questionnaires, the guidelines provided in ESMF for each type of projects were extensively used. The aim of the questionnaire was to engage both PO and CO and obtain as much as information about compliance with ESMF as possible. The questionnaires were used in the field to interview PO staff and community members and to verify on-site assessment of ESMF compliance of selected interventions. The questionnaires used for field assessment are attached in Annex 2. In order to assess compliance of ESMF and to supplement the review of ESMF by WWF- Pakistan staff, a meeting was also held with PPAF staff members. The focus of this meeting was to discuss in detail ESMF monitoring, dissemination and training regimes.

2.6. Field Assessment

After the desk assessment of the project reports and development of questionnaires, the regional teams coordinated with the respective POs of the selected interventions to carry out field assessments. Most of the members of these teams had already taken part in the field assessment of previous ESMF study and were therefore well aware of the procedures. The new members were given electronic briefing only (via phone and email), because of time constraint issues. The regional team visited the selected project sites to assess the compliance of the project in accordance with ESMF guidelines. The questionnaires were used for reporting any non-compliance of social and environmental safeguards. The teams used the following methods of reporting and documentation for field assessment:

- Use of questionnaires for interviewing the COs and POs
- Documentation through pictorial data

² Please note that in the case of AJK, 5 CPI and 5 W&E interventions were selected. This is because only CPI and W&E projects were available.

- Field verification and observation
- Verification through PO documents

3. EVALUATION OF ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

3.1 Assessment of ESMF:

As an integral part of the study, ESMF was thoroughly reviewed. WWF-Pakistan’s Core Team and an Evaluation Team were specifically formulated for this purpose. The teams provided comments on ESMF which have been summarized in this section³. The results of meeting with PPAF on ESMF monitoring, dissemination and training regimes are also summarized in this section.

a) Comments on ESMF:

Volume 1 – THE FRAMEWORK

Section/ Chapter	Proposed Modifications/ Suggestions
Executive Summary	
Executive Summary	<ul style="list-style-type: none"> • Certain social aspects have been mentioned in the document but have not been fully incorporated and defined. Social assessment and related aspect should be dealt separately since they require specialized skills, tools and expertise. • Under Section 2, sub-heading 2.1 and point 1 Environmental/Social Screening, include other environmental related Acts/policies to ensure (Wildlife / Forest / Water) compliance, international agreements/standards, contextually environment related relevant parameters, best practices. Under point 4 of the same section, in addition to World Bank assessment, also include other assessment undertaken under PPAF commissioned evaluation. • In sub-section 2.2, Social Review, it is suggested to include the indigenous/traditional knowledge assessment as well. • Section 3 Dissemination and enforcement strategies, Review cycle especially in terms of project revision based on periodic environmental appraisal. Under point 3.1 Incorporate SEA in project system in addition to provincial environmental and social systems. • In sub-section 3.1, Dissemination strategies, it is suggested to develop a Social Monitoring Strategy to assess the social indicators as well. • Point 3.2 under section 3, Include external monitoring team - EIA expert, thematic expert, project management rep., field staff implementing project etc. Explain feedback sharing and incorporation mechanism • Point 4.2 under section 4, Dissemination & Enforcement Action Plan, institute selection criteria to be based on past experience performance • In section 5.1, Environmental & Social Management Group (ESMG), it is suggested to have two dedicated groups i.e. Social and

³ These comments have already been conveyed to PPAF on 21st May, 2012.

	<p>Environment. Each group should have their separate responsibilities and TORs to have better output.</p> <ul style="list-style-type: none"> • Point 5.2 under the section 5, Appointment of Environmental/Social Management Professionals in POs, Capacity building of existing CPI Coordinator with regard to environment should be ensured. • In section 5.2, though PPAF identified funding as the major criteria for categorizing PO as large, medium or small, but this shall be explained in the document.
Acronyms	<ul style="list-style-type: none"> • In the Table of Acronyms, add WWF and IUCN. WWF mentioned but not in the abbreviations. Please review thoroughly as a lot of things missing from the abbreviations.
Chapter 1: Introduction	
Chapter 1: Introduction	<ul style="list-style-type: none"> • In Introduction section, it has been mentioned that ESMF is essential for Small Scale Infrastructure and Micro finance but it should be mentioned that for larger projects IEE and EIA will also be required as per Environmental Protection Act 1997. • In Section 1.2 Guiding principle, it is suggested to add a guiding principle with title “Maintaining a database of environmental aspects” which should include aspects such as ecological baselines, aggregation of positive interventions such as Biogas plants, and forest covers assessments. In sub-Section 9 of 1.3, Organization of the Environmental Management Framework, it is suggested that the section should include DMPP projects as well. • Paragraph 3 of the Introduction (Page 1) suggests three project components but Livelihood Enhancement Plans (LEP) is missing in this section. Please also add short description of LEP. • On page 2, immediately after the list of World Bank Safeguard Policies, the sentence suggests ‘The ESMF provisions for compliance to these laws’ No laws are mentioned in the section above as this statement suggests. Please correct the context of this section. Please clarify what is meant by ‘these laws’.
Chapter 2: Procedure for Environmental & Social Screening	
Chapter 2: Procedure for Environmental & Social Screening	<ul style="list-style-type: none"> • In section 2.1, Criteria developed for environmental screening PPAF should have a district wise list of ecological and cultural sites, protected areas, watersheds, etc. which shall be circulated to the POs as a guideline for their interventions. WWF can provide the list of ecologically sensitive sites. • Section 2.5 Initial Environmental/Social Examination, please note that as the heading suggests, there is no mention of Social Examination. PEPA 1997 guidelines do not include Social Examination as a separate component. It is suggested that IEE should be conducted for interventions that qualify under PEPA 1997, rather than only considering Pakistan Environmental Assessment Procedures 1997. EPA is the only competent authority for submission and approval of IEE and EIA.

	<ul style="list-style-type: none"> • Section 2.6 Environmental/ Social Impact Assessment, please note that as the heading suggests, there is no specific mention of Social Impact Assessment guidelines here. Since it is a legal obligation to go through the entire EIA process including the public hearing for any project qualifies to it. Approvals of EIA shall be obtained from the competent authority like EPA/ EPD. • Section 2.8, “Implementation of ESMF”, this section should also include briefly about training of POs for implementing ESMF and building their capacity to address environmental issues. • Please explain rationale behind Table 2.1 Environmental/Social Screening by Type of PPAF Interventions. Following are few suggestions on types of assessments mentioned under Table 2.1 that need revision: <ul style="list-style-type: none"> – The criteria for screening of projects mentioned under Table 2.1 need some improvement. WWF would suggest an IER instead of an E/SR for water channel-mountain areas, similarly projects related to NRM shall also qualify for IER instead of E/SR. – Link roads in mountain areas depending on the size and location shall have an IEE instead of IER. – Table 2.1 shows that for many E/SR projects, SIA is needed, whereas, in section 2.2, of the Executive Summary (Page ES-1) it is mentioned that SIA will be conducted for EIA level projects; there is a need to clarify the confusion. – Wildlife management (Trophy Hunting) should be included in the NRM projects.
Chapter 3: Environmental/ Social Review	
<p>In the ESMF social aspects has been mentioned but the guidelines do not specifically cover social components. In addition, in some interventions assumption or some statements have been part of the guidelines e.g. E/SR 14, Guideline 6, statement “the poor organizational arrangements and inequitable distribution of additional water may lead to the social conflict’ does not provide any guideline rather an assumption. Similarly point 3 and 4 in the same guideline qualify to be an assumption. There are many such interventions where guidelines need to be reviewed.</p> <p>Please note that the list of guidelines in ESMF when compared to the project selection appears to be incomplete For example, the sub-project types of Pipeline and pipe irrigation, footpath, Gabion wall, water supply lines etc. are selected projects but there are no guidelines given in ESMF.</p>	
<p>Chapter 3, Tube wells- - Irrigation in irrigated and dry areas E/SR 14-15</p>	<ul style="list-style-type: none"> • Under guideline 1, it is stated ‘Other standard recommended by EPA NWFP for a tube well in irrigated areas is 100m from any existing tube well.’ This standard is only applicable in NWFP (KPK), however, these ESMF guidelines are for all Pakistan, and therefore, it cannot be a standard for all Pakistan. • Guideline 5, suggests that ‘Irrigation water with high Total Dissolved Solids (TDS) may lead to salinization of the soils. Acceptable limit is 1,500 ppm, but basis and reference for this figure has not been provided.

	<ul style="list-style-type: none"> • For soil Salinization, it is suggested that important parameters for irrigation set by FAO and WAPDA in addition to TDS may also be included like, Sodium, Chloride, and pH etc. • As if more than X tube wells exist in a UC/Tehsil/ cluster, it can affect the ground water table. It is suggested to determine maximum/minimum numbers of tube wells in a particular area based on the hydraulic profile of the area. There is a need to include a guidelines mentioning: <ul style="list-style-type: none"> – Any limit for extraction of ground water – Ground water capacity – Ecological importance of the site where such intervention is taking place, i.e. Wetlands, Protected area etc. • It is suggested to carryout test for Arsenic as well, even if the area does not fall in the Arsenic rich locations. • Water quality testing should be done from some approved/recognized environmental lab. <p>In Form A:</p> <ul style="list-style-type: none"> • It is mentioned that the Tube well is to be located at a distance of 150 m from cultural and environmentally sensitive sites. This is not mentioned in the guidelines. Please provide the basis of this distance. How is a cultural or environmentally sensitive site defined? Please specify if any World Bank OP or legislation safeguard supports this? • Please explain the basis of the 1500 ppm limit for TDS. • 'Ensure that there should be no stagnant water pond within 15m from the tube well'. Please explain the basis for not having a stagnant water pond and also why there is a prescribed distance of 15 meters.
<p>Chapter 3, Hand Pumps E/SR 16</p>	<ul style="list-style-type: none"> • In Form A, testing for arsenic in water is missing. Arsenic is a very important issue, even more important than fluoride. There is a need to develop a guideline regarding restrictions for hand pumps being installed in arsenic areas/ regions as done in case of tube wells. • Water quality assessment should be done as per the WHO guidelines for drinking water. • Water quality testing should be done from some recognized laboratory.
<p>Chapter 3, Open Well E/ SR-18-19</p>	<ul style="list-style-type: none"> • In Form A, please explain what the basis is for the location of open well being 10 m away from cultural and environmentally sensitive sites. Size and distance of open wells with one another should also be mentioned in the guidelines. • It is suggested to include proper arrangements in guidelines for safety of the open wells from surface contamination including agricultural contaminants. There should be some mechanism identified that who will ensure this safety technically.
<p>Chapter 3, Rain Water Harvesting Pond ER-20-21</p>	<ul style="list-style-type: none"> • To keep the pond safe from surface contaminations especially in areas where the water is used for drinking purposes, it is suggested to include some guidelines to make proper arrangements to make it safe. • It is also suggested to develop suitable water testing parameters to

