Environmental Assessment and Review Framework

Project Number: 48326-001
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DRAFT

AFG: Northern Flood-Damaged Infrastructure Recovery

ABBREVIATIONS

ADB	–	Asian Development Bank
CDC	–	Community Development Council
DDA	–	District Development Assembly
DRRD	–	Department of Rural Reconstruction and Development
EAG	–	emergency assistance grant
EARF	–	environmental assessment and review framework
EIA	–	environmental impact assessment
EMP	–	environmental management plan
GFP	–	grievance focal point
IA	–	implementing agency
IEE	–	initial environmental examination
JFPR	–	Japan Fund for Poverty Reduction
MRRD	–	Ministry of Rural Rehabilitation and Development
NGO		nongovernmental organization
NEPA	–	National Environmental Protection Agency
PMO	–	Project management office (MEW and MPW)
PMU	–	Project management unit (MRRD)
REA	–	rapid environmental assessment
UNEP	–	United Nations Environment Program me

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I. INTRODUCTION

1. Agriculture is an important sector to Afghanistan as 36% of all households rely on farming with another 6% depending upon farm wages as their main source of income. Agriculture is based on irrigation, since rainfall is too low and unreliable in most of the country to permit rainfed cropping. Most irrigation works in Afghanistan are either small or medium-scale irrigation structures that are developed and managed by communities. More information is provided in Linked Document 04, Village Irrigation and Local Roads.

2. Flooding was experienced 24 of Afghanistan's 34 provinces between late April and early June 2014 and damaging heavy rain in a further 3. Much of the irrigation and road infrastructure was severely damaged. Most damage resulted from flash flooding in northern, eastern and central provinces.

3. Grant assistance is to be provided to the government to enable essential repairs and reconstruction to be undertaken to village irrigation and road infrastructure, facilities on MEW's irrigation systems in northern region, and to main roads.

4. Village irrigation and road infrastructure repair and reconstruction will be undertaken under the Ministry of Rural Rehabilitation and Development (MRRD) as implementing agency (IA). In numerous villages in mountain regions and in the lower river valleys, the floods caused damage to small dams, irrigation intakes, canals and retaining walls, curtailing irrigation during the 2014 irrigation season, destroying crops and damaging land. While temporary repairs have been effected in many cases, the assets will be susceptible to further damage or destruction during the first flood of 2015. Village road infrastructure was also damaged, with the destruction of bridges, culverts and retaining walls and damage to carriageways. The damage has severely disrupted the social and economic life of many villagers.

5. Irrigation schemes in the lower valleys and plains are run by Ministry of Energy and Water (MEW responsible for the headworks and main systems) and the Ministry of Agriculture Irrigation and Livestock (MAIL, responsible for secondary and sometimes tertiary systems). Many of their intakes, canals and retaining walls in schemes in the Northern Basin were also damaged by the floods and need urgent repair. MEW is consequently designated as the second project IA.

6. Although main road infrastructure is better protected from flood damage due to its more robust construction, significant problems were experienced in many areas. Damage to carriageways, retaining walls and bridges was experienced. Notable was the severe damage to the retaining wall protecting the Asian Highway at Tang-e-Tashkorgan in Balkh province south of Khulm, the largest of the main road subprojects costing close to $3 million to repair. The Ministry of Public Works (MPW) as the agency responsible for main road maintenance, is the third project IA.

7. This environmental assessment and review framework (EARF) has been developed to guide MRRD, MEW and MPW and their provincial departments and Asian Development Bank (ADB) staff, in carrying out the environmental assessment, mitigation and monitoring activities required when designing and implementing subprojects to be financed under the Grant Assistance. The purpose of the EARF is to provide a procedure for the environmental assessment of subprojects that will be identified during the course of the Grant Assistance.

8. The EARF is based on the existing regulatory and technical frameworks in Afghanistan for environmental management and ADB's Safeguards Policy Statement 2009. Consequently, within the context of the continuing efforts by Afghanistan to improve environmental protection in the country, the EARF will be periodically reviewed and revised, in consultation with ADB, on the basis of experience gained during implementation and changes, if any, in Afghanistan's or ADB's policies, regulations and institutional arrangements.

II. ASSESSMENT OF LEGAL FRAMEWORK AND INSTITUTIONAL CAPACITY

9. Environmental assessment of future projects will be undertaken with regard to complying with ADB and Government of Afghanistan policies, legislation, and requirements. This also includes complying with international agreements.

A. Afghanistan's National Environmental Policies

10. In 2005, the government approved and adopted the first environmental framework law (the Environment Act) which was intended to include and address environmental issues in the development process. The National Environmental Protection Agency (NEPA), was established as an independent agency in May 2005 for environmental governance in the country. NEPA has overall responsibility to address policy and legal issues as well as environmental management in coordination with other departments. NEPA reports directly to the Office of the President. The 2005 Act was superseded by the Environment Law (2007).

11. In coordination with other government offices and external agencies, NEPA is responsible for drafting and updating regulations and guidelines for environmental management. Presently, there exist the following environmental regulations, guidelines, and policies in Afghanistan:

(i) The Environment Law, 1385 (Official Gazette No. 912, dated 25 January 2007), Islamic Republic of Afghanistan;

(ii) The National Environmental Impact Assessment Policy – "An Integrated Approach to Environmental Impact Assessment in Afghanistan" (issued in terms of Executive Order No. 1/86, dated 25 November 2007);

(iii) The Environmental Impact Assessment Regulations, 1386 (Official Gazette No. 939, dated 10 March 2008); and

(iv) Administrative Guidelines for Preparation of Environmental Impact Assessments, June 2008;

12. The **Environment Law 2007** superseded the Environment Act, 2005. In January 2007, the final version of the Environment Law came into force. The Law, which has been approved by the National Assembly, is based on international standards which recognize the current state of Afghanistan's environment while laying a framework for the progressive improvement of governance, leading ultimately to effective environmental management. It is now binding on both the government and the people of Afghanistan.

13. The Law was promulgated to give effect to Article 15 of the Constitution of Afghanistan and provide for the management of issues relating to rehabilitation of the environment and the conservation and sustainable use of natural resources, living organisms and non-living organisms. Its primary purposes are to:

- improve livelihoods and protect the health of humans, fauna and flora;
- maintain ecological functions and evolutionary processes;
- secure the needs and interests of present and future generations;
- conserve natural and cultural heritage;
- facilitate the reconstruction and sustainable development of the national economy.

14. The Environment Act was developed by NEPA over a period of two years with the support and technical advice of the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature and international experts. UNEP also facilitated an extensive national consultation process on the draft act with all national stakeholders (ministries, quasi-government agencies, and civic society) and other interested parties (United Nations agencies, ADB, World Bank, International Union for Conservation of Nature, United States Agency for International Development). UNEP is supporting NEPA in developing regulations subsequent to the Environment Act, particularly in the fields of environmental impact assessment, integrated pollution control, and compliance and enforcement, and the institutional processes and systems required to adequately and effectively implement the Environment Act.

