

Environmental Assessment and Review Framework

Project Number: 54181-001
April 2020

PAK Emergency Assistance for Fighting Against COVID-19 Pandemic

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CURRENCY EQUIVALENTS

As of 26th April 2020
Currency Unit – Pak Rupee (PKR)
1 PKR = \$ 0.0061
US\$1.00 = 165 PKR

CONVERSIONS

1 meter = 3.28 feet
1 hectare = 2.47 acre

Acronyms

ADB	Asian Development Bank
AIP	Access to Information Policy
BISP	Benazir Income Support Programme
CO	Carbon Monoxide
COVID-19	Coronavirus disease of 2019
EA	Environmental Assessment
EAL	Emergency Assistance Loan
EARF	Environment Assessment Review Framework
EIA	Environment Impact Assessment
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
ESMS	Environment and Social Management System
FI	Financial Intermediary
FIP	Fund Implementation Partner
GOP	Government of Pakistan
GRM	Grievance Redressal Mechanism
HCL	Hydrogen Chloride
HF	Hydrogen Fluoride
IA	Implementing Agency
ICU	Intensive Care Unit
IEE	Initial Environmental Examination

IFC	International Finance Corporation
km	Kilometer
LAA	Land Acquisition Act (of 1984)
LARP	Land Acquisition and Resettlement Plan
Leq	Equivalent sound pressure level
NDMA	National Disaster Management Authority
NDRMF	National Disaster Risk Management Fund
NEQS	National Environmental Quality Standards
O&M	Operation & Maintenance
PCDD/F	Polychlorinated dibenzodioxin and dibenzofuran
PCR	Polymerase Chain Reaction
PPE	Personal Protective Equipment
REA	Rapid Environmental Assessment
SO₂	Sulfur Dioxide
SOP	Standard Operating Procedure
SPS	Safeguard Policy Statement
TOC	Total Organic Carbon
TPM	Total Particulate Matter
VTM	Viral Transport Media
WHO	World Health Organization

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I. Introduction

A. Background

1. The Corona virus disease (COVID-19) is an infectious disease caused by the recently discovered coronavirus from the same family that caused the Severe Acute Respiratory Syndrome outbreak in 2003 and the Middle East Respiratory Syndrome outbreak in 2012. Epidemiological evidence shows that COVID-19 can be transmitted from one individual to another, likely through droplets, personal contact, and contaminated objects. The World Health Organization (WHO) declared the COVID-19 outbreak a public health emergency of international concern on 30 January 2020 and further a pandemic on 11 March 2020.¹ Pakistan is highly susceptible to high spread of the coronavirus given the country's porous borders and the high cross border movement between Pakistan and its neighbors—for business, education, medical, and religious purposes. Pakistan's caseload of COVID-19 infected population is quickly rising – from the first two cases and zero death notified on 26 February 2020 to 7,481 cases and 143 deaths by 18 April 2020.²
2. The Government of Pakistan has historically under-financed spending on the health sector, with health expenditure less than one percent of GDP since decades and within these allocations the operational expenditure on health far outweighs development expenditure particularly in recent years.³ Consequently, the country has weak and limited health infrastructure and administrative capacity. The government and the UN country team, with support from main development partners, had developed Pakistan Preparedness & Response Plan COVID-19 (PRRP)⁴ to help prevent and limit the spread of COVID-19 in Pakistan, and reduce the related morbidity and mortality due to the pandemic in the country. The Plan's predicative analysis of expected cases based on the attack rates from other countries indicates that there are likely to be approximate 196,421 total cases in Pakistan. Of these 157,137 (80%) will be mild, 29,463 will be moderate to severely ill (15%) and approximately 10,000 (5%) critical cases that will require ventilator/Highly Dependent Unit support. The magnitude of demand for personal protective and biohazard equipment, medical equipment and supplies to strengthen hospitals, diagnostic laboratories, isolation units, and other medical facilities will depend on how the outbreak evolves, which remains highly uncertain.
3. This Environmental Assessment Review Framework (EARF) document has been prepared for the proposed assistance to be provided by the Asian Development Bank

¹ <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

² World Health Organization. COVID-19 Situation Report as of 19 April 2020. Pakistan.