	<p>retain quality of water.</p> <ul style="list-style-type: none"> It is also suggested to identify rainwater catchment area, map the area and integrate it with its watershed management, wherever possible e.g. plantation and grazing management. <p>In Form A, please elaborate and explain the following:</p> <ul style="list-style-type: none"> Pond is located 10 m away from cultural and environmentally sensitive sites. Proposed pond is located 100 m away from agriculture fields. Please specify the appropriate size and dimensions of Rainwater Harvesting ponds. The description about water agitation through rowing and boating suggests that the size of the pond is fairly large. Please clarify.
<p>Chapter 3, Check Dam E/SR 22-23</p>	<ul style="list-style-type: none"> Guideline 1 states that 'Check Dams normally do not cause environmental impacts'. This is a sweeping statement. Check Dams may also have negative environmental impacts, such as restricting the flow of water, constructed unsafely etc. In Form A there is less emphasis on Social Criteria in guidelines whereas check dams have many social issues especially for downstream communities. Depending on the size of the dam, construction of check dams can have impact on habitat, thus it is suggested to take precautionary measures before constructing check dams to ensure the following: <ul style="list-style-type: none"> Location of check dam Size of the dam Number of check dams on one stream What could be possible impact on some water body downstream the dam?
<p>Chapter 3, E/SR for Water Tank - 24</p>	<ul style="list-style-type: none"> In guideline 2, there is no mention of Arsenic which is a very important indicator for safe drinking water. It is also stated that, 'Water Tanks are located on a safe distance from sources of surface contamination'. Please indicate what is meant by 'safe distance'? In Form A, it suggested that the criteria should match and be consistent with the guidelines section. In the Form A, it is mentioned that 'proposed water tank is located 100 Meter away from all the sources of surface contamination such as latrines and solid waste dumps.' Please note that water tanks are enclosed structures and do not need a distance of 100 meters for preventing contamination. Furthermore, there is no mention of cleaning of the water tank.
<p>Chapter 3, Water Channel, Mountain areas ER-26-27</p>	<ul style="list-style-type: none"> It is important to assess the location of the water channel if the channel is passing through some Protected Areas then it has to be dealt with differently as compare to other areas. Guideline should be developed to ensure the drainage of the water channel to the wetland or PA. Ensure that the construction of the water channel does not put pressure on habitat of species or cause fragmentation of habitat, particularly of

	<p>smaller animal.</p>
<p>Chapter 3, E/SR Watercourse- 28</p>	<ul style="list-style-type: none"> • Please refer to Form A where it is stated that 'There is no increase in command area'. Please explain. Form A suggests that there will be no increase in command area. The objective of the watercourse is to develop and line watercourse results in availability which ultimately leads to increase in command area. These seem as contradictory statements. Please clarify.
<p>Chapter 3, Karez E/ SR-30-31</p>	<ul style="list-style-type: none"> • In Form A, please note that Karezes are not only meant for drinking water but also for irrigation purposes. There is a need to split guidelines for drinking and irrigation purpose built karezes. In case of preparation of schedules of maintenance of Karez and water testing, please consider that a schedule should be part of these guidelines else no one is going to comply. • If the Karez water is used for drinking purpose than the water quality testing will be necessary, but if the water is used for irrigation purpose there is no need of such tests.
<p>E/SR for Desalination Plant-35</p>	<ul style="list-style-type: none"> • An Environmental and Social Review has been stated in ESMF for this technological intervention. However, consider an Initial Environmental Examination or an EIA for this. The first guideline for this intervention is unclear. Please clarify. • In Form A, it is stated that the desalination plant must be 50 m away from latrines and solid waste dumps. Please explain the significance of this limit?
<p>Chapter 3, Biogas Plant E/SR 37-38</p>	<ul style="list-style-type: none"> • In Form A, it is stated that a biogas plant must be 200 m away from residences, and sources of water supply. Please provide the basis for this. Installation of proper arrangements for the monitoring of H₂S emissions is also suggested in Form A. Please explain that what is mean by installation of mechanisms to monitor H₂S. Please comment on its feasibility and practicality as generally such equipment is very expensive. • WWF would propose installation of gas metering measurement system on each biogas plant. Also a log-book should be maintained for consumption and recording any serious environmental impact in form of community health. This could later help PPAF to claim for CDM or some carbon credits.
<p>Chapter 3, Solar Energy E/ SR 39-40</p>	<ul style="list-style-type: none"> • It is suggested that PO shall develop a mechanism for measuring/ estimating the amount of electricity produced. This could be through installation of electric meters, or entry into a register of the estimated electricity produced each month. This will help monitor the performance of the unit, facilitate maintenance. This could also help PPAF for carbon credits. • Solar Energy Use and its Maintenance should be two separate indicators.
<p>Chapter 3, Cooking Stoves E/ SR 41-42</p>	<ul style="list-style-type: none"> • Guidance to the communities residing within the premises of Protected Areas about wood extraction should be mandatory.

Chapter 3, Link road plain Area E/SR 53-54	<ul style="list-style-type: none"> Guidelines should ensure that the road does not cross through ecologically or culturally important area. In that case an IEE or EIA will be required.
Chapter 3, ER for Solid Waste Management, E/SR 56	<ul style="list-style-type: none"> The guidelines mostly focus on the installation of solid waste bins instead of focusing on the real waste management system. It is suggested to incorporate the real sense of Solid waste management System which includes educating households to segregate waste, local collection systems, site selection for proper disposal and processed of waste either to a municipality or an especially designed sanitary landfill.
Chapter 3, NRM E/SR 58	<ul style="list-style-type: none"> How will it be determined that project intervention will not lead to over-harvesting of natural resources. There are general references given but this is a scientific process, which cannot be carried out by a lay person. It is suggested to develop criteria (responsibility assigning to a well qualified person) to ensure that the project intervention will not lead to natural resources over-harvesting. Guidelines suggest developing NRM interventions holistically under ecological criteria. Who and how it will be ensured that projects are developed accordingly? PO should have capacity to determine Freshwater ecosystem should also be included in the NRM list. NRM projects shall not encourage introduction of any invasive species. Communities should be encouraged to establish community managed protected areas or sustainable hunting, etc. as a tool for wildlife conservation. Environmental criteria shall be developed at the proposal stage.
Chapter 3, Security Lights ER-60-61	<ul style="list-style-type: none"> The solar/wind energy can be used where possible for security light projects. “LED” based light systems should be encouraged. Such project should not be allowed in any Protected Area since the Wildlife Act does not allow any such development since these lights could be a source of disturbance to wildlife and restrict their movements.
Chapter 3, Schools ER-65- 66	<ul style="list-style-type: none"> In guidelines for E/SR for Schools, there is mention of new schools not being located on major highways or main roads, while in Form A this aspect is missing. Similarly, in the guidelines there is mention of cleaning water tank at the school after every three months, while this is missing in Form A. Lastly, in the guidelines it is mentioned that there must be separate latrines for girls and boys in schools, while this is missing in Form A. It is also suggested that the guidelines for schools should have facilities mentioned in the guidelines, e.g.: <ul style="list-style-type: none"> Separate drinking water facilities and water quality testing. Hygienically sound latrines. Proper waste management system including waste bins and segregation of waste being collected.

Chapter 3, Basic Health Unit E/ SR-68-69	<ul style="list-style-type: none"> • In guidelines for E/SR for Basic Health Unit/Dispensary, there is a spelling mistake in point 1 i.e. 'deceases' instead of 'diseases'. • Segregation of waste is required to be added and recyclable material such as cartons, papers etc. should be recycled instead of putting in the pit. • It is important to have separate points for sterilization and crushing in basic health units.
Chapter 3, Agriculture Cropping ER-71	<ul style="list-style-type: none"> • CED negative list for Micro Finance (MF) projects should be attached as annexure. • Better Management Practices (BMP's) for Cotton, Rice and Sugarcane should be used in the guidelines. • The BMP's manual developed by WWF can be reprinted by PPAF and can be available for guidance for such projects.
Chapter 3, Livestock/ Poultry/ Fish farming E/SR 73	<ul style="list-style-type: none"> • There is a need to have a guideline for "Bio security measures", for all such projects (Poultry/ Livestock and Fish farming). • While assessing such projects, it is important to include the mechanism for animal waste disposal in the proposal. • Ensure that the stock in the farm is not taken from the wild since this can result in transmission of various diseases to the farm animals. • Veterinary care and vaccination plan shall be in place to control disease. • The poultry and fish farms shall not be close to an ecologically important site for possible spread of disease.
Chapter 3, Handicraft/ Cottage Industry E/SR 77	<ul style="list-style-type: none"> • It is suggested to fix some standard working hours like 8–10 hrs per day. Since majority of the workforce in handicraft and cottage industries are females and laws to protect them are in place.
Chapter 3, Food/ Agriculture E/SR 79	<ul style="list-style-type: none"> • The environmental criteria should be developed at the proposal stage for guidelines for post harvest pesticide spray. • Poor quality packaging material such as black plastic shall not be allowed.
Chapter 3, Micro-Enterprise E/SR 85	<ul style="list-style-type: none"> • The guidelines are too general, i.e. micro finance intervention livestock, poultry and fish farming has one guideline dealing all the three components. Same is in case of micro enterprise. It is suggested to develop specific guidelines for some of the more common intervention types
Chapter 4: Integrated Environmental Review	
Chapter 4, Tube well E/SR 90	<ul style="list-style-type: none"> • The guidelines for contamination of water must be taken from WHO in identifying parameters for the water quality. • Some sustainable extraction levels should be developed. • If within or in the buffer zone of a Protected Area then a Mitigation Plan should be developed according to the Wildlife Act.
Chapter 4, Delay Action Dam	<ul style="list-style-type: none"> • Map and the management plan of the watershed areas should be included and a mechanism shall be developed to keep the streams