15. **Administrative Guidelines for Preparation of Environmental Impact Assessments, June 2008**. The guidelines form a companion to the Environmental Impact Assessment Regulations (Official Gazette No. 939, dated 10 March 2008). The guidelines are provided to assist those undertaking development projects that may have a potential impact on the environment, and will guide proponents on the various aspects of dealing with NEPA as the competent environmental authority in Afghanistan. It also provides guidance on how the public should be consulted and the roles and responsibilities of the various stakeholders in the process.

16. **Environmental Impact Assessment Policy—"An Integrated Approach to Environmental Impact Assessment in Afghanistan," August 2006**. NEPA, with assistance from UNEP, has developed the environmental impact assessment (EIA) policy. The policy stipulates broad guidelines for project proponents on integrating EIA into the process of development, and procedures to address environmental consequences and involve necessary institutions in the process of project implementation. The policy has yet to be approved by the Cabinet (Ministry of Justice), which is necessary for it to obtain statutory status with regard to project proponents.

17. **Interim Environmental Impact Assessment Regulations, NEPA (Draft 2.3)**. These regulations govern the process of environmental impact assessment in Afghanistan on an interim basis pending establishment of the EIA board of experts under Article 20 of the Environment Law and issuing of final regulations. These regulations provide the detailed process of EIA and divide the projects into categories A and B based on potential impacts. In accordance with Article 13(1) of the Environment Law, these regulations apply to the following prohibited activities:

(i) Category A activities, set out in Schedule I of the Regulations, are those activities likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented, and that will impact a broader area than the sites or facilities subject to the physical works of the activity.
(ii) Category B activities, set out in Schedule I of the Regulations, are those activities likely to have significant adverse impacts on human environments or

environmentally sensitive areas that are less adverse than those of Category A activities, are site-specific, and in most instances are not irreversible.

(iii) Any activity that is likely to have significant adverse impact on the environment of an area that has been determined by NEPA to be an environmentally sensitive area.

(iv) Any other activity that is likely to have a significant adverse impact on the environment and is determined by NEPA to be a prohibited activity.

18. NEPA is allocated a number of responsibilities under the Water Law (2009). Articles 29, 30 and 31 relate to pollution and water quality and are not relevant to the EAG. However Article 32 covers potential negative Impacts on the environment from water projects and has relevant provisions:

- Owners of large water resources development projects shall be responsible to conduct an assessment of the negative impacts on the environment at their expense, in accordance with the environmental law and policy.
- Water users are responsible to use water in such a way that is not harmful to ecological systems and does not cause erosion and landslides and or other negative and adverse impacts to the environment.
- Those owners of water resources development projects who cause diversions into the course of water are responsible to not damage and to meet the needs of water users and water related ecosystems in the downstream.

B. ADB Environmental Safeguard Requirements and Policies

19. Environmental assessment will be carried out to ensure that potential adverse environmental impacts are addressed according to ADB's Safeguard Policy Statement (SPS) of June 2009.

20. The SPS consists of three policy components: (i) Environment Safeguards, (ii) Involuntary Resettlement Safeguards, and (iii) Indigenous People Safeguards. The objectives of Environment Safeguards are to ensure the environment soundness and sustainability of projects and to support the integration of environmental considerations into the project decision-making process. To help achieve the desired outcomes, ADB adopts a set of specific safeguard requirements that need to be achieved during the processing and implementation of projects financed by ADB. The environmental safeguard principles are stated in the Safeguard Policy Statement, which will guide environmental assessment process of projects.

21. ADB categorizes projects into categories A, B, and C, according to the significance of likely environmental impacts as follows:

(i) **Category A**. Projects with potential for significant adverse environmental impacts: An EIA is required to address significant impacts.

(ii) **Category B**. Project judged to have some adverse impacts, but of lesser degree and/or significance than category A. An initial environmental examination (IEE) is required to determine whether or not significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.

(iii) **Category C**. Projects unlikely to have adverse impacts. No EIA or IEE required, although environmental implications are still reviewed.

C. Institutional Capacity

22. The three project investment components will be implemented by MRRD, MEW and MPW.

23. **MRRD will implement Component 1 – village irrigation and local road repair and reconstruction**. MRRD is reputed to be one of the strongest project implementing agencies in Afghanistan. A PMU will be established under MRRD. Project implementation units (PIUs) will be established in the provincial offices of the Ministry which will be responsible for project implementation at the province level. MRRD is already implementing JFPR-9165 in four of the worst affected provinces (Baghlan, Ghor, Balkh and Samangan) and the PIUs in these provinces will be expanded to provide sufficient capacity to design subprojects and supervise implementation. A further two PIUs will be established, in Bamiyan and Badakhshan/Takhar, while the PMU in Kabul will be responsible for subprojects in four provinces.

24. Since the project will only be replacing or repairing destroyed or damaged infrastructure, it is expected that there will be limited need for environmental review. However, detailed subproject design will be required to define whether there are any potentially significant environmental issues likely to be encountered during construction or operation. In such cases the implications will be discussed with the environmental officers appointed by the JFPR 9065 implementing NGO (Hope International) and if necessary an IEE undertaken by independent consultants recruited under the project (Component 4 where provision is made for environmental consultancy costs).

25. **MEW will implement Component 2 - irrigation systems repair and reconstruction** Similarly to Component 1, all works under this component will comprise the reconstruction or repair of destroyed or damaged irrigation infrastructure. No environmental negatives are anticipated. Again, however, the subproject designs will include assessment of any need to address specific environmental issues. In such cases, independent environmental consultants will be required to review such issues and determine whether to proceed to IEE.

26. **MPW will implement Component 3 – the reconstruction or repair of damage to main roads.** In relation to the level of work required under the emergency grant, MPW indicates that it can be handled using its existing ADB-funded PMO. It will be necessary to recruit six engineers for construction supervision. Detailed design is being undertaken by the Ministry's well-established design department. MPW's testing laboratory will undertake any tests required during construction. MPW anticipates it will meet the costs of work undertaken by these departments.

III. ANTICIPATED ENVIRONMENTAL IMPACTS

27. It is anticipated that likely environmental impacts of subprojects under the Grant will be typical for small scale irrigation rehabilitation projects. In most cases the magnitude of impacts is assumed will range from minimum to moderate. However, environmental impacts may be more significant if a project will be located in proximity to environmentally sensitive areas. An environmental assessment will identify types and magnitudes of environmental impacts and the relevant mitigation measures.