³ Ministry of Finance, Government of Pakistan. 2020. Economic Survey 2018-19. Islamabad. (http://www.finance.gov.pk/survey_1819.html, accessed on 31 March 2020)

⁴ Government of Pakistan, Ministry of National Health Services, Regulation and Coordination. 2020. Pakistan Preparedness & Response Plan COVID-19. Islamabad.

(ADB) to the Government of Pakistan (GOP) to effectively respond, manage and control the spread of the COVID-19 pandemic in Pakistan.

B. Scope of EAL

4. The proposed Emergency Assistance Loan (EAL) will consist of the following two components with the respective outputs as described below:

Output 1: “Emergency preparedness and economic revival strengthened”

5. Under this Output, this assistance will be funneled through the existing Financial Intermediary (FI), the National Disaster Risk Management Fund (NDRMF), which will provide funds to its Fund Implementation Partners (FIPs), such as NDMA (which has the mandate at the federal level for managing and responding to all types of disasters).
6. This EAL Component will consist of the following interventions:
 - Provision of equipment (Polymerase Chain Reaction (PCR), ventilators, x-ray machines, monitors, nebulizers, synthesizers, Viral Transport Media (VTM), ICU beds, ultrasounds etc.) and consumable supplies (PPE, medicine, reagents, masks, sanitizers etc.) for tertiary laboratories, intensive care units of district and tertiary hospitals, quarantine or isolation facilities and point of entries.
 - Civil works to upgrade existing facilities or adding additional space within existing facilities.
 - At a limited scale, medium size static or mobile incinerators will be required to treat infection waste before disposal. WASH facilities will be added to existing health facilities where required. The remaining activities under this output will be staff surge and training, and developing the health management systems (inventory control, disease surveillance, standard protocols, etc.).
 - The economic revitalization component will mainly support inputs and supplies to targeted households and small community interventions to improve both health and hygiene, and economic activity in the area – this could include public toilet and washing facilities, tube-wells or economic infrastructure like sheds for grains/animals.
 - Support staff surge and training, and developing the health management systems (inventory control, disease surveillance, standard protocols, etc.).
 - Community infrastructure will only be provided where land is voluntarily contributed by the concerned communities. Physical extension in health facilities will only be considered where extension is on existing premises for which the required land is already available and free from any encroachments.

Output 2: “Social protection for poor and vulnerable delivered”

7. The Social Protection Development Project consisting of cash transfer to beneficiaries through the Benazir Income Support Programme (BISP). This Output will not involve any physical activity and will only consist of cash transfer.

C. Purpose of EARF

8. This EARF provides guidance regarding the potential environmental safeguard issues and their management during the implementation of the proposed EAL for responding to the COVID-19 pandemic.
9. Once this EAL is approved by the ADB Board, the Environmental and Social Management System (ESMS) of the NDRMF, which has been updated to cover EALs and is provided as **Annexure I**, will be implemented.
10. The EARF aims to provide guidance on the institutional arrangements and processes to be followed for components of the EAL to ensure compliance with applicable national and ADB SPS 2009 since the specific EAL activity design and/or activity selection will take place after ADB Board approval.
11. This EARF (i) describes the project and its components; (ii) explains the general anticipated environmental impacts and mitigation measures for the proposed EAL activities, which will be financed after ADB Board approval; (iii) assesses the capability of the project proponents to implement national laws and ADB's requirements, and identifies needs for capacity building; (v) specifies categorization and screening, assessment and planning, and implementation procedures, institutional arrangements, and capacity development requirements; and (vi) specifies monitoring and reporting requirements.

D. Existing ESMS of NDRMF

12. The existing ESMS for the NDRMF was established in April 2018 and was developed in order to integrate environmental and social governance into the Fund's overall management system. This was to ensure all activities being financed by the NDRMF are in accordance with national and financing source specific environmental and social safeguard policies, principles and guidelines to proactively avoid, minimize/prevent and/or mitigate any potential adverse E&S risks and impacts on affected persons/communities workers, and the environment and enhance beneficial impacts of financing activities before they result in any adverse outcome.
13. The ESMS document was developed to also provide operational guidance to the Fund staff and Fund Implementation Partners (FIPs) in preparing sub-projects that are compliant with the ESMS along with developing mechanisms for effective monitoring/auditing of compliance and reporting.

