Republic Of Yemen
Presidency of the Council of Ministers
Social Fund for Development




Environmental and Social Management Framework (ESMF) Executive Summary

19th February, 2015

Social Fund for Development Phase IV (Additional Financing 2)

Contents

Acronyms

AP	Approved Sub-project
BAS	Bid Analysis System
BM	Branch Manager
BQ	Bill of Quantities
CLTS	Community-Led Total Sanitation
CT	Completion and Takeover
CLDP	Community and Local Development Program
ECO	Environmental Coordinator
ESMF	Environmental and Social Management Framework
ESR	Environmental and Social Responsiveness
EMP	Environmental Management Plan
EPA	Environment Protection Authority
IDA	International Development Association
IP	Implementation Party
LIWP	Labor Intensive Works Program
MA	Ministry of Agriculture and Irrigation
MDG	Millennium Development Goals
MENA	Middle East and North Africa Region
MIS	Management Information System
MSWF	Ministry of Social Welfare
O&M	Operation and Maintenance
PAC	Projects' Approval Committee
PO	Project Officer
PUO	Project Unit Officer
PRA	Participatory Rural Appraisal
PU	Procurement Unit
SC	Supervising Consultant
SA	Sponsoring Agency
SFD	Social Fund for Development
SMED	Small and Micro Enterprises Development Program
SWMP	Solid Waste Management Plan
TA	Tender Announcement
TD	Tender Document
TCBU	Training and Capacity Building Unit
TO	Technical Officer
UH	Unit Head
UI	Under Implementation
WEU	Water and Environment Unit
WB	World Bank

Executive Summary

Preamble

1. This Environmental and Social Management Framework (ESMF) is prepared for the Social Fund for Development (SFD) IV Projects: SFD IV and SFD IV Additional Financing 1 (AF 1)—under implementation; and the proposed SFD IV Additional Financing 2 (AF 2). The ESMF replaces the SFD January 2010 Environmental Management Plan (EMP).

Introduction

2. Yemen, one of the poorest countries in the Middle East and North Africa (MENA) region, faces daunting challenges in an uncertain global and regional environment. Living conditions for much of Yemen's population remain difficult. Yemen is also facing rapid population growth, lack of clear alternatives to the oil economy, limited institutional capacity and outreach of the State, rapidly-depleting water reserves, poor infrastructure, and acute gender inequality issues. According to the World Food Program, food insecurity affected approximately 45 percent of the population in 2012, with almost half of children under five in the country – two million children - chronically malnourished and one million acutely malnourished. Given the country's high dependence on staple food imports, the reduction in oil prices has led to economic hardships and a surge in the food crisis and poverty, especially for the majority of the population residing in rural areas. Political crises have meant that the limited resources for human development and poverty alleviation are further constrained. Most major countries and international organizations have expressed continuing support, and in many cases significantly greater support, for the economic development of Yemen.

3. Reducing poverty in Yemen requires, among others, village-level infrastructure improvements and greater access to social services delivered through diversified, localized approaches that address the needs of marginalized rural areas where indicators are farthest from the targets laid out in the Millennium Development Goals (MDGs). Poverty is pervasive in rural areas, where much of the population resides. The dispersion of the population and the difficult topography pose a serious challenge to delivering social services: Yemen has around 35,000 official villages (with approximately 136,000 human settlements), many with less than 100 households, which makes the provision and maintenance of social services very expensive.

Project Description

4. The Social Fund for Development IV (SFD IV) project is expected to have important environmental and social impacts and benefits. SFD IV has been a major contributor to Yemen's efforts to progress towards the MDGs and support key elements of Yemen's current Poverty Reduction Strategy Paper. This includes: better human capital by expanding basic education, closing the gender gap in basic and secondary education, and improving access to health care; ensured environmental sustainability including policies for and investment in water sustainability and soil conservation; and improved governance through encouraging better budgeting and expenditure controls, as well as high fiduciary standards. After the successful completion of the previous SFD projects, SFD IV and SFD IV Additional Financing 1 (AF 1) are now under implementation. In addition, SFD IV AF 2 is now under preparation. Below is a description of the SFD IV projects.

I. The Social Fund for Development Phase IV Project (SFD IV) was financed by a World Bank IDA Grant during 2010, with the project development objectives to: (i) improve access to basic services; (ii) enhance economic opportunities; and (iii) reduce the vulnerability of the poor. This Project is currently under implementation. The SFD IV has the following four components, consisting of four operational Programs: (i) Community and Local Development (CLD) program; (ii) Small and Micro Enterprises Development (SMED) program; (iii) Capacity-Building (CB) program; and (iv) Labor-Intensive Works (LIW) program.

Component 1: Community and Local Development (CLD) program. The objective of this component is to improve access to basic social services. Under this program, SFD will continue to implement community-based subprojects in various sectors, while building the capacity of local authorities and engaging selected districts in implementing development projects. Specifically, this component will do this through:

- Provision of Sub-grants for the carrying out, by communities and local authorities, of Subprojects consisting of infrastructure and other services in various sectors, including: education, health, special needs groups, water and sanitation, cultural heritage, agriculture, and rural roads.
- Carrying out, through the provision of goods, training and consultants' services, activities to develop SFD's annual operational plans as well as the capacity of selected local authorities and communities in participatory planning and management of development activities.

Component 2: Small and Micro Enterprises Development (SMED) Program. The objective of this component is to support the overall SMED program of SFD which is: (i) strengthening and building capacity of local microfinance providers; and (ii) actively promoting entry into the market by creating an enabling environment and by encouraging the establishment of new financial service providers managed on a private sector basis by international investors with strong technical partners. This component will be supported through:

- provision of Sub-grants to Eligible Intermediaries to build up the institutional capacity of such Eligible Intermediaries to deliver financial and business development services; and
- carrying out, through the provision of goods, training and consultants' services, a program to further support the institutional capacity of micro finance institutions and to create an enabling environment for small and micro enterprises development, including through the establishment of a credit bureau, the development of consumer protection legislation and associated regulations, and the development of financial literacy training programs.

Component 3: Capacity-Building Program. A third set of activities will support the other three programs through a focus on capacity-building of local entities, including local and central government bodies, NGOs, and communities. The component will also support the strengthening of SFD's own institutional capacity, to include for example monitoring and evaluation, management, and transparency. This component will be supported through:

- carrying out, through the provision of Sub-grants, goods, training and consultants' services, Subprojects to develop or enhance the capacity of selected governmental organizations, local authorities, community-based organizations, non-governmental organizations, private sector groups and individuals in the areas related to SFD activities.
- carrying out, through the provision of goods, training, consultants' services, and operating costs, a program to strengthen the institutional capacity including the project management capacity of SFD.

Component 4: Labor-Intensive Works (LIW). The objective of this component is to provide a cash-for-work safety net to target households to bridge their consumption gap during shocks and stagnation of agricultural seasons, while increasing the productive assets of communities and households. It will also aim to raise awareness among the targeted communities about the dangers of malnutrition and damages of Qat, and build the capacity and enhance the skills of the targeted communities to cope with future shocks. This component will be supported through:

- provision of Sub-grants to targeted communities for the carrying out of labor-intensive works Subprojects in: irrigation, water harvesting, agricultural terraces rehabilitation, agricultural land improvement, maintenance and improvement of village access earth roads, the improvement of drinking water sources, watershed management and other fields based on the priority needs of each community.
- carrying out, through the provision of goods, training and consultants' services, activities to develop the SFD's annual operational plans as well as the capacity of select local authorities and communities in participatory planning and management of development activities.

II. SFD IV Additional Financing 1 (AF 1): Based on SFD achievements on during previous phases, World Bank obtained additional financing Grant for SFD IV (AF 1), which was approved in June 2013 to finance additional activities directed to youth under the *Labor-Intensive Works Program Component (LIW)* of the SFD IV project. The AF 1 is scaling up the SFD IV's LIW Program, with the aim of providing income opportunities and work experience to young people and women in the provision of health and education services. The AF 1 included the following two new subcomponents: to (i) support LIW targeted to unemployed youth; and (ii) introduce cash-for-work opportunities for youth and women in the delivery of social services. SFD IV AF1 is currently under implementation.

III. SFD IV Additional Financing 2 (AF 2): Based on the continued success of SFD IV, the World Bank is now seeking to obtain a second additional financing Grant as SFD IV (AF 2), to help meet the financing gap under the SFD IV's largest component, the *Community and Local Development Program Component (CLDP).*The Project Development Objectives of the SFD IV AF 2 will be the same as the original SFD IV project, which are to: (i) improve access to basic services; (ii) enhance economic opportunities; and (iii) reduce the vulnerability of the poor.

Implementation Arrangements

5. The Project will be implemented by the Social Fund for Development (SFD) which has a solid track-record of promoting development in areas as identified in the above projects. SFD was established in 1997 as an autonomous State organization under the Council of Ministers. The Prime Minister is the Chairman of its Board of Directors. Since its establishment, SFD has become one of Yemen's main development actors, with support from the Government and the donor community. SFD plays a vital role in improving living standards in rural areas by providing funds to needy communities so that access to social services can improve. SFD follows a demand-driven approach and thereby promotes its activities among the target communities and motivates them to apply for priority services. Its involvement has included areas such as education, health, water and sanitation, agriculture, village access roads (rural feeder roads), micro and small enterprise (MSE) development, social protection and workfare programs.

6. SFD has expanded and diversified its operations over the last 17 years, maintaining high standards in implementation and earning a strong reputation with communities and other stakeholders. The subprojects will continue to be implemented through SFD's branch offices and supervised by main implementation units. SFD has proven capacity to implement World Bank safeguard policies as it has gained significant experience through implementing the previous phases. SFD has well established procedures for environmental/social screening and classifying subprojects; monitoring to ensure that mitigation measures as outlined in the ESMP, are implemented; and reporting on compliance with safeguard policies.

7. The Water and Environment Unit (WEU) of SFD will be responsible for the monitoring and evaluation of the ESMF with support from the Training and Capacity Building Unit (TCBU) of SFD in the social aspects whenever needed.

Objectives of the Environmental and Social Management Framework (ESMF)

8. The purpose of the ESMF is to ensure that environmental and social management is integrated into the development cycle of individual subprojects. The SFD IV projects will be implemented as a community-led effort, where communities will be empowered to enable them in identifying their available resources and priority needs. Since exact sub-projects are not determined at the onset of project and will be decided during project implementation based on demand and consultations with the concerned communities, the instrument of the Bank Operational Policy OP 4.01 on Environmental Assessment is determined as ESMF.

9. The ESMF is intended to serve as a practical tool to guide identification and mitigation of potential environmental and social impacts of proposed investments and as a platform for consultations with stakeholders and potential project beneficiaries. The ESMF has been prepared in compliance with the Bank's OP 4.01 and relevant Yemeni policies on environmental assessment. The ESMF identifies the policy triggers for the project, the screening criteria of sub-projects, the environmental and social impacts for the likely sub-projects and the mitigation measures to mitigate the identified risks, assessment of the institutional capacity of the implementing agency and measures for capacity-filling gaps, and an estimate of the budget needed for the implementation of the ESMF.

Application of ESMF

10. The first Environmental Management Plan (EMP) for SFD was prepared in 2004, and the EMP was then updated during 2010. While SFD has been undertaking independent annual environmental audits, it was decided to improve the EMP report further by integrating lessons learned, and to replace it with an Environmental and Social Management Framework (ESMF). Due to the demand driven nature of the SFD's programs, specific types, designs and locations of sub projects are not know in advance, until implementation. Therefore the ESMF is the appropriate document which sets out guidelines and procedures for assessing potential environmental and social impacts of subprojects. These procedures and guidelines will help the implementing agencies in screening subprojects' eligibility; determining their environmental and social impacts; identifying appropriate mitigation measures to be incorporated into the sub-project; and specifying institutional responsibilities for implementing preventive, mitigation and compensation measures, and monitoring and evaluation.

World Bank Safeguard Policies

11. The SFD IV and AF 1 projects that are under implementation, and the proposed AF 2 project—are all classified as environmental Category B according to the Bank's OP 4.01. The projects are expected to have significant positive environmental and social impacts, with relatively minor and localized negative impacts. The ESMF has been developed to ensure environmental and social due diligence for subprojects. The Bank safeguard policies on Environmental Assessment (OP 4.01) and Physical Cultural Resources (OP 4.11) are triggered by the SFD projects.

	Safeguard Policy	Policy triggered	Justification
1	OP 4.01: Environmental Assessment	Yes	The policy is triggered due to the small-scale physical interventions that would be financed under SFD projects in several sectors including education, health, rural roads, agriculture and rural development. The project is not expected to result in significant, negative or irreversible impacts. Due to the nature of interventions, some subprojects could result in adverse environmental impacts which are expected to be site-specific and temporary in nature. The ESMF includes methodology to apply an environmental and social screening process that will guide in determining the potential environmental and social impacts of subprojects and in the application of appropriate mitigation measures. Site-specific EMP will be prepared during implementation and before construction as required for the subprojects.
2	OP 4.04: Natural Habitats	No	The policy is not triggered. The project activities will not cause conversion or degradation of natural habitats or critical natural habitats as defined by the policy.
3	OP 4.09: Pest Management	No	The policy is not triggered.
4	OP 4.11: Physical Cultural Resources	Yes	The policy is triggered due to the positive efforts envisaged under the SFD projects towards cultural heritage sites, and will be covered within the scope of the ESMF, which includes a separate annex on cultural heritage aspects.
5	OP 4.12: Involuntary Resettlement	No	The small scale nature of infrastructure works combined with a community participatory approach makes it possible land to be obtained as needed through voluntary land donation. Any subprojects which involve involuntary taking of land will not be eligible for funding under the SFD IV projects. Therefore the Bank Policy on Involuntary Resettlement OP 4.12 will not be applicable. Guidelines for safeguards screening, voluntary land donation and a negative project list are included in the Operational Manual.
6	OP 4.20: Indigenous People	No	The policy is not triggered as indigenous people as defined in the policy are not present in project areas.
7	OP 4.36: Forestry	No	The policy is not triggered as project will not be implemented in any forested areas. .
8	OP 4.37: Safety of Dams	No	The policy is not triggered. SFD IV projects under IDA financing will not include construction of dams as defined

			in the policy.
9	OP 7.50: Projects on International Waterways	No	Policy is not triggered as the project will not undertake any activities in the catchment areas of international waterways and shared aquifers.
10	OP 7.60: Projects in Disputed Areas	No	Policy is not triggered as project activities will not be implemented in any disputed areas.

Consultations and Disclosure of the ESMF

12. As part of the SFD IV and SFD IV AF 1 projects, consultations have been an ongoing process with key stakeholders and other beneficiaries. However, the project design including the environmental/social aspects were shared and consulted with key stakeholders during consultations that were held on April 9, 2014. **Annex (12)** contains a summary of consultation where points and concerns of stakeholders were documented. The annex contains also a list of names of participants. The Final draft of the ESMF has been reviewed and cleared by the World Bank and disclosed on the web site of SFD on xxxxxxxxxx. The ESMF has been also disclosed on the Bank Infoshop on xxxxxxxxxxx.

Potential Environmental and Social Impacts

13. The SFD IV projects are expected to result in significant social benefits and positive environmental impacts. Potential negative environmental impacts anticipated for SFD IV projects are minor and of temporary nature during the construction/rehabilitation of small-scale interventions including dust, noise, waste generation, disruption to traffic and movement, health and safety; and would be mitigated by implementing appropriate mitigation measures as identified in the ESMF. ***Annex (1)*** shows expected impacts for samples of subprojects during construction and operation, the proposed mitigation measures, the party/entity responsible for follow up and frequency of visits/testing.

14. SFD has been progressively building on and integrating lessons learned in its follow on projects, including enhancing the project's longer-term environmental rehabilitation impact. For public works programs, greater consideration is given to agricultural lands and terraces that can be rehabilitated for the benefit of poorer households. The LIW includes the rehabilitation of community assets in the fields of soil protection, agricultural terraces rehabilitation, maintenance and improvement of local feeder roads, streets pavement and other types of labor-intensive work based on the demand and priority needs of each community. In addition to the LIW program's regular menu, subprojects more suitable for youth and urban and semi-urban areas will be added, such as planting trees, paving cobblestone streets, cleaning shorelines, and especially rebuilding damaged public spaces. Cash will be provided to help mitigate the impact of increased food prices through temporary work opportunities using a well-tested community targeting mechanism, as well as to support rehabilitation of basic community assets. The CLDP will continue delivering poverty-targeted improvements in community infrastructure while building local-level capacity and creating employment. Subprojects will be targeted to poor communities and priorities defined by them including: school construction/rehabilitation; water and sanitation; health; rural feeder roads; agriculture and rural development and cultural heritage.

15. SFD is familiar with the provisions of the Bank' safeguards policies, including the implementation and monitoring of EMPs and related instruments due to the experience gained from the implementation of previous SFD phases with the Bank.

In addition, the participatory techniques and the governance mechanisms incorporated in the SFD's Operational Manual will ensure transparency of processes and reduce opportunities for elite capture.

Environmental and Social Auditing and Reporting

16. Annually, SFD recruits an environmental consultant to conduct an independent environmental and social compliance and performance audit. The audit report will then be reviewed within the SFD environment unit and then presented to SFD management. Based on the findings of this report, the SFD Managing Director (MD) will forward an "Annual Environmental Report" to the World Bank. In addition to SFD's independent annual audit, compliance of the projects with the ESMF will be included in the project specific progress reports that are submitted to the Bank.

Cost of ESMF Implementation

17. The cost of implementation of ESMF is estimated at US$500,000 (to be included in the cost of contracts).

Training undertaken by SFD

18. With regards to training, SFD conducts five levels of training, and the cost associated is US$680,200, through 2020. The five levels of training includes: SFD staff level, related government staff level, consultant level, contractor level, and SA level. The amount allocated also includes awareness related activities. SFD staff training will include all POs an d BMs and the projects' approval committee (PAC) members. Government ministries and authorities related to SFD's activities and their branch offices at the governorate and district levels will receive training on the ESMF. With the development of subprojects, consultants will be trained in groups and this training will continue throughout the project period (2015-2020). In the same way, contractors, and SA will be trained in groups as soon as enough number of subprojects becomes ready for physical implementation. Table under section 12.7 of the main report shows the SFD budget allocation for education, training and awareness.

SFD Subproject Cycle Methodology using the ESMF

19. In Summary: Initial requests are received from communities' members. These request are subject to office screening for SFD's eligibility. A Participatory Rural Appraisal (PRA) team goes down to the field carrying the list of eligible received requests from several communities in addition to the list of sectorally targeted communities, to facilitate in identifying priorities. With the available allocated funds, and the communities' priorities, the branch office prepares the annual plan.

Ø After the approval of the annual plan, the project officers start annual plan implementation with registering requests into the Management Information System (MIS) and submit them to the Branch Manager/Unit Head (BM/UH). The BM/UH will either approve the request which becomes under preparation proposal or returns it to the Project Officer (PO) for modifications. When the request becomes under preparation proposal, the PO hires a qualified consultant to go down to the community to prepare the proposal which will include a preliminary design and a cost estimate. The proposal is submitted to the BM/UH who reviews the proposal and either approves it and returns it to the PO to go ahead with the detailed design or returns it with comments.

Ø If the proposal is approved, the PO hires a qualified consultant to prepare the detailed design and tender documents. The consultant should visit the community and see the location

of the proposed subproject and gather all the data needed for preparing the design and tender documents.

Ø The design and tender documents are then submitted to the BM/UH for review and approval. If the subproject was developed at the branch, then, the BM will either approve the subproject and submit it to the related UH or return it back to the PO with comments.

Ø Whether the subproject was developed in the branch or in the HQ, the related UH will review it and, if satisfied, submit it to the Projects' Approval Committee (PAC) or return it back to the BM with comments. The PAC reviews the subproject and either approves it or return it back to the UH with comments.

Ø If approved by the PAC, the subproject is returned to the PO to start preparing for implementation. At this stage the financing agreement (FA) is signed with the sponsoring agency (SA), and the tender is prepared for announcement. The PO and the Technical Officer (TO) work together to select the work and supply items needed for the subproject from a system called Bid Analysis System (BAS) and they come out with the final BOQ that will be handed to the bidders. The tender is announced, offers received, evaluated, and the tender is awarded to the most responsive and lowest price.

Ø The PO hires a qualified consultant for supervising the subproject, and a technician is assigned to work as a resident technician. The contract is signed and the work starts and continues till completion and final hand over.

20. According to the subproject cycle followed in the SFD (***Figure 1*** next page), the critical points where environmental and social issues will need to be addressed are:

- Ø At request registration in the MIS which is done by the PO. Here the PO will enter the environmental classification of the subproject A/B/C.
- Ø At the proposal stage where a draft design and cost estimate are prepared. Here the responsiveness of the proposal to the environmental and social issues is examined.
- Ø The detail design stage, where environmental and social impacts will need to be identified and mitigation measures are designed and incorporated in the subproject documents including the Bill of Quantities (BOQ), to ensure they are priced and thus become an obligation of the implementing and supervising parties. The environmental and social self-monitoring plan is prepared at this stage.
- Ø Approved project stage which prepare for tender announcement. At this stage the PO, TO, and PUO extract the work and supply items from the BAS system and come out with the final bill of quantities that will be handed to the bidders. Here the team should focus on essential items that should exist in all projects containing civil works i.e. temporary latrines, tippy taps, and PPE. If these items were not considered by the consultant and the PO, the team will discuss them with the PO and consultant and come with the decision to add them or not.
- Ø The implementation stage, where the role of the supervising consultant with regards to the ESMF will be stated clearly in the ToR. The ToR will also require

the follow up and reporting on the progress of implementing the mitigation measures.

Ø The operation stage, where the environmental and social self-monitoring plan is implemented and periodically inspected.

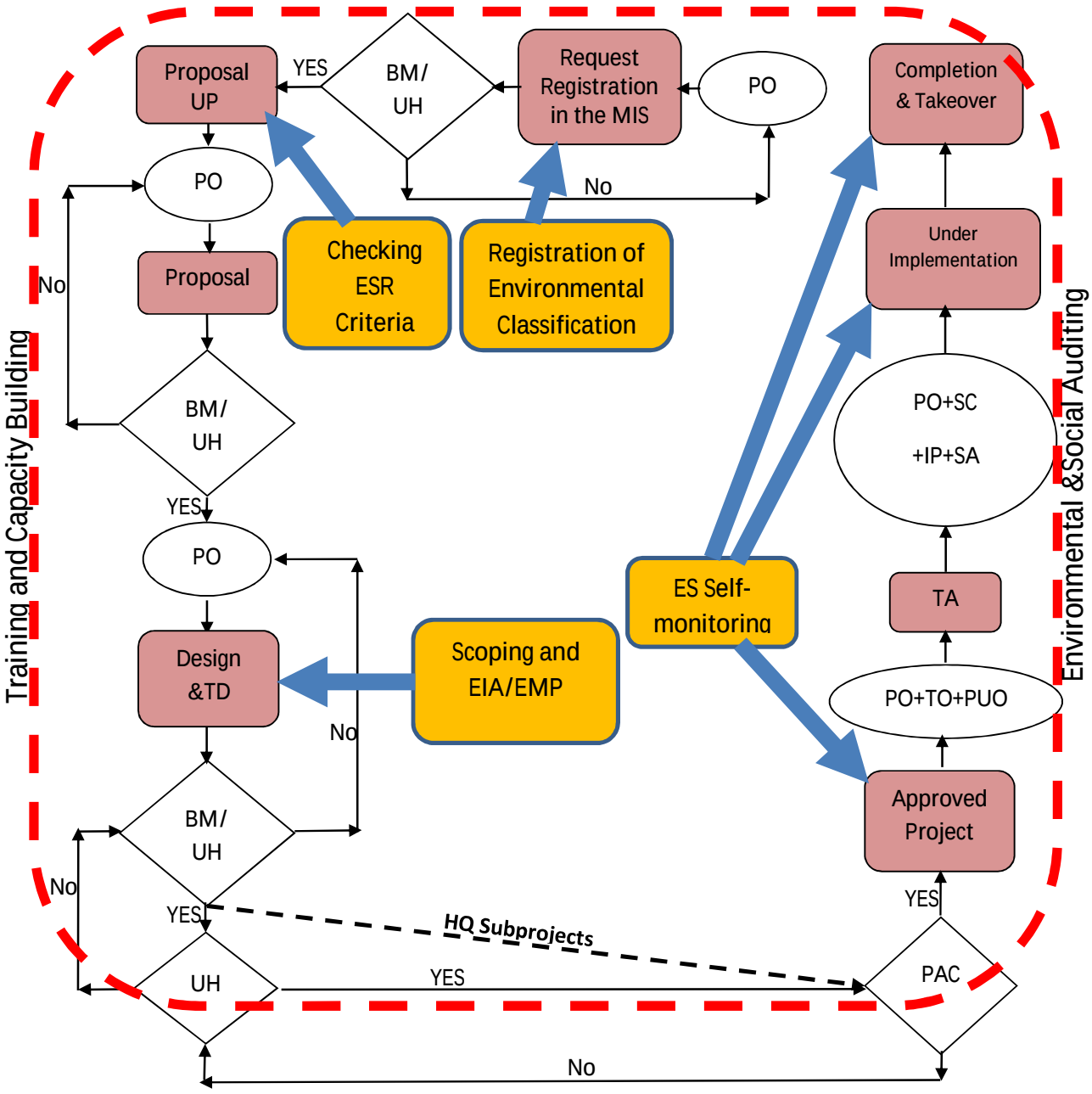


Figure 1: SFD's Subproject Cycle

Key of Abbreviations:

ESR=Environmental and Social Responsiveness, PO=Projects officer, BM=Branch manager, UH=Unit head, TD=Tender documents, PAC=Projects approval committee, TO=Technical officer, PUO=Procurement Unit Officer, TA=Tender announcement, SC=Supervision consultant, IP=implementation party, SA=Sponsoring agency, UP=Under Preparation, ES=Environmental and Social

Basic elements of the ESMF (see details in pages below)

a. Environmental screening and classification of sub-projects
b. Environmental screening and registration process using classification lists
c. Environmental and social responsiveness criteria at proposal stage
d. Checklist of expected environmental and social impacts to be addressed in the design stage
e. Environmental and social self-monitoring, reporting and periodic inspection
f. Environmental and social auditing and reporting
g. Environmental and social education, training and awareness

(a) Environmental screening and classification of subprojects: *The procedure followed by SFD for undertaking environmental screening and classification of subprojects is in line with the Bank's OP 4.01 on Environmental Assessment*. SFD undertakes environmental screening of the subproject proposals and classifies subprojects into Class A, B, and C, comparable to the Bank's classification of environmental category A, B and C of projects/subprojects. The classification is based on the significance of impacts which depend on the type, location, sensitivity, and scale of the subproject and the nature and magnitude of its potential environmental impacts. Accordingly, List C subprojects are those which are known to have no adverse environmental impacts and accordingly will not require any environmental assessment or follow-up. List B subprojects are those that are likely to have limited adverse environmental impacts that are temporary and/or site specific and can be reduced/avoided/mitigated with the implementation of appropriate mitigation measures, and these subprojects would require a scoping to be undertaken and a limited EIA/EMP is prepared as needed; and List A subprojects are those with significant adverse environmental impacts for which an independent full EIA will need to be prepared. *However, List A subprojects will be excluded from IDA funding. During the screening process if SFD comes across any of such List A subprojects (World Bank's environmental category A), they will be excluded from IDA funding*.

(b) Environmental screening and registration process using classification lists: After approving the annual plan, the PO enters the request data into the Management Information System (MIS) including the environmental classification (C or B) and submit the request to the Branch Manager/Unit Head (BM/UH). The BM/UH will review the request and amend/confirm the environmental classification.

(c) Environmental and social responsiveness criteria at proposal stage: This is done by using the formats prepared for each type of intervention of class B. The format includes decisive questions to examine the responsiveness of the proposal to the environmental and social issues. The answers to the questions are either "Yes" or "No". If the answer to any of the questions is "No", then the proposal is dropped or the location is changed to ensure full responsiveness to environmental and social issues. ***Annex (2)*** gives the environmental and social responsiveness criteria for SFD's interventions.

(d) Checklist of expected environmental and social impacts to be addressed in the design stage: The ESMF developed checklist of expected environmental and social impacts that will be addressed in the design stage. This is an important stage as it will pave the way for the implementation and operation stages. All the expected environmental and social impacts will be identified at this stage and the mitigation measures will be designed and incorporated in the subproject design and tender documents, particularly, in the BOQ so that it becomes

obligatory. The checklist contains questions about the expected environmental and social mitigation measures to be included in the project documents for each type of intervention and the answer will be "Yes" or "No". If the answer is "No", then the consultant/PO will need to justify this in the design report, and also include the completed checklist as an annex to the design report. **Annex (3)** gives the checklist of the environmental and social issues that need to be addressed at the design stage for SFD's interventions.