28. The summary of typical environmental impacts related to proposed project activities is given below.

Impacts	Issue	Control
Components 1 &2 Irrigation & village roads		
Weirs	Height of weir and water volume diverted	Not to exceed prior volumes
Other intakes	Water volume diverted	Not to exceed prior volumes
Canals	Canal capacity	Not to exceed initial design volume
Retaining walls	Faster flood water velocity, possible increase in downstream volume	Retaining walls to replace damaged or destroyed walls. If new walls are built, assessment of any downstream impacts will be required.
Village bridges	None envisaged. Bridges should be designed to avoid lifting off of the slab during at least a 1:50 year flood	
Village road resurfacing	Noise and dust during construction	Village to be required to accept likely level of pollution prior to approval of subprojects. Contractors working near the village or settlements (if non-village) will be required to undertake control measures if dust or noise problems are encountered, including dust suppression and possible limitation of working hours for machinery
Components 3 Main roads		
Retaining wall construction	Faster flood water velocity, possible increase in downstream volume	Retaining walls to replace damaged or destroyed walls. If new walls are built, assessment of any downstream impacts will be required.
Bridge and culvert construction	Blockage of carriageway Noise and dust during construction.	Proper detour and dust control plan will be introduced and implemented to control local air pollution
Road resurfacing and construction	Blockage of carriageway Noise and dust during construction	Proper detour and dust control plan will be introduced and implemented to control local air pollution

IV. ENVIRONMENTAL ASSESSMENT FOR SUBPROJECTS

A. Environmental Screening and Categorization

1. Village Irrigation – MRRD

29. The ADB's SPS establishes screening and categorization of projects and determines the level of study required. The significance of project's environmental impacts and risks determines the environmental category of the project.

30. At the stage of identification and selection of subprojects Departments of Rural Rehabilitation and Development (DRRDs), and district CDCs/District Development Assemblies (DDAs) will apply the following safeguard-related criteria:

(i) A subproject deemed to have considerable adverse impacts on the environment or located in environmentally sensitive areas (Category A for environment) will be excluded from further consideration;

(ii) If a potential subproject includes activities listed in ADB Prohibited Investment Activities List (ADB SPS's Appendix 5), it will be excluded from further consideration;
(iii) Subprojects shall only involve activities that follow all the government regulations.

31. Approximately 350 villages will be assisted under the village irrigation component, at an average cost of $55,000 covering one or several subprojects. In almost every case, the works will repair or reconstruct damaged or destroyed facilities. In these cases there should be no negative environmental impact. It is therefore considered that subprojects will be Category C for environment, and no environmental analysis will be required. However, design engineers will be provided with a checklist, and required to report briefly in the design for each subproject and identify if further environmental analysis is required.

32. The generic ADB Rapid Environmental Assessment checklist is included in Appendix 1. An abbreviated checklist will be prepared and utilized under the emergency grant[1]. It is proposed that the component environmental officer will prepare generic environmental analysis of each type of subproject including:

Canals
Intakes
Retaining walls
Small dams
Bridges
Culverts
Road repair

33. Only where the subproject may cause negative impact beyond the limits defined in the generic study will environmental analysis be required.

34. To streamline processing and reduce the number of REA forms to be completed, it is proposed that a cluster approach will be used where appropriate. For example, where several subprojects are sited along the same river or within the same catchment, they can be grouped and categorized as one cluster of subprojects. In other words, grouping is by cumulative impact of the cluster.

35. In general, a project will be classified as 'Category A' if the project:
(i) will generate impact on an ecologically sensitive area, particularly if the project is located in buffer or core zone of any designated specially protected areas, or area of international significance or cultural heritage and archaeological sites designated by UNESCO;
(ii) requires a complex mitigation measure needing to be prepared through an in-depth assessment of the impacts and detailed study for preparing mitigation measures.

36. A subproject is classified as Category B if its potential adverse environmental impacts are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be designed more readily than for Category A projects. An IEE, including EMP, is required.

[1] A draft abbreviated checklist is included in this appendix.

37. A subproject is classified as Category C if it is likely to have minimal or no adverse environmental impacts. An IEE is not required for those subprojects, although environmental implications need to be reviewed.

38. It is not anticipated that any category A or B subprojects will be funded under **Component 1**. This has been the approach adopted under JFPR-9165 which has so far approved 60 out of a planned 120 subprojects, all of which have been Category C. No Category B subprojects have been put up for approval. Average subproject size is around $90,000 and thus somewhat larger on average than the village irrigation subprojects proposed under the EAG. Subprojects under JFPR-9165 are also mainly involved in rehabilitation or reconstruction.

39. **Component 2** subprojects are anticipated to all be classed as Category C. No new infrastructure will be constructed, with all subprojects comprising reconstruction or repair of existing infrastructure. In some cases bank protection will be extended beyond its prior limit in order to improve the protection of villages and irrigation areas from future floods. However, in all or almost all cases, this would not lift the subproject into a higher environmental classification. One aspect which will need to be taken into account is the volume of water diverted by an intake. Under the Water Law, the quantity diverted should not be increased compared to pre-flood levels if this disadvantages downstream users. Project designs will recognize this limitation.

40. If the project identifies one or more Category B subproject under Component 1 or 2, the relevant IA will recruit external consultants using contingency funds, and require them to undertake an IEE and EMP.

41. **Component 3** subprojects are expected to be all Category B or C. Following classification using the REA checklist, if any subprojects are classified as Category B, an IEE and EMP will be prepared.

B. Environmental Assessment and Environmental Management Plan (EMP)

1. Component 1 – Village Irrigation and Roads

42. If the design engineers identify that a subproject is likely to have significant environmental impact, when compared to the generic assessment and based on the abbreviated checklist and is therefore Category B, the component safeguards officer will prepare an environmental management plan. This will include mitigation measures, monitoring procedures and reporting requirements. No Category B subprojects are anticipated.

2. Component 2 – Irrigation Systems (MEW)

43. The irrigation subprojects to be repaired or reconstructed by MEW are generally similar to the village schemes of Component 1. However, many subprojects will be undertaken by contractors, and thus issues of dust and noise may be more important in some subprojects than in the villages. The same criteria will apply, with a process of review during design by the design engineers, followed by more detailed assessment if the subproject falls outside the guidelines. At this stage, no Category B projects are expected in this component. If assessment against the Rapid Environmental Assessment (REA) Checklist identifies a subproject as likely Category B a decision will be made whether the drop the subproject, or to include it and undertake an IEE and EMP.

3. Component 3 – Main Road Repair

44. For each Category B subproject, the project management office will prepare an EMP that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. The EMP will form part of the corresponding IEE.

45. Road rehabilitation works, even when they do not involve construction of new infrastructure, normally produce construction related impacts on the immediate physical and social environment. These impacts or hazards, though temporary or short-term, need to be accounted for, and appropriate mitigation/avoidance measures need to be identified at the project preparation stage. field investigation and reconnaissance visits in the project area will exhibit several diverse types of short-term impacts of the construction work. These impacts will vary in significance and magnitude according to the nature of the local physical conditions and the pattern of human occupancy around any specific scheme. Potential impacts are discussed below.