E/SR 94	<p>clean.</p> <ul style="list-style-type: none"> • Possible impact of the Dam on habitat and different species should be addressed. • While constructing dams it is suggested to ensure that wildlife habitat may not be disturbed. Impact of this delayed action dams on downstream flows shall be monitored and habitat improved and/or fragmentation shall be recorded. • In case of break down and high discharges from the spillways the impacts on downstream communities and environment must be addressed.
Chapter 4, Windmill E/SR 99	<ul style="list-style-type: none"> • Water testing shall be done from some reliable laboratories. • The windmill shall not be installed at places which will cause cutting of trees or some water pollution etc. and the location should be selected with the communities' consensus. • Installation of electricity meters should be made essential to calculate the power generation and ultimately PPAF shall plan for getting Carbon credits. • The IER for the windmill should include both for electric and mechanical wind turbines, not only mechanical. The description in guidelines will need to be changed accordingly.
Chapter 4, Micro Hydel - less than 5MW IER/SIA 102	<ul style="list-style-type: none"> • In Form A, there is mention of Tail water to be disposed off in a hydraulically safe way. Please check if management of tail water in microhydel is relevant. Please clarify. • In the table of contents, the IER/SIA of microhydel is for 5 MW and in the actual document on page 102 and 103; guidelines are for microhydel less than 1 MW. Please clarify and create consistency in the document. • Three major guidelines have been given for IER in the manual. All are about maintaining water quality and quantity downstream, but none to deal with anticipated water quality and quantity issues upstream to ensure regular water flow. • It is important to look into impacts on watershed, if channelling is expected to cause any hazardous effect on watershed, and if the project design covers a watershed improvement plan, or at least a mitigation plan to control soil loss through erosion and landslides etc. • Maps should be developed for the watershed to manage water catchments and monitor water pollution. • Water diversion may affect agricultural practices in the adjacent, upstream as well as downstream areas that needs to be addressed in the project design, cost effectively. • Changes in water course may impact downstream waterfowls, and subsequently effect aquatic and other associated fauna, flora and avifauna of the area. It may also affect socio-economic assets of local people downstream, and may cause serious conflicts in the years to come. • There is need to review if any fish ladder type of structure in the mini hydel has been proposed. Fish movement need to be monitored and

	ensure fish movement is not affected.
Chapter 4, IER/ SIA for bridges 104	<ul style="list-style-type: none"> • While cutting trees to clear right of way, it is important to develop guidelines for, type of trees to be planted. • Number depends on the size and age of trees in that particular ecosystem. Some trees like junipers are more than thousand years old. They should not be cut in any situation. Some criteria should be developed to go for tree cutting since if trees have nesting of endangered species on it then they should not be cut. Efforts should be made to preserve old and important trees. Only in circumstances where the tree does not have any nest or tree is found in abundance in the area and the maturity time of the tree is 10-15 years then the cutting shall be allowed. • While planting two trees against every tree, it is important to plant tree not a small plant. Relocation of the same tree can be another option. • The location of bridge is also important, if the bridge is constructed in some plain area then for every cut tree growing two trees is fine but in the mountainous area for every one tree cut at least four shall be grown.
Chapter 4, Sanitation Scheme IER/ SIA 110	<ul style="list-style-type: none"> • Options shall be explored to develop some model for the construction of wetlands as an option for improved sanitation. A design prepared by on UN Habitat is available and being tested in Pakistan.
Chapter 4, Area upgrading IER/ SIA 114	<ul style="list-style-type: none"> • In the guidelines the location of pond to the residential area is mentioned, it should also be ensured that in case of Protected Area the Oxidation Pond should be constructed as per Wildlife Act. • The water quality testing of the nearest tube well for contaminants should be done from an approved laboratory. • Option for constructed wetlands shall be explored for sanitation and composting for solid waste management.
Chapter 6: Environmental/ Social Impact Assessment	
Chapter 6, EIA 124-129	<ul style="list-style-type: none"> • Section 6.4 “Guidelines for conducting SIA”, it is suggested to incorporate following in the mitigation guidelines: <ul style="list-style-type: none"> – Acquiring of land for an intervention – Physical restrictions and – Conflicts among the community on acquiring land for an intervention. • Section 6.4 point 7 asks “losing of livelihood by the vulnerable persons”, need further clarification. The section should also mention how the livelihood of the locals is being affected by donating land?
Chapter 7: Completion Certification	
Chapter 7, Form -B Completion Certificate 130-131	<ul style="list-style-type: none"> • It is suggested to add migratory birds and animals in following statement “ecological resources fisheries, aquatic biology, wildlife, forests, rare or endangered species “coming under the heading Description of environment in project affected area. • Since EIA is a legal requirement and there are set procedures and processes for the submission and approval of EIAs, those rules should

	<p>be followed since PPAF does not have any authority for EIA approval. The IEEs and EIAs should be filed to respective EPAs.</p> <ul style="list-style-type: none"> • IEE or EIA should be completed before the start of the project not after the completing and some public hearing shall also take place before the launch of the project interventions. • The statement “EIA and IEE can demand additional information on completion of the project”, is not clear, there should be mention of what kind of additional information can be required at the completion of the project.
Chapter 8: Dissemination and Enforcement Strategy and Action Plan	
<p>Chapter 8: Dissemination & Enforcement Strategy and Action Plan 132-135</p>	<ul style="list-style-type: none"> • Under Description of Dissemination Strategy 1 it is stated, “WWF-Pakistan will assist PPAF for conducting technical researches.” Please change to ‘research’. • Under Description of Dissemination Strategy 2, Mandate of network needs to be clarified. Why network will develop regional development master plan? • Under Description of Enforcement Strategy 2, change ‘period visits’ to ‘periodic visits’. • Under Description of Dissemination Strategy 3, please add community based disaster risk management • Under Description of Dissemination Strategy 4, change name of Ministry of Environment, as it has a new name now i.e. Ministry of Climate Change. Also more avenues of engagement than the ones stated may be explored. • Under 8.3.1 Definitions & Scope of Dissemination Events and Materials, the bullet point about earthquake areas can be changed to a broader term such as Disaster which would cover all types of disaster including Earthquake, Floods, Cyclones, tsunamis etc. Also include a bullet point on ‘Livelihood improvement through improved management of natural resources’ • Proceedings of events also be uploaded on website as suggested under the heading Roundtable under point 8.3.1 • Under the heading Leaflet, point 8.3.1 specify the language of the leaflets. • Under 8.3.2, Dissemination Action Plan change the name of Ministry of Environment to its new name i.e. Ministry of Climate Change • One of the gaps in the understanding of EMF-III was that the guidelines were only disseminated once after they were developed. Since there were many staff changes at the PO level, the new professionals had very little or no idea about EMF-III guidelines, WWF would therefore, suggest that annual seminars/workshops should be held at regional and provincial level (7 workshops / year) for the dissemination of ESMF guidelines to various POs.
Chapter 9: Institutional Arrangements	
<p>Chapter 9: Institutional Arrangements IA 141-145</p>	<ul style="list-style-type: none"> • On Page IA-143, Section 9.1.1 “Terms of Reference for the Environment & Social Management Group”, it is suggested to include an organizational chart mentioning role of “Environment Management Group”, and regional focal person.

	<ul style="list-style-type: none"> • On Page IA-143 section 9.1.1, “EMG Team”, it is suggested to review the need of regional focal personals in EMG professional team. • On Page IA-144, Section 9.3 “Environmental/Social Managers/ Assistant Managers/ Focal Persons in POs”, should have some responsibility beyond only PO, e.g. cluster or district level review and inputs to other POs, etc. • The Manager shall also play an important role in guiding POs of different interventions by developing and providing an “Environmental Resource Kit”. The kit should contain certain standard resource materials for POs on important interventions. Examples are: <ul style="list-style-type: none"> – GIS mapping/aggregation of energy units produced, e.g. by installing monitoring of electricity meters for wind turbines, gas meters for biogas plants. – Update datasets on ecologically important areas – Calculation of carbon offset equivalence. – Map relevant watershed areas. <p>WWF will be in a position to provide some information for the development of the kit.</p> <ul style="list-style-type: none"> • The EMG may also invite POs to share findings of environmental reviews amongst each other in regional meetings held once every six months or every year.
Chapter 10: Financial Procedures	
Chapter 10: Financial Procedures	<ul style="list-style-type: none"> • Tables 10.1, 10.2 and 10.3 have a total rounded up with the term 'say'. It is suggested to use another word such as approximate. • On Page unit cost/ ESMFIV F&B-149, Section 10.4 “Financial Procedures”, it is suggested that different forms of environmental costs should add “Regional presence cost” which will allow PPAF or any PO to cover the cost of any dedicate staff for regular environmental monitoring at regional level.

Volume 2 -- REFERENCE MATERIAL AND USER GUIDELINES

Section/Chapter	Proposed Additions/Modifications
Chapter 2: Pakistan conservation strategies framework	
Chapter 2: Pakistan conservation strategies framework	<ul style="list-style-type: none"> • Under Section 2.5 please provide reference of Sindh Strategy for Development

Chapter 3: Relevant legislative and administrative arrangements	
Chapter 3: Relevant legislative and administrative arrangements	<ul style="list-style-type: none"> The paragraph proceeding 3.1, last sentence, the sentence should clarify whether the environment institutes shown in the Figure 3-1 Environmental Institutions' Organisation Chart, are those prevailing at the timing of the drafting the document. It would be good to provide the reference.
Chapter 4: Detailed description of environmental issues relevant to PPAF interventions	
Chapter 4: Detailed description of environmental issues relevant to PPAF interventions	<ul style="list-style-type: none"> The first bullet point in section 4.1.5 states water availability given for 1951 and today. Please specify the date which is what is meant when referred to as 'today'. In section 4.1.5 B, it is stated that 'only 30% of the total diverted water supplies actually reach the crops they are to support.' No reference provided for this and this seems a bit out of context. Water sprinkling has been suggested time and again in various sections such as 4.3.2. Please consider other alternatives to dust control as well especially in a case where water is scarce. Under 4.4.5 B it is stated, 'water and sanitation projects can causes diseases...' Please reference and elaborate on this.

b) ESMF IV Dissemination, Enforcement Strategies and Action Plan:

ESMF contains dissemination and enforcement strategy supported by an action plan in section 8 of the document. The strategies have been developed to create awareness and build capacities of various POs to understand the guidelines for various interventions. In order to assess the compliance by PPAF on these strategies and action plan, a meeting was held with General Manager, Environment and Social Management (ESM) Unit, PPAF on 11th June, 2012 to discuss and understand the effectiveness of these strategies and to identify issues and gaps in its effective implementation. A subsequent meeting was also held with W&E Unit of PPAF to discuss issues related to DMPP and other W&E projects. Following are the key findings of the meetings:

ESM Unit

The ESM is relatively a new unit in PPAF, which was established in July 2011 and started its functions in August 2011. Since its establishment, the Unit is involved in dissemination and

enforcement of ESMF not only within PPAF but also to all relevant POs. With the establishment of this Unit, the other Operational Units of PPAF are now becoming more aware of the requirements of ESMF and its guidelines. In addition, the importance of ESMF and its compliance has been highlighted to POs as well. However, there are also certain limitations with this relatively new Unit. Few important ones are;

- i. Given the scale of PPAF operations, the ESM Unit will require additional human resources to expedite the process of ESMF implementation.
- ii. Backlog of work that needs to be done in a short period of time.
- iii. The importance of this cross cutting Unit is yet to be fully acknowledged and recognized by other Operational Units of PPAF.

Capacity Building Trainings and Workshops

In order to strengthen the capabilities of PPAF Operational Units and POs, a series of training and dissemination events are planned at national, provincial and local levels. However, these training and dissemination events are conducted by developing a training calendar but without any formal action plan (the training calendar does not provide any information on names and number of POs to be included, how the sessions will be conducted, what will be their duration and how long will each session be etc).