(e) Environmental and social self-monitoring, reporting and periodic inspection: The commencement of physical works is preceded by the following two preparation steps:

Ø Signing of the Financing Agreement (FA): The PO will prepare a FA which will state the role and commitments of SFD and the sponsoring agency (SA). All documents for land donation, compensation, water rights, system of operating and maintaining the subproject after completion are to be attached to the FA. ***Annex (7)*** contains the formats for land donation, land compensation and water rights, and ***Annex (10)*** shows the documents needed to be attached to the FA.

Ø Preparing the BOQ for Tender Announcement (TA) via MIS: The final BOQ and the TA are prepared via the MIS. The PO and technical officer (TO) together select the BOQ items from a system called bid analysis system (BAS) and then proceed with the TA. If the consultant omits, for example, the addition of PPE or the temporary toilets or the tippy tap, the missing items will be added into the final BOQ, and hence the POs and TOs will be trained in the ESMF to ensure that this step is undertaken accurately.

- ***Construction Phase:*** The PO prepares the ToR for the supervision consultancy service and selects the consultant from the consultants' data base. The existing ToR for supervising subprojects will be modified to incorporate the role of the supervising team in implementing the ESMF, and in monitoring and reporting the progress of implementing the mitigation measures. The PO will review the periodic reports and will follow-up periodically to ensure that environmental mitigation measures are being implemented. The representative of the SA will also report to the PO on the implementation of mitigation measures.
- ***Operation Phase:*** The party assigned for implementing the self-monitoring plan, prepared in the design phase, would be required to prepare and present to the PO, periodic self-monitoring reports as stipulated in the self-monitoring plan. The Environmental Coordinator (ECO) within SFD's Water and Environment Unit (WEU) will review the environmental self-monitoring reports, and will periodically inspect subprojects for environmental compliance and performance.

(f) Environmental and social auditing and reporting: Annually an environmental consultant will be recruited to conduct an environmental and social compliance and performance audit. The consultant is given a list of all SFD's subprojects, and he/she will select randomly the subprojects to be audited, which should include all SFD's sectors and programs, in different stages of subproject cycle including design, under implementation, and completed stages. The audit will include both desk and field audit review. Consequently, an audit report will be prepared by the consultant, reviewed by the ECO and then presented to SFD management. The executive summary of the audit report will be forwarded to the donors while the detailed report will be distributed to all SFD's branches for remedies, follow up and learning lessons towards current and future interventions.

(g) Environmental and social education, training and awareness: Five levels of training on the ESMF will be conducted: SFD staff level, related government staff level, consultants' level, contractors' level, and SAs level. SFD staff training will include Pos, BMs and UHs. Government ministries and authorities related to SFD's activities and their branch offices at the governorate and district levels will receive training on the ESMF. With the development of subprojects, consultants will be trained in groups and this training will continue throughout the project period. In the same way, contractors, and SA will be trained in groups as soon as enough number of subprojects becomes ready for physical implementation.

1. Introduction

1. Yemen, one of the poorest countries in the MENA region, faces daunting challenges in an uncertain global and regional environment. Living conditions for much of Yemen's population remain difficult. Yemen is also facing rapid population growth, lack of clear alternatives to the oil economy, limited institutional capacity and outreach of the State, rapidly-depleting water reserves, poor infrastructure, and acute gender inequality issues. According to the World Food Program, food insecurity affected approximately 45 percent of the population in 2012, with almost half of children under five in the country – two million children - chronically malnourished and one million acutely malnourished. Given the country's high dependence on staple food imports, the reduction in oil prices has led to economic hardships and a surge in the food crisis and poverty, especially for the majority of the population residing in rural areas. Political crises have meant that the limited resources for human development and poverty alleviation are further constrained. Most major countries and international organizations have expressed continuing support, and in many cases significantly greater support, for the economic development of Yemen.

2. Reducing poverty in Yemen requires, among others, village-level infrastructure improvements and greater access to social services delivered through diversified, localized approaches that address the needs of marginalized rural areas where indicators are farthest from the targets laid out in the Millennium Development Goals (MDGs). Poverty is pervasive in rural areas, where much of the population resides. The dispersion of the population and the difficult topography pose a serious challenge to delivering social services: Yemen has around 35,000 official villages (with approximately 136,000 human settlements), many with less than 100 households, which makes the provision and maintenance of social services very expensive.

2. Detailed Project Description

3. The SFD Programs are implemented across the country and therefore has a national coverage. The SFD Programs include contribution from 12 donors, including IDA funds from the World Bank. After the successful completion of the previous SFD projects, SFD IV and SFD IV Additional Financing 1 (AF 1) are now under implementation. In addition, SFD IV AF 2 is now under preparation. Below is a description of the SFD IV projects.

I. The Social Fund for Development Phase IV Project (SFD IV) (US$60 million) was financed by a World Bank IDA Grant during 2010, with the project development objectives to: (i) improve access to basic services; (ii) enhance economic opportunities; and (iii) reduce the vulnerability of the poor. This Project is currently under implementation. The SFD IV has the following four components, consisting of four operational Programs: (i) Community and Local Development (CLD) program; (ii) Small and Micro Enterprises Development (SMED) program; (iii) Capacity-Building (CB) program; and (iv) Labor-Intensive Works (LIW) program.

4. Objective: This program aims to enhance the productivity of poor households by ensuring that the public works interventions contribute to improving local productive capacities and livelihood opportunities (i.e., community and household asset creation).

5. Component 1: Community and Local Development (CLD) program. The objective of this component is to improve access to basic social services. Under this program, SFD will continue to implement community-based subprojects in various sectors, while building the capacity of local authorities and engaging selected districts in implementing development projects. Specifically, this component will do this through:

- Provision of Sub-grants for the carrying out, by communities and local authorities, of Subprojects consisting of infrastructure and other services in various sectors, including: education, health, special needs groups, water and sanitation, cultural heritage, agriculture, and rural roads.
- Carrying out, through the provision of goods, training and consultants' services, activities to develop SFD's annual operational plans as well as the capacity of selected local authorities and communities in participatory planning and management of development activities.

6. While the basic principles of targeting resources to the poorest communities in Yemen, participatory planning, and community based development will continue to underpin the CLD, some changes are being introduced in the approach for community development activities, as well as inclusion of a line of activity which supports the capacity-building of local authorities in the management of local development activities.

- Modified approach to community development. In addition to the existing demand-driven nature of community investments, whereby SFD responds to project requests from a community, in Phase IV, community investments will also respond to national sector plans and priorities, such as the education sector's master plan for schools or the water sector's national planning framework, or the national strategy of the health sector. In this variation, which is being termed the "MDG Gap Approach," the standards, criteria, and subproject cycle will remain identical to the existing guidelines except for the initial "application" stage, which will be guided by an analysis of national norms and/or data evidencing severe gaps in services. Elements of this approach have been applied in the Integrated Interventions and Special Programs elements of Phase III. This combination of modalities is intended to enhance SFD's contribution towards the achievement of the MDGs at the national level.

- Local development approach. As part of its commitment to support the decentralization strategy of Yemen, SFD will directly support local development through building capacity of a number of local authorities. Some major features of this new activity are: (i) SFD has signed a MOU with the Ministry of Local Administration regarding the delivery of its Empowerment and Local Development Program (ELD), which is the first stage of its support to local authorities. (ii) SFD will upfront formally agree on the 3-stage local development program with relevant national Government partners as a recognized process to certify or accredit local authorities as capable of managing resources for participatory local development. (iii) Since SFD cannot support all 333 local authorities simultaneously, it proposes to focus on approximately 80 districts with its first ELD stage of support. (iv) These ELD districts will be selected through objective, transparent selection criteria that would also consider geographical spread and ownership at the Governorate level. (v) SFD will sign agreements with each Governorate regarding the local development support it will be providing to districts. This will include Governorate commitments to sustained staffing of the selected districts.

7. Component 2: Small and Micro Enterprises Development (SMED) Program. The objective of this component is to support the overall SMED program of SFD which is: (i) strengthening and building capacity of local microfinance providers; and (ii) actively promoting entry into the market by creating an enabling environment and by encouraging the establishment of new financial service providers managed on a private sector basis by international investors with strong technical partners. This component will be supported through:

- provision of Sub-grants to Eligible Intermediaries to build up the institutional capacity of such Eligible Intermediaries to deliver financial and business development services; and
- carrying out, through the provision of goods, training and consultants' services, a program to further support the institutional capacity of micro finance institutions and to create an enabling environment for small and micro enterprises development, including through the establishment of a credit bureau, the development of consumer protection legislation and associated regulations, and the development of financial literacy training programs.

8. Given competing demands on IDA resources, it was agreed that IDA funds would be limited to technical assistance, capacity-building and business development services, while non-IDA sources would be used to finance loan funds to MFIs or banks.

9. During Phase IV SMED will continue to support with loan funds (mobilized from financiers other than IDA) and technical assistance the existing micro finance providers through an ongoing process of merger and consolidation. It will support the two microfinance programs in Aden and Abyan to merge in order to become a strong regional player in the South, and it will assist the largest microfinance provider – the NMF, which has a national coverage – to transform into a microfinance bank. Furthermore SMED will actively support at least one international microfinance provider (BRAC) to set up operations in Yemen and one private local financial institution to set up a microfinance bank. With experienced seasoned players entering the microfinance market, it is hoped that the microfinance sector will experience a boost in growth.

10. SMED will continue its work on the enabling environment, focusing on passage of relevant legislation/regulation for the establishment of a credit bureau as well as for consumer protection (including truth in lending). SMED will also continue supporting SMEPS via provision of sub-grants for operational support and business development services albeit on a decreasing basis and based on SMEPS achieving an agreed upon set of performance targets. Finally, SMED will undertake a feasibility study addressing options regarding its own sustainability and legal status. This study will inter alia analyze the option of transforming SMED into an independent apex agency (wholesale lending).

11. Component 3: Capacity-Building Program. A third set of activities will support the other three programs through a focus on capacity-building of local entities, including local and central government bodies, NGOs, and communities. The component will also support the strengthening of SFD's own institutional capacity, to include for example monitoring and evaluation, management, and transparency. This component will be supported through:

- carrying out, through the provision of Sub-grants, goods, training and consultants' services, Subprojects to develop or enhance the capacity of selected governmental organizations, local authorities, community-based organizations, non-governmental organizations, private sector groups and individuals in the areas related to SFD activities.
- carrying out, through the provision of goods, training, consultants' services, and operating costs, a program to strengthen the institutional capacity including the project management capacity of SFD.

12. The first set of activities listed above will be carried out by the Training and Organizational Support Unit (TOSU) which promotes effective identification, preparation, and implementation of SFD's diversified portfolio through training and enhancing skills of its various partners – communities, CBOs, NGOs, government agencies, private sector agencies

(consultants, contracts) and local authorities. TOSU will mainstream skills accumulation across institutions involved in the poverty alleviation and good governance agenda of Yemen. TOSU will continue its work on the development and implementation of training programs, development of manuals, qualification of consultants and trainers, and documentation of lessons learned from the field.

13. The second set of activities will be carried out by different departments within SFD itself, including the Monitoring and Evaluation Department, the sector departments, and the branch offices. These activities will include: regular management activities, the M&E program, strengthening of the SFD MIS, and field supervision by branch offices.

14. Component 4: Labor-Intensive Works (LIW) Program. The objective of this component is to provide a cash-for-work safety net to target households to bridge their consumption gap during shocks and stagnation of agricultural seasons, while increasing the productive assets of communities and households. It will also aim to raise awareness among the targeted communities about the dangers of malnutrition and damages of Qat, and build the capacity and enhance the skills of the targeted communities to cope with future shocks. This component will be supported through:

- provision of Sub-grants to targeted communities for the carrying out of labor-intensive works Subprojects in: irrigation, water harvesting, agricultural terraces rehabilitation, agricultural land improvement, maintenance and improvement of village access earth roads, the improvement of water sources, watershed management and other fields based on the priority needs of each community.
- carrying out, through the provision of goods, training and consultants' services, activities to develop the SFD's annual operational plans as well as the capacity of select local authorities and communities in participatory planning and management of development activities.

15. SFD has been implementing a labor-intensive cash-for-works program since 2008 that targets households most affected by the recent food crisis. The LIW program is an important component of Yemen's Social Protection Strategy. In the fourth phase, SFD will reflect on lessons learned from the first round of implementation of workfare programs to (i) scale-up coverage to roughly 300,000 individuals annually in the 45-50 poorest districts of Yemen; (ii) re-orient the program to have a simplified targeting process and target chronically vulnerable households; (iii) begin supporting interventions in communities for periods of 3-5 years rather than just one year; and (iv) support interventions implemented in each area that complement each other and have a focus on enhancing long-term productivity. The LIW program will also aim to be responsive to various shocks that affect communities. There will be greater consideration of agricultural lands and terraces that can be rehabilitated for the benefit of poorer households, and there will also be a greater emphasis on projects that might maximize female labor force participation.

II. SFD IV Additional Financing 1 (AF 1) (US$25 million): Based on SFD achievements on during previous phases, World Bank obtained additional financing Grant for SFD IV (AF 1), which was approved in June 2013 to finance additional activities directed to youth under the *Labor-Intensive Works Program Component (LIW)* of the SFD IV project. The AF 1 is scaling up the SFD IV's LIW Program, with the aim of providing income opportunities and work experience to young people and women in the provision of health and education services. The AF 1 included the following two new subcomponents: to (i) support LIW targeted to unemployed youth; and (ii) introduce cash-for-work opportunities for youth and women in the delivery of social services. SFD IV AF1 is currently under implementation.

- LIW for Youth (US$5 million): The main objective of this subcomponent is to reduce the vulnerability of unemployed youth through youth-targeted labor-intensive works. The subcomponent will finance subprojects that provide income opportunities and work experience to participating youth, while at the same time improving public infrastructure.

16. The program will create approximately 420,000 person-days of employment for unemployed youth in the 18-30 year old age bracket in urban and semi-urban areas. The level of compensation will be set low to ensure that the program attracts unemployed youth from poor households. Some 7,000 youth are expected to participate with up to 60 days employment each.

Subprojects will be selected on the basis of high labor-intensity and potential impact, primarily targeting semi-urban poverty pockets in towns with high unemployment. In addition to the LIW program's regular menu, subprojects more suitable for youth and urban and semi-urban areas will be added, such as planting trees, paving cobblestone streets, cleaning shorelines, and especially rebuilding damaged public spaces.

17. Management and coordination arrangements for subproject implementation will follow the procedures already tested and used for the LIW program, with implementation through SFD Branch Offices in close coordination with local authorities.

Subcomponent 1 LIW for Youth will finance:

- subproject costs in the targeted communities for carrying out labor-intensive public works;
- the development of annual operational plans;
- capacity building of the selected local authorities and communities in participatory planning and management of development activities;
- the provision of goods, training, consultancy services and operating costs for management, monitoring and evaluation activities.

- Cash-for-Work for Social Services (US$20 million): The objectives of this subcomponent are: (i) to reduce the vulnerability of unemployed youth and women through providing employment opportunities, and (ii) to improve access to basic social services in poor communities. In coordination with relevant national programs, this subcomponent will finance education and nutrition services at the community level, with a particular focus on promoting demand for these services.

18. (i) Education, literacy and numeracy

Approximately 750,000 person days of employment in teaching will be created for up to 3,000 unemployed young women and men who have completed at least secondary education. Successful applicants will receive training and regular supervision in delivering the following services: teachers to fill teacher gaps in regular schools (pupils 6-14 years old); non-formal

accelerated programs for children who have not enrolled or have dropped out of school, to help them re-integrate into the formal system; and adult literacy classes, including life skills.

19. The beneficiary communities for these education services will be approximately 30 percent in urban areas and 70 percent in rural areas, selected on the basis of poverty and education indicators. The program expects to provide education and literacy benefits for approximately 26,000 children and 9,000 adults (70 percent women) in targeted communities.

20. In implementing the subprojects, the SFD will use the tested procedures, guidelines, manuals and training content developed since 2004 for its Girls Education Program, taking an integrated community-based approach to addressing key constraints in the targeted communities, and will coordinate closely with the MOE and local government formal, community and adult education systems.

21. (ii)Nutrition

Approximately 460,000 person days of employment will be created for women Community Health Volunteers (CHVs) who will be trained and will receive monthly incentives in delivering a package of community-based nutrition services for children under 5 years old (U5) and pregnant and lactating women. This package includes: (a) enrolment and initial malnutrition screening; (b) quarterly or bi-annual malnutrition screening where MOPHP outreach services are not available; (c) facilitating transport to health facilities for treatment; (d) monthly nutrition education to mothers of U5 children; (e) nutrition education for pregnant women; (f) breastfeeding promotion; and (g) community level nutrition and health education.

22. The services are targeted to Hodeida Governorate, based on its high malnutrition rate and its readiness to provide nutrition interventions through the public health facilities. The program will take a phased approach to covering the whole governorate, and expects to directly benefit approximately 75,000 acutely malnourished children, representing 15 percent of the estimated 493,644 children in the governorate, as well as providing nutrition education to 20,000 pregnant and lactating women.

23. SFD will be responsible for managing and implementing the demand side community-level interventions, in close coordination with MOPHP which is responsible for the operation and equipment of health facilities and outreach teams. For implementation of the nutrition intervention, MOPHP will be supported by the Bank's Health and Population Project (P094755), which will supply nutrition kits, and the on-going treatment and supplementary feeding programs of UNICEF and WFP.

24. Subcomponent 2 Cash-for-Work for Social Services will finance:

- subproject costs in the targeted communities to carry out cash-for-work for social services;
- information, public awareness and recruitment campaigns;
- testing of applicants and training of the youth and women recruited;
- equipment and materials (textbooks and learning materials, supplies);
- education and health supervisors (consultants);
- the development of annual operational plans;
- capacity building of selected local authorities and communities in participatory planning and management of development activities;
- management and monitoring and evaluation activities through the provision of goods, training, consultancy services and operating costs.

III. SFD IV Additional Financing 2 (AF 2) (US$50 million): Based on the continued success of SFD IV, the World Bank is now seeking to obtain a second additional financing Grant as SFD IV (AF 2), to help meet the financing gap under the SFD IV's largest component, the *Community and Local Development Program Component (CLDP).* The Project Development Objectives of the SFD IV AF 2will be the same as the original SFD IV project, which are to: (i) improve access to basic services; (ii) enhance economic opportunities; and (iii) reduce the vulnerability of the poor.

25. The proposed AF 2 grant would help finance the costs associated with continuing activities under SFD's established and successful CLDP over the remainder of the project period, delivering poverty-targeted improvements in community infrastructure and building local-level capacity, while also creating employment. The expected outcomes, based on performance of the program to date, include: increased school enrolments, especially of girls; improved access to water; increased agricultural productivity and incomes; access to improved public health services; reduced travelling time through rural road improvements; and strengthened institutional capacity at community and local government levels.

26. The CLDP activities to be financed through the AF2 would support the national transition process and proposed decentralization by helping to strengthen capacity at community and local government levels, as well as improving access of the poor to basic services. The component's activities include a wide range of infrastructure subprojects, targeted to poor communities and responding to priorities defined by the community: school construction and rehabilitation; water and sanitation; health; rural feeder roads; agriculture and rural development. Demand from communities remains strong and SFD has a large pipeline of approved subprojects waiting funding. The CLDP has a strong momentum and is exceeding many of its targets. Follow up studies have found that the great majority (87 percent in the latest annual survey) of CLDP infrastructure continues to be utilized, while impact evaluations (the latest in 2010) have found substantial impacts of CLDP operations, including increases in school enrolments, especially of girls, improved access to water, and reduced travel time through rural road improvements. Impact evaluations also found satisfactory poverty targeting of CLDP interventions.

3. Objectives, Scope and Application of the ESMF

27. The World Bank has been a leading partner in the SFD since its inception and as requested by the Government of Yemen, the Bank is continuing to play a leadership role in organizing support for the fourth phase of the Social Fund for Development. The Bank will bring its global, regional, and country experiences regarding social funds and microfinance to the fourth phase. SFD IV is a major contributor to Yemen's efforts to make progress towards the MDGs and supports the following key elements: better human capital by expanding basic education, closing the gender gap in basic and secondary education, and improving access to health care; ensured environmental sustainability including policies for and investment in water sustainability and soil conservation; and improved governance through encouraging better budgeting and expenditure controls, as well as high fiduciary standards.

28. After the successful completion of the previous SFD phases, the SFD IV project is now under implementation, which has 4 components consisting of four operational Programs which will be implemented by the SFD:(i) Community and Local Development (CLD) program; (ii) Small and Micro Enterprises Development (SMED) program; (iii) Capacity-Building (CB) program; and (iv) Labor-Intensive Works (LIW) program.

29. While the SFD IV is still under implementation, the Bank obtained additional financing towards the Labor-Intensive Works (LIW) Program, which is now under implementation. The AF1 scaled up the Labor-Intensive Works (LIW) Program (Component 4 of SFD IV) with two new subcomponents to: (i) support LIW targeted to unemployed youth; and (ii) introduce cash-for-work opportunities for youth and women in the delivery of social services. Currently, it is proposed that additional funds will be obtained by the Bank to fund a financing gap for the Community and Local Development Program (CLDP) (Component 1 of SFD IV).

Objectives of the ESMF

30. The purpose of the ESMF is to ensure that environmental and social management is integrated into the development cycle of individual subprojects. The SFD IV projects will be implemented as a community-led effort, where communities will be empowered to enable them in identifying their available resources and priority needs. Since exact sub-projects are not determined at the onset of project and will be decided during project implementation based on demand and consultations with the concerned communities, the instrument of the Bank Operational Policy OP 4.01 on Environmental Assessment is determined as ESMF.

31. The ESMF is intended to serve as a practical tool to guide identification and mitigation of potential environmental and social impacts of proposed investments and as a platform for consultations with stakeholders and potential project beneficiaries. The ESMF has been prepared in compliance with the Bank's OP 4.01 and relevant Yemeni policies on environmental assessment. The ESMF identifies the policy triggers for the project, the screening criteria of sub-projects, the environmental and social impacts for the likely sub-projects and the mitigation measures to mitigate the identified risks, assessment of the institutional capacity of the implementing agency and measures for capacity-filling gaps, and an estimate of the budget needed for the implementation of the ESMF.

32. The ESMF has been prepared to set out the environmental and social assessment procedures required by SFD and its partners to assess the environmental and social consequences of SFD interventions.

33. Following are the objectives of ESMF:

- Prevent execution of interventions with significant individual or cumulative negative environmental and social impacts;
- Minimize potential individual and cumulative negative impacts by incorporating mitigations at the design stage and implementing mitigations at the implementation stage of the interventions;
- Enhance the positive impacts of interventions;
- Protect environmentally sensitive areas from additional disturbance from human interventions.

34. The procedures in the ESMF were designed to:

- Facilitate SFD and Sponsoring Agencies (SA) to adopt intervention specific structured environmental assessment formats;
- Enable SFD and SAs to monitor the implementation of ESMF on the basis of intervention specific structured environmental assessment formats.

Application of ESMF

35. The first Environmental Management Plan (EMP) for SFD was prepared in 2004, and the EMP was then updated during 2010. While SFD has been undertaking independent annual environmental audits, it was decided to improve the EMP report further by integrating lessons learned, and to replace it with an Environmental and Social Management Framework (ESMF). Due to the demand driven nature of the SFD's programs, specific types, designs and locations of sub projects are not know in advance, until implementation. Therefore the ESMF is the appropriate document which sets out guidelines and procedures for assessing potential environmental and social impacts of sub projects. These procedures and guidelines will help the implementing agencies in screening subprojects' eligibility; determining their environmental and social impacts; identifying appropriate mitigation measures to be incorporated into the sub-project; and specifying institutional responsibilities for implementing preventive, mitigation and compensation measures, and monitoring and evaluation.

4. World Bank Safeguard Policies and their applicability

36. The SFD IV and AF 1 projects that are under implementation, and the proposed AF 2 project—are all classified as environmental Category B according to the Bank's OP 4.01. The projects are expected to have significant positive environmental and social impacts, with relatively minor and localized negative impacts. The ESMF has been developed to ensure environmental and social due diligence for subprojects. The Bank safeguard policies on Environmental Assessment (OP 4.01) and Physical Cultural Resources (OP 4.11) are triggered by the SFD projects.

	Safeguard Policy	**Policy triggered**	**Justification**
1	OP 4.01: Environmental Assessment	Yes	The policy is triggered due to the small-scale physical interventions that would be financed under SFD projects in several sectors including education, health, rural roads, agriculture and rural development. The project is not expected to result in significant, negative or irreversible impacts. Due to the nature of interventions, some subprojects could result in adverse environmental impacts which are expected to be site-specific and temporary in nature. The ESMF includes methodology to apply an environmental and social screening process that will guide in determining the potential environmental and social impacts of subprojects and in the application of appropriate mitigation measures. Site-specific EMP will be prepared during implementation and before construction as required for the subprojects.
2	OP 4.04: Natural Habitats	No	The policy is not triggered. The project activities will not cause conversion or degradation of natural habitats or critical natural habitats as defined by the policy.
3	OP 4.09: Pest Management	No	The policy is not triggered.
4	OP 4.11: Physical Cultural Resources	Yes	The policy is triggered due to the positive efforts envisaged under the SFD projects towards cultural heritage sites, and will be covered within the scope of the ESMF, which includes a separate annex on cultural heritage aspects.
5	OP 4.12: Involuntary	No	The small scale nature of infrastructure works combined with a community participatory approach makes it possible

	Resettlement		land to be obtained as needed through voluntary land donation. Any subprojects which involve involuntary taking of land will not be eligible for funding under the SFD IV projects. Therefore the Bank Policy on Involuntary Resettlement OP 4.12 will not be applicable. Guidelines for safeguards screening, voluntary land donation and a negative project list are included in the Operational Manual.
6	OP 4.20: Indigenous People	No	The policy is not triggered as indigenous people as defined in the policy are not present in project areas.
7	OP 4.36: Forestry	No	The policy is not triggered as project will not be implemented in any forested areas. .
8	OP 4.37: Safety of Dams	No	The policy is not triggered. SFD IV projects under IDA financing will not include construction of dams as defined in the policy.
9	OP 7.50: Projects on International Waterways	No	Policy is not triggered as the project will not undertake any activities in the catchment areas of international waterways and shared aquifers.
10	OP 7.60: Projects in Disputed Areas	No	Policy is not triggered as project activities will not be implemented in any disputed areas.

5. Legal, Policy and Administrative Framework

National environmental legislation:

Environment Protection Law

37. In 1995, Parliament enacted a comprehensive Environment Protection Law (Law No.26 of 1995), consisting of five chapters and 95 articles. The law's objectives are to protect the environment, to combat pollution, and to protect natural resources, society, human health, and living beings from activities that damage the environment. In addition, the law is designed to protect the national environment from activities practiced beyond the national boundaries and to implement international commitments ratified by the Republic of Yemen in relation to environmental protection, control of pollution, conservation of natural resources, and the protection of such globally important environmental elements as the ozone layer and climatic changes. To avoid future adverse environmental effects, the law stipulates the incorporation of environmental considerations in economic development plans at all levels and stages of planning for all sectors. It also, imposes the performance of environmental assessment for all projects proposed by government, public, private, and cooperative agencies, and foreign companies. No licenses are to be issued for projects that degrade the environment. There is as yet no regulatory framework to support the implementation of the Environment Protection Law and the provision of undertaking environmental assessment for projects is not enforced.

38. The law also details provisions on the protection of land and water resources, and the use of pesticides. Mainly, the law prescribes controls on the digging of wells, raising water harvesting levels, soil erosion, desertification and pollution, and urban and industrial expansion on agricultural lands. The articles on the use of pesticides stipulate the control measures over importation, handling, storage, registration, analysis and disposal of expired stocks as per the international standards of FAO, WHO, and the Arab Organization for Industrial Development (AOID).

39. The law also broadened the role of the Environment Protection Council (established in1990) to include planning, licensing, monitoring, and auditing functions and to develop the procedures for defining, adopting, and monitoring environmental standards. The Law also outlines the role of line ministries and other technical authorities in the protection of air, water, and soil.

40. The Environment Protection Law provides the national, legal mandate for the application of the Bank's Safeguard Policies that are relevant to the SFD projects.

Cooperatives Societies and Unions Law (Law No. 39 of 1998)

41. Law 39 of 1998 concerning Cooperative Societies and Unions, which is the organizational and legal reference for all cooperatives and cooperative unions in the Republic of Yemen. This law is seen of relevance to the ACAP since it addresses community mobilization in terms of collective actions that would lead to better community involvement in the design, implementation and operation and maintenance of the coping measures and the income generation activities.