46. **Soil erosion**: The construction related clearing, excavating and grading of earthworks and borrow pits can trigger the process of soil erosion because the soil is cleared of vegetation and becomes unstable. Road widening of narrower village roads will involve the removal of roadside trees, and thus induce runoff erosion as well as pothole formation (caused by snowmelt water). Soil disturbance will be more significant if earthworks are done on sloping landscape and in the winter season.

47. **Temporary interruption of natural drainage, and local snowmelt flooding**: Road improvement works often require temporary diversion routes for the traffic which might contribute to changes in the flow of surface water leading to localized flooding-cum-drainage congestion. This impact is commonly encountered in areas of bridge and culvert rehabilitation. However, the problem can be avoided through appropriate planning of diversion structures and the undertaking of rehabilitation tasks in the dry season.

48. **Pollution from construction materials, equipment and dust**: Dumping of construction spoils, including accidental leakage of oil, grease and fuel in equipment yards, is an important hazard. Both surface and groundwater might be polluted from these contaminants. Related to this type of hazard is the use of such materials (by construction contractors) as toxic, inflammable and volatile substances, which might endanger the physical and human environment.

49. **Traffic disruption**: All road rehabilitation work will necessarily involve temporary disruption of normal traffic. Careful construction scheduling and appropriate diversion routes can sometimes reduce traffic congestion and inconvenience to road users.

50. **Increased traffic hazards**: The use of various categories of construction materials and equipment will cause nuisance, and even hazards, to local residents in terms of increased generation of noise, dust and unhealthy odors as well as vibration of heavy machinery. Homesteads and vegetation within the vicinity of construction works are likely to suffer especially from dust pollution.

51. **Work site safety**: The short-term impact issue involves the safety problems of the construction workers, and the provision for sanitation and drinking water facilities at work sites.

The lack of the latter facilities might severely affect construction workers' health condition and work efficiency.

52. **Cultural problems**: Temporary friction between local residents and the construction workers may not be uncommon in certain locations, but these do not pose a serious problem because of the general homogeneity of the population in the Project area. The problems that can be experienced in larger road construction projects through for example disease transmission from construction workers to local residents is unlikely to be an issue in the relatively small scale road repairs to be undertaken under this project.

53. The outline of the environmental assessment report is below. Some detail of suggested aspects to discuss in each section is in Annex 4.

A Executive Summary
C Description of the subproject
D Description of the Environment
E Anticipated Environmental Impacts and Mitigation Measures
F Analysis of Alternatives
G Information Disclosure, Consultation, and Participation
H Grievance Redress Mechanism
I Environmental Management Plan
J Conclusions and Recommendations

V. CONSULTATION INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

A. Public Consultation

54. For any Category B subproject subject to the EARF and where an IEE is required, formal and documented public consultation and information disclosure will be required in accordance with the ADB and government's consultation and information disclosure requirements. This will be done at an early stage during IEE preparation and is to inform stakeholders of the project components and to encourage input to identify possibly overlooked environmental issues. The information disclosed and feedback provided at the consultation sessions will be summarized, attendance recorded, and the document attached as an annex to the IEE.

55. For each of the subprojects the MRRD/MEW/MWP will organize consultations with project affected people and other stakeholders. Consultation will be based on the following principles:

(i) Early start in the project preparation stage and continuation throughout the project cycle;
(ii) Timely disclosure of relevant information in a comprehensible and readily accessible to affected people format;
(iii) Ensuring the absence of intimidation or coercion during public consultation;
(iv) Gender inclusive and responsive with focus on disadvantaged and vulnerable groups, and
(v) Enabling the integration of all relevant views of affected people and stakeholders into decision-making.

56. Invited attendees at IEE consultations will include government agencies and district authorities, community development councils (CDCs), as well as NGOs. At least two weeks notice of consultation meetings will be given.[2]

B. Information Disclosure

57. The IAs and ADB agree that in disclosing environmental information for each subproject to the public that:

(i) The IAs are responsible for ensuring that all environmental assessment documentation, including the environmental due diligence and monitoring reports, are properly and systematically kept as part of a project specific record;
(ii) all environmental documents are subject to public disclosure, and therefore must be made available to public; and
(iii) IAs will ensure that meaningful public consultations, particularly with project affected persons, are undertaken during the IEE preparation process for the future subprojects.

C. Grievance Redress Mechanism

58. In order to receive and facilitate the resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance a Grievance Redress Mechanism will be established for every category B subproject. When and where the need arises, the mechanism will be used for addressing any complaints that arise during the implementation of projects. The grievance mechanism should be scaled to the risks and adverse impacts of the project. It should address affected people's concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to all segments of the affected people at no costs and without retribution. The mechanism should not impede access to the Afghanistan's judicial or administrative remedies. IAs will appropriately inform the affected people about the mechanism.

D. Grievance Focal Points, Complaints Reporting, Recording and Monitoring

59. Environment complaints for category B subproject can be received through Grievance Focal Points (GFPs), these will be designated personnel at various levels who would be responsible for receiving the environmental complaint, resolving it or ensuring that it reaches the right quarters where it may be resolved. Designated GFPs may be village level local leaders, or village elders. Affected people may lodge their complaint for registration through a personal visit, call or letter to any of the GFPs.

60. Each GFP will maintain a record of complaints received and will follow up on their rapid resolution. Implementing agencies via their project implementation units will enter and maintain a complete record of all environmental complaints received alongside the record-book that serves as the social complaints register. IAs will also keep track of their status and will ensure that they are resolved.

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[2] Contingent on the security situation which may preclude foreigners or even non-local people from travelling to and conducting consultation in most areas, the consultation requirement may be waived for the initial environmental examination preparation. However, public consultation is required to be undertaken by the contractor *before* works start.

VI. INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

A. Component 1: Village Irrigation and Road Infrastructure

1. MRRD

61. The Ministry of Rural Rehabilitation and Development (MRRD) will be the implementing agency for Component 1. A project management unit (PMU) will be established within MRRD in Kabul and will employ a Project Director and a Deputy Project Director, two project engineers and an environmental officer, together with financial management and procurement staff. In relation to the EARF, the MRRD PMU will:

i. Exercise overall coordination of and institutional support to the Project at the national level, including coordination with National Environmental Protection Agency (NEPA);
ii. Prepare subproject performance criteria including environmental performance;
iii. Ensure the necessary national environmental approvals are obtained in a timely manner to advance project implementation;
iv. Finalize project implementation guidelines including safeguard issues;
v. Receive from DRRDs, compile and submit annual project environmental monitoring reports to ADB;
vi. At the request of ADB arrange and participate in safeguard review missions.