14. The existing ESMS clearly lays out the E&S policy statement of the Fund, the Legal and Policy Framework, the procedures for screening and categorization of sub-projects, Organizational responsibilities, resources and Capacity, including staff requirements as well as the operational procedures for Environmental and Social Compliance.
15. The updated version of the ESMS, provided as **Annexure I**, now covers EALs and the flexible modalities to be implemented in the case of EALs such as the preparation of an EMP for Category 'B' projects sufficing for an IEE study along with flexible monitoring requirements based on the nature of the EAL. The updated ESMS also provides guidelines from international institutions such as WHO for responding to health emergencies, particularly pandemics.
16. The ESMS also provides the requirements to engage or make available a pool of experts to address the impacts that will arise and the assessments that will need to be conducted. The terms of reference (ToRs) of experts required for medical waste management and incinerator design and installation, air quality and air emissions monitoring have also been provided in the ESMS document.

II. Assessment of Legal Framework and Institutional Capacity

A. WHO Guidelines Specific to COVID-19 Pandemic

- The WHO Guidelines provided specifically for the COVID-19 Pandemic must be implemented, which are provided as Annexures in the ESMS document and are as follows: WHO Guidelines on Water, Sanitation, hygiene and waste management for the COVID-19 Virus
- WHO advice on Use of Masks for the COVID-19 Virus
- WHO Guidance on Rights, Roles & Responsibilities of Health Workers, including key consideration for Occupational Safety & Health
- WHO Guidance on Laboratory Biosafety related to COVID-19
- WHO Guidance on Infection Prevention and Control during health care when COVID-19 is expected.

B. IFC Guidelines on Air Quality Emission Standards for Hospital Waste Incineration Facilities⁵

17. The permissible emission levels for hospital waste incineration facilities are provided as **Table II.1** below.

Table II.1: Air Emission Levels for Hospital Waste Incineration Facilities

Pollutants	Units	Guideline Value
Total Particulate matter (PM)	mg/Nm ³	10
Total organic carbon (TOC)	mg/Nm ³	10
Hydrogen Chloride (HCL)	mg/Nm ³	10
Hydrogen Fluoride (HF)	mg/Nm ³	1
Sulfur dioxide (SO ₂)	mg/Nm ³	50
Carbon Monoxide (CO)	mg/Nm ³	50
NOx	mg/Nm ³	200-400 ^(a)
Mercury (Hg)	mg/Nm ³	0.05
Cadmium + Thallium (Cd + Tl)	mg/Nm ³	0.05
Sb,As,Pb,Cr,Co,Cu,Mn,Ni and V	mg/Nm ³	0.50
Polychlorinated dibenzodioxin and dibenzofuran (PCDD/F)	ng/Nm ³ TEQ	0.1
Notes: a. 200 mg/m ³ for new plants or for existing incinerators with a nominal capacity exceeding 6 tonnes per hour, 400 mg/m ³ for existing incinerators with a nominal capacity of 6 tonnes per hour or less b. Oxygen level for incinerators is 7 percent.		

⁵ <https://www.ifc.org/wps/wcm/connect/960ef524-1fa5-4696-8db3-82c60edf5367/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&CVID=jqeCW2Q&id=1323161961169>