42. Law no. 39 of 1998 grants a relevant Ministry and its departments and branches in the governorates the right to supervise and assure compliance with relevant laws, and provide advice and technical assistance to the cooperatives to plan their activities as well as to attend their General Assembly meetings. It defines five specific types of cooperatives. Any other type of cooperative, such as Agricultural Cooperative Union (ACU) and its branches in the country can be created according to the provision of Article 142, which states that it is lawful to establish other cooperative societies, according to provision of this Law, in other services. More specifically, Article 142 stipulates that a decree of establishment under appropriate line Ministry shall be developed and forwarded to the Ministry of Social Affairs and Labour for approval and issuance.

Pesticides Law

43. The Pesticides Law was decreed in 1999 (Law No. 25 of 1999) and includes seven chapters and 36 articles. Executive regulations for enforcement are to be issued by resolution of the Minister of Agriculture. A registration guide and executive regulations were prepared to facilitate enforcement. Penalties for violations are stated.

44. The law's objectives are to regulate the handling, registration, and inspection of pesticides and to avoid the poisonous effects on humans, and animals, the environment, and economically beneficial insects. The competent authority for enforcing the law is the General Authority of Plant Protection of the Ministry of Agriculture and Irrigation, and the authority is to coordinate its work with the Environmental Protection Authority.

45. The Pesticides Law provides the national, legal basis for the application of the Bank's Pest Management Safeguard Policy in SFD interventions.

International and regional environmental legislation:

46. The Yemeni Government has ratified multilateral environmental agreements on agro-biodiversity and natural resources, oceans and seas, hazardous materials and chemicals,

atmosphere and air pollution, and health and workers safety. The following list provides the multilateral agreements relevant to the project activities:

Yemen is party to a number of international environmental agreements, the most important of which are:

- The Convention on Biodiversity (CBD) singed on 1/12/2005
- The Convention on the Conservation of Migratory Species (CMS); starting on the 1st of December, 2006; Yemen is party No.100
- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Signed at Washington, D.C., on 3 March 1973 and amended at Bonn, on 22 June 1979
- The United Nations Framework Convention on Climate Change (UNFCCC) Kyoto Protocol
- The United Nations Convention on Combating Desertification (UNCCD)
- Environmental Modification
- Hazardous Wastes
- World Cultural & Natural Heritage, Paris 1982
- Civil Responsibility for Damage from Oil Pollution, Paris 1979
- Convention on Wetlands of International Importance Especially as Waterfowl Habitat 1971
- Law of the Sea
- Ozone Layer Protection. On December 19, 1994, the United Nations General Assembly proclaimed 16 September the International Day for the Preservation of the Ozone Layer, commemorating the date in 1987, on which the Montreal Protocol on Substances that deplete the Ozone Layer was signed
- Yemen has also signed Stockholm Convention on Persistent Organic Pollutants (Signed: 12/05/2001; Ratified: 01/09/2004), which is a global treaty to protect human health and the environment from chemicals that remain intact in the environment for long periods, become widely distributed geographically and accumulate in the fatty tissue of humans and wildlife.

Administrative Framework:

47. As a governmental institution, SFD follows the national environmental law through applying its ESMF and maintaining good coordination with Environment Protection Authority (EPA). The Water and Environment Unit (WEU) and the Training and Capacity Building Unit (TCBU), in the headquarters, are assigned to be the two focal points for the environmental and social issues respectively. The main tasks of the WEU and the TCBU in the field of environment and social issues are summarized below:

- Formulation of environmental and social policies and ensuring the mainstreaming of such policies into SFD’s activities in implementing the SFD IV and related projects;
- Monitoring the implementation of SFD’s Environmental and Social Management Framework into the subprojects of the SFD IV and related projects;
- Formulation of environmental and social training programs and monitoring their implementation;
- Conduct environmental and social auditing to ensure application of the ESMF;
- Participate in the Projects' Committee to ensure the mainstreaming of environmental and social policies and guidelines;
- Coordinate with the EPA and MSWF;
- Preparing studies/manuals to promote environmental and social best practices and compile annual progress reports on the best practices.

6. Institutional and implementation arrangements

48. The SFD is uniquely placed to deliver safety net and development programs during this politically uncertain and challenging period. Its ability to respond flexibly and produce innovative multi-sectoral solutions is based on its operational autonomy, decentralized structure with strong Branch Offices, its focus on strong local-level partnerships, and transparent procedures with emphasis on monitoring and evaluation and good information systems. The SFD's Board is chaired by the Prime Minister with members representing the line ministries, private sector, labor union and non-governmental organizations (NGOs). Through diversified programs, SFD is responding to many pressing immediate and medium-term needs of the population. The government of Yemen, which has been financing over 10 percent of the SFD's budget since 2004, is fully committed to the SFD IV, AF 1, AF 2 and CRRC projects. SFD has expanded and diversified its operations over the last 16 years, maintaining high standards in implementation and earning a strong reputation with communities and other stakeholders.

49. With the recently announcement of Socotra as a new governorate, Yemen has 22 governorates. The city of Sana'a (the capital) has a special administrative status comparable to a governorate. Each governorate is divided into districts (Mudiriyah). Citizens of each district elect one representative to the national parliament. While there is no official central government administrative structure below the district, there are several additional administrative sub-divisions: sub-districts (Uzlah/Markez), villages, and hamlets (Mahalla).

50. Every ministry in the central government has a branch office at the governorate level and some have offices at the district level. For subprojects that need commitment for operation and maintenance such as teachers and books for schools and physicians, nurses and medicines for health facilities, SFD signs financing agreements with the executive offices at the district level. For subprojects that can be operated and maintained by the local communities, SFD signs the financing agreement with an active and community trusted NGO. In case an active and community trusted NGO is not available, then SFD helps the community to elect a committee, and the financial agreement is signed with the head of the committee.

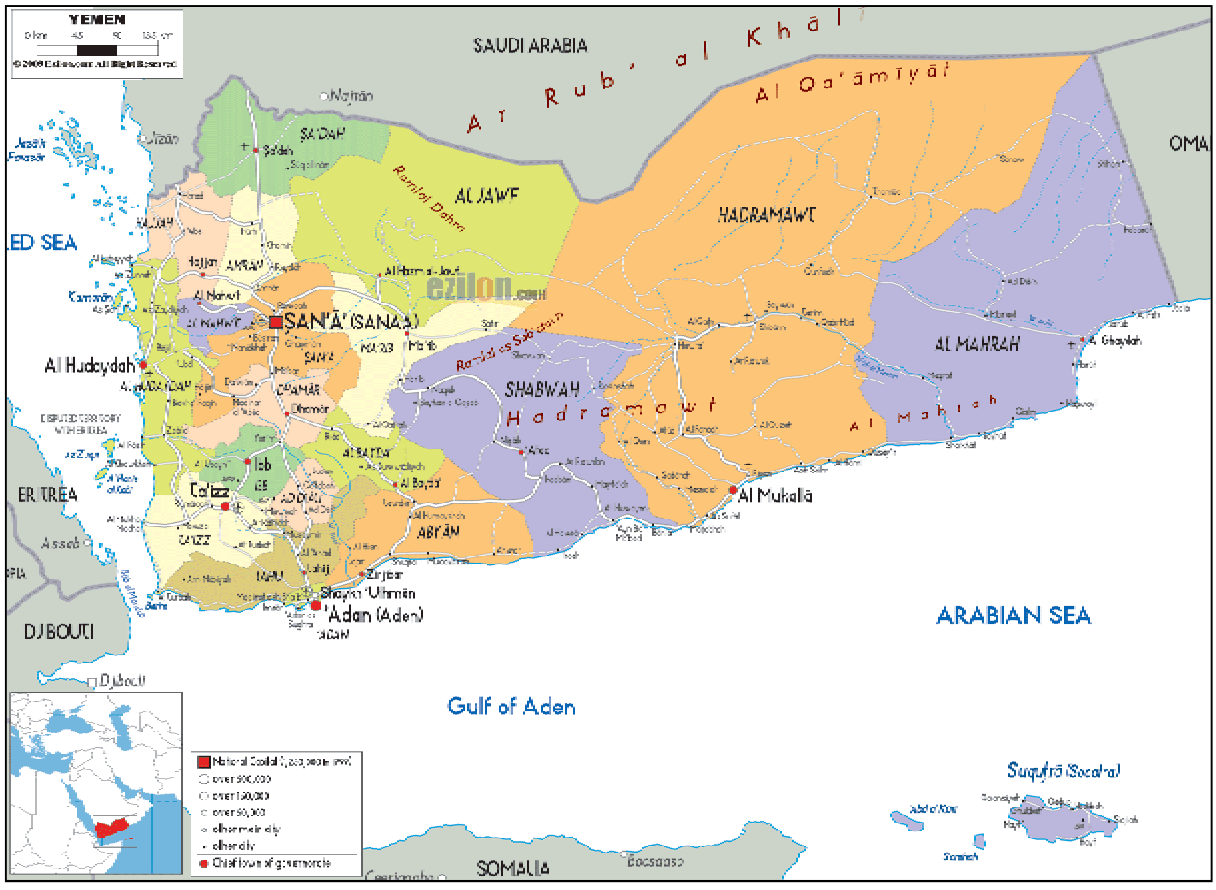
7. Description of Baseline Environmental and Socioeconomic Conditions

51. Yemen is located in Southwest Asia at the southern tip of the Arabian Peninsula between Oman and Saudi Arabia. It is situated at the entrance to the Bab-el-Mandeb Strait, which links the Red Sea to the Indian Ocean (via the Gulf of Aden) and is one of the most active and strategic shipping lanes in the world. Yemen has an area of 527,970 square kilometres (203,850 sq mi), including the islands of Perim at the southern end of the Red Sea and Socotra at the entrance to the Gulf of Aden. Yemen's land boundaries total 1,746 kilometres (1,085 mi). Yemen borders Saudi Arabia to the north (1,458 km or 906 mi) and Oman to the northeast (288 km or 179 mi).

52. Temperatures are generally very high in Yemen, particularly in the coastal regions. Rainfall is limited, with variations based on elevation. The highlands enjoy a temperate, rainy summer with an average high temperature of 21 °C (69.8 °F) and a cool, moderately dry winter with temperatures occasionally dipping below 0 °C (32.0 °F). The climate of the Tihamah (western coastal plain) is tropical; temperatures occasionally exceed 54 °C (129.2 °F), and the humidity ranges from 50 to 70 percent. Rainfall, which comes in irregular heavy torrents, averages 130 millimetres (5.12 in) annually. In Aden the average temperature is

25 °C (77.0 °F) in January and 32 °C (89.6 °F) in June, but with highs often exceeding 37 °C (98.6 °F). Average annual rainfall is 127 millimetres (5 in). The highest mountainous areas of southern Yemen receive from 520 to 760 mm (20.5 to 29.9 in) of rain a year. Some areas of the western highlands, most notably Ibb and Ta'izz, receive from about 1,000–1,500 millimetres (39.4–59.1 in) of rain each year. The capital, Sana'a, receives around 300 mm (11.8 in) a year, it is not uncommon for the northern and eastern sections of the country to receive no rain for five years or more. The Wadi Hadhramaut in the eastern part of Yemen is arid and hot, and the humidity ranges from 35 percent in June to 64 percent in January. Yemen is dry in the east and humid in the west.

53. Yemen's main environmental problems have long been scarcity of water, soil erosion, and desertification. Water pollution is a problem due to contamination from the oil industry, untreated sewage, and seawater intrusion. The nation has 4.1 cubic kilometers of renewable water resources with 92% used for farming activity and 1% for industrial purposes. Environmental problem in Yemen are caused by three fundamental factors: (i) Population growth, (ii) poverty and (ii) institutional weaknesses. These factors are discussed further below.



Population and Growth

54. A total of 24 million Yemeni inhabitants make use of Yemen's resource base, over half of them are younger than 14 years. At the current growth rate of about 3.5 percent, the population is expected to double every 20 years. The factors that account for this high rate of growth include improved health standards and a high fertility rate, the latter possibly linked to low female education and employment. Between 1970 and 1997, the percentage of urban population rose from 13 to 25 percent. In the capital city Sanaa (2 million) the population growth rate is more than 10 percent per year, reflecting an in migration rate of about 7 percent

per year and an annual natural increase of over 3 percent. The other cities in Yemen with populations over 100,000 are Aden, Al-Hodeidah, and Taiz, all of which are growing by about 7 to 8 percent. The failure of the centrally planned system in South Yemen during the late 1980s caused migration to the cities of the north. Urbanization was further accelerated by the return of about 900,000 Yemeni workers and their families after the Gulf War which caused a proliferation of unplanned settlements and accompanying environmental degradation in cities such as Sana'a, Al-Hodeidah, and Al-Mukalla. The inability of Yemen's municipalities to provide the necessary land, services, and facilities to accommodate urban growth poses significant threats to health, natural resources, and urban productivity. The fertility rate in Yemen (7.5) compares unfavourably to that in other countries: 5 (Algeria), 4.3 (Morocco), 3.5 (Tunisia), 4.2 (Egypt), 6.2 (Iran), and 5.3 (Jordan). The factors which contribute to this high rate are: (i) 74 percent of the female population is illiterate (compared to 47 percent for men), and (ii) only 13 percent of the women are in the labor force. In Morocco and Lebanon, 20 and 27 percent of the women, respectively, are in the labor force.

Poverty and Environment

55. A key issue confronting Yemen is poverty, and the linkage with environmental degradation, and resources depletion - occurring in both rural and urban areas. In rural areas, high levels of poverty often have led to environmental degradation. Households are living at levels well below subsistence levels and use soils, forest, and other resources at rates that exceed sustainable limits for recovery or renewal. The poor have no other option than to adopt short-term survival strategies which do not incorporate longer term resource management considerations. If the poor have no alternatives, they will continue to use land and water resources in ways that will threaten their future productivity. The conditions that exacerbate these trends include: unclear land and water rights, the use of modern technology (e.g., water pumps) without adequate knowledge of its impact on natural resources, and population pressure. Yemen's urban areas also illustrate the mutually reinforcing effects of poverty and environmental degradation. Foremost among the environmental concerns of the urban poor are health problems resulting from substandard living conditions that do not shield them from human excreta and other wastes and natural hazards. In most cities, it is not only the impact of urban environmental deterioration on the poor that is a concern. Poverty is itself a major factor in urban environmental degradation as the rural poor migrate to the cities in search of income-producing opportunities. The poor lack the financial resources to compete for serviced land and adequate housing in safe locations. In Sana'a the poor have no access to safe water**.** As a result, the poor are often forced to occupy illegal settlements on hazard prone or environmentally sensitive land. In many instances, the location of low-income populations on these lands has resulted in health hazards, injuries, property damage and loss of natural resources.

Institutional Weaknesses

56. The institutional capacity in Yemen to enforce environmental regulations, and ensure compliance with national and international laws, lags behind what is anticipated by legislators. In particular, the existing capacity to implement international treaty obligations is missing (as in CITES reporting, toxic dumping reporting, port facilities that comply with MARPOL requirements).There are gaps in management. Some areas of environmental concern are not addressed at all. For example, there is no agency designated to coastal zone management. There is no Department in the Ministry of Tourism to deal with Eco-tourism. There is no central authority to deal with oil spills. Although spills within the confinement of harbors are under responsibility of the port authorities, there is no budget allocated to control oil pollution. The system is characterized by the centralization of the management of natural resources at the national level, under the responsibility of the line ministries. The provision of many

environmental services, such as urban water supply, wastewater collection and disposal, and solid waste management is also centralized at the national level. Also among the many agencies with natural resource management responsibilities at the national level, there is fragmentation and a lack of coordination. For example, at least four ministries and a number of government agencies share responsibility for water management but do not coordinate their operations. This leads to overlap and duplication of functions. In addition, competing sectoral interests undermine the establishment of overall objectives and formulation of policies and strategies for resource management.

57. Natural forests in mountainous areas have been destroyed by agricultural clearing and livestock overgrazing. As of 2001, 5 mammal species and 13 bird species are listed as threatened. Endangered species include the northern bald ibis, the South Arabian leopard, slender-billed curlew, and two species of turtle (green sea and hawksbill). Queen of Sheba's gazelle and the Saudi Gazelle have become extinct in the wild.

58. The flora in Yemen comprises of sparse vegetation near the coast and dense vegetation as the land proceeds towards higher land. The chief of the trees that grow in Yemen are the date palms, Judas tree and acacias. The land is blessed with an abundance of fruits as well. Some of them are euphorbia, grapes, spurge and custard apple. The land of Yemen is plentiful in herbs too. Two of the most famous ones are balsam and basil. The fauna of the land forms a rich and diverse list of gazelles, baboons and leopards. Another unique species of fauna is the mountain hare. The avian fauna too forms a pretty inventory consisting of hornbills, vultures, honey suckers, hawks, parrots, ravens, bustards and weaver finches.

59. Most Yemenis are engaged in agriculture and herding. Yemen produces grain, fruits, vegetables, qat (a stimulant-containing shrub), coffee, cotton, and livestock (sheep, goats, cattle, and camels) but is dependent on imports for most of its essential needs. Terraced agriculture, dating from ancient times, is still practiced. The climate is arid, and only a fraction of the land is arable. There is fishing, food processing, salt mining, and small-scale manufacturing, including cotton textiles, leather goods, handicrafts, and aluminium products. The country produces and refines petroleum, and oil export revenues have boosted the economy since the late 1980s, but oil reserves are now being depleted. Imported oil is also processed into petroleum products for export. Other exports include coffee and processed fish. Foodstuffs, live animals, machinery, and chemicals are imported.

60. Yemen is characterized by high food insecurity and malnutrition with rates of child malnutrition and maternal mortality being amongst the highest in the world. The country faces multi-dimensional challenges: High population growth (>3%) associated with gender inequalities; high prevalence of poverty (35%) with a large rural/urban divide; high illiteracy (21.1% and 57.2% among adult male and female respectively); poor access to social infrastructure; conflicts in several parts of the country (Sa'dah in the north, Abyan and Lahj in the south); increased influx of refugees; recurrent droughts and floods, in addition to increasing aridity due to climate change, as well as increasing agricultural and urban water needs. Furthermore, substantial food price rises over the past two years have led to an augmented number of Yemenis affected by food insecurity and poverty, given that 96% of the populationare net-buyers, making them particularly vulnerable to food price fluctuations1.

61. Land ownership varies between self-owned, rent, or tenant. In renting system, the farmer pay the owner a fixed and agreed amount (cash/products) per year, while in the

[1] International Food Policy Research Institute (IFPRI 2010)

tenanting system, the farmer should allocate an agreed fraction of the land products (usually 1/3-1/2) to the landlord.

8. Analysis of Alternatives

62. A business-as-usual scenario implies maintaining the status quo of impoverished communities of the selected project sites and doing very little about it, maintaining the current poverty and livelihoods situation, and continued exploitation of the natural resources in a non-sustainable manner and compromising its biodiversity, in addition being posed to negative potential impacts on their current livelihoods due to climate change. This option would wrongfully imply that there is no urgent need for improved management targeted by the SFD projects or for improving sustainable livelihoods in the area, that there is no urgent need to introduce activities that would improve access to basic services, enhance economic opportunities, and reduce the vulnerability of the poor.

63. Should SFD IV move to support full-scale decentralization of services vs. gradual bottom-up capacity-building of local authorities? This was a key question considered by SFD and its partners during the "visioning" process for SFD IV. Based on consultations with a variety of local partners, on-the-ground experience with local authorities in different parts of the country, and a review of international experience of social funds and their contributions to decentralization strategies, SFD took the decision to adopt a gradual, step-by-step capacity building approach to supporting local authorities, including through grants for small projects for local authorities who have demonstrated their ability to manage and account for resources. Most districts are found to have weak management capacity. This will be addressed by the national Government through public sector management-related investments, to be complemented by SFD investments in capacity-building of local authorities in aspects where SFD has a comparative advantage (e.g., participatory planning, learning-by-doing management of investment projects).

64. Without the project, the following environmental and social impacts would be expected: continued unsustainable natural resource exploitation, continued high levels of poverty and unemployment, continued deterioration in natural assets/or reliance on governmental aid: natural resources will be put under additional stress and those that directly or indirectly exploit natural resources will either proactively change livelihoods to compensate or be forced to change because the resource base will no longer support the relevant livelihood. On the other hand- project sub projects being proposed- this option indicates that all defined potential adverse impact sources during the construction, implementation and operation phases will not occur. Also local governance capacity will remain weak in area of management and hence rely on central level which will hinder move to full-scale decentralization of services delivery.

65. Nevertheless, adverse potential environmental impacts identified for SFD projects are very limited as compared to the positive social and environmental impacts anticipated from the project. On account of the reasons listed above, a no-project alternative should not be considered.

9. Potential Environmental and Social Impacts

66. The SFD IV projects are expected to result in significant social benefits and positive environmental impacts, as has been witnessed in the previous SFD phases. Potential negative environmental impacts anticipated for SFD IV projects are minor and of temporary nature

during the construction/rehabilitation of small-scale interventions including dust, noise, waste generation, disruption to traffic and movement, health and safety; and would be mitigated by implementing appropriate mitigation measures as identified in the ESMF.

67. SFD has been progressively building on and integrating lessons learned in its follow up of projects, including enhancing the project's longer-term environmental rehabilitation impact. For public works programs, greater consideration is given to agricultural lands and terraces that can be rehabilitated for the benefit of poorer households. The LIW includes the rehabilitation of community assets in the fields of soil protection, agricultural terraces rehabilitation, maintenance and improvement of local feeder roads, streets pavement and other types of labor-intensive work based on the demand and priority needs of each community. In addition to the LIW program's regular menu, subprojects more suitable for youth and urban and semi-urban areas will be added, such as planting trees, paving cobblestone streets, cleaning shorelines, and especially rebuilding damaged public spaces. Cash will be provided to help mitigate the impact of increased food prices through temporary work opportunities using a well-tested community targeting mechanism, as well as to support rehabilitation of basic community assets. The CLDP will continue delivering poverty-targeted improvements in community infrastructure while building local-level capacity and creating employment. Subprojects will be targeted to poor communities and priorities defined by them including: school construction/rehabilitation; water and sanitation; health; rural roads; agriculture and rural development and cultural heritage.

68. SFD is familiar with the provisions of the Bank' safeguards policies, including the implementation and monitoring of ESMF and related instruments due to the experience gained from the implementation of previous SFD phases with the Bank.

69. In addition, the participatory techniques and the governance mechanisms incorporated in the SFD's Operational Manual will ensure transparency of processes and reduce opportunities for elite capture.

10. SFD Subproject Cycle and Methodology for using the ESMF

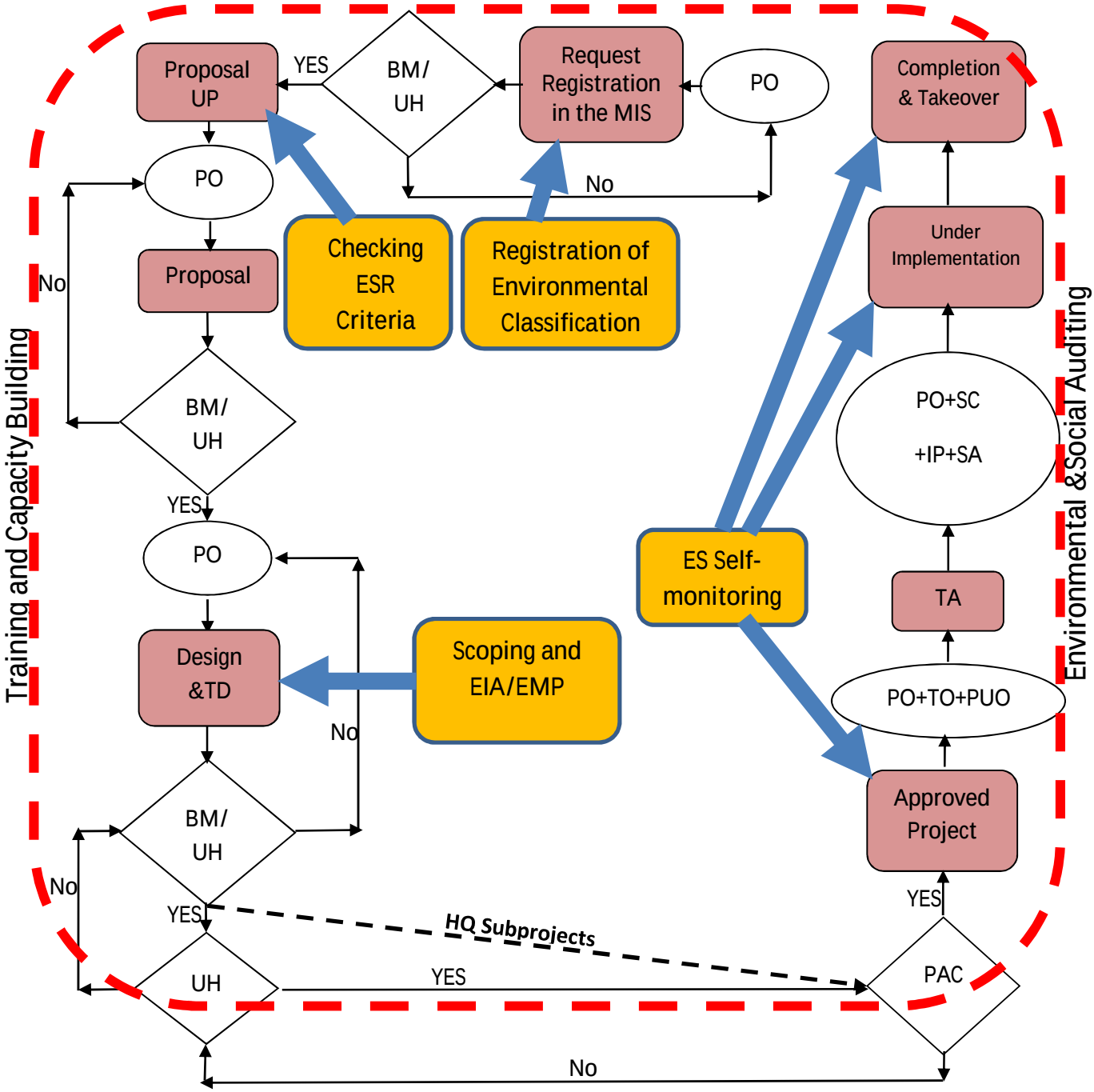


Figure 1: SFD's Subproject Cycle

Key of Abbreviations:

ESR=Environmental and Social Responsiveness, PO=Projects officer, BM=Branch manager, UH=Unit head, TD=Tender documents, PAC=Projects approval committee, TO=Technical officer, PUO=Procurement Unit Officer, TA=Tender announcement, SC=Supervision consultant, IP=implementation party, SA=Sponsoring agency, UP=Under Preparation, ES=Environmental and Social

70. In Summary: Initial requests are received from communities' members. These request are subject to office screening for SFD's eligibility. A Participatory Rural Appraisal (PRA) team goes down to the field carrying the list of eligible received requests from several communities in addition to the list of sectorally targeted communities, to facilitate in identifying priorities. With the available allocated funds, and the communities' priorities, the branch office prepares the annual plan.

- After the approval of the annual plan, the project officers start annual plan implementation with registering requests into the Management Information System (MIS) and submit them to the Branch Manager/Unit Head (BM/UH). The BM/UH will either approves the request which becomes under preparation proposal or returns it to the Project Officer (PO) for modifications. When the request becomes under preparation proposal, the PO hires a qualified consultant to go down to the community to prepare the proposal which will include a preliminary design and a cost estimate. The proposal is submitted to the BM/UH who reviews the proposal and either approves it and returns it to the PO to go ahead with the detailed design or returns it with comments.

- If the proposal is approved, the PO hires a qualified consultant to prepare the detailed design and tender documents. The consultant should visit the community and see the location of the proposed subproject and gather all the data needed for preparing the design and tender documents.

- The design and tender documents are then submitted to the BM/UH for review and approval. If the subproject was developed at the branch, then, the BM will either approve the subproject and submit it to the related UH or return it back to the PO with comments.

- Whether the subproject was developed in the branch or in the HQ, the related UH will review it and, if satisfied, submit it to the Projects' Approval Committee (PAC) or return it back to the BM with comments. The PAC reviews the subproject and either approves it or return it back to the UH with comments.

- If approved by the PAC, the subproject is returned to the PO to start preparing for implementation. At this stage the financing agreement (FA) is signed with the sponsoring agency (SA), and the tender is prepared for announcement. The PO and the Technical Officer (TO) work together to select the work and supply items needed for the subproject from a system called bid analysis system (BAS) and they come out with the final BOQ that will be handed to the bidders. The tender is announced, offers received, evaluated, and the tender is awarded to the most responsive and lowest price.