62. The engineers within the PMU will be responsible for the design and supervision of all subprojects in Laghman, Panjshir, Kunar Nuristan and Faryab provinces, with a total subproject value of $3.3 million. They will also be responsible for supporting any of the provincial PIUs that are experiencing difficulty in meeting their targets.

63. The environmental officer in the PMU will be responsible for all environmental activities required under the component, including preparation of required environmental studies and monitoring of any Category B subprojects in the component, though none are envisaged.

64. The environmental officer will advise the PIUs of the methodology for completing Rapid Environmental Assessments of individual or groups of subprojects and of the steps that will be required to minimise negative environmental factors during subproject implementation.

2. DRRD PIU Responsibilities

65. The Departments of Rural Rehabilitation and Development (DRRDs - provincial offices of MRRD in project provinces which are not managed from Kabul) will be responsible for implementation of subprojects at a local level. Adequate funding resources will be provided under each subproject for restoring the environment to at least its pre-flood condition after project implementation. That will include, but not be limited to, landscaping and revegetation of affected surfaces. The DRRDs will be responsible for the following:

i. Prepare ADB's REA Checklists on individual or groups of subprojects.
ii. In case if a potential subproject is assessed to have substantial adverse or moderate environmental impacts (Environmental Categories A&B), DRRD screens out the subproject from further consideration.
iii. Obtain necessary permits and/or clearance, as required, from NEPA and other relevant government agencies, ensuring that all necessary regulatory environmental clearances are obtained before commencing any civil work.

iv. Ensure that CDCs understand their responsibilities to mitigate environmental problems associated with their construction activities.
v. In case unpredicted environmental impacts occur during the project implementation stage, prepare and implement as necessary an environmental emergency program in consultation with NEPA, any other relevant government agencies, and ADB.
vi. Submit annual environmental reports, including implementation of an environmental emergency program, if any, to NEPA and ADB.

B. Component 2: Irrigation Systems (MEW)

66. The irrigation systems rehabilitation under MEW will generally also be Category C, since they are simply replacing damaged or destroyed structures. However in case there is a requirement to undertake Category B subprojects, the following responsibilities will be added in addition to those under Component 1.

i. Prepare ToRs to conduct IEE studies for subprojects categorized as Environmental Category B.
ii. Prepare IEE reports including EMP for public disclosure.
iii. Ensure that IEEs are prepared in compliance with the requirements of the Government and ADB, and that adequate consultation with affected people is undertaken in accordance with ADB requirements.
iv. Submit to ADB the IEE and EMP reports and other documents, as necessary.
v. Ensure that CDCs have access to the IEE and EMP reports of the projects.
vi. Ensure and monitor that an EMP including an environmental monitoring plan will be properly implemented.
vii. In case if a project area needs to be expanded during implementation, review the environmental classification, revise it accordingly, and identify whether a supplementary IEE study is required. If yes, prepare the terms of reference for undertaking a supplementary IEE and engage an environmental consultant to carry out the study.
viii. Submit annual reports on implementing EMPs, including implementation of an environmental emergency program, if any, to NEPA and ADB.

C. Component 3: Main Roads (MPW)

67. The main road repairs to be undertaken by MPW will generally also be Category C, since they are simply replacing damaged or destroyed structures. However in case there is a requirement to undertake Category B subprojects, the additional responsibilities listed above for MEW will be added to those under Component 1.

D. ADB Responsibilities

68. ADB will be responsible for the following:
(i) Review IEE reports and the rapid environmental assessment checklists as a basis to issue approval for Category B subprojects. It is recommended that such approvals are granted or withheld by AFRM safeguards specialists.
(ii) Undertake periodic monitoring of the EMP implementation and due diligence as part of the regular project review process.
(iii) If required, provide advice to the IAs in carrying out their responsibilities to implement the EMP for the project.

E. Monitoring and Reporting

69. Throughout implementation of the Grant Assistance, the Government and ADB will monitor implementation progress and environmental impacts of the project. Environmental monitoring for subprojects will be implemented by the IAs. In consultation with ADB, the IAs will establish a system for preparing six-monthly reports on environmental performance, monitoring, issues resolution, and corrective action plans. A project-end report on environmental performance will be prepared as an appendix to the project completion report.

70. An Environmental Monitoring Plan will be part of the overall project monitoring and supervision, and will be implemented by the IAs. Progress on the preparation and implementation of an EMP will be included in the periodic project progress reports. Specific monitoring activities defined in the IEEs and EMPs will be carried out by the IAs which will submit six-monthly reports on EMPs implementation for review by ADB. In the event that there are no Category B projects in an IA's area of responsibility, the report will be confined to assessment of the extent to which subprojects fell outside the submitted REA checklists, and the steps that were taken to mitigate any adverse environmental impact.

71. In general, the overall extent of monitoring activities, including their scope and periodicity, should be commensurate with the project's risks and impacts. The IAs are required to implement safeguard measures and relevant safeguard plans, as provided in the legal agreements, and to submit periodic monitoring reports on their implementation performance. At a minimum, for those projects for which IEEs and EMPs are prepared, ADB will require the IAs to:

(i) establish and maintain procedures to monitor the progress of implementation of EMPs;
(ii) verify the compliance with environmental measures and their progress toward intended outcomes;
(iii) document and disclose monitoring results to affected persons and identify necessary corrective and preventive actions in the periodic monitoring reports;
(iv) follow up on these actions to ensure progress toward the desired outcomes; and
(v) submit annual environmental monitoring reports on safeguard measures within 1 month after each monitoring period. The format of the report is appended.

72. ADB will carry out the following monitoring actions to supervise project implementation:

(i) conduct periodic site visits for projects with adverse environmental or social impacts;
(ii) conduct supervision missions with detailed review by ADB's safeguard specialists/officers or consultants for projects with significant adverse social or environmental impacts;
(iii) review the periodic monitoring reports submitted by the IAs to ensure that adverse impacts and risks are mitigated as planned and as agreed with ADB;
(iv) work with the IAs to rectify to the extent possible any failures to comply with their safeguard commitments, as covenanted in the legal agreements, and exercise remedies to re-establish compliance as appropriate; and
(v) prepare project completion reports that assess whether the objective and desired outcomes of the EMPs have been achieved, taking into account the baseline conditions and the results of monitoring. ADB will disclose the EMRs on the ADB web-site.

73. If there are no Category B projects in an IA's program the steps included in the above two paragraphs will not be required.

74. The IAs with assistance of the national environmental consultants, will review the IEE and corresponding EMP for each Category B subproject (if any) to ensure that mitigation measures and monitoring plans proposed in that document are in compliance with ADB's and national requirements. According to the reports and reviews during its missions, ADB, in consultation with the Government, will confirm compliance. For this purpose, the IAs will provide ADB with access to information on any projects. The information on implementation of an EMP, as well as that on environmental and social safeguard compliance, will be systematically documented and reported to ADB as part of the regular progress reports.