C. ADB Policies

ADB Safeguards for Emergency Assistance

18. ADB's Emergency Assistance Lending highlights that for EALs, the completion of standard environmental assessments, environmental management plans, resettlement plans, and Indigenous Peoples plans may not be possible before Board of Directors approval. In such cases, the Safeguard Policy Statement (SPS) provides that in lieu of such assessments, safeguard frameworks may be prepared.⁶
19. The purpose of a safeguard framework is to ensure that the subprojects or project components implemented under the framework comply with ADB safeguard objectives, principles and requirements. Safeguard frameworks (including environmental assessment and review frameworks, resettlement frameworks, and Indigenous Peoples planning frameworks) need to be in place prior to project approval and provide necessary details on the screening and categorization, assessment, planning, institutional arrangements, and processes to be followed for subprojects or components after Board approval. Impact assessments and safeguard plans are also prepared during subproject or component preparation in conformity with the safeguard frameworks agreed to by ADB and the client.
20. To determine whether the application of safeguard frameworks is appropriate, ADB assesses the client's capacity to manage environmental and social impacts and risks and to implement national laws and ADB's requirements. If gaps exist between ADB's requirements and countries' laws, or where gaps in borrowers' capacity are apparent, the safeguard frameworks include the details of the specific gap-filling requirements to ensure that policy principles and safeguard requirements are achieved.
21. For projects involving investment of ADB funds to or through financial intermediaries (FI), ADB conducts safeguard due diligence to assess the potential environmental and social impacts and risks associated with the FI's existing and likely future portfolio, and its commitment and capacity in social and environmental management. All FIs will ensure that their investments are in compliance with applicable national laws and regulations and will apply ADB's prohibited investment activities list (SPS, Appendix 5) to subprojects financed by ADB. Where the FI's investments have minimal or no adverse environmental or social risks, the FI project will be treated as category 'C' project and need not apply any other specific requirements. All other FIs will be required to have in place or establish an appropriate environmental and social management system (ESMS) commensurate with the nature and risks of the FI's likely future portfolio.
22. In addition, the Disaster and Emergency Assistance Policy (DEAP) allow additional flexibility to facilitate expeditious processing. For the environmental safeguards, management can waive the 120-day rule for disclosure of the environmental impact

⁶ ADB. 2009. Safeguards Policy Statement. Manila. See requirements 1-3.

assessment and the two-step public consultation requirement for category-A projects (those with a potentially significant environmental impact) on a project-by-project basis.

Additional details

23. Safeguard frameworks will be prepared for each safeguard area and will:

- (i) reflect fully the policy objectives and relevant policy principles and safeguard requirements governing preparation and implementation of subprojects and/or components;
- (ii) explain the general anticipated impacts of the subprojects and/or components to be financed under the proposed project;
- (iii) specify the requirements that will be followed for subproject screening and categorization, assessment, and planning, including arrangements for information disclosure, meaningful consultation with measures to involve vulnerable groups including women, grievance redress mechanism, and where applicable, safeguard criteria that are to be used in selecting subprojects and/or components;
- (iv) describe implementation procedures, including budgets, institutional arrangements, and capacity development requirements;
- (v) specify monitoring and reporting requirements; and
- (vi) specify the responsibilities and authorities of the borrower/client, ADB, and relevant government agencies in relation to the preparation, submission, review, and clearance of subproject safeguard documents, and monitoring and supervision of safeguard plan implementation.

ADB's Safeguard Policy Statement (SPS), 2009

24. The ADB's SPS 2009 requires that environmental considerations be incorporated into ADB funded projects to ensure that the project will have minimal environmental impacts and be environmentally sound. Occupational health & safety of the local population should also be addressed as well as the project workers as stated in SPS. A Grievance Redress Mechanism (GRM) to receive application and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance is also established.

25. All loans and investments are subject to categorization to determine environmental assessment requirements. Categorization is to be undertaken using Rapid Environmental Assessment (REA) checklists, consisting of questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts. Projects are classified into one of the following environmental categories:

Category A: A proposed project is classified as category A if it is likely to have significant adverse environmental impacts that are irreversible, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment (EIA) is required.

Category B: A proposed project is classified as category B if its potential adverse environmental impacts are less adverse than those of category A projects. These 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 initial environmental examination (IEE) is required.

Category C: A proposed project is classified as category C if it is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.

Category FI: A proposed project is classified as category FI if it involves investment of ADB funds to or through a financial intermediary (FI).

ADB's Access to Information Policy (AIP) 2018 (In effect from January 2019)

26. ADB's new Access to Information Policy (AIP), reflects the ADB's ongoing commitment to transparency, accountability, and participation by stakeholders. The policy contains principles and exceptions to information sharing with external stakeholders, led by a new overarching principle of "clear, timely, and appropriate disclosure."

ADB's Accountability Mechanism Policy 2012

27. The objectives of the Accountability Mechanism is providing an independent and effective forum for people adversely affected by ADB-assisted projects to voice their concerns and seek solutions to their problems, and to request compliance review of the alleged noncompliance by ADB with its operational policies and procedures that may have caused, or is likely to cause, them direct and material harm. The Accountability Mechanism is a "last resort" mechanism.