Three ESMF workshops were conducted by PPAF for its staff members from various Operational Units (Table3). The purpose of these workshops was to build capacity of PPAF staff members to incorporate environmental and social safeguards in their respective interventions. In addition to these, four planning sessions with PPAF panel on environment and social management (PPESM) were also conducted (Table 4).

Table 3: ESMF Dissemination Workshops for PPAF Staff

No.	Attended by	Date	Location
1	PPAF Units (CED, CPI, ERD, F&A, Gender, H&E, HID)	11-Nov-09	Islamabad
2	PPAF Units (CRM, HR, IA, IT, M&C, R&R, SM, WMC)	25-Nov-09	Islamabad
3	Entire PPAF Staff	7-Sep-11	Islamabad

Table 4: Planning Sessions with PPAF Panel on Environmental and Social Management (PPESM)

No.	Attended by	Date	Location
1	PPESM	Oct-11	Islamabad
2	PPESM	22-Nov-11	Islamabad
3	PPESM	21-Dec-11	Islamabad
4	PPESM	10-Feb-12	Islamabad

A total of eight training events were conducted in the past one year for individual POs and regional clusters like workshops in Haripur and Quetta to disseminate general guidelines of ESMF (Table 5). A total of 14 POs participated in these eight training workshops. This amounts to almost 14% of all 97 active POs of PPAF who were provided training on general guidelines of ESMF. In terms of portfolio coverage the POs trained so far constitute 70% of PPAF total investment in phase III.

The format of these training events ensures hands on experience for the compliance of ESMF. These training workshops were of 2 to 3 days each. All these trainings were started in December 2011 with a World Bank agreed format. Table below shows the dates and venues of these training workshops.

Table 5: Trainings conducted on general ESMF guidelines for POs in 2011-12

Sr. No.	PO	Date	Location
1	NRSP Regional Management	December 22-23, 2011	Islamabad
2	SRSP	February 14-15, 2012	Peshawer
3	TRDP	March 15-16, 2012	Mithi
4	HADAF, MDO, RDP, Sungi, GBTI, Badbaan	April 4-5, 2012	Haripur
5	NRSP District Staff	April 10-11, 2012	Islamabad
6	BRSP	April 24-26, 2012	Quetta
7	TF	April 25-27, 2012	Quetta
8	SRSO and SAFWCO	May 08-10, 2012	Hyderabad

Apart from these technical trainings, two major dissemination workshops were also conducted for the wider dissemination of ESMF. These two workshops were conducted in Karachi and Islamabad and about 38 POs participated in these two workshops (Table 6). This amounts to 39% of all 97 active POs of PPAF who have attended dissemination workshops.

Table 6: ESMF IV Dissemination Workshops for POs

No.	Attended by	Date	Location
1	17 POs from Sindh and Balochistan	24-Jun-10	Karachi
2	21 POs from Punjab and KPK	20-May-10	Islamabad

It is also mentioned in the Section 8.1 of ESMF that local level trainings will be conducted by local POs, but no such local trainings were conducted in the past.

Dissemination and Enforcement Action Plan

This is to note that no detailed Dissemination and Enforcement Action Plan has been developed by PPAF. A couple of National level workshops were however organized to disseminate ESMF. This was observed that no seminar on any of the pre-selected theme such as drinking water quality, irrigation efficiencies, groundwater depletion, use of municipal wastewater for irrigation etc. was organized. Moreover, no roundtable conducted, no environmental / social alerts were released, reference material and user guidelines were not updated as required by ESMF to be updated every two years. No leaflets were printed by PPAF on specific subjects; however, it was informed by PPAF that some leaflets on general environment were published by POs with the help of PPAF funding.

Quarterly Environmental Compliance Reports

As per ESMF requirement, POs were instructed to prepare their quarterly environmental compliance reports on World Bank approved format. It was quite encouraging to see that many POs have started preparing their compliance reports. This compliance reporting regime started very recently, therefore no annual compliance report has so far been prepared by PPAF.

Internal and External Monitoring

Internal Monitoring:

This is a routine procedure in PPAF that all Operational Units conduct their regular internal monitoring on quarterly basis. After the monitoring visit, a Back to Office Report (BTOR) is prepared on a standard format and shared with all relevant Units. The ESM Unit is also doing a regular internal monitoring of POs on quarterly basis. They conduct environmental and social audits in the ESM priority districts. So far five districts have been covered (Table 7).

Table 7: Internal Monitoring of POs in ESM Priority Districts

Sr. No.	District	POs
1	Thatta	AKPBS, SAFWCO, SCOPE
2	Dadu	Indus Resource Center (IRC), TRDP
3	D. G. Khan	NRSP, HRDS
4	Rajanpur	NRSP, Sayya Foundation
5	Muzaffarabad	Sungi Foundation, MGPO

In addition to this, the Monitoring Evaluation and Research (MER) Unit of PPAF also conducts quarterly internal monitoring of overall progress.

External Monitoring:

As per ESMF guidelines, external monitoring should be done by any renowned and competent environmental organization at least once a year. However, it was observed that external monitoring has not been done regularly on annual basis. This current assignment for environmental monitoring and evaluation has been awarded to WWF-Pakistan after three years of project implementation.

Other ESMF Compliance Issues

Apart from training workshops, compliance reports and internal/external monitoring, there are few more issues, which have been identified during this assignment. These are as follows;

- a. The recommendation of ESMF has not yet been incorporated in the CPI manual. However, a statement is there which ensures that all CPI interventions should fulfil ESMF requirements.
- b. Based on the Sindh Coastal Areas Network model, no further multipurpose provincial / regional networks of POs have been established, although, the issue of establishing such networks have been discussed with the POs.
- c. It was informed by PPAF that POs have started appointing dedicated environmental experts to ensure compliance with ESMF guidelines. So far 51 POs have nominated their focal persons. It is anticipated that by September 2012, all POs would have nominated their focal persons.

3.2 Comparison of EMF Recommendations & their Implementation in ESMF

A similar monitoring and evaluation study was conducted by WWF – Pakistan three years ago on EMF 3rd Edition. After detailed analysis of EMF, some implementation problems were pointed out and recommendations were made. A comparison of the recommendations made in EMF and their implementation in ESMF has been given in the table below:

Table 8: Comparison of EMF recommendations and their implementation in ESMF

	Recommendations from 2009 external monitoring study	Implementation in ESMF and findings in 2012
Internal Monitoring by PPAF		
1.	PPAF should have an environmental monitoring team to regularly assess the environmental aspects of the projects and their progress should be made part of the technical reports of the projects	A dedicated Unit (ESM Unit) has been established for regular internal monitoring of POs on quarterly basis. They have initiated environmental and social audits in the ESM priority districts and share their findings with all relevant Units.
Focal persons in POs for ESMF		
2.	There should be a Focal person for Environment at each PO to improve the documentations including progress reports, environmental initiatives undertaken, filling and filing of Form A etc.	POs have started appointing dedicated environmental experts to ensure compliance with ESMF guidelines. So far 51 POs have nominated their focal persons and It is anticipated that by September 2012, all POs would have nominated their focal persons.
Missing ESMF Guidelines		
3.	Some interventions of the Environment Review projects that PPAF has accomplished, their respective guidelines were not either available under EMF document nor were	Some of the projects had sub-project types for which no particular classifications or guidelines were given (e.g. short listed projects by PPAF include both Micro Hydel

	incorporated in the ESMF document (e.g. DWSS, Flood Protective Walls, Pipe irrigation etc.)	and Mini Hydel as sub project types, however, in ESMF guideline for only Micro Hydel less than 5 MW are given). (Page 102, ESMF)
4.	Each project should have a separate budget allocation for any environmental intervention and monitoring that is in accordance with the EMF guideline such as regular water testing, plantation, waste management etc.	Based on the discussion with the POs and study assessments, it was revealed that budget allocation for environmental compliance has not been made. However, PPAF has allocated some budget for environmental compliance of large interventions.
Involvement of External Bodies and Government		
5.	Coordination with other bodies such as CBOs or government to support various activities should be encouraged especially for larger projects.	Only POs and COs were involved in the project planning and development; no involvement of local government was observed in any project intervention.
6.	PPAF should commission ecological baseline studies for areas of high ecological significance.	Same situation, studies not conducted
7.	A detailed monitoring and evaluation plan should also be devised as per EIA Guidelines	No plan developed, but PPAF has started internal monitoring and audits
8.	PPAF and /or any independent and credible environmental organization nominated by PPAF should conduct regular environmental audits to make sure the monitoring process is effective and transparent.	It was observed that external monitoring has not been done regularly as per ESMF (on annual basis). This current assignment for environmental monitoring and evaluation has been awarded to WWF-Pakistan after three years of project implementation.

3.2.1 Recommendations for ESMF:

- **Dissemination and Enforcement Plan:** A detailed dissemination and enforcement action plan is available but needs to be implemented by PPAF including seminars on the listed themes, round table conducts, environmental and social impacts need to be released and reference material along with user guidelines need to be published every two years according to the ESMF guidelines.
- **Compliance Reports:** Environmental compliance reports must be prepared by PPAF and it should be ensured that similar reports should also be submitted by all the POs on quarterly or annual bases.
- **External Monitoring:** External monitoring mechanism needs to be improved by involving renowned and competent environmental organizations on annual basis.
- **CPI Manual:** The recommendations of ESMF need to be incorporated in the CPI manual

- **Environmental Experts in POs:** Dedicated environmental experts should be hired by all POs to ensure compliance with the ESMF guideline.
- **Missing guidelines:** In ESMF there were many interventions, for which guidelines were not available. For example, separate guidelines were not available for Micro Hydel and Mini Hydel projects. Similarly, many guidelines are missing for some important interventions such as gabion wall, pipe irrigation, dug well, footpath, hydropower channel repair, flood protection bund, drinking water supply line and water storage reservoir projects. The ESMF must be revised to include all guidelines for the missing interventions. This is important to ensure that the guidelines of the ESMF for these particular sub-project types are conveyed to the POs for implementation.
- **Guideline for tree re-plantation:** The ESMF document should contain guidelines about the types of trees that should be replanted in each location where trees are cut. A specific time period for their monitoring should also be mentioned to ensure their survival.

4. FINDINGS OF PROJECT ASSESSMENT

For the study, assessment of 55 projects⁴ was conducted. For evaluation of these projects a number of questions were asked to both the PO and CO. In addition, pictures were taken at different locations to assess compliance (Annex 3).

PPAF works by engaging various POs, these POs intern establish their CO who do majority of the work. POs have direct link and coordination with PPAF and have good knowledge of its work but to assess if the end user and beneficiary has knowledge of PPAF, questions were asked from each CO about their familiarity with PPAF and 73% informed they were familiar with the work of PPAF (Figure 2) and showed signs of a very inclusive process of working with the POs and PPAF.