F. Staffing Requirements and Budget

1. Village Irrigation & Roads (MRRD)

75. MRRD through its environmental officer will:

(i) Prepare generic environmental assessments for each class of subproject, including guidelines to the designers on the criteria for more detailed environmental assessment
(ii) Screen each subproject at the identification stage and screen out projects with considerable or moderate environmental impacts (Category A or B for environment);
(iii) Monitor the project for environmental and social safeguards during implementation;
(iv) Prepare environmental monitoring reports and submit annual environmental monitoring reports to ADB;
(v) Prepare subproject environmental performance criteria;
(vi) Ensure the necessary national environmental approvals are obtained in a timely manner to advance project implementation;
(vii) Liaise with the National Environmental Protection Agency (NEPA) on project-related issues;
(viii) Contribute to project implementation guidelines (safeguard issues);
(ix) At the request of ADB arrange and participate in safeguard review missions.

2. Irrigation Schemes (MEW)

76. Once all subproject designs are completed, the designs will be reviewed by environmental staff within MEW, who will classify all subprojects.

77. It is not envisaged that MEW will recruit an environmental officer for its PMU. Any required IEE or EMP production will be contracted out to a national environmental consultant or consulting firm.

78. In the event that Category B subprojects are included in the component, MEW through its environmental consultant will, in addition to items (ii) to (ix) of Component 1 above:

(x) Prepare IEE reports for Category B projects and submit them for approval to NEPA and ADB;

79. All environmental staffing costs should be included in the Grant Assistance budget.

3. Main Roads

80. MPW will adopt the process listed above for MEW under paras. 76 to 79.

Annex 1

REA CHECKLIST FOR IRRIGATION AND VILLAGE ROAD SUBPROJECTS

Rapid Environmental Assessment (REA) Checklist
Irrigation & Village Roads MRRD & MEW

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES), for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: AFG: Emergency Assistance: Northern Flood-Damaged Infrastructure Recovery

Sector Division: CWRD / AFRM

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site		X	According to preliminary assessment subproject sites are not adjacent to or within environmentally sensitive areas.
▪ Legally protected Area (core zone or buffer zone)		X	
▪ Wetland		X	
▪ Mangrove		X	
▪ Estuarine		X	
▪ Special area for protecting biodiversity		X	
B. Potential Environmental Impacts Will the Project cause…			
▪ impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?		X	No or low impacts
▪ disturbance to precious ecology (e.g. sensitive or protected areas)?		X	No or low impacts
▪ alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?	X		Potential temporary alterations of water surface hydrology.

Screening Questions	Yes	No	Remarks
▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	X		Potential for temporary deterioration in surface water quality. There will be few if any worker camps. No toxic chemicals will be used during construction
▪ increased air pollution due to project construction and operation?	X		Potential for temporary air quality deterioration during development of quarries.
▪ noise and vibration due to project construction or operation?	X		Potential noise and vibration issues during quarry works.
▪ involuntary resettlement of people? (physical displacement and/or economic displacement)		X	No ~~or low~~ impacts
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?		X	No impacts
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?		X	No or low impacts Almost all subprojects constructed by village labor
▪ creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?		X	No impacts
▪ social conflicts if workers from other regions or countries are hired?		X	No impacts
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?		X	No or low impacts
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?		X	No or low impacts
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?		X	No impacts
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning?		X	No or low impacts
▪ generation of solid waste and/or hazardous waste?		X	No impacts
▪ use of chemicals?		X	No impacts
▪ generation of wastewater during construction or operation?		X	No impacts

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	**Yes**	**No**	**Remarks**
▪ Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)?	X		Project sites are subject to flooding. Some areas can be affected by earthquake or landslide
▪ Could changes in precipitation, temperature, salinity, or extreme events over the Project lifespan affect its sustainability or cost?		X	Subprojects will generally be more robust than the infrastructure repaired or replaced. Therefore situation improved compared to pre-flood condition
▪ Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (e.g. high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?		X	
▪ Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., increasing traffic or housing in areas that will be more prone to flooding, by encouraging settlement in earthquake zones)?		X	The project will increase climate resilience and decrease vulnerability in project areas

REA SHORT CHECKLIST IRRIGATION & VILLAGE ROADS

Short Rapid Environmental Assessment
MRRD & MEW

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES), for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: AFG: Emergency Assistance: Northern Flood-Damaged Infrastructure Recovery

Sector Division: CWRD / AFRM

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Wetland			
▪ Special area for protecting biodiversity			
C. Potential Environmental Impacts Will the Project cause…			
▪ alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?			
▪ increased air pollution due to project construction and operation?			
▪ noise and vibration due to project construction or operation?			
C. Climate Change and Disaster Risk			
▪ Is the Project area subject to earthquakes, floods, landslides			

REA CHECKLIST MAIN ROADS

Rapid Environmental Assessment - MPW

Instructions:

(i) The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Environment and Safeguards Division (RSES), for endorsement by Director, RSES and for approval by the Chief Compliance Officer.

(ii) This checklist focuses on environmental issues and concerns. To ensure that social dimensions are adequately considered, refer also to ADB's (a) checklists on involuntary resettlement and Indigenous Peoples; (b) poverty reduction handbook; (c) staff guide to consultation and participation; and (d) gender checklists.

(iii) Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures.

Country/Project Title: AFG: Emergency Assistance: Northern Flood-Damaged Infrastructure Recovery

Sector Division: CWRD/AFRM

SCREENING QUESTIONS	Yes	No	REMARKS
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Cultural heritage site	☐	X	
▪ Protected Area	☐	X	
▪ Wetland	☐	X	
▪ Mangrove	☐	X	
▪ Estuarine	☐	X	
▪ Buffer zone of protected area	☐	X	
▪ Special area for protecting biodiversity	☐	X	
D. Potential Environmental Impacts Will the Project cause…			
▪ encroachment on historical/cultural areas; disfiguration of landscape by road embankments, cuts, fills, and quarries?	☐	X	
▪ encroachment on precious ecology (e.g. sensitive or protected areas)?	☐	X	The project activities will be contained within the RoW.
▪ alteration of surface water hydrology of waterways crossed by roads, resulting in increased sediment in streams affected by increased soil erosion at construction site?	X	☐	Reconstruction of project's bridges can cause temporary increase in suspended solids in stream during construction. The impacts can be mitigated by scheduling