- The PO hires a qualified consultant for supervising the project, and a technician is assigned to work as a resident technician. The contract is signed and the work starts and continues till completion and final hand over.

71. In Detail: According to the subproject cycle followed in the SFD (***Figure 1)*** the critical points where environmental and social issues need to be addressed are:

- At the proposal stage where a draft design and cost estimate are prepared. Here the responsiveness of the proposal to the environmental and social issues is confirmed.

- Ø The detail design stage, where environmental and social impacts will need to be identified and mitigation measures are designed and incorporated in the subproject documents including the Bill of Quantities (BOQ), to ensure they are priced and thus become an obligation of the implementing and supervising parties. The environmental and social self-monitoring plan is prepared at this stage.

- Ø Approved project stage which prepare for tender announcement. At this stage the PO, TO, and PUO extract the work and supply items from the BAS system and come out with the final bill of quantities that will be handed to the bidders. Here the team should focus on essential items that should exist in all projects containing civil works i.e. temporary latrines, tippy taps, and PPE. If these items were not considered by the consultant and the PO, the team will discuss them with the PO and consultant and come with the decision to add them or not.

- Ø The implementation stage, where the role of the supervising consultant with regards to the ESMF will be stated clearly in the ToR. The ToR will also require the follow up and reporting on the progress of implementing the mitigation measures.

- Ø The operation stage, where the environmental and social self-monitoring plan is implemented and periodically inspected.

11. Basic Elements of the ESMF

(1) Environmental screening and classification of sub-projects
(2) Environmental screening and registration process using classification lists
(3) Environmental and social responsiveness criteria at proposal stage
(4) Checklist of expected environmental and social impacts to be addressed in the design stage
(5) Environmental and social self-monitoring, reporting and periodic inspection
(6) Environmental and social auditing and reporting
(7) Environmental and social education, training and awareness

11.1. *Environmental screening and classification of subprojects*:

72. *The procedure followed by SFD for undertaking environmental screening and classification of subprojects is in line with the Bank's OP 4.01 on Environmental Assessment*. SFD undertakes environmental screening of the subproject proposals and classifies subprojects into Class A, B, and C, comparable to the Bank's classification of environmental category A, B and C of projects/subprojects. The classification is based on the significance of impact to depend on the type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts. Accordingly, List C subprojects are those which are known to have no adverse environmental impacts and accordingly will not require any environmental assessment or follow-up; List B subprojects are those that are likely to have limited adverse environmental impacts that are temporary and/or site specific and can be reduced/avoided/mitigated with the implementation of appropriate mitigation measures, and these subprojects would require a scoping to be undertaken and a limited EIA/EMP is prepared as needed; and List A subprojects are those with significant adverse environmental impacts for which an independent full EIA will need to be prepared. *However, List A subprojects will be excluded from IDA funding. During the screening process if SFD comes across any of such*

List A subprojects (World Bank's environmental category A), they will be excluded from IDA funding.

11.2. *Environmental screening and registration process using classification lists*:

73. The annual plan pass through several steps before its finalization. Hard copies of requests from communities are received and gathered. Office screening is conducted for eligibility, then a PRA team is assigned to visit the eligible requests' areas, in addition to the sectoral targeting list. The results of the PRA team work is a list of communities' priorities, and with the available allocated funds, and the communities' priorities, the branch office prepares the annual plan. After the approval of the annual plan, POs starts the annual plan's implementation with entering the applications in the Management Information System (MIS), and in this step the PO will fill the field of the environmental classification with either B or C. When the application reaches the SFD Branch Manager/Unit Head (BM/UH), it will be reviewed and classification will be confirmed/corrected.

11.3. *Environmental and social responsiveness criteria at proposal stage*:

74. This is done by using the formats prepared for each type of intervention. The format includes decisive questions to examine the responsiveness of the proposal to the environmental and social issues. The answers to the questions are either "Yes" or "No". If the answer to any of the questions is "No", then the proposal is dropped or the location is changed to ensure full responsiveness to environmental and social issues. Annex (2) contains the tables of the environmental and social responsive criteria for all SFD's subprojects, and ***Annex 10*** shows the documents needed to be attached to the proposal.

11.4. *Checklist of expected environmental and social impacts to be addressed in the design stage*:

75. The ESMF developed checklist of expected environmental and social impacts that will be addressed in the design stage. This is an important stage as it will pave the way for the implementation and operation stages. All the expected environmental and social impacts will be identified at this stage and the mitigation measures will be designed and incorporated in the subproject design and tender documents, particularly, in the BOQ so that it becomes obligatory. The checklist contains questions about the expected environmental and social mitigation measures to be included in the project documents for each type of intervention and the answer will be "Yes" or "No". If the answer is "No", then the consultant/PO will need to justify this in the design report, and also include the completed checklist as an annex to the design report. Annex (3) shows the check list of the environmental and social issues that need to be addressed in the design phase for most of SFD's interventions, and ***Annex 10*** shows the documents needed to be attached to the design and tender documents.

11.5. *Environmental and social self-monitoring, reporting and periodic inspection*:

76. The commencement of physical works is preceded by following two preparation steps:

- Ø Signing of the Financing Agreement (FA): The PO will prepare a FA which will state the role and commitments of SFD and the sponsoring agency (SA). All documents for land donation, compensation, water rights, and the operation and maintenance system after completion are to be attached to the FA. ***Annex (7)*** contains the format for land donation, compensation and water rights. For the operation and maintenance system it will depend on the type and level of project, therefore it should be prepare for each single subproject by the SA, approved by SFD, signed by the SA and attached to the FA. ***Annex 10*** shows the documents needed to be attached to the financing agreement.

- Ø Preparing the BOQ for Tender Announcement (TA) via MIS: The final BOQ and the TA are prepared via the MIS. The PO and technical officer (TO) together select the BOQ items from a system called bid analysis system (BAS) and then proceed with the TA. If the consultant omits, for example, the addition of PPE or the temporary toilets or the tippy tap, the missing items will be added into the final BOQ, and hence the POs and TOs will be trained in the ESMF to ensure that this step is undertaken accurately.

- ***Construction Phase:*** The PO prepares the ToR for the supervision consultancy service and selects the consultant from the consultants' data base. The existing ToR for supervising subprojects will be modified to incorporate the role of the supervising team in implementing the ESMF, and in monitoring and reporting the progress of implementing the mitigation measures. The PO will review the periodic reports and will follow-up periodically to ensure that environmental mitigation measures are being implemented. The representative of the SA will also report to the PO on the implementation of mitigation measures.

- ***Operation Phase:*** The party assigned for implementing the self-monitoring plan, prepared in the design phase would be required to prepare and present to the PO, periodic self-monitoring reports as stipulated in the self-monitoring plan. The Environmental Coordinator (ECO) within SFD's Water and Environment Unit (WEU) will review the environmental self-monitoring reports, and will periodically inspect subprojects for environmental compliance and performance.

11.6. *Environmental and social auditing and reporting*:

77. Annually an environmental consultant will be recruited to conduct an environmental and social compliance and performance audit. The consultant is given a list of all SFD's subprojects, and he/she will select randomly the subprojects to be audited, which should include all SFD's sectors and programs, in different stages of subproject cycle including design, under implementation, and completed stages. The audit will include both a desk audit/review and a field audit. Consequently, an audit report will be prepared by the consultant, reviewed by the ECO and then presented to SFD management. The executive summary of the audit report will be forwarded to the donors while the detailed report will be distributed to all SFD's branches for correcting deviations and lessons learning.

11.7. *Environmental and social education, training and awareness*:

78. *Five levels of training on the ESMF will be conducted*: SFD staff level, related government staff level, consultant level, contractor level, and SA level. SFD staff training will include all POs and BMs and the projects' approval committee (PAC) members. Government ministries and authorities related to SFD's activities and their branch offices at the governorate and district levels will receive training on the ESMF. With the development of subprojects, consultants will be trained in groups and this training will continue throughout the project period (2015-2020). In the same way, contractors, and SA will be trained in groups as soon as enough number of subprojects becomes ready for physical implementation. Table below shows the SFD budget allocation for education, training and awareness.

Training and Awareness Budget for SFD Operations

Item	Unit Cost	2015		2016		2017		2018		2019		2020		Total $	Remarks
		No. of Trainees	Amount $	No. of Trainees	Amount $	No. of Trainees	Amount $	No. of Trainees	Amount $	No. of Trainees	Amount $	No. of Trainees	Amount $		
Training SFD's Branch Mangers , Unit Heads and POs	**100**	**210**	**21,000**	**210**	**21,000**	**210**	**21,000**	**210**	**21,000**	**210**	**21,000**	**210**	**21,000**	**126,000**	194Pos+9BM+7 UHs=210
Training Government Staff	**100**	**167**	**16,700**	**167**	**16,700**	**167**	**16,700**	**167**	**16,700**	**167**	**16,700**	**167**	**16,700**	**100,200**	7Persons*21governorates+20persons from ministries and authorities
Training Consultants	**100**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**108,000**	20 consultants *9 branches=180 yearly
Training sponsoring agencies	**100**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**108,000**	20 persons from each branch yearly=180 persons/year
Training local contractors	**100**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**180**	**18,000**	**108,000**	20 Contractors from each branch yearly=180 contractors/year
Awareness Activities			**40,000**		**20,000**		**20,000**		**20,000**		**20,000**		**30,000**	**130,000**	Introducing targeted communities to the project and delivering messaged on good practices
Total														**680,200**	

12. SFD Complaints Handling Mechanism (CHM)

79. As part of an ongoing move to improve its accountability, SFD has developed a CHM for managing, responding to and monitoring complaints within its Programs. The accumulated experience in SFD to respond and interact with all partners and beneficiaries enabled it to improve and adopt an efficient CHM, focusing on institutionalizing the experience in dealing with complaints and mainstream it in the system context including MIS.

Objectives of CHM:

- Improve accountability to SFD partners and beneficiaries
- Increase the level of beneficiaries satisfaction with the delivery of services and enhance the beneficiaries /SFD relationship;
- Provide an efficient, fair and accessible mechanisms for resolving beneficiaries/partners complaints;
- guide SFD staff in handling complaints
- Allow to rectify mistakes , alert to problems, and help to continuously learn and improve

13. Environmental Monitoring Plan (EMP)

80. Environmental monitoring is an integral part of an EMP, which outlines the specific information to be collected to ensure the environmental quality at different stages of project implementation. The parameters and their frequency of monitoring should be provided along with cost of monitoring plan and institutional arrangements for conducting monitoring. Reporting formats should be provided along with a clear arrangement for reporting and taking corrective action. Annex (4) outlines variables for monitoring of an example of sub-project. Environmental monitoring plan includes indictors to be measured through out the stages of the subproject including the baseline indicators measurements in order to track the impacts of the subproject. Annex (6) shows the environmental impacts, the monitoring indicator and the monitoring frequency. Monitoring costs are included within the budgets for the project components at 10% of subproject cost, and will be budgeted in the goods and services contracts related to the activities when more detail is available. The site specific EMP will be translated into action on the ground. Contract documents will be incorporated with clauses directly linked to the implementation of mitigation measures.

14. Environmental Mitigation Measures

81. By design, the project is expected to have far greater environmental benefits than adverse environmental impacts. The potential adverse environmental impacts from the project are likely to be small and limited. Spatial and temporal distribution of impacts that would result from the project activities, as well as the sub-projects requires the attention especially during screening. However, it is recognized that such impacts can accrue into larger impacts if they are not identified early during the planning cycle, and their mitigation measures integrated into the project planning and implementation. Annex (1) provides direct and significant potential impacts due to project actions. As the actual site of intervention and scope of interventions are not known, it is not possible to provide specific impact level category although preliminary identification based on likelihood has been done. Given the fact that minimum impact sub-projects are eligible and the level of available fund, such impacts could be mitigated using

sensible site selection criteria, good construction practices in harmony with the local culture and diligent management practices in the operational phase.

82. Annex (5) identifies some of the possible environmental impacts that could arise in each selected sample of sub-projects, proposed mitigation aspects and measures, monitoring indicators and monitoring methods and monitoring responsibilities and frequencies. As mitigation measures must be taken into account the project design and costs, some aspects of the EMP do not need a separate budget allocation. However, it is imperative that activities' costs reflect the incremental effort necessary to fully implement the EMP.

15. Sub-projects Monitoring and Evaluation

83. Environmental monitoring needs to be carried out during all phases including operation and maintenance of sub-projects in order to measure the success of the mitigation measures implemented. Monitoring provides opportunities:

- To alert SFD and provide timely information about the success or otherwise of the screening process, to enable changes to be made to the system, if required; and
- To determine whether the mitigation measures set out the sub-projects have been successful.

84. Subproject design includes a monitoring framework, together with indicators. The responsibilities for monitoring and evaluation of the mitigation measures adopted under the sub-projects would be assigned to the WEU. The WEU will be responsible for the implementation of the monitoring framework and reporting of feedback throughout the life of the subproject. Specifically:

- Monitoring of the environmental and social assessment work to be carried out;

- Monitoring of environmental issues and the supervision of mitigation measures during the implementation process;

- Monitoring of environmental issues during operations and maintenance of any infrastructure and facilities when handed over to communities after implementation; and,

- Submission of monitoring reports to the SFD MD. The report will include inter alia progress towards achieving the overall project objectives and specific objectives of the sub-projects using indicators identified by the community with support of WEU technical staff. The reporting may be on monthly, quarterly or annual basis, as needed.

ANNEX (1)
Examples of Negative Environmental Impacts that may be associated with Sub-projects[2]

Sub-project Type	Potential Environmental and Social Negative Impacts During Project Construction	Best Management Practices and Mitigation Measures	Potential Environmental and Social Negative Impacts During Project Operation	Best Management Practices and Mitigation Measures
Water Supply and Networks **Rural Road, and Irrigation Canals**	□Mismanagement of Construction and demolition/ Rehabilitation waste □Disruption to biodiversity (changes to fauna, flora, and aquatic life) □Cut down of trees or destruction of green areas □Increased air pollutant emissions □Foul odors □Effluents to public water systems □Alteration of current alignment of streams □Obstruction of irrigation intakes □Obstruction of flood water course □Alteration of surface water quality or quantity □Interference with existing drainage networks □Alteration of direction/quality of groundwater □Changes in soil(erosion/ fertility/salinity/pollution) □Gas emissions □Dust pollution □Change in local climate □Accidents may occur leading to fire or personal injury	□Monitoring of water □Regional water use plans □Proper drainage near wells and pumping stations □Erosion control during construction □Construction during dry season □Include odor-control technology in design □Provide appropriate sized bins to collect construction waste and arrange for periodic pickup and disposal □Restrict activities to areas where biodiversity is not adversely affected □Avoid cutting trees and destruction of green areas, and if necessary ,re-vegetation should be arranged and included in the project □Control construction by fencing Site and spraying water over working area to control dust emissions □Consider project siting during the design phase □Collect liquid effluents during Construction and avoid disposal of untreated effluents into public water systems □Careful design and appropriate	□Disruption to biodiversity (changes to fauna, flora, and aquatic life) □Increased air pollutant emissions □Foul odors □Changes in soil(erosion/ fertility/salinity/pollution) □Gas emissions □Change in local climate □Accidents may occur leading to fire or personal injury	□Quality; operation, and Maintenance plan □Avoid harmful effects to biodiversity during operation □Monitoring of water □Regional water use plans □Erosion control during operation □Include odor-control technology in operation □Use protective clothing and masks for workers as appropriate. □Train workers on health care waste segregation and occupational safety measures

[2]The table provides a summary of some of the negative environmental impacts that maybe associated with the sub-projects different components though it is not intended to provide an exhaustive list of all types of the sub-projects, their impacts, and their mitigation measures that shall be funded by the Project, rather, the table highlights the typical impacts that can be expected in the types of sub-projects that shall be financed by the Project.

		Selection of irrigation systems □Use protective clothing and masks for workers as appropriate. □Train workers on health care waste segregation and occupational safety measures		
Waste Management	□None perceived	□None	□The garbage streams contain All types of household and other wastes, some of which are hazardous. □Collection vehicles are not Covered during transport leads to littering. □Collection workers usually have no special training or protection for handling these wastes □Human scavengers at dumping area maybe sorting through the waste. □Waste accumulating in dumping areas may burn spontaneously or by individuals resulting in air quality degradation from smoke and dust. □Contamination of ground water resources is of concern at dumping areas.	□Avoiding contamination of Close by water bodies through random waste dumping. □Sound selection and siting of dumping areas, studies are crucial for this type of project □Train workers on waste management and occupational safety measures □Use protective clothing and masks for workers as appropriate □Vehicles must be covered during transport. □Waste generated should be collected frequently and storage prohibited in streets. □Waste accumulated in dumping areas should be covered to avoid scavenging and spontaneous burning
HealthCare Related	□Mismanagement of demolition /rehabilitation waste □Disruption to biodiversity (changes to fauna, flora, and aquatic life) □Cut down of trees or destruction of green areas □Changes in soil(erosion/	□Adequate sanitation and disposal System for waste □Avoid cutting trees and destruction of green areas, and if necessary, re-vegetation should be arranged and included in the project □Restrict noisy activities to certain	□Indoor air pollution □Infectious waste may be disposed of in mixed form with municipal waste □Incinerators, if used, may not be properly sited, operated or maintained leading to air pollution and	□Control sources of indoor Pollution at source. □Provide for appropriate indoor ventilation either naturally by using larger windows or mechanically by using air circulation fans and vents □Use different bags for

	fertility/salinity/pollution) □Dust pollution □Accidents may occur leading to fire or personal injury □Transportation and traffic circulation □Increase traffic hazards to motorists and pedestrians □Introduction of new diseases □Excessive exposure to existing diseases □Attraction of pests and rodents □Generation of excess solid wastes and litter □Transport, storage or disposal of regulated hazardous wastes □Reduced aesthetic values/ visual pollution □Risk of impact on historical, archaeological, touristic, religious, or protected areas and sites □Risk of impact on recreational activities □Increased noise levels/noise pollution	Hours during the day to avoid disturbance □Control construction by fencing site and spraying water over working area to control dust emissions □Provide appropriate sized bins to collect construction waste and arrange for periodic pickup and disposal □Consider project siting during the design phase □Restrict activities to areas where biodiversity is not adversely affected □Use protective clothing and masks for workers as appropriate. □Train workers on health care waste segregation and occupational safety measures □Education in proper sanitation And health practices □Careful management of pesticides □Integrated pest management programs □Provide glowing traffic signs and build artificial humps near construction area □Strict avoidance of construction near archeological, historical, or religious areas. If any potential Artifacts are discovered during construction, work will be temporarily halted in this area □Restrict noisy activities to certain hours during the day to avoid disturbance	Hazardous working conditions. □Accidents may occur leading to fire or personal injury □Disruption/congestion of transportation and traffic circulation □Increase traffic hazards to motorists and pedestrians □Introduction of new diseases □Excessive exposure to existing diseases □Attraction of pests and rodents □Generation of excess solid wastes and litter □Transport, storage or disposal of regulated hazardous wastes □Reduced aesthetic values/ Visual pollution □Risk of impact on historical, archaeological, touristic, or protected areas and sites □Risk of impact on recreational activities	Municipal waste (black bags) And infectious waste (red bags). □Get approval on incinerator location before installation. □Maintain incinerator periodically. □Use protective clothing and masks for workers as appropriate. □Train workers on health care waste segregation and Occupational safety measures □Consultation with affected communities □Employ local citizens in sub-project area in sub-project operation □Education in proper sanitation and health practices □Avoidance of stagnant waters □Careful management of pesticides □Integrated pest management programs □Provide glowing traffic signs and build artificial humps near construction area

Annex (2)
Environmental and Social Responsiveness Criteria at Proposal Stage

Building New Terraces

i. Establishing new terraces in an area will affect its landscape, therefore, the relation between existing historical, cultural, and sensitive environmental sites with the new terraces shall be checked.
ii. Fertilizers are used for improving soil and increase the quantity and quality of products, but they may cause contamination to water sources downstream the terraces. Therefore, new terraces should not be part of a catchment area of rainwater harvesting cisterns used for domestic use. Mitigation to be taken is to divert the final outlet of the terraces outside the catchment area.
iii. Terraces are one of the tools for rainwater harvesting; they receive water from direct rain and intercept runoff. Part of this water is consumed by the plant and the other part penetrates down the ground to the shallow aquifer. Hence, introducing new terraces will certainly create water rights conflict, which shall be checked.
iv. The slope of the terrain shall not be steeper than 1:1, as steeper slopes will increase the cost per hectare retained.
v. Normally there should be no land ownership problem because the lands here are either small water courses (locally called Rahag) or privately owned but not used because of steep slope and very low or zero soil depth. Even if privately owned, owners are in favor of having terraces they can cultivate. Nevertheless, the community should solve any land ownership problem that may arise in future phases of implementation.

Proposal Title	
Proposal Location	

ESR Criteria for Building New Terraces at the Proposal Stage	**Confirmation** **Write Yes or No**
The proposed site is at a distance of at least10 M from the nearest historical, cultural or sensitive environmental site	
Slope is not more than 1:1	
The terraces will not be part of a catchment area for an existing rainwater harvesting cistern for domestic use	
The terraces will not cause any water right conflicts	
The community is willing to solve any land ownership problem	
If answer to any of the above stated questions is 'NO' then the PO should amend the proposal to achieve compliance or develop new alternative, or drop the project. If the answer is 'Yes' then incorporate this information in the project proposal	

Rehabilitating Terraces

i. Existing, but, deteriorated terraces are part of the historic culture of the site, therefore, no threat of distorting the landscape and existing cultural monuments

ii. After being abandoned for years, land owners downstream the deteriorated terraces became accustom to receive certain amount of runoff. Rehabilitating the terraces will disturb the quantity of the runoff they used to receive, hence, the water right conflict have to be checked

iii. Normally there should be no land ownership problem because the lands here are either small water courses (locally called Rahag) or privately owned but not used because of steep slope and very low or zero soil depth. Even if privately owned, owners are in favor of having terraces they can cultivate. Nevertheless, the community should solve any land ownership problem that may arise in future phases of implementation.

iv. Fertilizers are used for improving soil and increase the quantity and quality of products, but they may cause contamination to water sources downstream the terraces. Therefore, new terraces should not be part of a catchment area of rainwater harvesting cisterns for domestic use. Mitigation to be taken is to divert the final outlet of the terraces outside the catchment area.

Proposal Title	
Proposal Location	

ESR Criteria for Rehabilitating New Terraces at the Proposal Stage	**Confirmation** **Write Yes or No**
The terraces will not cause any water right conflict	
The community is willing to solve any land ownership problem	
The terraces will not be part of a catchment area for an existing rainwater harvesting cistern for domestic use	

If answer to any of the above stated questions is 'NO' then the PO should amend the proposal to achieve compliance or develop new alternative, or drop the project. If the answer is 'Yes' then incorporate this information in the project proposal

Check Dams

i. Check dams normally do not cause environmental impacts. It is suggested that wherever possible use local material to avoid the transportation of material and ensure that the structure design ensures the safety of people in case of break down.

ii. It should not have any negative social impact through its location or ownership of land.

iii. Water rights should be considered for the downstream users before constructing the dam.

Proposal Title		
Proposal Location		
ESR Criteria for Check Dams at the Proposal Stage		**Confirmation Write Yes or No**
There is no land acquisition problem		
There is no water rights problem		
If answer to any of the above stated questions is 'NO' then the PO should amend the proposal to achieve compliance or develop new alternative, or drop the project. If the answer is 'Yes' then incorporate this information in the project proposal		

Flood Protections

i. Flood protections are structures for protecting agricultural lands or wadi banks from erosion.

ii. In Yemen, most of the erosion occurs to the agricultural lands and wadi banks are the results of deteriorated upstream watershed. Hence, interventions in protecting lands downstream a deteriorated watershed may not solve the problem while improving the watershed management will reduce the erosion downstream the watershed and if needed, protection work will be minimal, hence, economical and sustainable.

iii. In case flood protection structures have been approved, then low cost techniques using local materials and gabions shall be adopted without jeopardizing the function of the structure.

iv. The interventions may include check dams, rehabilitating terraces, and rainwater harvesting cisterns. Hence, land may be an issue for such structures, therefore, the community should solve any land ownership problem in a fairly way and if needed compensate the land owners in cash/kind.

Proposal Title	
Proposal Location	

ESR Criteria for Flood Protections at the Proposal Stage	**Confirmation** **Write Yes or No**
The proposal will lead to reduction in erosion of downstream properties	
Protected land will not be used for cultivating Qat	
The community is willing to solve any land ownership problem and compensate owners fairly in cash/kind	

If answer to any of the above stated questions is 'NO' then the PO should amend the proposal to achieve compliance or develop new alternative, or drop the proposal. If the answer is 'Yes' then incorporate this information in the project proposal.

Groundwater Recharging

i. Groundwater recharging structures are structures that receive storm water and allow it to infiltrate to the ground. Such structures may include leaching pits and trenches, recharging wells and basins, water weirs, etc.

ii. Land may be needed to build groundwater structures hence, the community shall provide the land needed and compensate the owners fairly in cash/kind.

iii. At low areas where flooding is a problem, groundwater recharging structures will play two roles, eliminating the flood problem and recharging groundwater.

iv. All recharging structures need periodic maintenance including removal of accumulated silt, monitoring and controlling contamination sources, etc.

Proposal Title	
Proposal Location	

ESR Criteria for Groundwater Recharging at the Proposal Stage	**Confirmation Write Yes or No**
The recharging structure/s will not cause large displacement of population.	
Upstream catchment area is free from open disposal of wastewater, garbage dumping site, or open defecation areas.	
The recharging structure/s do not inundate large cultivable land, orchards, and culturally, religious and environmentally important site	
The proposed recharging structure/s is/are not less than 100 M far from the nearest cultural monument or environmentally sensitive site.	
The community is willing to solve any land ownership problem and compensate owners fairly in cash/kind	
No water right conflict problem	

If answer to any of the above questions is 'NO' then the PO should amend the proposal to achieve full responsiveness to environmental and social issues or develop new alternative, or drop the proposal. If the answer is 'Yes' then incorporate this information in the project proposal.

Open Catchment Rainwater Harvesting Covered cisterns for Domestic Use

i. The locations of open catchment rainwater harvesting cisterns for domestic use are carefully selected to avoid contamination sources from wastewater disposal, open defection, dumping sites and agriculture lands.
ii. The storage capacity depends on rainfall pattern, runoff coefficient, catchment area and consumption.
iii. All SFD's interventions in this field are covered, in order to comply with the national water coverage definition in rural areas, therefore, the threats of algae growth, and mosquitoes breeding are eliminated.
iv. Women and girls are responsible for fetching water, therefore, their opinion on the proposal and the location and design of the cistern must be respected,
v. Depending on the site, taking water from the cistern could be via pulley-rope-bucket, or hand pumps or taps.
vi. Site selection should insure the use of the cistern by all community groups including the vulnerable and marginalized groups.
vii. Silt and floating material trap basin is normally built before the inlet of the cistern, and if not emptied, cleaned and maintained periodically it becomes a good environment for mosquitoes breeding.

Proposal Title	
Proposal Location	

ESR Criteria for Open Catchment Rainwater Harvesting Covered Cisterns for Domestic Use at the Proposal Stage	**Confirmation** **Write Yes or No**
Women and girls were consulted on the proposal and its location and their feedback and comments were reflected in the proposal report	
The site is far by at least 100m from latrines, dumping site and agriculture lands	
The site is far by at least 10m from the nearest historical, cultural, religious or environmentally se sensitive site	
The site is far by at least 10 m from the nearest wadi course	
The catchment area is free from open defecation, open wastewater disposal, dumping sites or agricultural lands	
The location of the cistern serves all community including the vulnerable and marginalized groups	
The community agreed to provide the land and compensate the owners fairly in kind/cash.	
If answer to any of the above questions is NO, then the PO and the SA shall search for another location, or the proposal shall be dropped. If all answers are YES then incorporate this information in the project proposal.	

Open Catchment Rainwater Harvesting Uncovered Cisterns for Agriculture and Livestock

i. The storage capacity depends on rainfall pattern, runoff coefficient, catchment area and consumption.
ii. The cisterns in this case are normally open, hence, mitigations for minimizing mosquitoes breeding and Bilharzia spreading shall be considered.
iii. Depending on the site, taking water from the cistern could be via pulley-rope-bucket, hand pumps or taps.
iv. Site selection should insure the use of the cistern by all community groups including the vulnerable and marginalized groups.
v. Silt and floating material trap basin is normally built before the inlet of the cistern, and if not emptied, cleaned and maintained periodically it becomes a good environment for mosquitoes breeding and source of bad odor.