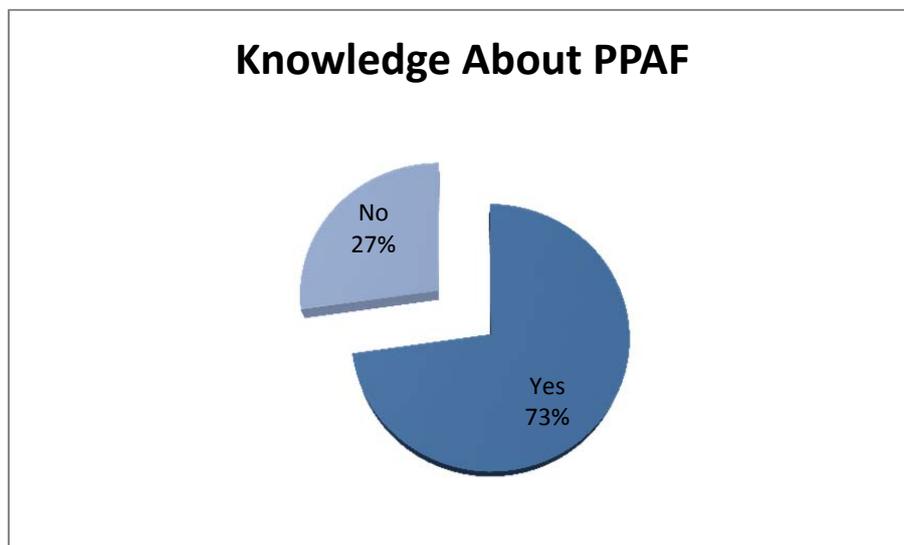


Figure 2: Familiarity of Community Organizations with PPAF

To address the social side of projects a number of questions were asked, one of which was on child labour. In most cases no child labour was reported but in two cases labour of 14-18 years of age was involved.

4.1 Findings of Desk Assessment

For desk assessment, a number of documents were obtained from POs such as project proposal, agreements with COs, Form A and Form B. According to the ESMF requirement, a duly filled Form A is a pre-requisite for any project intervention. Form A outlines a set of environmental and social criteria for a particular intervention to be considered at the proposal stage and mitigation plan at the design and implementation stage. Form B, on the other hand is a completion certificate indicating that the proposed mitigation plan has been implemented. Form B has to be signed by four people including person responsible for the preparation of

⁴ A total of sixty could not be met as the remaining five projects are located in District Loralai , Balochistan

Form A, person implemented the Form A, head of the Community Organization, and finally the person checked the Form A implementation.

It was reported during the field assessment that the majority of the POs were aware about Form A and 91% of the interventions had Form A available while only 43% had Form B available (Figure 3). Almost 4 % of the projects are in progress as they were still not completed and Form B is provided after project is completed.

In some cases, POs were of the view that the required forms were not provided by PPAF. Instead copies of the project proposal were provided. Some of the POs were still using old forms such as Form 1 and 2.

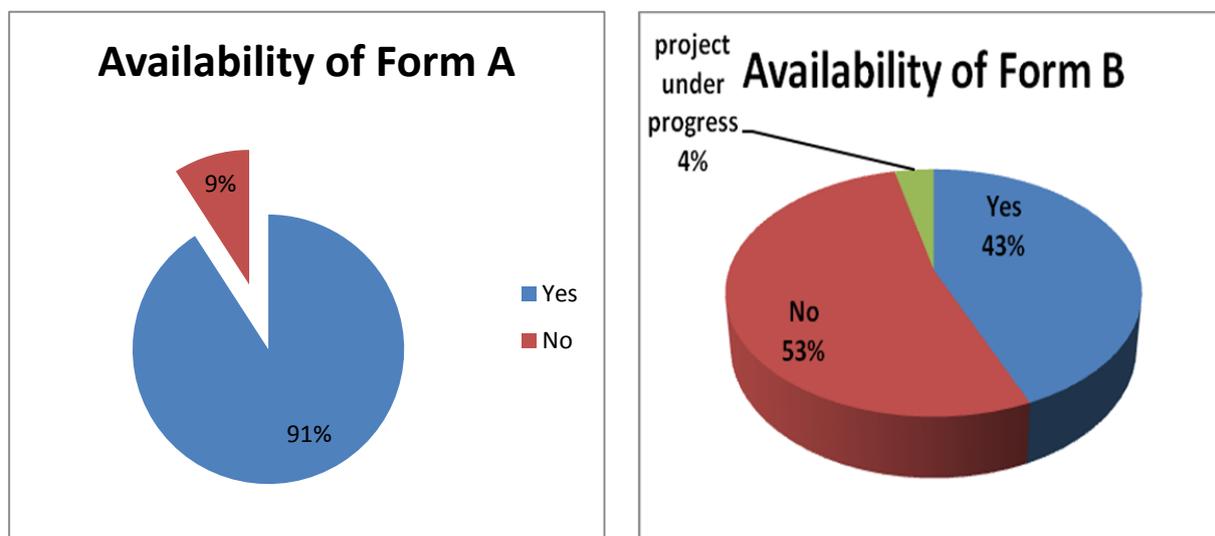


Figure 3: Availability of Form A and Form B with Partner Organizations

Table 9: Availability of Form A and B in Provinces

Province	Total Interventions	Availability of Form A	Availability of Form B
AJK	10	9	0
Baluchistan	5	5	5
GB	10	10	8
KP	10	9	4
Punjab	10	7	7
Sindh	10	10	0

4.2 Findings of the Field Assessment

4.2.1 Health⁵

A total of 5 different health projects including Community Health Centres (CHC) and Basic Health Units (BHU) were evaluated in this study, which benefitted more than 2,800 people. The survey indicated that 3 out of 5 (60%) of the sites were using sterilized equipment in the health facilities while the remaining 2 (40%) health facilities in District Swat operated by EPF indicated otherwise (Figure 4). In some areas, sterilization equipment is available but due to the ongoing electricity crisis the use of sterilization equipment is difficult. To deal with this ongoing problem, some BHU have adapted to the electricity schedule and also use a gas stove for sterilization of instruments as an alternative.

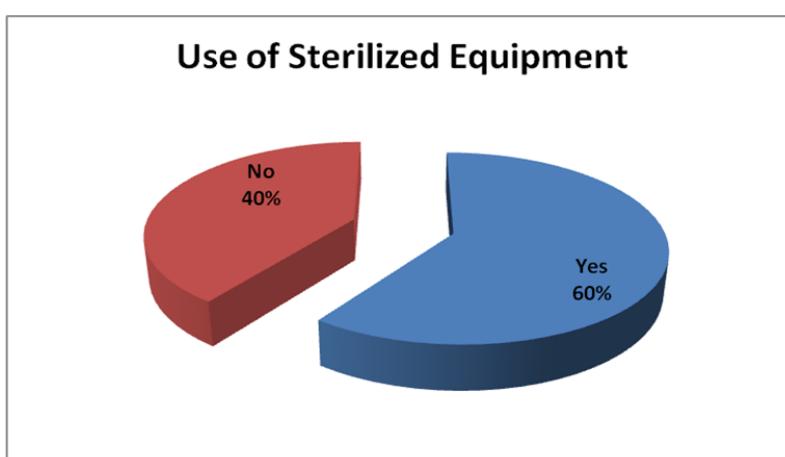


Figure 4: Prevalence of Sterilization at Health Facility

As far as the waste disposal is concerned, only one intervention in Tehsil Nara, District Khairpur Mirs, Sindh had the waste disposal pit within the premises of the facility. At all other 4 locations, it was found that there was no waste disposal pits. At one location in Village Chadar, District Kasur, it was observed that there was an incinerator right next to the wall of the BHU. It was reported that once a week the medical waste including syringes is burned. This is a cause of concern as the BHU has a joint wall with a school. Incineration, if not conducted properly is a health and an environmental hazard not only for the BHU staff and patients but also for the school children.

It was reported that all the health facilities had latrines and were easily accessible to the women of the area. The latrines also had P-traps and septic tanks. The land acquired for the purpose of these health facilities was mostly rented and in the case of Haripur (KP), a small, fixed fee was

⁵ Please note that information from Balochistan has not received to date even after several attempts to contact the PO (Taraqee Foundation - TF). This analysis is based on 5 interventions instead of 6. The information can be included in the final report, provided if information from Balochistan is received.

also being charged to the patients. The dispensary was opened with the mutual consensus of the community; in almost all the interventions, community participation along with the help of the partner organization played an important role in the success of the project.

In all sites the PO had a dedicated, well trained staff for the monitoring mechanism and the community was also helping the PO in monitoring of the dispensaries. As far as the guidance of the dispensary staff is concerned, all interventions had workshops about proper disposal of waste and reuse of syringes. Training is an important aspect at any health facility and was conducted for many aspects such as sterilization, hygiene practices and medical waste disposal. Out of 5 health facilities, 40% of the locations had provided trainings on poor hygiene practices while training related to hazards of poor sterilization and scientific ways of sterilization was conducted at 60% of the locations (Figure 5). It was noted that all trainings were conducted in Sindh and Punjab region while no training for hygiene practices was conducted in any of the KP regions.

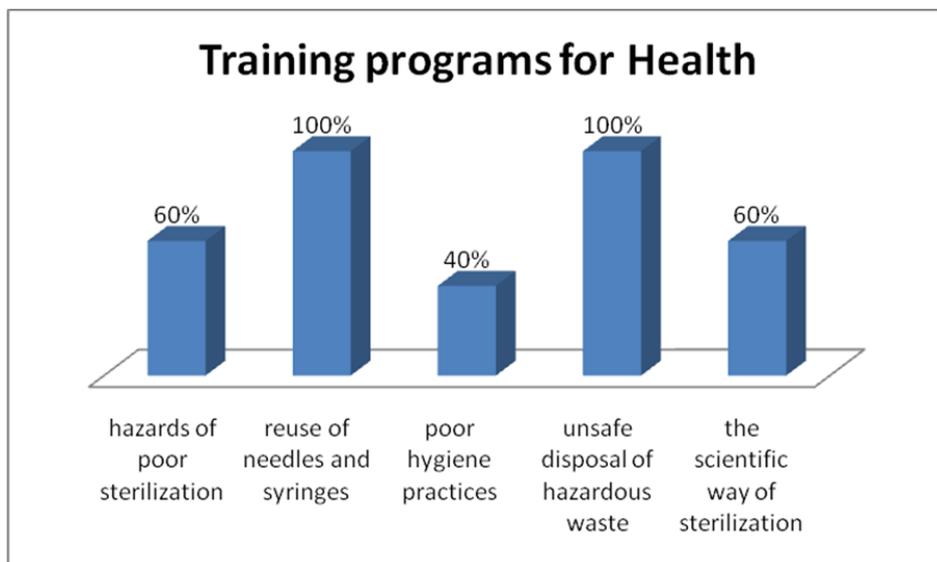


Figure 5: Trainings at Health Facilities

It was noted at one location in Kasur, that the PO had no knowledge of ESMF, however they had basic health manuals present on site and were following standard operating procedures of their own organization.