SCREENING QUESTIONS	Yes	No	REMARKS
			construction activities for low water season. Once construction is complete, sedimentation will be reduced compared to the do-nothing situation as river banks will be protected
▪ deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?	☐	X	
▪ increased local air pollution due to rock crushing, cutting and filling works, and chemicals from asphalt processing?	X	☐	Temporary and local air pollution are expected due to construction works. Mitigation measures can include: location of rock crushing sites far from settlements, dust suppression measures, environmental air quality monitoring (if deemed necessary), etc.
▪ risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation during project construction and operation?	X	☐	Occupational health and safety issues are expected during construction. Mitigation can include safety briefings, enforcement of safety rules, using protective equipment, etc
▪ noise and vibration due to blasting and other civil works?	X	☐	Construction noise can temporarily impact population in settlements. Mitigation can include careful scheduling construction near noise sensitive receptors, using low noise equipment, timely informing local population, etc
▪ dislocation or involuntary resettlement of people?	☐	X	
▪ dislocation and compulsory resettlement of people living in right-of-way?	☐	X	
▪ disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?	☐	X	
▪ other social concerns relating to inconveniences in living conditions in the project areas that may trigger cases of upper respiratory problems and stress?	☐	X	
▪ hazardous driving conditions where construction interferes with pre-existing roads?	☐	X	
▪ poor sanitation and solid waste disposal in construction camps and work sites, and possible transmission of communicable diseases (such as STI's and HIV/AIDS) from workers to local populations?	☐	X	
▪ creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?	☐	X	
▪ accident risks associated with increased vehicular traffic, leading to accidental spills of toxic materials?	☐	X	
▪ increased noise and air pollution resulting from traffic volume?	☐	X	~~It is anticipated that there will be minor increase in noise and air pollution due to increased traffic.~~ Traffic will revert to pre-flood levels if currently decreased. Noise and dust will decline due to proper surfacing of roads.

SCREENING QUESTIONS	Yes	No	REMARKS
▪ increased risk of water pollution from oil, grease and fuel spills, and other materials from vehicles using the road?	☐	X	
▪ social conflicts if workers from other regions or countries are hired?	☐	X	
▪ large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?	☐	X	
▪ risks to community health and safety due to the transport, storage, and use and/or disposal of materials such as explosives, fuel and other chemicals during construction and operation?	☐	X	
▪ community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and decommissioning.	X	☐	The project can pose safety risk to road-side communities and livestock.

Climate Change and Disaster Risk Questions The following questions are not for environmental categorization. They are included in this checklist to help identify potential climate and disaster risks.	Yes	No	REMARKS
• Is the Project area subject to hazards such as earthquakes, floods, landslides, tropical cyclone winds, storm surges, tsunami or volcanic eruptions and climate changes (see Appendix I)	**X**		The project area is subject to floods, earthquakes and mudflows JC very much doubts if the SP locations will be subject to mudflows. But roads team can comment.
▪ Could changes in temperature, precipitation, or extreme events patterns over the Project lifespan affect technical or financial sustainability (eg., increased erosion or landslides could increase maintenance costs, permafrost melting or increased soil moisture content could affect sub0-grade).	**X**		Mudflows can increase maintenance costs. There will be no change to pre-flood levels
▪ Are there any demographic or socio-economic aspects of the Project area that are already vulnerable (eg., high incidence of marginalized populations, rural-urban migrants, illegal settlements, ethnic minorities, women or children)?		**X**	
▪ Could the Project potentially increase the climate or disaster vulnerability of the surrounding area (e.g., by encouraging settlement in areas that will be more affected by floods in the future, or encouraging settlement in earthquake zones)?		**X**	

Note: Hazards are potentially damaging physical events.

Appendix I: Environments, Hazards and Climate Changes

Environment	Natural Hazards and Climate Change	Example Impact on Irrigation Systems
Arid/Semi-arid & desert environments	Low erratic rainfall of up to 500 mm rainfall per annum with periodic droughts and high rainfall variability. Low vegetative cover. Resilient ecosystems & complex pastoral and systems, but medium certainty that 10–20% of drylands degraded; 10-30% projected decrease in water availability in next 40 years; projected increase in drought duration and severity under climate change. Increased mobilization of sand dunes and other soils as vegetation cover declines; likely overall decrease in agricultural productivity, with rain-fed agriculture yield reduced by 30% or more by 2020. Earthquakes and other geophysical hazards may also occur in these environments.	In cases where water availability may decrease due to reduced precipitation, increased water use may be unsustainable
Humid and sub-humid plains, foothills and hill country	More than 500 mm precipitation/yr. Resilient ecosystems & complex human pastoral and cropping systems. 10-30% projected decrease in water availability in next 40 years; projected increase in droughts, heatwaves and floods; increased erosion of loess-mantled landscapes by wind and water; increased gully erosion; landslides likely on steeper slopes. Likely overall decrease in agricultural productivity & compromised food production from variability, with rain-fed agriculture yield reduced by 30% or more by 2020. Increased incidence of forest and agriculture-based insect infestations. Earthquakes and other geophysical hazards may also occur in these environments.	In many cases, climate change is expected to result in more intense but less frequent rainfall events and longer dry seasons and water capture systems may not be designed to accommodate these changes.
River valleys/ deltas and estuaries and other low-lying coastal areas	River basins, deltas and estuaries in low-lying areas are vulnerable to riverine floods, storm surges associated with tropical cyclones/typhoons and sea level rise; natural (and human-induced) subsidence resulting from sediment compaction and ground water extraction; liquefaction of soft sediments as result of earthquake ground shaking. Tsunami possible/likely on some coasts. Lowland agri-business and subsistence farming in these regions at significant risk.	As temperature increases, the spread of vector and water borne diseases may spread, standing water created by irrigation systems may promote their spread by creating habitats for their transmission.
Small islands	Small islands generally have land areas of less than 10,000km^2 in area, though Papua New Guinea and Timor with much larger land areas are commonly included in lists of small island developing states. Low-lying islands are especially vulnerable to storm surge, tsunami and sea-level rise and, frequently, coastal erosion, with coral reefs threatened by ocean warming in some areas. Sea level rise is likely to threaten the limited ground water resources. High islands often experience high rainfall intensities, frequent landslides and tectonic environments in which landslides and earthquakes are not uncommon with (occasional) volcanic eruptions. Small islands may have low adaptive capacity and high adaptation costs relative to GDP.	Areas previously suitable for agriculture may become less so as sea-level rise causes salt water intrusion and soil salinity. Planned agricultural areas may no longer be viable and therefore irrigation systems that feed them.
Mountain ecosystems	Accelerated glacial melting, rockfalls/landslides and glacial lake outburst floods, leading to increased debris flows, river bank erosion and floods and more extensive outwash plains and, possibly, more frequent wind erosion in intermontane valleys. Enhanced snow melt and fluctuating stream flows may produce seasonal floods and droughts. Melting of permafrost in some environments. Faunal and floral species migration. Earthquakes, landslides and other geophysical hazards may also occur in these environments.	Irrigation infrastructure may be damaged and blocked by glacial lake outbursts and mudflows. Water resources supplied by mountain systems may increase or diminish as rates of glacial melt change.
Volcanic environments	Recently active volcanoes (erupted in last 10,000 years – see www.volcano.si.edu). Often fertile soils with intensive agriculture and landslides on steep slopes. Subject to earthquakes and volcanic eruptions including pyroclastic flows and mudflows/lahars and/or gas emissions and occasionally widespread ashfall.	Irrigation infrastructure may be lost during volcanic eruptions.