Proposal Title	
Proposal Location	

ESR Criteria for Open Catchment Rainwater Harvesting Uncovered Cisterns for Agriculture and Livestock at the Proposal Stage	**Confirmation** **Write Yes or No**
The site is far by at least 10m from the nearest historical, cultural, religious or environmentally sensitive site	
The site is far by at least 10 m from the nearest wadi course	
The catchment area is enough to fill the cistern	
The catchment area is free from open defecation, open wastewater disposal, dumping sites	
The location of the cistern serves all community including the vulnerable and marginalized groups	
Recommendations for mitigating mosquitoes breeding and Bilharzia spreading were considered in the proposal	
The community agreed to provide the land and compensate the owners fairly in kind/cash	
If answer to any of the above questions is NO, then the PO and the community shall search for another location, or the proposal shall be dropped. *If all answers are YES then incorporate this information in the project proposal.*	

Rooftop Rainwater Harvesting

i. Rooftop rainwater harvesting cisterns are normally owned by the house owner; therefore, ownership and sustainability are very high.

ii. SFD's policy insists on the community to identify the vulnerable families and help them to build their cisterns.

iii. To comply with the national standards, the cisterns are normally covered and water is taken from the cistern via bucket and rope or tap if the level allows.

iv. Traditional techniques are used for building the cisterns.

v. To improve the quality of stored water, first flush tool is installed to force the first quantity of storm water outside the cistern, then, clean water is allowed to enter the cistern. Coarse filter can be installed at the inlet as well.

vi. No land ownership problem here because the intervention is at the household level, hence every house owner will allocate a suitable land near the house to build his own cistern.

Proposal Title	
Proposal Location	

ESR Criteria for Rooftop Rainwater Harvesting Cisterns at the Proposal Stage	**Confirmation Write Yes or No**
Women and girls were consulted on the proposal and its locations and their feedback and comments were reflected in the proposal report	
The community agreed to identify vulnerable families and help them build their own cisterns	
The whole community is aware of SFD's policy and agreed to go for rooftop rainwater harvesting	
If answer to any of the above questions is NO, then the PO and the community shall search for another option, or the proposal shall be dropped. If all answers are YES then incorporate this information in the project proposal.	

Water Channel

i. Water channels divert water from upstream main water source, and distribute water to the downstream farmers along the alignment. Diversion and distribution of water is a serious issue among the farmers community. Intensive consultations are conducted with the farmer communities for the selection of point and source of diversion, alignment of the channel, water distribution system along the channel, construction design and cost, etc.
ii. The good practice is to have the alignment of the water channel in publicly owned passages. Though, loosing property is not expected, but objections from farmers may arise in some sections hence the community should agree to solve such problems whenever arise.
iii. In many cases the quantity of water for irrigation is very limited; therefore, the end of the channel and the limits of the agricultural lands that will be included in the proposal must be discussed and agreed with the community. Encouraging the farmers outside the limits to attend the discussions will help in eliminating this impact in the future.

Proposal Title		
Proposal Location		
ESR Criteria for Water Channel at the Proposal Stage		**Confirmation** **Write Yes or No**
No water right conflicts exist as a result of the proposal		
The preliminary alignment of the channel has been discussed and the community agreed to solve any obstacles arise from farmers		
The boundaries of the agricultural lands that will be served by the proposal have been agreed with all the farmers		
The community agreed to provide the land required and compensate the owners fairly in kind/cash		
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are in 'Yes' then incorporate this information in the project proposal.		

Water Saving Irrigation Systems

i. Intervention may include water distribution network and on field irrigation system which should be of a water saving system such as drip irrigation.
ii. The good practice is to have the alignment of the water distribution network in publicly owned passages. Though, losing property is not expected, but objections from farmers may arise in some sections, hence the community should agree to solve such problems whenever arise.
iii. In many cases the quantity of water for irrigation is very limited therefore the end of the network and the boundary of the agricultural lands that will be included in the subproject must be discussed and agreed with the community. Encouraging the farmers outside the identified boundary to attend the discussions will help in eliminating this impact in the future.
iv. Operation and maintenance is an issue here, hence, their requirements in terms of labors, and expenses should be discussed and agreed with the community.
v. The two components, the network and on field irrigation systems are connected to each other, if the farmers don't accept the on field irrigation system the network will not be implemented. Therefore, the type of on farm irrigation system must be discussed and agreed with the farmers.
vi. Water right conflict may arise at the water source and at distribution points; hence, need to be checked at the proposal stage.

Proposal Title	
Proposal Location	

ESR Criteria for Water Saving Irrigation System at the Proposal Stage	**Confirmation Write Yes or No**
The preliminary alignment of the distribution network has been discussed and the community agreed to solve any obstacles arise from farmers.	
The boundaries of the agricultural lands that will benefit from the proposal have been agreed with all the farmers.	
Farmers were introduced and accepted the proposed technique for the on farm irrigation system.	
No water right conflicts will exist at the water source and at distribution points as a result of the proposal	
O&M requirements have been discussed with the community and the community agreed to develop a proposal for this issue	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are in 'Yes' then incorporate this information in the project proposal.	

Introducing new Plants Species

i. Introducing new plants species that can tolerate harsh environment can help rural communities to cope with climate change. However, social, economic, climatic, and environmental issues have to be studied carefully.
ii. Community participation is crucial, and the community should know the advantages and disadvantages of the new species and all its requirements.

Proposal Title	
Proposal Location	

ESR Criteria for Introducing New Plants Species at the Proposal Stage	**Confirmation** **Write Yes or No**
New species have been identified according to the local social, economic, climatic, and environmental conditions.	
The community has been introduced to the new species and accepted them.	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are in 'Yes' then incorporate this information in the project proposal.	

Improving Existing Rural Feeder Roads

i. Improvement work may include retaining walls, drainage ditches, and very little widening at critical sections. Pavement is also introduced at steep slopes to protect the road surface from erosion.
ii. Water rights could be an issue, therefore, at the proposal stage the affected community members shall be identified and informed that their water rights will be documented and kept without change as a result of implementing the proposal.
iii. As a result of improving the road, the speed of the vehicles may increase therefore, speed breakers and signs at critical sections shall be introduced.

Proposal Name	
Proposal Location	

ESR Criteria for Improving Existing Rural Feeder Road at the Proposal Stage	**Confirmation** **Write Yes or No**
Affected community members have been identified and informed that their water rights will be documented and kept with no change.	
The community is introduced to the threats of increasing vehicles' speed as a result of improving the road, and the measures to mitigate them.	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are in 'Yes' then incorporate this information in the project proposal.	

House Gardens

i. Open areas near houses can be utilized for planting lettuce, chili, onion, coriander, garlic, etc. to provide households with basic food needs.
ii. Selecting the needed type of plant will depend on the household, however, the proposal should provide guidance on how to maintain the plant,

Proposal Title	
Proposal Location	
ESR Criteria for House Gardens at the Proposal Stage	**Confirmation**
	Write Yes or No
The community has been introduced to the house garden plants suitable to their environment.	
The proposal has been introduced to all community groups including vulnerable and marginalized.	
If answer to any of the above questions is 'NO' then the PO shall drop the proposal. If all answers are in 'Yes' then incorporate this information in the project proposal.	

Biogas Units

i. Biogas units are an environmentally friendly product. It does two functions; (a) Supply clean energy at the household level, and (b) generate bio-fertilizer (slurry) as a bye product. Biogas unit operation is relatively complex as compared to other SFD's interventions. If the unit is operated under prescribed manual then it normally do not cause environmental impacts.

ii. Public or shared biogas plants are not common in Yemen, but individual units can be accepted. Therefore, eligibility criteria for having individual biogas unit shall be developed and introduced to the community.

iii. The community shall be introduced to the technology, and expected dangers associated with its use, the safety measures, and its O&M.

iv. Households fulfilling the eligibility criteria should be given equal chance.

Proposal Title	
Proposal Location	

ESR Criteria for Biogas Units at the Proposal Stage	**Confirmation** **Write Yes or No**
There is no threat of contaminating water sources as a result of accumulated bio-fertilizer	
The community is aware of the eligibility criteria	
The community has been introduced to the expected dangers associated with the biogas units, and the safety measures to be taken	
The community has been introduced to their advantages and disadvantages and accepted the technology	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are 'Yes' then incorporate this information in the project proposal.	

Establishing/Rehabilitating Grazing Lands

i. Interventions in this field may include building/rehabilitating terraces not more than 1.0 M high, cutting and leveling soil, seeding and seedlings, open catchment rainwater harvesting cisterns for irrigation and livestock, community mobilization and capacity building.

ii. The community shall be introduced to the characteristics of grazing lands, then, the community will identify the location of the land and shall agree on using it equally by all community groups including vulnerable, and marginalized groups.

iii. The community shall agree to provide the land and compensate owners fairly in kind/cash.

iv. Management of grazing land will include agreed schedule of grazing, therefore, the community shall agree to develop the schedule of grazing and the arrangements for its enforcement.

Proposal Title	
Proposal Location	
ESR Criteria for Establishing/Rehabilitating Grazing Lands at the Proposal Stage	**Confirmation** **Write Yes or No**
The community was introduced to the characteristics of grazing lands, and has identified a suitable location	
The community agreed to give equal rights to use the grazing land for all groups including vulnerable and marginalized groups	
The community agreed to provide the required land and compensate the owners fairly in kind/cash	
The community has agreed to develop the schedule for grazing and the arrangements for its enforcement.	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are 'Yes' then incorporate this information in the project proposal.	

Replacement of Qat

i. Interventions here will include the provision of new cash crops seedlings that will depend on many factors including climate, economic, environmental and social factors.

ii. Equity should be insured, therefore, all the community must be introduced to the proposal and every household is given equal chance to have the new cash crops seedlings depending on the available land and water sources.

iii. Most of the farmers will not accept to remove completely the Qat tree and replace it with the new cash crop because they are afraid of losing almost a monthly revenue, while the new cash crop will take years to start giving revenues which will be once or twice a year in the best conditions. Therefore, the proposal should be to encourage the farmers to plant the new cash crop beside the Qat tree and let them figure out the benefits of the new cash crop and decide to remove the Qat tree completely in the future i.e. removal of Qat should not be a prerequisite for providing the cash crop seedlings.

Proposal Title	
Proposal Location	

ESR Criteria for Replacing Qat at the Proposal Stage	**Confirmation**
	Write Yes or No
The crop water requirement of the new cash crop is less than that of Qat	
All households are given equal chance to get the seedlings of the new cash crops	
The community clearly knew that completely removing the Qat tree is not a prerequisite for receiving the cash crop seedlings	
The proposal is accepted by local community	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If all answers are 'Yes' then incorporate this information in the project proposal.	

Seeds storage

i. Intervention here will include new buildings that may include hangars, and management building**.** The impacts of these new buildings on the surrounding landscape must be considered.
ii. Management buildings will have wastewater disposal at operation phase, therefore, the possibility of contaminating existing water sources must be considered and mitigated.

Proposal Title	
Proposal Location	

ESR Criteria for Seeds Storage at the Proposal Stage	**Confirmation**
	Write Yes or No
The proposed site is at least 100 M far from historical, cultural, or environmental sensitive sites	
The proposed site is at least 100 M far from the nearest water source	
The community agreed to provide the land and compensate the owners fairly in kind/cash	
The sponsoring agency is welling to operate and maintain the buildings	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. Sponsoring agency is advised to locate new site that qualifies the criteria. If all answers are 'Yes' then incorporate this information in the project proposal.	

Post Harvesting Facilities

i. Interventions here may include the introduction of harvesting machines, wooden boxes for drying coffee beans, and packaging of agriculture products.

ii. Grain harvesting machine is associated with dust and smoke emissions, therefore, the location of installing and operating such machine shall be far from residential buildings and historical and cultural monuments.

iii. Arrangement of operating and maintaining post-harvest facilities is very important to insure their sustainability in providing the service.

iv. All households shall be given equal chance to access post harvesting facilities.

Proposal Title	
Proposal Location	
ESR Criteria for Post Harvesting Facilities at the Proposal Stage	**Confirmation** **Write Yes or No**
Harvesting machine is at least 100 M from residential buildings, historical and cultural monuments	
Community has agreed to operate and maintain the post harvesting facilities	
All household will be given equal access to post harvesting facilities	
The community agreed to provide the land needed and compensate the owners fairly in kind/cash	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Improving Rural Markets

i. Rural areas have their local markets, but they are in bad condition, they lack shades, public toilets, and garbage collection and disposal system.
ii. Improvement may include establishing public toilets; hence, the method of wastewater disposal shall be selected carefully to avoid contaminating existing water sources.
iii. Establishing garbage collection and disposal will require a dumping site which shall be discussed and agreed with the SA.
iv. Sustainability will need an operation and maintenance system which will require payment for the service to get revenues to cover the cost of O&M.

Proposal Title	
Proposal Location	

ESR Criteria for Improving Rural Markets at the Proposal Stage	**Confirmation** **Write Yes or No**
The proposed site of the public toilet is at least 100 M far from the nearest water source	
The dumping site for garbage disposal is selected and agreed with the SA	
The SA has agreed to provide the land for all the intervention's components and compensate the owners fairly in cash/ kind	
The SA was introduced to the importance of the O&M and agreed to develop a system for O&M	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Constructing Sewerage Network (Wastewater Treatment Plant Not Included)

i. From SFD's previous experience, operation and maintenance of newly established sewerage systems is one of the strong challenges for the sustainability of these systems. Due to social and religious reasons local people will accept to work and come into direct contact with water, but they will refuse to work in sanitation where direct contact with wastewater is possible, i.e. it's so difficult to find people for operating these systems. Hence, such interventions are limited to extensions of existing sewerage networks in urban areas where Local Water Supply and Sanitation Corporations (LWSC) are active.

ii. LWSC in some cities doesn't maintain the already existing sewers, and this can be detected by opening few manholes and looking at the accumulated debris on the benching and standing wastewater which are signs for frequent blockages due to lack of preventive maintenance. In such case, adding new sewers will cause more burden on LWSC, hence should be avoided.

iii. These systems are new to the country, hence the plumbing of some houses are not prepared to connect to a sewerage network. They lack ventilation columns, siphons, and inspection champers' covers. The lack of these components will cause frequent blockages in the new sewerage network and increase the corrosion of concrete work. Hence, all houses shall be checked for the availability of these components.

iv. Boundaries of targeted area shall be agreed with the SA and local community members to avoid any obstacles during implementation and the need to add variation orders.

v. The alignment of all sewers shall be in public roads and passages. When a short cut through private land is found technically and economically feasible, then it should be discussed with the SA and land owner. The short cut should not be considered acceptable unless both the SA and the land owner agreed to settle this down at the design stage.

vi. The targeted community is expected to pay for the service after completion; therefore, a survey shall be conducted for randomly selected houses to measure the willingness to pay for service. At least 75% of the surveyed houses are willing to pay for the service.

Proposal Title	
Proposal Location	

ESR Criteria for Sewerage Network at the Proposal Stage	**Confirmation**
	Write Yes or No
The Local Water Supply and Sanitation Corporation is active in the area and conducts preventive maintenance for the existing sewers	
Plumbing of all houses within boundaries of targeted area are accepted, therefore, houses are ready to be connected to sewerage network	
The boundaries of targeted area are identified and agreed with the SA	
All sewers are in public roads and passages, and short cuts through private lands have been discussed with the SA and the land owner and both agreed to settle the issue at the design stage	
75% or more of the surveyed houses are willing to pay for the service	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Building and Furnishing Kindergarten

i. The location should be safe for the kids. It should be far from main roads, heavy traffic, and noise sources such as workshops, markets, and mills.
ii. Wastewater disposal should not cause any contamination to available water sources.
iii. Land will be needed, therefore, the SA should provide the land and compensate the land owner fairly in cash/kind
iv. Operation and maintenance of the building after completion is usually a problem, and kids will suffer from the shortcomings of the O&M particularly the WASH facilities. Hence, this issue should be discussed carefully with all stakeholders including the SA, and the community. They should know at this stage that they will develop at the design stage a system for O&M that will cover all issues including financial and administration issues, and they will bear the whole responsibility for its enforcement.
v. The location should have good drainage (i.e. should not be low to cause water stagnation during rainy seasons), and should be far from water courses and rock falls.

Proposal Title	
Proposal Location	

ESR Criteria for Building and Furnishing Kindergarten or School at the Proposal Stage	**Confirmation** **Write Yes or No**
The location is far from main roads, heavy traffic, and noise sources such as workshops, markets and mills	
The location is more than 100 m far from the nearest water source	
SA agreed to compensate the land owner fairly in cash/kind	
O&M of the building after completion, particularly WASH facilities has been discussed with the SA who agreed to develop a system for OM at the design phase	
The location has good runoff drainage, and far from water courses and rock falls	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Building and Furnishing School

i. The location should be safe for the students. It should be far from main roads, heavy traffic, and noise sources such as workshops, markets, and mills.
ii. Wastewater disposal should not cause any contamination to available water sources.
iii. Land will be needed, therefore, the SA should provide the land and compensate the land owner fairly in cash/kind
iv. Operation and maintenance of the building after completion is usually a problem, and kids will suffer from the shortcomings of the O&M particularly the WASH facilities. Hence, this issue should be discussed carefully with all stakeholders including the SA, and the community. They should know at this stage that they will develop at the design stage a system for O&M that will cover all issues including financial and administration issues, and they will bear the whole responsibility for its enforcement.
v. The location should have good drainage (i.e. should not be low to cause water stagnation during rainy seasons), and should be far from water courses and rock falls.

Proposal Title	
Proposal Location	

ESR Criteria for Building and Furnishing Kindergarten or School at the Proposal Stage	**Confirmation** **Write Yes or No**
The location is far from main roads, heavy traffic, and noise sources such as workshops, markets and mills	
The location is more than 100 m far from the nearest water source	
The community has access to improved water according to the national water coverage definition	
SA agreed to compensate the land owner fairly in cash/kind	
O&M of the building after completion, particularly WASH facilities has been discussed with the SA who agreed to develop a system for OM at the design phase	
The location has good runoff drainage, and far from water courses and rock falls	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Building and Furnishing Health Education Center

i. The location should be far from heavy traffic, and noise sources such as workshops, markets, and mills.
ii. Land will be needed, therefore, the SA should provide the land and compensate the land owner fairly in cash/kind
iii. Operation and maintenance of the building after completion is usually a problem, and students and staff will suffer from the shortcomings of the O&M particularly the WASH facilities. Hence, this issue should be discussed carefully with all stakeholders including the SA, and the community. They should know at this stage that they will develop at the design stage a system for O&M that will cover all issues including financial and administration issues, and they will bear the whole responsibility for its enforcement.
iv. The location should have good drainage (i.e. should not be low to cause water stagnation during rainy seasons), and should be far from water courses and rock falls.

Proposal Title	
Proposal Location	

ESR Criteria for Building and Furnishing Health Education Center at the Proposal Stage	**Confirmation** **Write Yes or No**
The location is far from main roads, heavy traffic, and noise sources such as workshops, markets and mills	
SA agreed to compensate the land owner fairly in cash/kind	
O&M of the building after completion, particularly WASH facilities has been discussed with the SA who agreed to develop a system for OM at the design phase	
The location has good runoff drainage, and is far from water courses and rock falls	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Pavement of Squares, Roads and Passages

i. Pavement generally seals the ground surface, and reduces rainwater infiltration and consequently reduces groundwater recharge. To compensate for this, components for recharging groundwater such as leaching pits, recharging wells... etc, shall be added and considered a compulsory component of the intervention.
ii. Garbage accumulation and spread out is expected to become a problem at operation phase, hence, the arrangement for collecting and transporting garbage shall be discussed and agreed with the SA.
iii. As a result of pavement, the speed of vehicles is expected to increase hence the community should be aware of this impact and the measures to mitigate it.
iv. The final level of pavement should not cause any trouble to the entrance of houses, and any change in pavement level from the existing level for the favor of improvement shall be discussed and agreed with the related house owner.
v. In some sub-urban areas where agriculture exists side by side with urban settlements, water rights could be an issue. Therefore, the directions of runoff drainage shall be documented and agreed with the SA and the agriculture land owners and should be kept without any alteration.

Proposal Title	
Proposal Location	

ESR Criteria for Paving Squares, Roads, and Passages at the Proposal Stage	**Confirmation** **Write Yes or No**
Components for compensating groundwater recharge are added to the proposal	
SA agreed to provide a system for collecting and transporting garbage after completion	
The SA and the community are introduced to the expected increase of vehicle speed as a result of pavement and the mitigation measures to reduce that impact	
The final level of pavement is not causing any trouble to the houses' entrances, and all alterations for the favor of improvement have been discussed and agreed with the houses' owners	
Water rights have been documented and agreed with the agriculture land owners	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Rehabilitation of Cultural Heritage Monuments

i. Every cultural heritage monument has its unique architectural and structural style and construction techniques. Hence, rehabilitation should be based on these techniques using same materials and same final finish by highly qualified people in cultural heritage rehabilitation.
ii. After rehabilitation, the no. of visitors is expected to increase and this may cause nuisance to the neighbors after the years of smooth and quite life of abandoning the monument. Though some neighbors may see the visitors as a source of improving business, others my see them as nuisance particularly those leaving very near to the monument. This issue shall be discusses and agreed with the SA and the community.
iii. After completion and commissioning, garbage will accumulate and a system for garbage collection and transportation will be needed to keep the monument clean and tidy for the visitors. This shall be discussed and agreed with the SA.
iv. The proposal may include the addition/modification of toilets for the visitors, hence, the outlets shall be connected to the existing sewerage system or wastewater shall be disposed appropriately to avoid contamination to water sources

Proposal Title	
Proposal Location	

ESR Criteria for Rehabilitating Cultural Heritage Monument Passages at the Proposal Stage	**Confirmation** **Write Yes or No**
The proposal recognizes the cultural sensitivity and will use the same materials and final finish and techniques use in the original monument	
The SA and the neighboring households are introduced to the impacts of visitors coming to the monument after commissioning and the mitigations to reduce those impacts	
The SA is aware of the need to a garbage collection and transporting system at commissioning phase and agreed to provide the system and maintain it	
Wastewater from rest rooms will be collected and disposed safely without causing environment pollution	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Cash for Work – Building New Latrines

i. Cash for work program is targeting the most vulnerable households and pay them for the work they do in rehabilitating/building services such as terraces, rainwater harvesting, rural feeder roads...etc. However, there are very poor communities in the West coastal strip where they don't have any asset and don't even own the land they live on with their huts. In such case supporting the community in having appropriate latrines could be the only activity for cash for work.
ii. Such subsidy will not change behavior hence, cash for work activity should be preceded by awareness campaign to create demands for latrines.
iii. To win the appreciation of latrines' users and encourage their use frequently, latrines should fulfill at least the minimum standards. Siphons to prevent odors and rodents, ventilation pipes, and tight inspection chamber covers shall be provided and installed. Ventilation pipe should be extended to at least 0.2m above the roof of the latrine.
iv. The work is implemented by the house' owner, hence training on the job in plumbing and all civil work will be necessary.
v. It was found in previous similar interventions that community started to experience more mosquito breeding directly after commissioning the latrines. The reason was leaving the squat hole and water containers open. Hence, the proposal should include awareness to the community on the importance of keeping the squat hole and water containers closed.
vi. To augment the impact, the proposal should include also the introduction of the tippy tap and help the families to have their own hand washing tool.
vii. Some of cash for work POs focus on selecting only the poor families for this intervention hence they may ignore a better-off family without appropriate latrine. The exclusion of better-off families will not solve the sanitation problem because even if one house is left without appropriate sanitation is enough to keep the disease burden within the community. Therefore in this activity, cash for work program should focus in two objectives, pumping cash to the poor families, and achieving total sanitation.

Proposal Title	
Proposal Location	

ESR Criteria for Building New Latrines at the Proposal Stage	**Confirmation** **Write Yes or No**
Hygiene awareness will be conducted to create demand for latrines before starting cash for work activities	
The minimum requirements for appropriate latrines such as siphons, ventilation pipes, and tight inspection chamber covers are included	
The arrangement for training on the job in plumbing and civil work have considered in the proposal	
Awareness campaign on the importance of keeping the squat hole and water containers closed is included in the proposal	
Introducing tippy tap is included in the proposal	
All houses are included in the intervention even the better-off	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Building Groundwater Based Water Supply System

i. Sustainability of groundwater as a single water source for this investment is a threat hence, the proposal should include pumping tests to measure the discharge of the well and the water quality.
ii. To compensate for the water extraction, a component for recharging groundwater shall be included in the proposal. Such component could be of surface spreading type such as flooding, ditches and furrows, and recharge basins or of sub-surface type such as injection wells, recharge pits, recharge trenches or a combination of both techniques.
iii. Sanitation problem may exacerbate as a result of water consumption increase and consequently increase of wastewater disposal. Hence, a sanitation component should be included in the proposal. In most of the cases in rural areas, sanitation component will be in the form of conducting hygiene campaign using Community-Led Total Sanitation (CLTS) approach with water saving awareness. As a result the community comes out with collective activities to solve the sanitation problem without any subsidy.
iv. Operation and maintenance system and tariff to insure enough revenues to cover at least the operation and maintenance cost are essential for the sustainability of the service.
v. Willingness and affordability to pay for the service is measured through conducting socio-economic survey for randomly selected households. The community is willing and can afford to pay for the service when more than 75% of the surveyed families have the water bill less than 5% of their income.
vi. The proposal should contain a component for training the selected management staff on the O&M of the system. The management staff will be divided into two groups, the first group will be trained on administration and management and the second group on mechanical and technical aspects.

Proposal Title	
Proposal Location	

ESR Criteria for Building Groundwater Based Water Supply System at the Proposal Stage	**Confirmation** **Write Yes or No**
Pumping test has been conducted for 72hrs, and water quality tests have been conducted and all the results confirmed the well is successful	
Components for compensating groundwater extraction have been included in the proposal	
Sanitation component in the form of CLTS and water saving awareness in included in the proposal	
SA and community are aware that they have to develop at the final design stage an appropriate O&M system to insure service sustainability	
Socio-economic survey has been conducted and confirmed that more than 75% of the surveyed families can afford and are willing to pay for the service	
Training the selected management staff on the O&M is included in the proposal	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Building Spring Based Gravity Water Supply System

i. These systems depend on collecting water from springs to supply communities with clean drinking water by gravity.

ii. The water production of the springs will dictate the capacity of the collection tank, hence; accurate measurement of the springs' water production in both dry and wet seasons should be conducted and the proposal shall be prepared accordingly.

iii. Sanitation problem may exacerbate as a result of water consumption increase and consequently increase of wastewater disposal. Hence, a sanitation component should be included in the proposal. In most of the cases in rural areas, sanitation component will be in the form of conducting hygiene campaign using Community-Led Total Sanitation (CLTS) approach with water saving awareness. As a result the community comes out with collective activities to solve the sanitation problem without any subsidy.

iv. Though the O&M costs are less than groundwater based systems (because they work by gravity without pumps), the community should develop a system for O&M including the water tariff.

Proposal Title	
Proposal Location	

ESR Criteria for Building Groundwater Based Water Supply System at the Proposal Stage	**Confirmation** **Write Yes or No**
Measurement of springs' water production at dry and wet seasons has been taken and found feasible for the proposal	
Water quality tests have been conducted and found water suitable for human use	
Sanitation component in the form of CLTS and water saving awareness in included in the proposal	
The SA was introduced to the importance of O&M and agreed to develop a proposal for that purpose	
If answer to any of the above questions is 'NO' then the project will be dropped at the proposal stage. If answer is 'Yes' then incorporate this information in the project proposal	

Annex (3)
Checklist of Expected Environmental and Social Impacts to be Addressed at the Design Stage

After approving the proposal, the project inters the stage of detail design and tender documents which include the bill of quantities. This stage is very important for it will pave the road for the implementation and operation stages. All the expected environmental and social impacts shall be identified at this stage and the mitigation measures shall be designed and incorporated in the subproject design and tender documents, particularly, the bill of quantities so that they are priced and become the obligation of the implementing and supervising parties. From the previous experience, it was noticed that local contractors don't give any attention to the general and specific conditions of contract which includes some safeguards, but, they focus only on the BQ. Hence, the environmental and social safeguards shall be inserted in the BQ.
There are two measures needed to be taken in every subproject that requires civil work for its implementation:

i. Whether implemented by commercial or community contracting, the laborers will need temporary toilets and handwashing tools such as Tippy Tap. Therefore, this should be included in the design and tender documents particularly the Bill of Quantities (BQ) to insure they become the obligation of the implementing party and the supervision consultant. Such measure is not only for the benefit of the laborers and supervision staff, but, in addition, a message to local communities how to build and erect low cost and simple toilets and handwashing tools in their own homes using local materials. The only exceptions are the rooftop rainwater harvesting, and home gardens where the intervention is at the house level, here in these two cases, temporary toilets will not be needed assuming that every house has a toilet.

ii. PPE are normally mentioned in the General Conditions of the Contract which states that the contractor is responsible for providing personal protection equipment to his labors and enforce their use. However, most contractors don't read the General Conditions of the Contract, but focus only on the Bill of Quantities; therefore, they have to be inserted in the Bill of Quantities in order to become the obligation of the implementer and the supervisor.