Amongst the concerns expressed by PO at one location was that no doctor was willing to work at the BHU. This is because the location is far from the city and access to area is marred by bumpy roads and dirt tracks. This was also a problem for the female staff at the BHU, however this was solved by providing a transport allowance to them.

4.2.2 Education⁶

A total of 9 education projects were assessed in this study. The most common sources of drinking water in schools are hand pumps and water tanks or coolers. In almost 6 out of 9 (67%) of the schools, drinking water was not tested as per the ESMF guidelines (Figure 6). The areas where water testing was reported include District Skardu, Gigit-Baltistan (WASEP Lab) and District Sanghar and Khairpur, Sindh (Soil and water testing lab). In one instance where hand pump was installed for drinking water, the PO stated that even though the water is not tested, it is still safe for human consumption according to their personal opinion. In Kasur, for instance, it was observed that the school children were using hand pumps for drinking water. Given that the water table in Kasur is contaminated especially with heavy metals such as arsenic and cadmium, lack of water testing is a great cause of concern. During conversation with the villagers in Kasur area, the number one problem expressed by them was also that of poor water quality for drinking purposes.

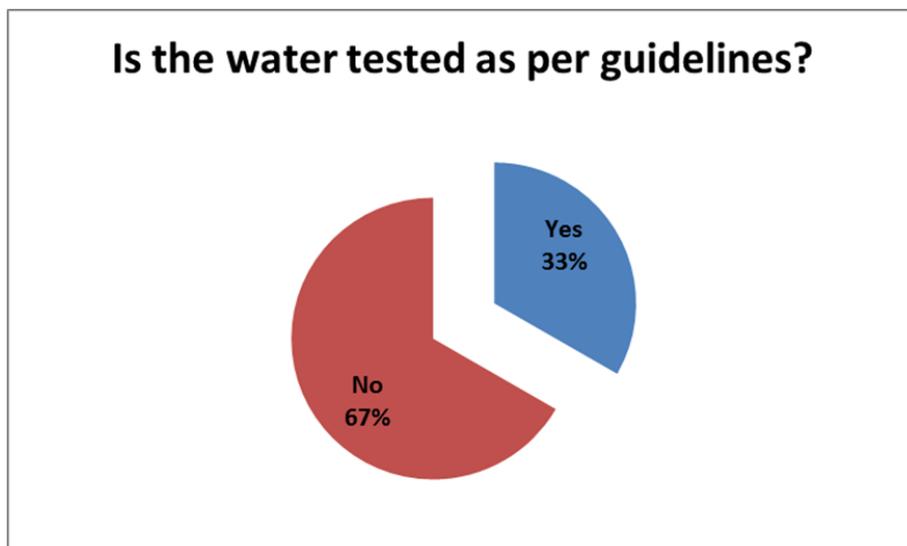


Figure 6: Water Testing in Schools

In some instances community members narrated how they have been involved in the development and expansion of schools. A total of 2,000 people have benefitted from the interventions and the community seemed satisfied with the effort being made by the POs.

In 3 out of 9 locations a proper waste disposal and collection system does not exist. It was observed that in Layyah, Punjab and GB wastes were disposed of in nearby fields. In Kasur, Punjab and Skardu, GB waste was burnt and in Sanghar, Sindh wastes were buried on a weekly basis.

⁶ Please note that information from Balochistan has not received to date even after several attempts to contact the PO. This analysis is based on 9 interventions instead of 10. The information can be included in the final report, provided if information from Balochistan is received.

It was reported that the latrines in all the schools were properly cleaned (either daily or on weekly basis), although the schools in Skardu needed a separate washroom for girls. Similarly, a new buildings need to be constructed for school in both Sindh and Gilgit Baltistan regions. It was observed in the Kasur region that school space was very limited and two teachers were delivering lessons to two classes at the same time and in the same room.

The school building did not meet the seismic code requirements in three locations (almost 33%) and overall there was no monitoring mechanism in almost 44% of the intervention sites.

4.2.3 Community Physical Infrastructure (CPI)

Community Physical Infrastructure interventions include five types (Figure 7) namely:

1. Roads and Bridges
2. Irrigation
3. Flood Protection
4. Drinking Water Supply Schemes
5. Drainage and Sanitation

Each of these five types of CPI interventions have further sub-types, for instance Tube wells, Irrigation channel, Hand Pumps, Rainwater harvesting Ponds, Water tanks, Watercourses, Culverts and so on. A detailed list of CPI sub-types is provided in Table 10.

Table 10: Types of Community Infrastructure Projects

Project Names	Sub- Project Names	Number of Interventions Visited by WWF-Pakistan
Roads & Bridges	Link Roads	7
	Culvert	2
Irrigation	Rain Water Harvesting	1
	Karez	1
	Irrigation channel	2
	Water Course Lining	1
	Tube Wells	1
Flood Protection Works	Flood protection bund	1
	Gabion Wall	1
Drainage & sanitation	Brick Soling	2
	Drain	1
	Street Pavement	2
	Sewer Lines	1
	Community Toilets	2
Drinking Water Supply Scheme	Hand Pump	4
	Dug Well	1

The main highlights of the projects selected under CPI are as below:

- **Roads & Bridges:**

Link Roads:

- A total of 7 link road projects were evaluated. The PO working on these sites include NRSP in the AJK region (5 projects), AKRSP in Gilgit Baltistan and SAFWCO in the Sindh region (1 project each).
- No land compensation was paid to the affected people. Only one site in Gilgit Baltistan and one in Sindh were able to produce agreement letters with the stakeholders.
- In terms of having safety measures during construction and blasting, it was documented that all safety measures were taken for blasting and the downstream community was informed about the entire planning activity.
- In the locations of GB and AJK, three out of six (50%) link roads were constructed during the dry season. During the construction, on an average a range of 300 to 600 trees were cut down (5 trees in GB were cut in one location and approximately 2050 trees in 5 selected sites in District Poonch, AJK region).
- No trees were replanted except in Skardu, GB where 200 fruit trees were replanted with an 80% survival rate. An environmental profile of the areas in Rawalakot, AJK was not available which suggests that no record of trees cut was kept and that none were re-planted.
- A total of almost 6000 households have benefitted from the construction of link roads and the monitoring mechanism involves visits by PO engineers and staff.
- For establishment of link roads in Rawalakot, AJK, it was observed that EMSF was not available at the PO and COs offices. The relevant staff of POs and COs were not aware about the EMSF and only the Project Manager NRSP attended training on ESMF.

Culvert:

- The two culverts selected are located in Punjab and INSAF and SAP-PK are the two POs.
- The design of the culvert was observed to be of the right size. The construction material was reported to be disposed of properly. A proper agreement of the land existed and no conflicts were reported.
- Almost 25 people volunteered from the community for the project providing direct benefit to total 200 households at both locations.

- **Irrigation:**

Rain water harvesting pond:

- *This project is located in District Loralai, Balochistan and Taraqee Foundation is involved in the intervention. Despite various efforts by our team and PPAF, we were unable to get any response from the PO.*

Karez:

- *Same as above*

Irrigation Channel:

- Two projects located in GB were selected for assessment and managed by AKRSP and MGPO. The project managed by MGPO was in progress when the WWF- Pakistan team visited the location.
- Impact assessment studies were conducted before the project and no change occurred in the flow of water. No impact on fish or ecology was reported during the progress and no social conflicts were seen either.
- The community consensus was reached after meetings and 568 households benefitted from the projects in both the locations.

Water course lining:

- One water course lining was selected for evaluation which was being managed by EPS.
- Almost 60 households benefitted from the project by provision of better irrigation facilities and less water wastage.
- The community worked with the PO (EPS) and no conflicts were seen overall. The closest environmental site is a fruit orchard but no particular damage was observed while the project was underway.

Tube Well:

- One tube well in Sindh was visited by the WWF-Pakistan team which was installed for agriculture as well as drinking purposes.
- The distance of the tube well from the nearest latrines was almost 100 meters and the water was tested for arsenic, fluoride, coli-forms and faecal coli-forms from Directorate of Agricultural Research. The new tube well was within 100 meters of the old one.

- The water is used for drinking purpose also and stored in a water tank. However, the community was not informed about cleaning of the tank of drinking water after every three months.
- The project benefitted 125 households and 6 people from the community volunteered for it.
- In Sindh, the COs expressed that the installation of tube wells is beneficial in short term to irrigated land, but in long term deteriorates underground water quality (by increasing the salt content in the water) and quantity as a result of over pumping of water for irrigation.
- The monitoring mechanism involved regular visits by the PO (MRDO) and the community organization; the project was located in Khairpur, Sindh.

- **Flood Protection Works:**

- Gabion Wall:

- Only one gabion wall structure was assessed where the PO working was BRDRS. The form A and B were both available and adequately filled.
 - The construction was done with standard materials which were specified by an engineer. Similarly, the land was checked for sliding resistance and the process was conducted with the consensus of the community.
 - Monthly visits by engineers were conducted for monitoring purposes along with visits by the BRDRS (PO) staff and a total of 36 households benefitted from the project.

- Flood Protection Bund:

- Form A and B were both available and adequately filled. One project of flood protection bund was selected and is being managed by AKRSP in the GB region.
 - The construction was done with standard materials and no particular damage was caused to the ecology or wildlife.
 - The completion report was compiled and impact assessment was conducted. But no analysis for earth pressure testing was done.
 - Overall, the project was done with the consultation of the community and a total of 300 households were benefitted.

- **Drinking Water Supply Scheme:**

- Hand Pump:

- Four interventions related to hand pumps were assessed. POs working on the hand pump projects include EPS and HADAF in KPK, BRDRS in Balochistan and SAFWCO in Sindh.
 - For all four hand pumps, water testing was conducted. Results of water testing and names of laboratory that conducted the tests were also recorded. However, arsenic testing was conducted only for one of the location which is Haripur, KP.
 - The average distance of the hand pump from the latrines was around 100 to 150 meters. The hand pump is not located in irrigation or dry area and the maintenance of the pump is done mostly by the community organization.
 - The benefits of the project were enjoyed by almost 157 households in total.

- Dug Well:

- Only one dug well was selected for evaluation.
 - The purpose of the project was to provide drinking water to the community, for which consensus was reached through community mobilization and resolutions managed by HADAF.
 - Water quality was assessed for nitrate, fluoride and Coli-forms as per WHO standards and was not found contaminated.
 - The water is easily accessible to the women of the locality while the distance of the well from latrines is almost 65 meters. The project has benefited 50 households.