Annex 2

TERMS OF REFERENCE – MRRD PMU SAFEGUARDS OFFICER (SO)

Scope of the assignment

The Environmental Officer will be responsible for providing input and guidance on environmental management and safeguards to the DRRDs and CDCs and assisting in building environmental management capacity in the DRRDs.

Specific focus of the assignment

Specifically, the Environment Officer will:

(i) monitor the update and implementation of subprojects' EMPs by the CDCs;
(ii) monitor baseline and routine environmental monitoring activities on the subprojects;
(iii) monitor project sites against any unexpected environmental impacts;
(iv) advise DRRD's management on environment problems and/or requirements, and recommend mitigating measures;
(v) report on EMP implementation and CDCs compliance.
(vi) take part in project performance monitoring and evaluation activities; and
(ix) assess and prepare capacity building program on environmental issues at the DRRD.

Qualifications

The Environment Officer is a well-qualified professional local environmental expert with at least a bachelors degree in environment sciences and a minimum of 8 years' experience in assessing environmental impact, and monitoring environment safeguards of irrigation projects. Familiarity with ADB environmental guidelines is preferred. Experience in similar projects and geographic areas, proficiency in both written and spoken English, and knowledge of locally spoken languages are advantages.

Annex 3

SIX-MONTHLY ENVIRONMENTAL MONITORING REPORT CONTENTS

Project Number: {XXXXX}
{Month Year}

{Full Country Name}: {Project Title}
{(Financed by the <source of funding>)}

Prepared by {author(s)}

{Firm name}

{City, country}

For {Executing agency}
{Implementing agency}

Table of Contents

Part I Introduction

- Construction activities and Project Progress during previous 6 months
- Changes in project organization and Environmental management team
- Relationships with Contractors, owner, lender, etc.

Part II Environmental Monitoring

Environmental monitoring summary – summarise the previous six months monitoring data and provide explanations of any instances where environmental standards or guidelines are exceeded. Typically this will cover:

- Noise and Vibration
- Water Quality
- Air Quality
- Flora and fauna monitoring

Recommendations are required to show how any exceedences will be prevented in the future.

Graphs can be used in this section to show trends, however large tables of data or multiple graphs should be attached as an appendix.

Part III Environmental Management

- EMS, SSEMP and work plans. Report on delivery of documents, required amendments etc.
- Site Inspections and audits – summarise the number and type of site visits
- Non-compliance notices – summarise the details on the number of notices given out and the issues covered. Summarise the ranking of issues.
- Corrective action plans - report on timeliness of preparation and completion
- Consultation and complaints – report on any consultation undertaken and list any complaints received.

Annexes

- Monitoring data
- Photographs
- Implementation report on EIA/IEE mitigation requirements

Reference	Requirement	Action to date	Action required/comment

Annex 4

SUGGESTED OUTLINE OF AN INITIAL ENVIRONMENTAL EXAMINATION REPORT

For category B subprojects or groups of subprojects under the Northern Flood-Damaged Infrastructure Recovery (RRP AFG 48326-001)

For the complete version of IEE contents, see page 41 of the ADB Safeguard Policy Statement (2009)

A. Executive Summary

This section describes concisely the critical facts, significant findings, and recommended actions.

B. Description of the Project

This section describes the proposed project; its major components; and its geographic, ecological, social, and temporal context, including any associated facility required by and for the project (for example, access roads, power plants, water supply, quarries and borrow pits, and spoil disposal). It normally includes drawings and maps showing the project's layout and components, the project site, and the project's area of influence.

C. Description of the Environment (Baseline Data)

This section describes relevant physical, biological, and socioeconomic conditions within the study area.

D. Anticipated Environmental Impacts and Mitigation Measures

This section predicts and assesses the project's likely positive and negative direct and indirect impacts to physical, biological, socioeconomic and cultural resources in the project's area of influence, in quantitative terms to the extent possible; identifies mitigation measures and any residual negative impacts that cannot be mitigated.

E. Analysis of Alternatives

Since the project is repairing or reconstructing pre-existing infrastructure, only the alternatives discussed in the engineering design need to be mentioned in this section.

F. Information Disclosure, Consultation, and Participation

This section:

(i) describes the process undertaken during subproject design and preparation for engaging stakeholders, including information disclosure and consultation with affected people and other stakeholders;

(ii) summarizes comments and concerns received from affected people and other stakeholders and how these comments have been addressed in project design and mitigation measures, with special attention paid to the needs and concerns of vulnerable groups, including women, the poor, and Indigenous Peoples; and

(iii) describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for carrying out consultation with affected people and facilitating their participation during project implementation.

G. Grievance Redress Mechanism

This section describes the grievance redress framework (both informal and formal channels), setting out the time frame and mechanisms for resolving complaints about environmental performance.

H. Environmental Management Plan

This section deals with the set of mitigation and management measures to be taken during project implementation to avoid, reduce, mitigate, or compensate for adverse environmental impacts (in that order of priority). It may include multiple management plans and actions. It includes the following key components (with the level of detail commensurate with the project's impacts and risks):

(i) Mitigation:
   (a) identifies and summarizes anticipated significant adverse environmental impacts and risks;
   (b) describes each mitigation measure with technical details, including the type of impact to which it relates and the conditions under which it is required (for instance, continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate; and
   (c) provides links to any other mitigation plans (for example, for involuntary resettlement, Indigenous Peoples, or emergency response) required for the project.

(ii) Monitoring:
   (a) describes monitoring measures with technical details, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits and definition of thresholds that will signal the need for corrective actions; and
   (b) describes monitoring and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures and document the progress and results of mitigation.

(iii) Implementation arrangements:
   (a) specifies the implementation schedule showing phasing and coordination with overall project implementation;
   (b) describes institutional or organizational arrangements, namely, who is responsible for carrying out the mitigation and monitoring measures, which may include one or more of the following additional topics to strengthen environmental management capability: technical assistance programs, training programs, procurement of equipment and supplies related to environmental management and monitoring, and organizational changes; and
   (c) estimates capital and recurrent costs and describes sources of funds for implementing the environmental management plan.

(iv) Performance indicators: describes the desired outcomes as measurable events to the extent possible, such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods.

I. Conclusion and Recommendation

This section provides the conclusions drawn from the assessment and provides recommendations.