In addition to the above two measures, every subproject will have additional specific measures to be taken. The checklist formats for every type of subproject are mentioned in the following pages. The consultant shall confirm the points mentioned in the checklist by writing "Yes" or "No", and if the confirmation is "No", he should justify it in the design report where a section should be prepared for safeguards. The checklist format shall be annexed to the design report so that the BM/UH can review it.

Building New Terraces

i. Scope of work or the boundaries of intervention is one of the technical and social issues that need to be identified and agreed with the community otherwise the subproject will reach the point of community's dissatisfaction, even if the disbursed amounts exceeded the original budget.
ii. Establishing new terraces will need agricultural soil to be brought from nearby sources. The borrowing location shall be identified and agreed with the community and the mitigations for avoiding the location to become a low point for water stagnation and nuisance to the community shall be included in the Bill of Quantities.
iii. New terraces will need also stones for building the retaining walls. Large quantities of stones will be needed hence, the locations for extracting the stones shall be carefully selected to avoid disturbing the stability of slopes and soil.
iv. Introducing new terraces will result in intercepting some of the runoff water that was previously flowing into the downstream agricultural lands. Hence the water rights problem shall be studied carefully and discussed with the owners of the downstream lands. Mitigation measures to minimize this impact shall be presented to the downstream land owners and agreed upon and included in the bill of quantities.
v. Arrangement for the sustainability of the terraces needs to be developed, discussed and agreed with the community.
vi. At the design stage, the areas for borrowed agriculture soil shall be identified. Hence, the community shall agree to compensate the owners fairly either in kind or in cash.

Project Name	
Project Location	
Check List of the E&S Issues To Be Addressed for Building New Terraces at the Design Stage	**Confirmation** **Write Yes or NO**
Scope of work has been identified and agreed with the community	
Temporary toilets have been added to the bill of quantities	
Hand washing tool such as Tippy Tap has been added to the bill of quantities	
PPE have been added to the bill of quantities	
Stability of slopes will not be affected by extracting stones for building the retaining walls	
The mitigation measures for minimizing the negative impacts in the location of borrowing the soil have been designed, discussed and agreed with the community and included in the Bill of Quantities	
The owners of the land from which the agriculture soil will be borrowed have been identified and the community agreed to compensate them fairly in kind/cash	
The extent of the expected water right problem is figured out and the downstream people are aware and agreed to cope with it	
Terraces will not increase the erosion to the surrounding environment	
If any of the answers is "No", then the reasons must be stated in the design report.	

Rehabilitating Terraces

i. Scope of work is one of the technical and social issues that need to be identified and agreed with the community otherwise the project will end up with community's dissatisfaction even if the disbursed amounts exceeded the original budget.
ii. Rehabilitating terraces will need agricultural soil to be brought from nearby sources. The borrowing location shall be identified and agreed with the community and the mitigations for avoiding the location to become a low point for water stagnation and nuisance to the community shall be designed and incorporated in the BQ.
iii. Rehabilitating terraces will need also stones for building the retaining walls. Large quantities of stones will be needed; hence, the locations for extracting the stones shall be carefully selected to avoid disturbing the stability of slopes and soil.
iv. Introducing new terraces will result in intercepting some of the runoff water that was previously flowing into the downstream agricultural lands. Hence the water rights problem shall be studied carefully and discussed with the owners of the downstream lands. Mitigation measures to minimize this impact shall be presented to the downstream land owners and agreed upon and included in the bill of quantities.

Project Name	
Project Location	

Checklist of the E&S Issues to be Addressed for Rehabilitating Terraces at the Design Stage	**Confirmation** **Write Yes or NO**
Scope of work has been identified and agreed with the community	
Temporary toilets have been added to the bill of quantities	
Hand washing tool such as Tippy Tap has been added to the bill of quantities	
PPE have been added to the bill of quantities	
The contributions have been discussed and agreed with the community	
The mitigation measures for minimizing the negative impacts in the location of borrowed soil have been designed, discussed and agreed with the community and included in the Bill of Quantities	
Stability of slopes will not be affected by extracting stones for building the retaining walls	
The owners of the land from which the agricultural soil will be borrowed have been identified and the community agreed to compensate them fairly either in kind or cash	
The extent of the expected water right problem is figured out and the downstream people are aware and agreed to cope with it	
Terraces will not increase the erosion to the surrounding environment	
If any of the answers is "No", then the reasons must be stated in the design report.	

Check Dams

i. Water rights shall be studied discussed and agreed with the owners of the lands downstream the check dam.
ii. The arrangement for cleaning the accumulated silt and debris shall be developed, and agreed with the community.
iii. Check dams shall not result in any significant ecological impacts.

Project Title	
Location of the project	

Checklist of E&S Issues to be Addressed for Check Dams at the Design Stage	**Confirmation** **Write Yes or No**
Water rights have been studied, discussed and agreed with the owners of the downstream lands	
The arrangement for cleaning the accumulated silt and debris have been developed, discussed and agreed with the community	
The proposed check dam doesn't have significant ecological impact	
If any of the answers is "No", then the reasons must be stated in the design report.	

Flood Protection

i. The design of the targeted location, if not covering the whole affected area, which is normally the case, shall be part of a holistic approach for protecting all the affected area.
ii. Scope of work is one of the technical and social issues that need to be identified and agreed with the community otherwise the project will reach the point of community's dissatisfaction, even if the disbursed amounts exceeded the original budget.
iii. The location for dumping construction wastes shall be identified and agreed with the community and the mitigations measures to minimize the distortion of the landscape of the dumping location shall be included in the bill of qualities.
iv. The design of the flood protection structures, if implemented, will not increase the erosion to the other side of the wadi or to the lands downstream the targeted area.

Project Title	
Project Location	

E&S Issues to be Addressed for Flood Protection at the design Stage	**Confirmation Write Yes or No**
The design of the targeted location is part of a holistic approach for protecting all the affected area	
Scope of work has been identified and agreed with the community	
Temporary toilets have been added to the bill of quantities	
Hand washing tool such as Tippy Tap has been added to the bill of quantities	
PPE have been added to the bill of quantities	
The contributions have been discussed and agreed with the community	
The mitigation measures for minimizing the negative impacts in the location of dumping construction waste materials have been designed, discussed and agreed with the community and included in the Bill of Quantities	
The design of the flood protection structures will not increase the erosion to the other side of the wadi or to the lands downstream the targeted area.	
In case of answer "No" to any of the above points, it should be justified in the design report.	

Groundwater Recharging Structures

i. The location for dumping construction wastes shall be identified and agreed with the community and the mitigations measures to minimize the distortion of the landscape of the dumping location shall be included in the bill of qualities.
ii. Guidelines and arrangements for operation and maintenance of the recharging structures shall be developed, discussed and agreed with the sponsoring agency.
iii. Safety measures are considered in the selection and design of groundwater recharging techniques. Such measures may include fencing, sings, etc.
iv. A plan for measuring the impacts of the project shall be developed and the party for its implementation has been identified and the party has agreed to do so. The plan will include the locations of measuring groundwater levels, frequency of measurements, requirements and the budget.

Project Title	
Project Location	

E&S Issues to be Addressed for Groundwater Recharging at the design Stage	**Confirmation** **Write Yes or No**
Temporary toilets and Tippy Taps have been added to the BQ	
PPE have been added to the bill of quantities	
The contributions have been discussed and agreed with the community	
Life safety measures have been considered in the selection and design of groundwater recharging structures.	
The mitigation measures for minimizing the negative impacts in the location of dumping construction waste materials have been designed, discussed and agreed with the SA and included in the BQ	
Guidelines and arrangements for operation and maintenance of the recharging structures shall be developed, discussed and agreed with the sponsoring agency.	
The plan for measuring the impacts of the project has been developed and the party for its implementation has been identified and the party agreed to do so.	
In case of answer "No" to any of the above points, it should be justified in the design report.	

Open Catchment Covered Rainwater Harvesting Cisterns for Domestic Use

i. Women and girls in rural areas are responsible for fetching water, therefore, the design should respond to their needs, hence, they have to be consulted on the whole design of the cistern including the storage capacity, the level of the roof, the steps needed to ascend and descend it, and the method of lifting water and its location.
ii. The components for improving the stored water quality shall be included in the design. These components should include the cover, the silt and floats trap, and the tool for taking water either pulley-rope-bucket, hand pump, or taps if the level allows.
iii. Wherever possible, the location of the silt and floats basin trap should be at higher level to allow emptying it via cleaning pipe and cap.
iv. In some cases the design consultant may chose corrugated sheets for covering the cistern because of their low cost, but this may cause the distortion of the landscape in the area. Therefore, the cover should have nearly the same appearance of the buildings' roofs in the area.
v. Rainwater harvesting technique is traditional in most of the country; therefore, there is no threat of operation and maintenance. However, due to the water scarcity, rainwater harvesting may be implemented in areas where it's not a tradition and people will have no idea about their O&M. In such cases, guidelines and arrangement for O&M shall be developed, and the community should be trained.
vi. The location for dumping construction wastes shall be identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location shall be designed and included in the bill of qualities.

Project name	
Project Location	

E&S Issues to be Addressed for Open Catchment Rainwater Harvesting Covered Cistern at the design Stage	**Confirmation** **Write Yes or No**
Women and girls have been consulted on the design and their feedback and comments have been reflected in the design	
Components for improving water quality such as settling basin, fetching tool, and cover have been included in the design and BQ	
The location of the settling basin is at a higher level and the emptying and cleaning pipe has been included in the design and bill of quantities	
The design and material of the cover insure the harmony in the area's landscape	
The arrangement for O&M is developed, discussed and agreed with the SA	
Temporary toilets and tippy taps have been included in the bill of quantities	
PPE has been inserted in the bill of quantities	
The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape have been designed and included in the BQ	
In case of answer "No" to any of the above points, it should be justified in the designreport.	

Open Catchment Rainwater Harvesting Uncovered Cisterns for Agriculture and Livestock

i. Wherever possible, the location of the silt and floats basin trap should be at higher level to allow emptying it via cleaning pipe and cap.
ii. Rainwater harvesting technique is traditional in most of the country, hence, no threat of operation and maintenance. However, due to the water scarcity, rainwater harvesting may be implemented in areas where it's not a tradition and people will have no idea about their O&M. In such cases, guidelines and arrangement for O&M shall be developed, and the community should be trained.
iii. The location for dumping construction wastes shall be identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location shall be designed and included in the bill of qualities.
iv. Open cisterns at elevation below 1500 M above sea level (asl) may become an environment for mosquito breeding. Bilharzias spreading is also a threat in open cisterns. Therefore, mitigation measures such as agitation via boating, growing special fish that eats larvae, and fencing to prevent swimming shall be developed and included in the design and bill of quantities.

Project name	
Project Location	
Checklist of E&S Issues to be Addressed for Open Catchment Rainwater Harvesting Uncovered Cistern for Agriculture and Livestock at design stage	**Confirmation** **Write Yes or No**
Mitigation measures for combating mosquitoes and Bilharzias have been included in the design and BQ.	
The location of the settling basin is at a higher level and the emptying and cleaning pipe has been included in the design and bill of quantities	
The arrangement for O&M is developed, discussed and agreed with the SA	
Temporary toilets and tippy taps have been included in the bill of quantities	
PPE has been inserted in the bill of quantities	
The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location have been designed and included in the bill of qualities	
Site selection insures the use of the cistern by all community groups including the vulnerable and marginalized groups.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Rooftop rainwater harvesting

i. Women and girls in rural areas are responsible for fetching water, therefore, the design should respond to their needs, hence, they have to be consulted on the whole design of the cistern including the storage capacity, the level of the roof, the steps needed to ascend and descend it, and the method of lifting water and its location.
ii. To comply with the national standards, the cisterns are normally covered and water is taken from the cistern via bucket and rope or tap if level allows.
iii. Traditional techniques and material are used for building the cisterns.
iv. To improve the quality of stored water, first flush tool is installed to force the first quantity of storm water, which normally carry with it dust, and birds' and rodents' droppings, outside the cistern, then clean water is allowed to enter the cistern.
v. Coarse filter can be installed at the inlet as well.
vi. In some cases the design consultant may chose corrugated sheets for covering the cistern because of their low cost, but this may cause the distortion of the landscape in the area. Therefore, the cover should have nearly the same appearance of the buildings' roofs in the area.
vii. Rainwater harvesting technique is traditional in most of the country; therefore, there is no threat of operation and maintenance. However, due to the water scarcity, rainwater harvesting may be implemented in areas where it's not a tradition and people will have no idea about their O&M. In such cases, guidelines and arrangement for O&M shall be developed, and the community should be trained.

Project name	
project location	

Checklist of E&S Issues to be Addressed for Rooftop Rainwater Harvesting Cisterns at Design Stage	**Confirmation** **Write Yes or No**
Women and girls have been consulted on the design and their feedback and comments have been reflected	
First flush tool and coarse filter at the inlet have been included in the design and BQ	
The design and material of the covers insure the harmony in the area's landscape	
The arrangement for O&M is developed, discussed and agreed with the community	
All households including poor, vulnerable and marginalized are included in the project.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Water Channel

i. The alignment of the water channel is known at this stage and the SA identified all property loss along the path of the channel- if any –and confirmed its commitment to compensate the owners fairly in kind/cash.
ii. Water channels, if not properly constructed, cause upstream and downstream soil erosions. During construction special care needs to be taken to avoid all the reasons of community disturbances attached to falling of debris, alternate route for existing channel, and blasting - if involved.
iii. During operations leakages from water channels lead to landslides that may cause physical damage and human loss in the downstream communities. Due to this reason technical measures are taken to insure water tightness of the channel.
iv. The mitigations needed to overcome the water rights conflicts at the water source and the distribution points shall be designed and included in the BQ.
v. The location of dumping construction wastes should be identified with the community, and the mitigations to reduce the distortion to the landscape of the dumping location should be designed and included in the BQ.

Project Title	
Project Location	

Checklist of E&S Issues to be Addressed for Water Channels at Design Stage	**Confirmation** **Write Yes or No**
There is a consensus in the community on channel design, route, water distribution, and cost	
Technical measures were taken to prevent landslides	
The community agreed to provide the land required and compensate the owners fairly in kind/cash	
Temporary toilets and tippy taps have been included in the bill of quantities	
Mitigation measures to eliminate the water right problem at the water source and at distribution points have been designed and included in the BQ	
The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location have been designed and included in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Water Saving Irrigation Systems

i. The alignment, the limits of the water distribution network and the external boundaries of the lands that will be irrigated are clearly identified, discussed and agreed with all farmers.
ii. Water rights conflicts at the water source and the distribution points are settled at this stage. Measures to eliminate the water rights conflicts have been designed and included in the BQ.
iii. Operation and maintenance schedule and budget have been developed, discussed and agreed with the SA.
iv. On farm irrigation systems have been developed and agreed with the farmers and training plan in incorporated in the design of the project.

Project Title	
Project Location	

Checklist of E&S Issues to be Addressed for Water Saving Irrigation Systems at Design Stage	**Confirmation Write Yes or No**
The alignment, the limits of the water distribution network and the external boundaries of the lands that will be irrigated are clearly identified, discussed and agreed with all farmers.	
Measures to eliminate the water rights conflicts have been designed and included in the BQ.	
Temporary toilets and tippy taps have been included in the bill of quantities	
Operation and maintenance schedule and budget have been developed, discussed and agreed with the SA.	
On farm irrigation systems have been developed and agreed with the farmers and training plan is in incorporated in the design of the project	
In case of answer "No" to any of the above points, it should be justified in the design report	

Introducing New Plants Species

i. The new species have been selected and proved to be suitable to the community's environment. The community is aware of their benefits and their requirements.
ii. Lands where the new species will be planted are identified and agreed with the farmers.
iii. Monitoring and evaluation schedule and budget are developed and incorporated in the design.
iv. Dissemination plan and budget were developed and incorporated in the design report.

Project Title	
Project Location	

Checklist of E&S Issues to be Addressed In Introducing New Plants Species at Design Stage	**Confirmation** **Write Yes or No**
The new species have been selected and proved to be suitable to the community's environment. The community is aware of their benefits and their requirements.	
Lands where the new species will be planted are identified and agreed with the farmers.	
Monitoring and evaluation schedule and budget are developed and incorporated in the design	
The risk of introduced species to disturb the local ecosystem is identified and mitigation measures are considered.	
Dissemination plan and budget were developed and incorporated in the design report.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Improving Existing Rural Feeder Roads

i. All improvement items needed to insure the road safety such as retaining walls, drainage ditches, stone pavement are incorporated in the design and BQ.
ii. Communities are consulted on the expected danger of increasing vehicles' speed as a result of improving the road, and mitigation measures that can be adopted to reduce the impact.
iii. Mitigation measures agreed with the communities to reduce the impacts of increasing vehicles' speed as a result of improving the road should be incorporated in the design and BQ.
iv. At this stage the documentation of water rights should be agreed with the related community members and the drainage ditches and culverts are designed accordingly. i.e. the drainage system of the improved road should keep the water rights as they were before road improvement.

Project Name	
Project Location	

Checklist of E&S Issues to be Addressed in Improving Rural Feeder Road at design stage	**Confirmation** **Write Yes or No**
All work items for insuring the road safety such as retaining walls, drainage ditches, culverts and stone pavement, have been included in the design and BQ	
Communities have been consulted on the expected danger of increasing vehicles' speed as a result of improving the road, and on the mitigation measures that can be adopted.	
Mitigation measures to reduce the impacts if increasing vehicles speed have been designed and incorporated in the design and BQ.	
Water rights are documented and reflected into the design and BQ.	
Temporary toilets and tippy taps have been included in the bill of quantities	
In case of answer "No" to any of the above points, it should be justified in the design report	

Back Yard gardens

i. At this stage targeted households, available land area, and quantity of water available for irrigation should be identified.
ii. Type of plants, the quantities of each species, and their inputs and requirements have been discussed and agreed with the households.
iii. Training, monitoring and follow up plan has been developed and budgeted.
iv. Baseline data about nutrition and household expenses on food have been collected for future comparison.

Project Name	
Project Location	

Checklist of E&S Issues to be Addressed in Houses' Gardens at design stage	**Confirmation** **Write Yes or No**
All vulnerable households are included in the subproject	
Types of plants, their quantities, their inputs and requirements have been discussed and agreed with the community	
Training, monitoring and follow up plan has been developed and budgeted	
Baseline data about nutrition, and household expenses on food have been collected	
In case of answer "No" to any of the above points, it should be justified in the design report	

Biogas Units

i. At this stage no. of biogas units and their locations should be known based on the eligibility criteria and households complying with the criteria including the vulnerable.

ii. Seepage from biogas well can cause groundwater contamination. Seepage control measures are incorporated in the design to mitigate this impact.

iii. H_2S generation can cause serious environmental impacts in the form of community health. This issue is normally mitigated by fixing a suction fan in the kitchen. Fan will suck the gas and disperse it in the air.

iv. O&M guidelines and safety precautions shall be developed.

v. Training of local community, monitoring and evaluation plans have been developed and budgeted.

vi. Baseline data of family expenses on existing energy sources for cooking such as wood and natural gas for randomly selected families should be collected. These data will be compared with the post data after completing and operating the biogas units.

Project Name	
Project Location	

Checklist of E&S Issues to be Addressed in Biogas Units at Design Stage	**Confirmation** **Write Yes or No**
O&M guidelines have been developed	
Training, monitoring and evaluation plans have been developed and budgeted	
Baseline data of family expenses on existing energy sources for cooking have been collected for randomly selected families.	
All safety measures have been incorporated in the design and BQ.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Establishing/Rehabilitating Grazing Lands

i. The grazing lands and their owners have been identified and the community confirms its commitment to compensate them fairly in kind/cash.

ii. The design of all the components of the grazing land and their costs have been developed, discussed and agreed with the community.

iii. The schedule for grazing and the arrangements for its enforcement were developed by the community and are ready to be approved and signed by selected community members.

Project name	
Project Location	

Checklist of E&S Issues to be Addressed in Establishing/Rehabilitating Grazing Lands at Design Stage	**Confirmation** **Write Yes or No**
The grazing lands and their owners have been identified and the community confirms its commitment to compensate them fairly in kind/cash.	
The design of all the components of the grazing land and their costs have been developed, discussed and agreed with the community.	
The sub-project will not entail significant alteration of natural vegetation and impact to ecosystems due to alteration of land use.	
The schedule for grazing and the arrangements for its enforcement were developed by the community and are ready to be approved and signed by selected community members.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Replacement of Qat

i. At this stage, the new cash crops to replace Qat will be selected, discussed, and agreed with the community.
ii. The areas for planting the new cash crops will be agreed; hence, the quantities of the seeds/seedlings can be identified.
iii. The community is introduced to the requirements of the new cash crops and agreed to fulfill them.

Project Name	
Project Location	

Checklist of E&S Issues to be Addressed in Replacement of Qat at Design Stage	**Confirmation** **Write Yes or No**
The new cash crops have been selected, discussed and agreed with the community	
The areas for planting the new cash crops are agreed with the community, and quantities of seeds/seedlings are calculated accordingly.	
The community is aware of the new cash crops requirements and agreed to fulfill them.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Seeds Storage

i. The landscape of the area was considered in the design of the buildings and in the selection of their materials and their outlook.
ii. The location for dumping construction waste materials has been identified and the mitigation measures to eliminate the distortion to its landscape have been designed and incorporated in the BQ.
iii. The community confirmed its obligation to compensate land owners in kind/cash.
iv. To insure sustainability of service provision, the arrangement for O&M and the service tariff should be developed, discussed and agreed with the community.

Project Name	
Project Location	
Checklist of E&S Issues to be Addressed in Seeds Storage at Design Stage	**Confirmation** **Write Yes or No**
The landscape of the area was considered in the design of the buildings and in the selection of their materials and their outlook.	
The location for dumping construction waste materials has been identified and the mitigation measures to eliminate the distortion to its landscape have been designed and incorporated in the BQ.	
The community confirmed its obligation to compensate land owners in kind/cash.	
Temporary toilets and tippy taps have been incorporated in the BQ	
PPE have been incorporated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Post Harvesting Facilities

i. To insure the sustainability of post harvesting service provision, the arrangement of operating and maintaining the post-harvest facilities should be developed, discussed and agreed with the community.
ii. The type, and size of the harvesting machines have been selected and their installation locations have been agreed with the community.

Project Name	
Project Location	

Checklist of E&S Issues to be Addressed in Post Harvesting Facilities at Design Stage	**Confirmation** **Write Yes or No**
The arrangement of operating and maintaining the post-harvest facilities is developed, discussed and agreed with the community.	
The type, and size of the harvesting machines have been selected and their installation locations have been agreed with the community	
In case of answer "No" to any of the above points, it should be justified in the design report	

Improving Rural Markets

i. The locations of all the interventions' components and the areas needed for each component have been identified and agreed with the SA.
ii. The location of the garbage dumping site has been selected and agreed with the SA. The site should satisfy the following criteria(distance is from the edge of the site):
    a. Distance to the nearest water course is not less than 60m,
    b. Distance to the nearest residential building or public facility (school or health facility) is not less than 400m,
    c. Distance to the nearest cultural heritage monument, or environmentally sensitive site is not less than 100m,
    d. Distance to the nearest operational well is not less than 1.0km,
    e. The static water level is not less than 100m from the bottom of the design level of the dumping site.
iii. The SA has developed the system for operating and maintaining the market, and was reviewed and found satisfactory.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Improving Rural Markets at the Design Stage	**Confirmation** **Write Yes or No**
The area of lands needed for all the subproject components have been identified and the SA confirmed its obligation to provide the land and compensate the owners fairly in kind/cash	
The dumping site for garbage satisfies all the environmental criteria	
The SA has developed the O&M system and seen satisfactory	
Temporary toilets and tippy taps have been incorporated in the BQ	
PPE have been incorporated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Constructing Sewerage Network (Wastewater Treatment Plant Not Included)

i. The boundaries of the targeted area have been agreed with the SA, and the local community members.
ii. Houses lacking siphons, ventilation columns, and tight covers for inspection chambers have been identified and agreed to be equipped with these components by the house owners before the announcement of the tender.
iii. All outlets from all houses within the agreed boundary are considered in the design. Houses with very deep outlets (in case of basements) that can't be connected to the designed network are identified and owners are recommended to keep the existing leaching pits they have.
iv. The alignments of all sewers are in public roads and passages and all short cuts through private lands have been discussed and settled by the SA and land owners.
v. The location for dumping construction wastes has been identified and stated in the BQ
vi. Fixing damaged services as a result of excavations is included in the BQ
vii. Safety measures for pedestrians and traffic during open trenches, such as closing the trench with poles and ropes, pedestrians' bridges at convenient locations, signals and signs have been considered and included in the BQ.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Constructing Sewerage Networks at the Design Stage	**Confirmation** **Write Yes or No**
The boundaries of the targeted area are identified and agreed with the SA and the design was prepared accordingly	
Houses within the boundary lacking siphons, ventilation columns and tight inspection chambers covers have been identified agree to be equipment by the house owners before tender announcement	
The owners of outlets that will not be connected to the network due to very low invert levels are informed to keep disposing their wastewater into their existing leaching pits	
All sewers are in roads and passages, and short cuts through private lands have been settled by the SA and land owners	
Safety measures for pedestrians and traffic during open trenches, such as closing the trench with poles and ropes, pedestrians' bridges at convenient locations, signals and signs have been considered and included in the BQ.	
Temporary toilets are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Building and Furnishing Kindergarten

i. The SA has confirmed its obligations to compensate the land owners fairly in cash/kind
ii. The system for O&M has been developed by the SA and has been checked and found acceptable. The system is signed by the SA and is ready to be annexed to the financial agreement.
iii. If the building will not be connected to the water network, then rooftop rainwater harvesting tank shall be designed based on the rainfall pattern and the roof area of the building.
iv. The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location are designed and incorporated in the bill of qualities.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building and Furnishing Kindergarten at the Design Stage	**Confirmation** **Write Yes or No**
SA confirmed its obligations to compensate the land owners fairly in cash/kind and to prepare the formats of land voluntarily donated and land compensated according to annex 1.	
The system for O&M developed by the SA was found reasonable and has been signed by the SA, and become ready to be annexed to the financial agreement	
The capacity of the rooftop rainwater harvesting tank was calculated based on the rainfall pattern and the roof area of the building	
Temporary toilets and tippy taps are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Building and Furnishing School

i. The SA has confirmed its obligations to compensate the land owners fairly in cash/kind
ii. The system for O&M has been developed by the SA and has been checked and found acceptable. The system is signed by the SA and is ready to be annexed to the financial agreement.
iii. If the building will not be connected to the water network, then rooftop rainwater harvesting tank shall be designed based on the rainfall pattern and the roof area of the building.
iv. The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location are designed and incorporated in the bill of qualities.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building and Furnishing School at the Design Stage	**Confirmation** **Write Yes or No**
SA confirmed its obligations to compensate the land owners fairly in cash/kind and to prepare the formats of land voluntarily donated and land compensated according to annex 1.	
The system for O&M developed by the SA was found reasonable and has been signed by the SA, and become ready to be annexed to the financial agreement	
The capacity of the rooftop rainwater harvesting tank was calculated based on the rainfall pattern and the roof area of the building	
Temporary toilets and tippy taps are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Building and Furnishing Health Education Center

i. The SA has confirmed its obligation to compensate the land owners fairly in cash/kind and agreed to prepare the formats for land voluntarily donated and compensated according to annex 1.
ii. The system for O&M has been developed by the SA and has been checked and found acceptable. The system is signed by the SA and is ready to be annexed to the financial agreement.
iii. If the building will not be connected to the water network, then rooftop rainwater harvesting tank shall be designed based on the rainfall pattern and the roof area of the building.
iv. The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location are designed and incorporated in the bill of qualities.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building and Furnishing Health Education Center at the Design Stage	**Confirmation** **Write Yes or No**
SA confirmed its obligations to compensate the land owners fairly in cash/kind and to prepare the formats of land voluntarily donated and land compensated according to annex 1.	
The system for O&M developed by the SA was found reasonable and has been signed by the SA, and become ready to be annexed to the financial agreement	
The capacity of the rooftop rainwater harvesting tank was calculated based on the rainfall pattern and the roof area of the building	
Temporary toilets and tippy taps are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Pavement of Squares, Roads and Passages

i. Locations for the components of groundwater recharging to compensate for sealing the ground surface has been identified and agreed with the SA.
ii. The SA has confirmed its obligation to compensate the land owners fairly in cash/kind and agreed to prepare the formats for land voluntarily donated and compensated according to annex 1.
iii. The SA has developed and signed a system for collecting and transporting solid waste at the commissioning phase which will be annexed to the financing agreement.
iv. The expected threat of increased vehicles' speed after pavement has been discussed with the SA and affected families and the mitigation measures have been designed and incorporated in the BQ.
v. The final design pavement levels have been discussed and agreed with the SA and the changes in levels compared with the original existing levels have been discussed and agreed with the related house owners.
vi. Water rights have been documented and agreed with the agricultural land owners, and have been incorporated in the design and BQ.
vii. The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location are designed and incorporated in the bill of qualities.