- **Drainage & Sanitation:**

- Brick Soling:

- Two locations (Sindh and KP) were selected for the monitoring of the intervention with SRSO and RDP as the respective POs.
 - Alternate routes were provided to the people of the community during the construction process.
 - The construction material was disposed of in the fields and light equipment was used for the project.
 - A total of almost 310 household benefited from these two interventions.

Street Pavement:

- Two projects relating to street pavements were evaluated.
- Standard construction material was used for street pavement at both locations and wastes were said to be disposed of properly. The local farmers were given basic lessons about land levelling and well keeping of the street pavements.
- Almost 300 households benefited from both interventions and the communities were satisfied with the POs managing the projects i.e. EPS and HADAF.

Drains:

- The intervention monitored by WWF-Pakistan team is located in Punjab and being managed by SOS.
- Almost 25 people from the community participated in the project and a total of 160 households benefitted from proper disposal of waste water.
- Latrines, t- hoods and covered drains were installed during the project and it was reported by the PO that the water tanks and sewage lines are cleaned once in two months
- The community was trained on better hygiene through meetings and lectures and it was being made sure that latrine water did not mix with the irrigation water.

Sewer Lines:

- The sewer line constructed at District Kasur, Punjab was monitored. It was observed during the field assessments that the waste discharged from the sewage pipes went directly into the agricultural fields.
- The project was conducted with the community consensus, about 20 people volunteered for it and 60 households benefited from it.
- During meetings of the PO (SOS) and with the community, it was reported that better sanitation and hygiene practices were discussed with them.

Community Toilets:

- Two community toilet projects were selected for assessment and both are located in Layyah, Punjab.
- It was reported by the PO, SAP-PK that the latrines are cleaned twice a day
- P-traps were installed and both were conventional flush latrines.

- The community was given lectures on the advantages of better hygiene practices by the PO staff. Both projects involved community at all levels and were found beneficial for about 2000 people approximately.

4.2.4 Water and Energy (W&E)

Under Water and Energy (W&E) category, a total of 14 projects were selected to check compliance with ESMF. The types of interventions selected under W&E category are given in Table 11 below.

Table 11: Types of Water and Energy projects

Project Names	Number of Interventions Visited by WWF-Pakistan
Drinking Water Supply Schemes	2
Land Reclamations Work	1
Technological Innovation Projects	2
Sanitation	1
Communication	1
Irrigation	2
Agriculture	1
Mini Hydel	1
Micro Hydel	1
Integrated Water & Energy Infrastructure Projects	2

The main highlights of water and energy projects are listed in this section:

- **Irrigation:**

Water course:

- Water courses were lined in one of the two regions (Sanghar and Khairpur), but changes in the command area were not reported.
- Overall the project has proven to be beneficial for around 60 households. The project is being managed by SRSO in Khairpur.

Check Dams:

- *This project is located in District Loralai, Balochistan and Taraqee Foundation is the implementing PO of the intervention. Despite various efforts by our team and PPAF, we were unable to get any response from the PO.*

- **Micro Hydel:**

- One micro hydel was selected in Skardu, GB to be evaluated.

- It was reported that the local population was not displaced since the project was located away from the population and above tree line.
 - The project however did not cause any ecological disturbance including damage to the fish, soil erosion or agricultural land. It was reported that the water quality and quantity was assessed at the beginning of the project but no particular reports were shown to the WWF- Pakistan team.
 - The land for the project was donated and land agreement existed. A social impact assessment was conducted and community consensus was sought by the PO (AKRSP).
 - A total of 200 households benefitted from the intervention in Skardu, GB.
- **Mini Hydel:**
 - One mini hydel managed by AKRSP was selected in GB to be evaluated. The people displaced or affected otherwise by the intervention were compensated.
 - Some trees were cut during the process as the location of the project was close to a man made forest (six mature trees and approximately 10 to 15 smaller ones)
 - Soil erosion was also reported by the PO.
 - Sedimentation tanks have been installed for smooth sediment flow but no study has been conducted to assess its downstream impact.
 - The quality of the water was not assessed at the beginning of the project but first aid guidelines were followed at the power house. A first aid kit was also kept at the site location in case of any emergency.
 - Almost 2000 people from the community volunteered for the project and the entire project completed with the help of the community.
- **Agriculture:**
 - Land Levelling:
 - One land levelling project was selected in Balochistan managed by BEEJ.
 - Measures have been taken to execute land levelling in an appropriate manner but no training or awareness sessions have been provided to the framers about the importance of top soil.
 - The monitoring is done both by the engineers and the local community and almost 20 to 25 households have benefitted from it.

- **Drinking Water Supply Scheme (DWSS):**

- No water testing was conducted at the initial stages and the storage tank was located near the sewage system.
- The drinking water tank was hardly 15 meters away from sewage disposal and latrines in the case of Neelum, AJK.
- The water supply distribution system is at the household level and has benefited 35 households in total.
- The PO for the site was HWF.
- The distribution system was not well designed as many distribution pipes were laid through the sewage disposal tanks. The water distribution tank was also not covered with lid.

Storage Tanks:

- A drinking water storage tank was evaluated in Musakhel, Balochistan
- The project has directly helped 25 to 30 households.
- The water was tested at the laboratory and test reports are available.
- The distance of the latrines from the water tank is almost 110 meters and the water tanks are cleaned periodically. However, there are no signed agreements in regards to water rights and the monitoring mechanism involves bi-monthly visits by the engineers and the PO (BEEJ) staff.

- **Communication:**

Foot Path:

- The one project selected under this category is located in Neelum, AJK (refer to Annexure 3) and is being managed by HWF.
- Almost 200 people are said to have benefitted from the foot path in the Neelum, AJK.
- Alternative paths were provided to the walkers during the construction phase of the foot path and the construction material was said to have been disposed of properly. Some of the left over construction material was used to fill in patches along the sides of the footpath.
- PO (HWF) and the community are the two stakeholders actively involved in the project.

- **Sanitation:**

- One sanitation project was selected for evaluation is located in Neelum, AJK and being managed by HWF.
- Latrines, T- hoodies and covered drains are used for sewage disposal.
- A total of 40 latrines were provided. While it was reported that the latrines are cleaned daily, the community has not been trained adequately about the usefulness of hygiene practices.
- No open defecation was prevalent in the presence of latrines.
- No particular brick lining was seen in the T- hoodies to avoid groundwater contamination.
- These were not the common latrines and were provided in individual houses.

- **Technological Innovative Projects:**

- Hydro Power channel repair:

- One project was selected from this category and is located in Neelum, AJK.
- The community members took part in the channel repair, no compensation was required for the affected people as they willingly donated their pieces of land; however a completion report has not been prepared so far (completing date 30 June 2012).
- About 150 households are said to have benefited from the project and monitoring is done by both the community and the PO (HWF) staff. No particular risk of soil erosion or disturbance to fish was observed in the area due to channel repair.

- Sprinkler System:

- A Sprinkler system was assessed in Layyah, Punjab. The PO reported that the main objective of the project was to irrigate the fields because of lack of rain in the region.
- The equipment was not installed before the growing season and no impact assessment study was conducted, but the flow of water has been improved and overall agriculture yield has also shown positive trend.
- The quality of water was also tested at the initial stages of the project.

- The entire process was done with community consensus and the community shared 20% of the total cost.
- The project has overall benefited about 210 people. The PO involved was SAP-PK.

- **Land Reclamation Works:**

- Land Protection:

- One land protection project was assessed. The construction was done with standard materials but the completion report has not been prepared as yet, the POs were going to submit the completion report by 30th June 2012.
 - The magnitude for flooding was not determined but a monitoring mechanism for the protection of bund has been developed involving both the community and the PO (HWF) staff.
 - Almost 110 households have been benefited.
 - No impact assessment study was conducted; however, the design did include consideration for soil erosion and seepage.
 - The project site was in Neelum region of AJK.
 - The land protection wall was of gabion structure
 - A contribution of ALKRSP has also been identified in completing the protection wall. This is some sort of mutual understanding between HWF and AJKRSP, however no documentary proof or MOU was shown to WWF, as both POs claim that this protection wall is constructed by them.

- **IWEIP:**

- Water Course:

- One location was selected for monitoring of this project in Sanghar Sindh.
 - The katcha area in the surrounding was brought under cultivation as the water supply increased which goes against the ESMF guidelines.
 - PO (SAFWCO) and the community organization were the two stakeholders in the project.

Land Leveling:

- Proper measures were taken by the PO (SAFWCO) for executing land leveling in an efficient manner. The farmers were well aware of the relationship of top soil with the yield of the crop.
- A total of 5 people volunteered for the project and two households benefitted from it.

4.2.5 Microcredit Interventions

In addition to the 60 projects selected, three micro-credit interventions were also selected to be assessed in this study. The purpose of the micro-credit interventions is to enhance the household income and develop entrepreneurial skills among beneficiaries. Two of the selected micro-credit projects are being run by Chenab Development Foundation (CDF) in Layyah, Punjab while the third one is by Sindh Rural Support Organization (SRSO) in Khairpur, Sindh.

The projects in Layyah include livestock rearing and an embroidery project. For both projects, there was no knowledge of Form A and Form B. While, the PO was aware of ESMF but they did not have a copy of the document. Given that the socio-economic conditions of the area are poor, the importance of micro-credit interventions is apparent. A total of 7 households benefitted as a result of the embroidery project; all the loans were given to individuals, no group loan was given. The lead activist in this project approached the PO, in order to enhance her family business. She has also involved other women in the project. Similarly, the livestock rearing project benefitted a total of 10 households. In this case the loan was obtained to strengthen and enhance already existing livestock rearing business. The stakeholders seemed very enthusiastic about their future by receiving credit from CDF and there was a trusting relationship between community and the social mobilizer.

In Sindh, the main purpose of the project is to provide loans to farmers for agricultural inputs. Form A and Form B of the project were available. The credit was used for the purchase of pesticides for agriculture and CO was trained on Community Management Skill's Training (CMST). It was reported that the farmers were not educated about the disadvantages of over use of fertilizers, storage requirements of fertilizers, crop rotation, land fallowing, hazards of using pesticides and integrated pest management. A total of 22 households benefitted from the project in Sindh and 6 women from the community volunteered in it. The advantages reported of this project include self-reliance of the borrower and increase in crop yield.