Project name	
project location	

Checklist of E&S Issues to be Addressed in Pavement of Squares, Roads, and Passages at the Design Stage	**Confirmation** **Write Yes or No**
Locations for the components of groundwater recharging to compensate for sealing the ground surface has been identified and agreed with the SA.	
The SA has confirmed its obligation to compensate the land owners fairly in cash/kind and agreed to prepare the formats for land voluntarily donated and compensated according to annex 1.	
A has developed and signed a system for collecting and transporting solid waste at the commissioning phase which will be annexed to the financing agreement.	
The expected threat of increased vehicles' speed after pavement has been discussed with the SA and affected families and the mitigation measures have been designed and incorporated in the BQ.	
The final design pavement levels have been discussed and agreed with the SA and the changes in levels compared with the original existing levels have been discussed and agreed with the related house owners.	
Water rights have been documented and agreed with the agricultural land owners, and have been incorporated in the design and BQ.	
The location for dumping construction wastes has been identified and agreed with the SA and the mitigation measures to minimize the distortion of the landscape of the dumping location are designed and incorporated in the BQ.	
In case of answer "No" to any of the above points, it should be justified in the design report	

Rehabilitation of Cultural Heritage Monuments

i. Rehabilitation work has been designed based on the architectural and structural style and construction techniques of the monument and the same materials will be used and the same final finish will be insured.
ii. The impacts of having visitors to the monument have been discussed with the SA and the vicinity neighbors, and mitigations to reduce these impacts have been designed and incorporated into the BQ.
iii. The SA has developed and signed a system for collecting and transporting solid waste at the commissioning phase which will be annexed to the financing agreement.
iv. The disposal method of wastewater from the monument has been designed to insure avoiding pollution to the environment and water sources.
v. The location for dumping construction wastes has been identified by the SA and stated in the BQ

Project name	
project location	

Checklist of E&S Issues to be Addressed in Rehabilitating Cultural Heritage Monument at the Design Stage	**Confirmation** **Write Yes or No**
Rehabilitation work has been designed based on the architectural and structural style and construction techniques of the monument and the same materials will be used and the same final finish is insured.	
The impacts of having visitors to the monument have been discussed with the SA and the vicinity neighbors, and mitigations to reduce these impacts have been designed and incorporated into the BQ.	
The SA has developed and signed a system for collecting and transporting solid waste at the commissioning phase which will be annexed to the financing agreement.	
The disposal method of wastewater from the monument has been designed to insure avoiding pollution to the environment and water sources.	
Temporary toilets and tippy taps are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Cash for Work – Building New Latrines

i. Arrangement to conduct hygiene campaigns to create demands for latrines before the start of cash for work activities has been insured.
ii. All components needed for latrines to comply with the minimum standards have been incorporated in the BQ. Siphons to prevent odors and rodents, ventilation pipes, and tight inspection chamber covers shall be provided and installed. Ventilation pipe should be extended to at least 0.2m above the latrine's roof.
iii. On job training for house owners in plumbing and civil work have been arranged.
iv. Awareness of the community on the importance of keeping the squat hole and water containers closed has been considered and incorporated in the projects' activities.
v. Introducing tippy taps and training the community on erecting them have been incorporated into the project's activities.
vi. To insure total sanitation and elimination of diseases burdens, all houses are included in the project.
vii. The location for dumping construction wastes has been identified by the SA and stated in the BQ

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building New Latrines at the Design Stage	**Confirmation** **Write Yes or No**
Arrangement to conduct hygiene campaigns to create demands for latrines before the start of cash for work activities has been insured.	
Siphons, ventilation pipes up to 0.2m above the roofs, and tight inspection chamber covers have been considered for all latrines and incorporated in the BQ	
On job training for house owners in plumbing and civil work have been incorporated in the projects' activities.	
Awareness of the community on the importance of keeping the squat hole and water containers closed has been considered and incorporated in the project's activities.	
Introducing tippy taps and training the community on erecting them have been incorporated into the project's activities.	
All houses are included in the intervention even the better-off	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Building Groundwater Based Water Supply System

i. Pumping test and water quality tests have been conducted and all confirm the suitability of the well for human use and for the investment in the subproject.
ii. The components for recharging groundwater have been designed and incorporated in the BQ. There locations have been identified and agreed with the SA.
iii. The SA has developed and singed a system for O&M and it's ready to be attached to the financing agreement.
iv. Hygiene awareness campaigns using CLTS and water saving campaigns have been considered and incorporated in the subproject's activities.
v. Training the selected management staff have been considered and incorporated in the subproject's activities.
vi. The location for dumping construction wastes has been identified by the SA and stated in the BQ

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building Groundwater Based Water Supply System at the Design Stage	**Confirmation** **Write Yes or No**
Pumping test and water quality tests have been conducted and all confirm the suitability of the well for human use and for the investment in the subproject.	
The components for recharging groundwater have been designed and incorporated in the BQ. There locations have been identified and agreed with the SA.	
Hygiene awareness campaigns using CLTS and water saving campaigns have been considered and incorporated in the subproject's activities.	
The SA has developed and singed a system for O&M and it's ready to be attached to the financing agreement.	
Training the selected management staff on O&M have been considered and incorporated in the subproject's activities.	
Temporary toilets and tippy taps are included in the BQ	
PPE are included in the BQ	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

Building Spring Based Gravity Water Supply System

i. The spring's water production has been measured in dry and wet seasons and the storage tank has been designed accordingly.
ii. Hygiene awareness campaigns using CLTS and water saving campaigns have been considered and incorporated in the subproject's activities.
iii. The SA has developed and singed a system for O&M and it's ready to be attached to the financing agreement.
iv. The location for dumping construction wastes has been identified by the SA and stated in the BQ

Project name	
project location	

Checklist of E&S Issues to be Addressed in Building Spring Based Gravity Water Supply System at the Design Stage	**Confirmation** **Write Yes or No**
The spring's water production has been measured in dry and wet seasons and the storage tank has been designed accordingly.	
Hygiene awareness campaigns using CLTS and water saving campaigns have been considered and incorporated in the subproject's activities.	
The SA has developed and singed a system for O&M and it's ready to be attached to the financing agreement.	
The location for dumping construction wastes has been identified by the SA and stated in the BQ	
In case of answer "No" to any of the above points, it should be justified in the design report	

ANNEX (4)
Environmental Monitoring Plan Matrix

Mitigation Aspects	Mitigation Measures	Monitoring Indicators	Monitoring Methods	Implementing Agency	Monitoring Agency	Monitoring Frequency
Reduce emissions, dust, and suppression of noise	***Construction Phase:*** • Covering waste disposal trucks with tarpaulins • Ensuring that ambient air quality limits are not exceeded: vehicles and machinery should comply with emission standards. • Construction activity noise levels will be maintained below limits. • Personnel and workers operating on site will be equipped with hearing and breathing protection gear. ***Operation Phase:*** • Adopting composting practices to reduce the amount of solid waste produced and reduce the need for waste collection vehicles.	Complaints from local community and occupants Dust deposition on vegetation and rocks Loud noise can be heard from a distance Change in natural habitats within ecology of surroundings	• Monitoring devices to ensure compliance of noise and emissions • Field observations • Interaction with local community: use indigenous knowledge to understand impact on wildlife	• Contractor during construction • WEU during operation phase	SFD/WEU	Daily/Weekly Monthly
Occupational Health and Safety	***Construction Phase:*** • Compliance with General rules and regulations on Occupational Health and Safety. • Provision of protective gear for workers including helmets, boots, gloves, masks, and earplugs. • Provision of first aid kit at work sites and necessary information on rescue during emergency. • Prohibiting admission of children, guests, or dependents of legal employees or underage workers to construction site. • Provision of appropriate training and emergency response procedures. ***Operation Phase:*** • Provision of fire extinguishers and first-aid kits in the camp sites. • An operational manual will also be developed for the building facilities management.	Complaints from labourers, occupants, and local community Number of incidents/accidents Adoption level of OHS	• Construction site inspection • Review of incidents records	• Contractor during construction • WEU during operation phase	SFD/WEU SFD/WEU	Monthly Monthly

Solid Waste Management	***Construction Phase:*** • Construction waste will be stored and disposed of in an environmentally safe manner. • A suitable location will be designated for the safe storage of construction waste onsite. The designated location should be void of vegetation, natural habitats, and distant from depressions or surface drainage. • Use of natural materials where possible • Onsite waste shall be covered with tarpaulin to prevent dust clouds from forming. • Waste will be carted away from the onsite storage location to a location identified by for filling purposes. ***Operation Phase:*** • Spaces should be designated for on-site separation for paper, glass, aluminium, steel and plastics. • Adopting a garbage prevention strategy: recycle for reuse or recycled back into the environment through biodegradation where possible • Final disposal of waste through landfills should be remote from population and properly designed in accordance with global and national specifications.	Complaints from local community and occupants Improper disposal of waste products	• Construction site inspection	• Contractor construction • WEU during operation phase	EPA	Weekly during construction phase Monthly during operational phase
Sewage Waste Management	***Operation Phase:*** • Adopting composting strategy of solid sewage waste and use compost for greenery. • Use of composting toilets not flush toilets. • Recommended use of biological treatment technologies of sewage waste that does not involve land disposal. • Recommended use of biological systems to purify wastewater. And biological control for vectors • Recommended use of pit latrines during the construction stage of ecotourism structures and in the remote camping areas. Pit latrines should not be located in runoff areas, in depression, or near water resources.	Construction specifications and infrastructure design Improper disposal of waste products Soil and water quality measurements reflecting Contamination of nearby areas from sewage waste products.	• Review of tender and contractor bid documents • site inspection • Water and soil quality monitoring	WEU	SFD/WEU	Quarterly
Soil protection and	***Construction Phase:*** • Soil removed through excavation should be used as	Indication of rill or inter-rill erosion	• Field observations	• Contractor	SFD/WEU	Weekly during

prevention of compaction	back filling or immediately removed from the project. • Any excavated soil remaining temporarily on site should be placed in proper location and covered using tarpaulin. • Construction should be avoided during periods of anticipated rainfall to prevent any soil erosion. ***Operation Phase:*** • Use of existing paths for transportation and avoiding the creation of new routes that would disrupt vegetation, wildlife and compact soils. • Limit the use of vehicles in the region to reduce soil compaction and ecosystem disruption. • Reduce dependency on vehicles for services	Soil compaction and exfoliation of rocks during construction or operation Disruption of vegetation and wildlife	• Complaints from local community	construction • WEU during operation phase		construction phase and periodically during project operation
Spreading of Malaria, diarrhoea Bilharzias	***Operation Phase:*** • Measures to minimize pollution (on-site water quality monitoring, ensure proper design of the discharge of stagnant water, etc.) • Using biological control, mesquite treated nets • Regular monitoring of species • Use a warning system with environmental monitoring indicators • Measures to treat waste using biological, chemical and physical filters, prioritize water re-use • Apply best environmental practice to avoid and diseases. • Proper feeding practices	Presence of Mosquito larvae Amoeba + E-Coli Snails Change of water quality	• Field observations • Complaints from local community • Health records • Water quality monitoring	• Contractor during construction stage	SFD/WEU	Periodically during project operation
Habitat degradation from various activities	• Construction away from sensitive habitats • Waste management strategy applied • Tender document will have to include provisions for site specific EMP.	Complaints from community, local operators, NGOs, and tourist. Poor water quality / visibility observed in vegetation areas Observed damage to Flora and Fauna	• Field observations • Incident reports • Violations	• Contractor • WEU	SFD/WEU	Periodically during project construction and operation

ANNEX (5)
Environmental and Social Management Plan Matrix

Sub-Projects Measures	Potential Environmental Impacts	Proposed Mitigation Measures	Monitoring Requirements (including supervision)	Means of insurance and compliance	Institutional Responsibility (including enforcement/ coordination)	Time Frame or Schedule	Cost Estimate
Building New Terraces	**Air Quality and Noise Construction** Construction may impact air quality and generate noise. This results mainly from excavation, site grading, vehicle loading and unloading, and other construction-related activities. **Operation** Potential impacts on ambient air quality would result from odors and gaseous emissions generated by stagnant water– water may increase humidity - Exposure to or production cracks, humidity exfoliation may happen due to high humidity in the area - Odor due to increase relative humidity - Deterioration of terraces walls my lead to erosion or flash flood - distributing the stability of slopes and soils due to large quantities used in building terraces - interruption of some runoff	**Air Quality and Noise Construction** Use dust control measures onsite, such as water spraying for dust suppression; Regulate site access; Cover lorries transporting friable construction materials and spoil; Prohibit open air burning; Maintain machinery in good working conditions to minimize emissions; and Provide adequate protective wear for workers, and equipment must be maintained regularly to avoid any emissions; Pre-treat gases emitted **Operation** Conserve energy use to reduce fuel combustion; Control emissions from wastewater treatment facility/good discharge system Mitigation to the first factor could be addressed by frequent inspection to the terraces construction and apply the required maintenance. Regular inception and examinations for	SFD/ WEU/as appropriate monitor the design and supervision consultant‘ s reports to ensure safeguards compliance , undertaking field visits or further investigations as necessary. The World Bank will also its own monitoring to ensure the project is	SFD with beneficiaries CBOs oversees construction and operation activities and conducts visual inspection with the assistance of a representative of the local community Contracts and PCU coordinator ensures that contractors implement environmental management plans/regulations and that contractors perform continuous inspection and monitoring of areas of potential pollution and/or uses with the potential to result in soil contamination;	SDF and WEU	Quarterly	Will be estimate during design

	water **Soil Quality and Surface/Ground water Pattern/contamination** **Construction** Impacts on soil quality may result from the following construction activities: Change in composition, filtration. **Operation** Contamination of soils and groundwater with chemicals used in farming and chemicals and oil spills from equipment. Spills and leaks at liquid impoundment areas for fuels, solvents, waste and from infrastructure equipment, may infiltrate through soil pores, under gravitational forces, and contaminate ground water aquifers; Discharge into surface waters, or alteration of surface water quality, including but not limited to temperature, dissolved oxygen, turbidity, solids **Waste water** Potential generation of waste water resulting for the project activities and/ or sub-projects during both construction and operation. -contamination of water, soil and agricultural products with insecticides and herbicides	mentioned impacts and address them through maintenance replacement of materials spoiled. Minimizing entrance of heavy machines to reduce vibration impact. .For handling and occupational health applying restrict protection regulation for occupational health measurements is critical and a separate EA is required to part of EMP-including all operational stages form handling, washing, classification, freezing, backing up to loading and distribution to consumption **Soil Quality and Surface/Ground water pattern/contamination** **Construction** Apply, inspect and maintain temporary/permanent erosion and sediment control measures (e.g. silt fences, rapid growth vegetation, erosion control matting) to exposed areas; Restrict movement of vehicles to designated tracks; **Operation** Maintain periodically vehicles and equipment to prevent leaks; Maintain records and procedures for equipment maintenance, handling and storage of liquid fuels and chemicals; lab regular testing for ground and surface workers **Waste Water**	compliant with its environmen t and social safeguards	Complaints from local community Review of tender and bid documents by SDF			

	Biological Resources- Flora & Fauna Removal or disturbance of natural vegetation, A loss or disturbance to a unique, rare or threatened plant community, A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants such as bushes, A deterioration of existing wildlife habitat, Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife	Encourage drying mechanisms to avoid stagnant water Use of bio-treatment to prevent chemical contamination Apply IPMP to avoid negative impact of pesticides and herbicides if required, apply biological control for pests. [2] **Biological Resources- Flora & Fauna** Applying environmental operational standards within the legal, policy and management framework of the project to minimize the negative impact on the environment using the comparative advantage of the different project counterparts. Compliance with SFD IV area is critical for the conservation of biodiversity Coordination with relevant stakeholders is very important, Proper selection of sites as to avoid damaging natural habitat. Tender document will have to include provisions for site specific EMP.					
Open Catchment Covered Rainwater Harvesting Cisterns for Domestic Use	**Air Quality and Noise Construction** Construction may impact air quality and generate noise. This results mainly from excavation, site grading, vehicle loading and unloading, and other construction-related activities.	**Air Quality and Noise Construction** Use dust control measures onsite, such as water spraying for dust suppression; Regulate site access; Cover lorries transporting friable construction materials and spoil; Prohibit open air burning;		Villages CBOs with support from Governorate lined Units in addition to SDF/ WEU PO and ECO conducting visual inspection with the assistance of a representative	SDF/WEU and Villages CBOs with support from Governorate lined Units	Monthly	Will be estimate during design

[2] Integrated Pest Management Plan as per World Bank operational manual at http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTARD/EXTPESTMGMT/0

	Operation Potential impacts on ambient air quality would result from odors and gaseous emissions generated by a Boilers/Kitchen/Air Compressors Wastewater treatment (undesirable odors), Vehicles and motorized engines, and Boats **Soil Quality and Ground water contamination** **Construction** Impacts on soil quality may result from the following construction activities: Site clearance, site grading, excavation, infrastructure, and oil leaks from vehicles/equipment. **Operation** Contamination of soils and groundwater with plastic generated decaying chemicals may result from chemicals used in water purification and from equipment. Spills and leaks at liquid impoundment areas for fuels, solvents, waste and from infrastructure pipelines pumps and buckets, may infiltrate through soil pores, under gravitational forces, and contaminate groundwater aquifers; **Waste waster** Potential generation of waste water resulting for the project activities and/ or sub-projects	Maintain machinery and vehicles in good working conditions to minimize emissions; and Provide adequate protective wear for workers Vehicles, and equipment used must be maintained regularly to avoid any emissions; Pre-treat gases emitted by boilers and generators; **Operation** -Assess the ecology of disease carriers in the watershed - Employ suitable prevention and mitigation measures, including education of local people and construction workers, e.g.: Ensure all construction sites, borrow pits and quarries are properly drained -Finish and manage reservoir margins for proper drainage -Vary the reservoir water level Proper design and operation of dam spillways and gates (timing ,and volume of discharges) •-Monitor disease and public health indicators, during and after construction, and take corrective measures (e.g. education, medical) as needed -Conserve energy use to reduce fuel combustion; Control emissions from wastewater treatment facility; **Waste Water** Treatment of stagnant water after to avoid biological contamination **Biological Resources- Flora &**		of the local community Contracts and ECO ensures that contractors implement environmental management plans/regulations and that Technical officials with CBOs perform continuous inspection and monitoring of areas of potential pollution and/or uses with the potential to result in soil contamination; Review of tender and bid documents by SDF&WEU			

	during both construction and operation such as stagnant water **Biological Resources- Flora & Fauna** **Construction & Operation** Removal or disturbance of natural vegetation, A loss or disturbance to a unique, rare or threatened plant community, A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants such as indigenous herbs, A deterioration of existing wildlife habitat, Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife	**Fauna** Applying environmental operational standards within the legal, policy and management framework of the project to minimize the negative impact on the environment using the comparative advantage of the different project counterparts. Compliance with CRRC area is critical for the conservation of biodiversity Coordination with relevant stakeholders is very important, Proper selection of sites as to avoid damaging natural habitat. Tender document will have to include provisions for site specific EMP.					
Rooftop rainwater harvesting	If small workshops are required to be constructed to produce water harvesting materials, the potential impact to minor than the cases mentioned above but at least impact on soil and water waste , due small constructions and construction waste, expected leakage can be damage building during operation	Proper selection of sites as to avoid damaging natural habitat. Ecotourism criteria mentioned above to be applied Tender document will have to include provisions for site specific EMP. Good practice in design		All technical stakeholder are involved in inspection of quality assurance with village CBO	SDF/WEU and Villages CBOs with support from Governorate lined units	Weekly/ Monthly	Will be estimate during design
Flood Protection	Alteration or damaging natural habitat during construction, contamination may occur from construction infrastructure and materials,	Avoiding damaging natural habitat during constructions or minimize it (proper site selection, use environmentally friendly materials, prepare materials off-		All technical stakeholder are involved in inspection of quality assurance	Villages CBOs with support from Governorate lined Units in addition to SDF/WEU	Monthly	Will be estimate during design

	run-off surface water obstacles and divert to cause other flooding hazards	site, etc.) Tender document will have to include provisions for site specific EMP. Good practice in design		with village CBO and overall supervision of SDF/WEU			
Improving Rural Markets	Potential impact is expected during construction and operation on air, soil and water from associated activities such as traffic, solid waste, however, the size will be smaller but minor smaller impact could be accumulated and increase impact on air, water, soil and natural habitat	Good practice associated with quality assurance and regular site inspection Apply specific site ESMP		District/town/village councils with support from CBOs and SDF and WEU	District/town/village councils with support from CBOs and SDF and WEU	As required	Will be estimate during design
Water Saving Irrigation Systems	Plastic installation and dioxin made material could source of contamination for water and soil and thus public health	Using materials made from friendly environmental materials and good practice Apply specific site ESMP		All technical stakeholder are involved in inspection of quality assurance and WEU with village CBO	CBOs with support of government lined department and SDF/WEU	As required	Will be estimate during design
Stone Pavement	Air Quality and Noise Construction Construction may impact air quality and generate noise. This results mainly from excavation, site grading, vehicle loading and unloading, and other construction-related activities. Operation Potential impacts on ambient air quality would result from odors and gaseous emissions generated by stagnant water – water may increase humidity - Exposure to or production cracks, humidity exfoliation	Air Quality and Noise Construction Use dust control measures onsite, such as water spraying for dust suppression; Regulate site access; Cover lorries transporting construction materials; Prohibit open air burning; Maintain machinery in good working conditions to minimize emissions; and Provide adequate protective wear for workers equipment must be maintained regularly to avoid any emissions; Pre-treat gases emitted	SFD/ WEU to monitor the design and supervision consultant‘ s reports to ensure safeguards compliance. Undertake field visits or further investigations as necessary. The World	SFD with beneficiaries CBOs oversees construction and operation activities and conducts visual inspection with the assistance of a representative of the local community. PCU coordinator ensures that contractors implement environmental management	SFD and WEU	Quarterly	Will be estimated during design

	may happen due to high humidity in the area - Odor due to increase relative humidity - Deterioration of stone pavement may lead to erosion or flash flood - disturbing the stability of slopes and soils due to large quantities used in building pavements - interruption of some runoff water Soil Quality and Surface/Ground water pattern/contamination Construction Impacts on soil quality may result from the following construction activities: Change in composition, filtration. Operation Contamination of soils and groundwater with chemicals used in construction and chemicals and oil spills from equipment. Spills and leaks at liquid impoundment areas for fuels, solvents, waste and from infrastructure equipment, may infiltrate through soil pores, under gravitational forces, and contaminate ground water aquifers; Discharge into surface waters, or alteration of surface water quality, including but not	Operation Conserve energy use to reduce fuel combustion; Control emissions from wastewater treatment facility/good discharge system Mitigation to the first factor could be addressed by frequent inspection to the pavement construction and apply the required maintenance. Regular inception and examinations for mentioned impacts and address them through maintenance replacement of materials spoiled. Minimizing entrance of heavy machines to reduce vibration impact. Soil Quality and Surface/Ground water pattern/contamination Construction Apply, inspect and maintain temporary/permanent erosion and sediment control measures (e.g. silt fences, rapid growth vegetation, erosion control matting) to exposed areas; Restrict movement of vehicles to designated tracks Operation Periodically maintain vehicles and equipment to prevent leaks; Maintain records and procedures for equipment maintenance, handling and storage of liquid fuels and chemicals; lab regular testing for ground and surface workers Waste Water	Bank will also do its own supervision to ensure that the project is compliant with its environmen t and social safeguards	plans/regulations and that contractors perform continuous inspection and monitoring of areas of potential pollution and/or uses with the potential to result in soil contamination; Complaints from local community Review of tender and bid documents by SFD			

	limited to temperature, dissolved oxygen, turbidity, solids Waste water Potential generation of waste water resulting from the project activities and/ or sub-projects during both construction and operation. Biological Resources- Flora & Fauna Removal or disturbance of natural vegetation, A loss or disturbance to a unique, rare or threatened plant community, A reduction in the numbers or restriction in the range of any unique, rare or threatened species of plants such as bushes, A deterioration of existing wildlife habitat, Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife	Encourage drying mechanisms to avoid stagnant water Use of bio-treatment to prevent chemical contamination Biological Resources- Flora & Fauna Applying environmental operational standards within the legal, policy and management framework of the project to minimize the negative impact on the environment using the comparative advantage of the different project counterparts. Compliance with SFD criteria is critical for the conservation of biodiversity. Coordination with relevant stakeholders is very important. Proper selection of sites as to avoid damaging natural habitat. Tender document will have to include provisions for site specific EMP.					
Basic services facilities: Education, Health, etc.	Construction -Dispute among beneficiaries on the location -Water pollution due to wastewater disposal of temporary latrines -Spread out of construction waste -Spread out of solid municipal waste Operation	Proper selection of sites as to avoid dispute among beneficiaries on the location. Tender document will have to include provisions for site specific EMP. Good practice in design -Locate latrines, septic systems and soakaways at least 30m from any water body (e.g. stream, river, lake, pond) -Ensure adequate design,	SFD/ WEU to monitor the design and supervision consultant‘ s reports to ensure safeguards compliance . Undertake field visits	All technical stakeholders are involved in inspection of quality assurance with village CBO	SFD/WEU and Villages CBOs with support from local executive offices	Weekly/ Monthl y	Will be estimate d during design

	Types of health waste can include: -Human tissue and blood; -Soiled surgical dressings and swabs; -Discarded syringe needles; -Other contaminated sharp instruments; - Microbiological cultures and potentially infected wastes from laboratories; -Excretions; and -Drugs and other pharmaceutical products. -Radioactive wastes need to be managed and treated separately from other healthcare wastes, and are not covered here (will require separate EMP) -Human feces spread around the site -Water pollution due to wastewater disposal of school bathrooms	installation and maintenance of latrines, holding tanks, septic systems and wastewater soakaways. This is especially important where the water table is high or soils have a high clay or sand content -Ensure adequate spacing between latrines and soakaways - Tender document for hazardous wastes will have to include provisions for site specific, separate EMP. Determine the approximate volumes of waste materials by category (e.g. sharps, body tissues, dressings, pharmaceutical products, non-hazardous healthcare wastes, etc.), and design the management system to deal with each waste category separately as required - Assess current practices and address the priority gaps and risks, building on any successful aspects of the current system. All measures and facilities should be planned within an overall strategy for hazardous healthcare waste management. This overall strategy will ensure consistent and efficient methods, and sharing of good practices. - Provide specialized, clearly labeled containers for hazardous healthcare wastes to separate them at source, manage the risks of exposure, and secure the wastes before removal for	or further investigations as necessary. The World Bank will also do its own supervision to ensure that the project is compliant with its environment and social safeguards				

		treatment or storage. - Plan, design, construct and operate a shared treatment facility. Types of facilities include heat treatment disinfection, incineration, chemical & biological treatment. - Until a shared treatment facility is established, employ interim measures to ensure the safe and secure storage of wastes. In some cases, an appropriate interim measure will be to bury the waste in deep (e.g. >2m) trenches in municipal disposal sites, and ensure the trenches are immediately covered with other municipal solid waste. -Implementing the Self Monitoring and Follow up and sewage treatment Implementing the items in the TD related to dealing with municipal solid wastes and the components needed for SWMP					
Rural Feeder Road	Construction Construction may impact air quality and generate noise. This results mainly from excavation, site grading, vehicle loading and unloading, and other construction-related activities. Solid wastes Construction wastes Historical monuments Green areas Sanitary drainage Deformation of grades	-Good practice during construction. Proper treatment of solid waste and other bi product during construction -Apply suitable design for natural water courses and putting measures for preserving wildlife -Avoiding damaging natural habitat during constructions or minimize it (proper site selection, use environmentally friendly materials, prepare materials off-site, etc.) -Avoid creating congested and	SFD/ WEU to monitor the design and supervision consultant‘ s reports to ensure safeguards compliance . Undertake field visits or further investigatio	All technical stakeholder are involved in inspection of quality assurance with village CBO and overall supervision of SFD/WEU	Villages CBOs with support from local executive offices in addition to SFD/WEU	Monthl y	Will be estimate during design

	Blockage of water canals and drainage course at their intersection with road. Alteration or damaging natural habitat during construction, contamination may occur from construction infrastructure and materials, run-off surface water obstacles and divert to cause other flooding hazards. A deterioration of existing wildlife habitat, Introduction of any factors (light, fencing, noise, human presence and/or domestic animals) which could hinder the normal activities of wildlife Operation Abrasion of road Increase of traffic accidents	unsafe road conditions at intersections, and in villages and towns -Good practice in design to avoid traffic accidents such as Sloping of road Curves -Include components that reduce traffic accidents such as speed breakers and speed limits signs -Tender document will have to include provisions for site specific EMP.	ns as necessary. The World Bank will also do its own supervision to ensure that the project is compliant with its environmen t and social safeguards				
Improving Rural Markets	Construction Construction may impact air quality and generate noise. This results mainly from excavation, site grading, vehicle loading and unloading, and other construction-related activities. Solid wastes Construction wastes Historical monuments Green areas Sanitary drainage Deformation of grades Operation Solid waste, wastewater from market latrines may cause soil	Construction -Maintain equipment in good working condition to reduce emissions and noise, -Use dust control measures onsite, such as water spraying for dust suppression; -Good practice associated with quality assurance and regular site inspection -Cover lorries transporting friable construction materials -Maintain a system for collecting and disposing garbage during construction -Collect construction wastes and transport them to the agreed site		District/town/villag e councils with support from CBOs and SFD and WEU	District/town/villa ge councils with support from CBOs and SFD and WEU	As required	Will be estimate during design

	and water sources pollution	-Tendering should include specific site EMP Operation -Enforce the solid waste management system that should have been developed by the SA at the preparation stages -Maintain good operation and maintenance of market latrines					

ANNEX (6)

CHECK LIST FOR ENVIRONMENTAL MONITORING INDICATORS FOR SAMPLE SUB-PROJECTS

School Sub-project:

Environmental Impact	Monitoring Indicator	Monitoring Frequency
Air Pollution	Increase in traffic, noise, odors, dust, smoke, pollutants (i.e.CO, NOx and SO2), asbestos, paint containing lead	Annually
Water Pollution	Electrical Conductivity BOD–COD E-Coli Nitrates	Annually
Soil Pollution	Oil Wastewater Solid Waste	Annually

Rural Road Sub-project:

Environmental Impact	Monitoring Indicator	Monitoring Frequency
Air Pollution	Increase in traffic, Noise Odors Dust Smoke Pollutants(i.e.CO,NOx.AndSO2), Asbestos, Paint containing lead, VOC	Annually
Different Forms of Visual Pollution	Solid Waste, Construction Waste, Green Areas, Sewage System, Archeological Sites/Artifacts	Annually
Water Pollution	EC BOD-COD E-Coli Nitrates	Annually
Reduction or Migration of Water Sources	Productivity of water source	Annually
Obstruction of Water Collection	Obstruction of canals on the road Dispersion of natural canals Road erosion	Annually
Landslide, Erosion and Structural Instability of Slopes	Falling rocks ,soil, and debris on the road Change in road width	Annually
Population Emigration	Census	Annually
Tourism Support	Determination of incoming tourists	Semi-Annually

Annex (7)

Forms for Voluntary Donation of Land/Compensation Land Owner/Water Rights

Form for Voluntary Donation of Land

After the PAC approves the subproject, the PO prepares the financing agreement which will be signed by SFD's BM and the SA. If land was voluntarily donated for the subproject, then this should be documented and attached to the financing agreement.
The document for donating the land should be signed by the donor and the recipient and approved by local authority. This document should ensure the following:

- Ø The ownership of the land and voluntary nature of the donation
- Ø That the land is appropriate for the intended purpose
- Ø That the land does not belong to any donor who is below the poverty line or whose holding would be reduced below the minimum size as stipulated to be economically viable (1.0ha)
- Ø That there are no encumbrances on the land
- Ø That it does not negatively impact the livelihood of any vulnerable group, and if so, that community developed mitigation measures are acceptable to the affected group
- Ø That the owner gives up all claims on the land and the title will be transferred to the recipient through the notary public or a registered deed or any other procedure prescribed by the law of the State.

Form for Compensating the Land Owner

After the PAC approves the subproject, the PO prepares the financing agreement which will be signed by SFD's BM and the SA. In case of compensating a land owner for a land needed for the subproject, then this should be documented and attached to the financing agreement. The compensation document should be signed by the land owner and the SA and approved by the local authority. The document should have the following format:

"Following the guidelines of the ESMF, the SFD's consultant and the SA have selected the location of ----------.

The boundaries of the location are from North ----------, South ----------, East ----------, and West ----------.

The area of the lands is ----------m2.

The SA has met the land owner who brought the documents of the land and they do confirm his ownership of the land with the same boundaries that have been identified by the SA and SFD's consultant.

The SA has introduced the land owner to the subproject and its importance to the community, and why his land in particular was selected for the subproject.

The land owner without any force from the SA agreed to give the land for a compensation that has been agreed with SA.

The land owner hereby confesses that he has given the land to the SA and has received the agreed compensation.

With signing this agreement the land owner confirms that he has received the fair compensation and he has no claim with regard to this land. "

For the SA

Name:

Signature

The Land Owner

Name:

Signature

Approved
For Local Authority
Name:
Signature

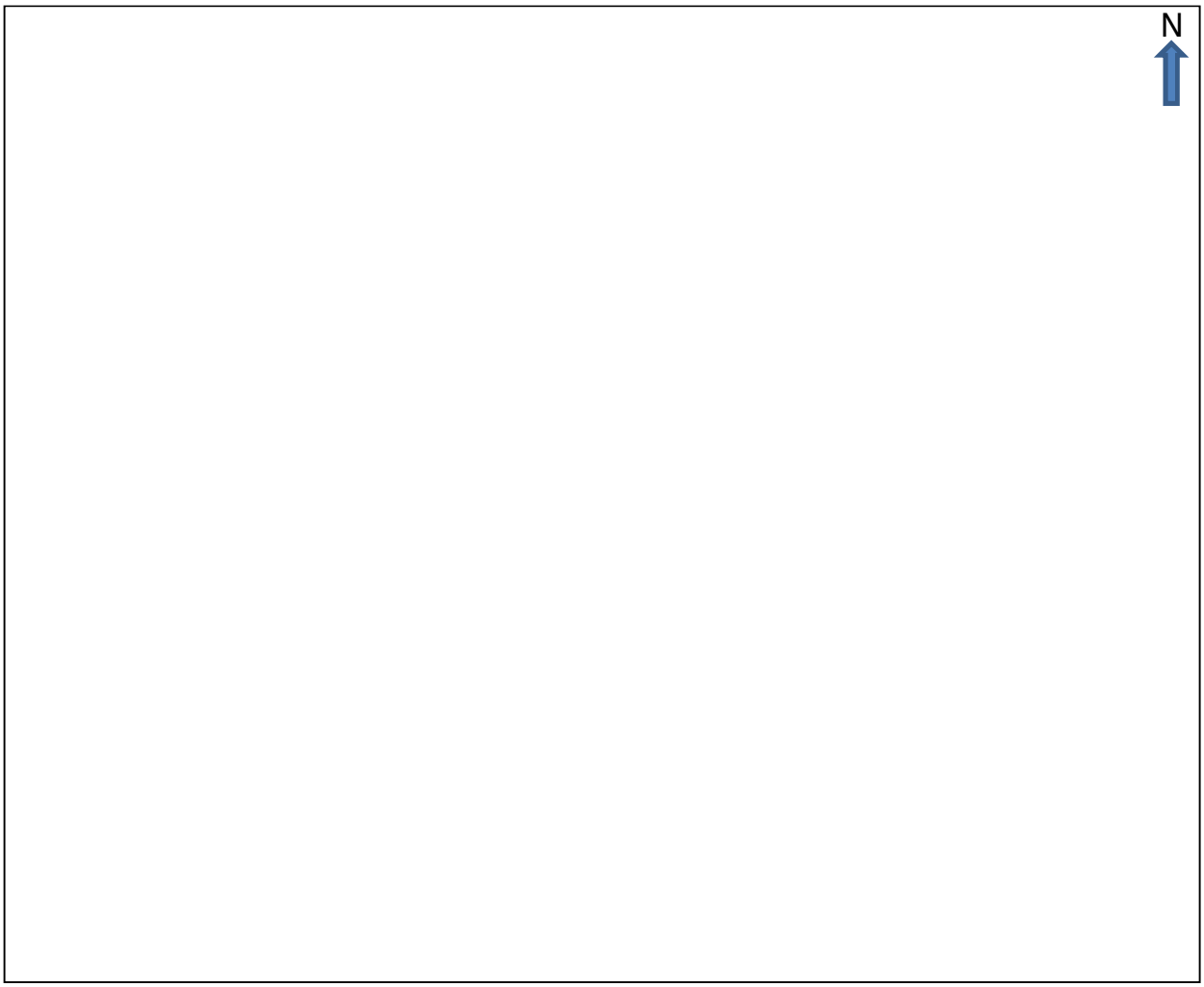
Form for Water Rights

In case a water source found suitable for the community, but owned by a person and the owner is willing to donate the water source or part of it for the community use, then a document should be prepared for this purpose, signed by the donor and the SA and approved by the local authority. This document shall be annexed to the financing agreement that will be signed by SFD's BM and the SA. The document should ensure the following:

- The donor confirms donating the water source/part of it voluntarily to be used by the community and he or his siblings have no right in this water sourced/part of it as long as it is use by the community
- In case in the future the community found another better water source and decided to stop using this source/pat of it then the donation becomes void and the water source/part of it returns to the owner or his siblings.
- That no fees or price will be charged by the donor of the water source/part of it from any eligible community member for use of this water.
- That at no time will supply be restricted to any person

ANNEX (8)
Environmental Screening Form (B) For Specific Subproject EMP

1. **Projects Name: _____**
2. **Project Type** (health care, educational, water, environment, other utilities)
3. **Brief description of Project** (project's components including assisting services, scope of service, number of beneficiaries, number of workers, etc.)
4. **Brief description Project Location** (nature of location: rocky or dusty, the previous usage of the location):
5. **Description of the surrounding area**: for a circle of 50 meters radius from the drainage point, especially locations of environmental sensitivity (utilities, constructions, land usage, water sources[3], etc.).
6. **Sketch/ Drawing of the of Project**



[3] Accurate data about water resources such as distance and elevation from the sub-project location and depth of water in case of wells

7. **Environmental Impacts & Mitigation Measures * (Construction & Operation Phase)**

Project Phase	Parameter	Influencing Factor	Mitigation Measure	Institution Responsible For Execution
Design				
Construction				
Operation				

***** Example for design phase: Parameter: Water, influencing factor: Disposal of wastewater, mitigating measure: design proper wastewater treatment, Responsibility: Consultant

8. **Does the project need monitoring during its operation? (in case there is a probability of polluting water resources, or soil or air) yes No**

9. **In case the answer is yes, mark the monitoring issues applicable to your project:**

Monitoring water sources
Monitoring the performance of health care waste disposal
Monitoring the performance of sanitary drainage system
Monitoring the cleanness of the building's yard
Monitoring the planting of trees in the building's yard

Table for Environmental Monitoring during Project Operation

Parameter	Indicator	Location	No. of samples	Intervals	Responsibility

Example: Parameter: Water, Indicator: Nitrate, Location: Albaraka well, No of samples: 4, Interval: one year, Responsibility: Agency responsible for sampling and reporting

Annex (9)
Environmental Screening Form A for Checklist of Likely Environmental and Social Impacts of Subprojects

Name of the subproject:
…….
Sector and Type of subproject:
……
Department implementing subproject: ……
District where subproject is to be implemented: …….
Estimated cost of subproject: …….
Screening Checklist Completed By (Name and Title):
……
Date: ……..
Class of subproject (Class A, B or C):
……
Name of Approving Authority: …….

1. Brief Description of Subproject
Please provide information on the type and scale of subproject (subproject area, area of required land, approximate size of total building floor areas, etc.)
_____
_____
_____

2. The Natural Environment
(a) Describe the land formation, topography, vegetation in/adjacent to the subproject area (*e.g. is it a low lying land, water logged, rocky, swampy or wetland, etc.)*
_____
_____
_____
(b) Estimate and indicate whether vegetation might need to be cleared.
_____
_____
_____
(c) Are there any environmentally sensitive areas or threatened species that could be adversely affected by the subproject (specify below)?
(i) Intact natural forests Yes_____No_____
(ii) Riverine forest Yes_____No_____
(iii) Wetlands (lakes, rivers, seasonally inundated [flooded] areas) Yes_____No_____
(iv) If yes, how far are the nearest wetlands (lakes, rivers, seasonally inundated [flooded] areas)? _____km
(v) Habitats of endangered species for which protection is required under Yemeni laws and/or international agreements. Yes_____No_____
(vi) Others (describe). Yes_____No_____ (*e.g. cultural sites, burial places, etc.,)*

4. Fauna and Flora
- Will subproject involve the disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes)? Yes_____No_____
- Will the subproject lead to the destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development? Yes_____No_____

- Will the subproject lead to the disruption/destruction of wildlife through interruption of migratory routes, disturbance of wildlife habitats, and noise-related problems? Yes_____No_____

5. Destruction/Disruption of Land and Vegetation

- Will the subproject lead to unplanned use of the infrastructure being developed? Yes_____No_____
- Will the subproject lead to long-term or semi-permanent destruction of soils in cleared areas not suited for agriculture? Yes_____No_____
- Will the subproject lead to the interruption of subsoil and overland drainage patterns (in areas of cuts and fills)? Yes_____No_____
- Will the subproject lead to landslides, slumps, slips and other mass movements in road cuts? Yes_____No_____
- Will the subproject lead to erosion of lands below the roadbed receiving concentrated outflow carried by covered or open drains? Yes_____No_____
- Will the subproject lead to health hazards and interference of plant growth adjacent to roads by dust raised and blown by vehicles? Yes_____No_____

6. Protected areas

- Does subproject area (or components of the project) occur within/adjacent to any protected areas designated by government (national park, national reserve, world heritage site, etc.) Yes_____No_____
- If subproject is outside of, but close to, any protected area, is it likely to adversely affect the ecology within the protected area (e.g. interference with the migration routes of mammals or birds) Yes_____No_____

7. Geology and Soils

- Based upon visual inspection or available literature, are there areas of possible geologic or soil instability (erosion prone, landslide prone, subsidence-prone)? Yes_____No_____
- Based upon visual inspection or available literature, are there areas that have risks of large scale increase in soil salinity? Yes_____No_____

8. Landscape/aesthetics

Is there a possibility that subproject will adversely affect the aesthetic attractiveness of the local landscape? Yes_____No_____

9. Historical, archaeological or cultural heritage site.

Based on available sources, consultation with local authorities, local knowledge and/or observations, could the subproject alter any historical, archaeological or cultural heritage site or require excavation nearby? Yes_____No_____

10. Resettlement and/or Land Acquisition

- Will the subproject require land acquisition? Yes_____No_____
- If so, will this land acquisition be involuntary? Yes_____No_____
- If so, will this involuntary land acquisition lead to relocation or loss of shelter, loss of assets, or access to assets? Yes_____No_____
- If so, will this involuntary land acquisition lead to loss of income sources or means of livelihood (whether or not affected persons must move to another location)? Yes ___No___
- Will subproject lead to involuntary restriction of access to legally designated parks and protected areas resulting in adverse impacts on livelihoods of displaced persons? Yes __No_

9. Loss of Household Infrastructure

Will subproject result in permanent or temporary loss of household infrastructure (such as granaries, outside toilets and kitchens, etc.)? Yes ___No_____

10. Noise pollution during Construction and Operations

Will the operating noise level exceed the allowable (ambient) noise limits? Yes ___No____

11. Solid or Liquid Wastes, including Medical Waste.

- Will subproject generate large amounts of residual wastes (solid or liquid wastes), including medical waste? Yes____ No ___
- If "Yes", does subproject include a plan for collection and disposal? Yes____ No____

12. Pesticides, Insecticides, Herbicides or any other Poisonous or Hazardous Chemicals.

- Will the subproject require the use of such chemicals? Yes ___No_____
- If, "Yes", does subproject include a plan for safe handling, use and disposal? Yes___ No____

13. Water and Soil Contamination.

- Will subproject require large amounts of raw materials/construction materials? Yes __No__
- Will subproject generate large amounts of residual wastes, construction material waste or cause soil erosion? Yes _____No_____
- Will subproject result in soil or water contamination (e.g. from oil, grease and fuel from equipment)? Yes_____No_____
- Will subproject lead to contamination of ground and surface water bodies by herbicides for vegetation control and chemicals (e.g. calcium chloride) for dust control? Yes _____No____
- Will subproject lead to an increase in suspended sediments in streams affected by road cut erosion, decline in water quality and increased sedimentation downstream? Yes ___No____
- Will subproject lead to the destruction of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards? Yes _____No_____
- Will subproject lead to the creation of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors? Yes _____No_____

ANNEX (10)
Documents Needed in Each Stage

Proposal Phase:

In addition to the draft design, bill of quantities, and costing, the proposal shall include the table of environmental and social responsiveness criteria mentioned in annex 2. Depending on the type of the sub-project, the consultant shall select the required table from annex 2, answer the decisive questions, and attaches it to the proposal and hand over all the proposal documents to the PO. The PO should review the proposal together with the environmental and social responsiveness criteria before submitting the proposal to the BM/UH.

Design Phase:

This is the stage in which detailed design, tender documents including bill of qualities are prepared. The documents needed to be attached to the design report and tender documents are the following:

1. The check list of the environmental and social issues that need to be reflected in the detailed design. This checklist is shown in annex 3, so the consultant select the checklist suitable to his/her sub-project and answer the questions with either Y/N, i.e the question of whether temporary latrines have been included in the bill of quantities, the answer will be Y/N, if N, then the consultant shall state the reasons in the design report under a special topic for environmental and social issues.

2. Environmental Screening Form (B) shown in annex 8.

Financing Agreement:

The documents to be attached to the financing agreement are:

1. A document confirming the settlement of land ownership. In case of land donation, then this document should be prepared to comply with the conditions of donation mentioned in Annex 7 "Form for Voluntary Donation of Land". In case of compensating the land owner, then this document shall be of the form mentioned in annex 7 "Form for Compensating the Land Owner".

2. In case a water source is donated, then a form of donation fulfilling the conditions mentioned in annex 7 "Form for Water Rights" should be prepared and attached.

3. Operation and maintenance system that should include the rate/s for service fees, approved by the SA.

4. In case of terrace building/rehab., irrigation systems or similar projects, then a map showing the outside boundaries of the benefited lands shall be prepared and approved by the SA.

Annex (11)
SFD's interventions in the field of Cultural Heritage

Refined Vision for SFD Phase IV

Introduction

Yemen enjoys a rich, diverse and very much endangered cultural heritage expressed by its unique architecture, cultural landscape, antiquities, traditional handicrafts, music, costume & ritual, dialects, wealth of manuscripts and other aspects all representing a strong expression of deep rooted civilization, national identity as well as a considerable potential economic resource.

While employing SFD's capacity and managerial advantage was a much needed contribution to the national cultural heritage preservation efforts, safeguarding and preserving this heritage was also regarded increasingly by SFD as a possible area for addition to its poverty alleviation efforts from the perspective of the generating temporary and longer term employment as well as from the poverty targeting perspective.

SFD's relation to Cultural Heritage has evolved from no intervention, as cultural heritage was not foreseen as one of SFD's areas of action upon its establishment to a careful limited intervention by the year 1999, when cultural heritage became officially one of its supported sectors since the start of the second phase.

By 2002 SFD became the most important and active partner to the Ministry of Culture as regarded by the World Bank and others. SFD's operations increased and developed further to become more diverse and achieve wider geographical coverage putting the Social Fund as the first player in this area at the national level.

However, the size and nature of threats facing different cultural heritage assets is simply much bigger than to be addressed by SFD's efforts; it is even beyond Yemen's resources and capacity if best used for safeguarding its rich, diverse, and patrimony.

While poverty, lack of awareness, social, urban and architectural metamorphosis in addition to other factors coalesce with the time caused decay to form an accelerating threat to Yemeni Cultural Heritage assets; concerned agencies experience chronic structural weaknesses at the managerial & technical levels in addition to the lack of adequate legislative bases and financial resources enabling to play an effective role in protecting Yemen's Cultural Heritage which makes a catastrophic picture for the current situation and less optimistic for the future.

As Yemen's well known genuine architecture represents the most immediate symbol of its rich culture and the strongest expression of its heritage, SFD initially directed its operations to the built heritage as to *document* and save as many endangered important sites and monuments as possible, and to enhance the conservation status of historic cities, especially those inscribed in the World Heritage.

Over time, SFD's interventions grew and became more diverse by addressing various aspects of tangible and intangible heritage to the extent allowed by its technical and financial capacity. Generally, the implemented interventions were of high technical quality and

represented a real and much needed improvement in the conservation status of many endangered aspects of the country's cultural heritage.

Despite the above, a real progress towards improving the legislative, administrative, managerial and technical environment still stands as a fundamental requirement for saving Yemen's cultural heritage and avoiding a regrettable loss of the important value it bears.

Directions of SFD IV relating to Cultural Heritage activities

Towards the fourth phase of its operations, SFD still considers the continuation of documenting, rescuing and restoring endangered significant sites and monuments in addition to improving conservation status of Yemeni historic cities as a necessary, realistic and badly needed strategy. This is due to the fact that endangered assets cannot wait for sufficient improvement of the institutional and legislative environment is in place as many of those sites and monuments could collapse, disappear or fall beyond restoration if SFD's continued interventions do not take place.

However, SFD recognizes the importance of expanding and scaling up its interventions in the area of urban conservation by enhancing the national capacity at the central and local levels in protecting historic cities against negative effects of accelerated urbanization on their authentic urban fabric, and architectural traditional styles. This will be given a steadily growing attention throughout the upcoming phase, particularly through the ongoing program "Development of Historic Cities of Yemen" co-financed by SFD.

SFD will continue to implement subprojects to document/preserve/conserve endangered cultural heritage sites in Yemen, in compliance with the "Preservation of the Historic Cities and Sites Law No. 16" (endorsed by Cabinet on August 13, 2013), for protecting Yemen's cultural heritage. For this positive effort to preserve cultural assets, SFD will continue to benefit from qualified national and international expertise to secure quality interventions, trying at the same time to enhance and expand national technical capacity. According to an MOU signed between SFD and the Ministry of Culture, both parties sides will: (i) work with the Ministry of Higher Education to adopt standard conservation as a mandatory subject in the curricula of Architecture and Engineering faculties in public and private universities, and (ii) explore and demonstrate income generation opportunities out of different cultural heritage assets. This will serve both the sustainable preservation and poverty alleviation objectives.

With the above in mind, the refined strategic lines through which SFD foresees the delivery of its overall contribution to the national Cultural Heritage preservation efforts will be stated as follows:

- Contribution to the conservation of main historic sites especially those inscribed in the World Heritage sites and those of architectural importance;
- Expansion of the nation's technical, professional and managerial capacity at different levels to protect cultural heritage;
- Assisting in the establishment of inventories of the country's cultural heritage assets;
- Saving the most threatened most significant sites and monuments (Given the large number and diversity of threatened assets); and
- Exploring possibilities and piloting operations to associate Cultural Heritage with development and the use of different Cultural Heritage assets as means of income generation.

Quality assurance in SFD Cultural Heritage interventions

SFD has a separate Cultural Heritage Unit.

Cultural Heritage interventions are generally characterized by being labor intensive in implementation. In its efforts, SFD coordinates with the General Organization for Antiquities and Museums (GOAM) and the General Organization for Preservation of Historic Cities in Yemen (GOPHCY). Furthermore, in its conservation/restoration interventions, SFD used traditional building and restoration techniques and abides with the following international guidelines in the most sensitive monuments of exceptional significance—International Charter for Conservation and Restoration of Monuments and Sites (Venice Charter 1964), World Heritage Convention (Paris Charter 1972), Conservation of Places of Cultural Significance (The Burra Charter, Australian ICOMOS 1981), and the Nara Document on Authenticity (1994).

SFD conducts high quality theoretical and practical training course and workshops for young architects, archaeologists and technicians from relevant organization on the principles and techniques of documentation, restoration and conservation of monuments, as well as on the prevailing international guidelines. SFD's project officers, national consultants and trainees from relevant governmental organizations participated in special training events where they were introduced to the concepts of preservation and to the international relevant charters and practices.
Meanwhile, a number of specialized experts[4] lead and also provide technical supervision for SFD's main conservation operations through direct on-site supervision or regular visits that take place on monthly, bi-monthly & semiannual basis. Additionally, the technical quality of SFD's interventions was positively acknowledged by a World Bank review mission undertaken by a Cultural Heritage expert[5].

Furthermore, SFD supported projects were recognized as follows: winner of the Aga Khan prestigious architectural award in 2007: (i) Shibam Hadramout conservation project (http://www.akdn.org/akaa_award10.asp#yemen); and (ii) Al Amyriah Mosque project.

4 E. Ronald Lewcock - Professor of Architecture at Georgia Tech. Institute and Cambridge University.
Dr. Chris Edens (Archaeologist – former director of the American Institute for Yemeni Studies).
Dr. Ala'a Al Habashi, Professor Eves Eagles, Eng. IssamAwwad, Renzo Ravagnan, Abdullah Al Hadrami
5 Marina Djabbarzade (Heritage Management Specialist Sustainable Development Department
Europe and Central Asia Region (statements in the Aide memoires 2007,2008,2009)

ANNEX (12)
Summary of Consultations

A consultation workshop was held on Wednesday, 9th April, 2014 attended by related government stakeholders at the central and local levels, and representatives of NGOs, empowerment committees, and local communities. The list of attendees is attached.

The workshop was opened with an introduction by the head of water and environment unit, then a speech by SFD's managing director, then the presentations. Three presentations were introduced the first one was for the ESMF (WU), the second for the CRRC (AU) and the thirst was for SFD (M&E U).

Opening speech of the MD

After the presentation of the ESMF, the discussion was opened and the following are the main points that were discussed:

Operation and Maintenance Budget: Some attendees stated that SFD should include in the budget of each subproject an amount for covering the O&M cost. The answer was that O&M is the responsibility of the SA/community. However, SFD should give more attention to this issue at early preparation stages and tone up its mobilization approaches and tools in order to insure better commitments from its partners in operating and maintaining completed subprojects and consequently improve the sustainability of providing the service.

MD NWRA- Taiz stating his Points

Checklist of Environmental and Social Issues to be Addressed at the Design Phase: To make sure that the subproject is in line with the general plan of the sector in the targeted area, a point should be added to the checklist. Example of groundwater based water system: "the subproject is in line with the aquifer plan".

Climate Resilience Requires Climate Parameters Measurement Equipment: Attendees have put this point stating that climate resilience will not achieve impacts without good early warning climate stations. They were happy to know that the CRRC project will benefit from the 60 early warning climate stations that will be installed by the Climate Information System & PPCR Coordination Project (P132116) in the targeted areas, and rural communities will have good access to the climate data.

Excluding Class A Subprojects from the WB Fund: Attendees have put this question, why class A subprojects are excluded from the WB fund? The answer was that WB fund are dedicated to small community level subprojects which are generally of class B. Class A are subprojects associated with very high environmental and social impacts that need special and complicated arrangements for their preparation, design and implementation.

MD NWRA-Hadhramawt

Excluding Dams: Attendees showed displeasure of excluding dams from the WB funds, and asked how SFD is going to support local communities with dams when they are the most viable option to provide the community with water for domestic and agriculture use? The answer was that, there are other donors who still can finance dams, and SFD is planning to evaluate the completed dams and based on the results of this evaluation, the policy of dams will be updated and tone up.

WB Local Social Specialist Ibrahim Baslamah

WB Local Social Specialist Ibrahim Baslamah

Climate Resilience Can Help in Modifying the Agriculture Seasons: Farmers have a traditional agriculture system describe the months of seeding and harvesting based on long experience of rainfall records in memories of famous ancient farmers like Ali Weld Zaid and Homaid Ben Mansur. Having records of rainfall pattern for period not less than 10 years will help in updating the traditional agriculture system to help farmers to cope with the climate change.

بسم الله الرحمن الرحيم

الجمهورية اليمنية
رئاسة مجلس الوزراء
الصندوق الاجتماعي للتنمية

Republic of Yemen
Presidency of the Council of Ministers
Social Fund for Development

وحدة المياه و البيئة

التاريخ: 09/ 04/2014م

كشف حضور باسماء المشاركين في ورشة التعريف بمشروع التأقلم مع التغيرات المناخية وخطة الإدارة البيئية المجتمعية(المشاركين في أمانة العاصمة)

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(أعضاء مكتب الزراعة والري بالمحافظات)

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