4.3 Comparison of Field Assessment of EMF and ESMF:

A detailed comparison of the field assessment of EMF and ESMF has been mentioned in the table below:

Table 12: Comparison of Field Assessment of EMF and ESMF

	Recommendations from 2009 external monitoring study	Implementation in ESMF and findings in 2012
Community Participation		
1.	Capacity of the community should be strengthened through provision of manuals, training sessions and awareness initiatives	Community meetings were held to spread awareness about sanitation and hygiene and some training were conducted.
2.	Community ownership of projects needs to be enhanced by involving community at all levels of the project processes from planning to implementation and later maintenance.	Community ownership has been observed through formation of committees which were also involved in monitoring of the projects.
Training for disposal of medical wastes		
3.	Technical training for staff in health projects is essential for the handling, segregation and safe disposal of hazardous medical waste.	Although training sessions were conducted in most of the project locations but safety measures for hazardous medical waste need to be improved. For example, keeping records of safe disposal pits and evaluating working of the incinerators.
Project Maintenance		
4.	Post projects maintenance needs to be clearly outlined in order to clarify the responsibility of the stakeholders with regard to post-project O&M.	Same situation exists
5.	A few physical infrastructure projects are not being maintained properly. For example small cracks in bridges were observed during field assessment. Ownership of projects by the communities is very important for project maintenance.	Maintenance of community physical infrastructure projects was not observed in a few locations. For example, in AJK, cracks were observed in one of the link roads.
Water Testing and Storage Tanks		
6.	Water quality testing should be carried out for all water related projects and reports should be made available	Not all DWSS projects showed compliance in water quality testing.
7.	Regular maintenance of water tanks to check any leakage must be ensured. The water tanks should be properly covered to prevent any chances of contamination.	The water storage tank was covered and was maintained by the community organization

Re-plantation of Trees		
8.	It should be ensured by the POs and PPAF that plantation of trees of indigenous species should be carried out where trees have been cut. It is important that these plants should be monitored for at least 2 years to ensure their survival.	ESMF guidelines also contain the same condition however this is not being practiced.
Education Guidelines		
9.	A manual for Environmental Education should be developed at least in Urdu and preferably in regional languages.	Same situation. No environmental education manual developed

5. DROUGHT MITIGATION AND PREPAREDNESS PROGRAM (DMPP)

The PPAF has initiated a number of Drought Mitigation and Preparedness Plans (DMPP) in the various parts of the country, with the aim to eradicate drought conditions in a specific area and to improve the overall standard of living and livelihood of the people. For this current assignment and for evaluation and assessment purposes, the DMPP implemented in three union councils of Choti Bala, Wadoor and Sakhi Sarwar situated in District Dera Ghazi Khan (D. G. Khan) in Punjab Province was selected. Overall, there were 94 various interventions under this DMPP (Figure10). These include;

- Water course lining (5)
- Pipe irrigation (42)
- Rain water harvesting ponds (5)
- Diversion bunds (2)
- Soil protection bunds (38)
- Over flow / land reclamation works (2)

The DMPP was officially started on 1st January 2010 and completed on 31st January 2012. The DMPP was implemented by Human Resource Development Society (HRDS), while after completion; it is now managed by Community Organizations (CO) of respective localities. The initial survey was conducted by HRDS to determine the need of various interventions and to develop the plan accordingly. Around 15 to 20 members from each CO participated in the project. The community consensus was reached after making them realize through meetings that the project will help them in conserving as well as efficient use of water. PO and COs jointly implemented this project with the financial support from PPAF and community contributions. They did not seek any kind of financial support from the government or any other source. HRDS office was located in D.G. Khan but after completion of the project, the D.G.Khan office was closed and all activities are now being monitored from their head office in Islamabad; this is one reason that PO does not have all the relevant documents available in D.G.Khan. All the record was shifted to Islamabad office, where it was readily available.

5.1 Benefits of DMPP

The project has provided benefit to more than 2700 households and a total of 23,953 individuals in various ways; the project seems quite effective in terms of its benefits, which helped in water retention, flood protection, soil reclamations and an overall improved irrigation system resulting in better agricultural activity in the area. A total of 5 interventions of various sub-types (e.g. water channel, rainwater harvesting pond, soil protection bund, pipe irrigation scheme and overflow works) were visited during field assessments. Pipe irrigation schemes were found quite useful and beneficial as they were quite efficient in distributing irrigation water quickly and without losses. A pipe irrigation scheme in Basti Faiz Muhammad Gabol was visited by WWF-Pakistan evaluation team. A significant benefit of this intervention has been observed in the field. The area under cultivation has almost been doubled with the help of pipe irrigation which

helped control the water losses as compared to the conventional open water channels. The production of wheat has also been significantly increased. Both local and external labour was hired for the process however no child labor was involved. The community has been involved in the project throughout so that they get a better understanding of what developments are being made in their locality.

5.2 ESMF Compliance and Other Key Findings

During desk and field assessment, considerable gaps were identified, which are quite significant and needs urgent attention. Following are the observations on DMPP;

- Most of the interventions were found different from what was proposed in the Project Proposal at the time of approval. e.g. check dams and delay action dams were proposed in the proposal but these were not implemented in the field, instead diversion bunds and overflow bunds were initiated which were nowhere mentioned in the proposal. Similarly 40 rain water harvesting ponds were proposed but only 4 were constructed, only 10 pipe irrigation schemes were proposed but 42 were implemented in the field. This is a huge difference in project interventions and yet no documentary proof is available to justify this change. Approval of each intervention was however granted by PPAF and relevant approval forms were found attached in the project documents, but the relevance of these interventions in the light of overall project objectives were not assessed.
- No mechanism was found to assess that the objectives of a DMPP were achieved with these changed interventions.
- According to the ESMF guidelines, all DMPPs should undergo detailed environmental and social assessments. A comprehensive Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA) are therefore required for this DMPP. The EIA and SIA should be as per guidelines of Pakistan Environmental Protection Act (PEPA) 1997. It is thus required that a comprehensive EIA and SIA should be prepared before the start of this project and necessary approvals should be obtained from respective authority; in that case Punjab Provincial Environmental Protection Department. It was however revealed through desk and field assessment that although, EIA and SIA has been conducted but it was done at a very later stage. Even after five months of the completion of project, the EIA and SIA reports are still in draft form; hence no necessary approvals have been obtained from the competent authority. No public hearing was conducted. This is a clear violation of not only ESMF but also PEPA 1997.
- During interview with PO, it was revealed that no funds were allocated for EIA and SIA studies in the project financials. This is the main reason the PO was unable to implement ESMF guidelines.
- During desk studies, the relevant Form A of each intervention were found attached in their respective files, however couple of them were found missing and few of them were the older versions taken from EMF document. This was mainly because no specific guidelines were given in ESMF for some interventions.
- No completion certificates (Form B) were found in any of the file.

- The copies of ESMF and RMUG were not available in the field office; however, they were available in PO head office in Islamabad.
- There was no dedicated environmentalist appointed by PO to implement ESMF. No budget for any dedicated environmental expert was allocated in the project financials.
- No professional staff of PO got any training on ESMF or environment from PPAF during the implementation of this project. However, a training session on ESMF was attended by one of the professional from PO last month in May 2012.
- During assessment of rain water harvesting pond, the community informed that they drink water from this stagnant pond. However, as per DMPP objectives, this pond was not meant to be used as drinking water source. It was only meant for water storage for agricultural purposes. It is therefore necessary to educate people not to drink water from this pond. If it is intended for drinking, then a proper water quality assessment should be done and a management plan should be developed to keep pond clean from possible pollutants.
- This same water harvesting pond in Basti Rustamani Gharbi was also found very close to the community graveyard. There were no boundaries of graveyard, it was therefore difficult to assess if it is at an appropriate distance from the pond as required in ESMF. These things should be considered while designing the interventions.

5.3 Conclusion and Recommendation for DMPP:

As far as the compliance with ESMF is concerned, the project was found partially in compliance. Based on the evaluations, it was observed that partial non compliance is not entirely a PO or PPAF's fault or negligence. The system itself is quite complicated. For example, the interventions initiated under DMPP are small scale interventions and are scattered in three union councils. It seems very difficult to assess the integrated cumulative impacts of these interventions. The need for a comprehensive and detailed EIA / SIA is not justifiable for such type of interventions; instead, individual assessments of these interventions are good enough to safeguard local environmental issues (if there are any). However, this is a PPAF policy matter and can be dealt accordingly. Some key recommendations for DMPP are as below;

- The ESMF guidelines should be reviewed as there seems no justification for full EIA & SIA of certain DMPPs.
- If an EIA/SIA is mandatory, then it should be done in a proper manner. i.e. assessments should be done before the start of the project and necessary approvals from respective authority should be obtained.
- Appropriate funds for EIA/SIA should be allocated in the project budget and no approvals from PPAF shall be granted until and unless all EIA/SIA requirements are met.
- Proper capacity building of POs is also required for the implementation of ESMF guidelines.

6. CONCLUSION

WWF-Pakistan has previously been involved in the monitoring and evaluation of PPAF interventions. In this current assignment, WWF-Pakistan has seen slight positive changes in the implementation ESMF as can be observed from the two comparison tables. There is still room for improvement in implementation of ESMF at all levels i.e. PPAF, POs and COs. During the assessment, numerous gaps were found in ESMF compliance which seems to be as a result of lack of training and capacity of the POs. However, many POs indicated that they are in the process of receiving training from the ESM unit of PPAF which is a positive step towards incorporating environmental and social consideration into projects.

7. RECOMMENDATIONS

- **Focal persons for ESMF IV:** Train POs for record keeping especially by providing essential guidance of Form A and Form B and ESMF implementation. ESMF IV guidelines should be disseminated to other active POs as well. In addition, more POs should plan to have focal persons with at least basic understanding of ESMF.
- **External monitoring** by a third party (as per guidelines of ESMF) should be conducted on annual basis so as to monitor implementation of ESMF by POs.
- **Training for disposal of medical wastes:** Improve safe practices at health facilities especially in record keeping of disposal pits and practices such as incineration are very dangerous for human health and the environment.
- **Project Maintenance:** Support for maintenance of projects such as community physical infrastructure projects was lacking. There is a need to set up guidelines for project maintenance for ensuring quality control.
- **Water testing and water quality:** Even though water testing in some locations was observed, at others such as in the case of DWSS, there was no water testing and even if water testing was done, no reports were available. Water testing at all relevant sites must be ensured especially in areas where tube wells and DWSS projects are being implemented. In areas of heavy metals contamination, water testing in the case of drinking water should be mandatory.

In desert areas where rainfall is sparse, installation of tube wells may not be the best option for irrigation in the long term, the underground water quality and quantity may deteriorate as a result of over pumping of water. A detailed study of groundwater conditions should be done before awarding any such project, else alternate means of irrigation such as storage ponds might help fulfil immediate irrigation needs.

- **Liaison with government bodies:** In all projects local government departments were not involved. For long term impacts and sustainability of the projects, relationships must be established with local government departments.
- **Re-plantation of trees:** For any construction that involves tree cutting, it must be ensured that double the amount of trees cut, is replanted to avoid other potential environmental concerns such as deforestation and soil erosion. Furthermore, ESMF does not outline the type of trees (e.g. fruit trees, etc.) that must be planted in place of the ones cut down. It must be specified in the ESMF guidelines what kind of trees must be planted to compensate for the trees that have been cut down. Any trees that have to be cut down as a result of the project need to be specified at the stage of Form A and costs to re-plant trees must be incorporated prior to start of the project. This must be specified in the environmental profiles of the villages or the project area.