ADB Guidance Note – 'Managing Infectious Medical Waste during the COVID-19 Pandemic', 2020

28. The ADB has prepared a guidance note on management of infectious medical waste in light of the COVID-19 pandemic.⁷ This brief provides governments with essential information to support their efforts to manage an increase in infectious medical waste due to the COVID-19 pandemic.
29. It outlines the key considerations for governments to understand their country's capacity to manage an anticipated surge in infectious medical waste. It also makes practical recommendations to improve the disposal of household and hospital waste—as well as municipal solid waste—with the aim of reducing the further spread of COVID-19 and other diseases.

⁷ <https://www.adb.org/publications/managing-medical-waste-covid19>

D. Implications of ADB's safeguard policies on proposed project

30. The objectives of ADB's safeguards are to:

- avoid adverse impacts of projects on the environment and affected people, where possible;
- minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and
- help borrowers/clients to strengthen their safeguard systems.

31. ADB's SPS sets out the policy objectives, scope and triggers, and principles for three key safeguard areas:

- environmental safeguards,
- involuntary resettlement safeguards, and
- Indigenous Peoples safeguards.

32. The objective of the environmental safeguards is to ensure the environmental soundness and sustainability of projects and to support the integration of environmental considerations into the project decision-making process. ADB's policy principles are summarized in **Table II.2** below.

Table II.2: ADB Policy Principles

	Policy principle	Summary
1	Screening and categorization	Screening process initiated early to determine the appropriate extent and type of environmental assessment.
2	Environmental assessment	Conduct an environmental assessment to identify potential impacts and risks in the context of the project's area of influence.
3	Alternatives	Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts, including no project alternative.
4	Impact mitigation	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts. Prepare an environmental

		management plan (EMP).
5	Public consultations	Carry out meaningful consultation with affected people and facilitate their informed participation. Involve stakeholders early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation. Establish a grievance redress mechanism.
6	Disclosure of environmental assessment	Disclose a draft environmental assessment in a timely manner, in an accessible place and in a form and language(s) understandable to stakeholders. Disclose the final environmental assessment to stakeholders.
7	Environmental management plan	Implement the EMP and monitor its effectiveness. Document monitoring results, and disclose monitoring reports.
8	Biodiversity	Do not implement project activities in areas of critical habitats.
9	Pollution prevention	Apply pollution prevention and control technologies and practices consistent with international good practices. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges. Avoid the use of hazardous materials subject to international bans or phaseouts.
10	Occupational health and safety Community safety.	Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities
11	Physical cultural resources	Conserve physical cultural resources and avoid destroying or damaging them. Provide for the use of

		"chance find" procedures.
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33. Since this is an EAL, so the specific conditions and flexibilities applicable for EALs as mentioned in **Section II.B, 'ADB Safeguards in Emergency Situations'** will be applicable for the activities under this proposed EAL as described in this EARF.

III. Description of proposed EAL

34. The scope of the proposed EAL is provided above in **Section 1.B** of this EARF and is not being provided again here to avoid repetition.

IV. Anticipated Environmental Impacts

35. The proposed activities to be conducted under this EAL are expected to be medium term in duration and limited to the construction phase of the project. The anticipated environmental impacts and mitigation measures related to the construction and operation phases of the proposed EAL are provided in the **Table III.1** below. These are indicative impacts and will need to be further explored during the detailed design stage.

Table IV.1: Indicative Impacts

Anticipated Environmental Impacts	Mitigation Measures
Construction Phase	
i. Installation of Incinerators ii. Expansion of Existing Health Facilities (Isolation Ward Rooms, ICUs etc.) iii. WASH Activities	
Air Quality deterioration (dust emissions from earth works, construction vehicle movement, civil works etc.)	<ul style="list-style-type: none"> ▪ Conduct water sprinkling as frequently as required to minimize dust emissions at work sites. ▪ Limit speed of construction vehicles at site to 30 km/hr to minimize dust emissions at work sites as far as possible. ▪ Cover any raw materials (sand, fine gravel etc.) during transport to site and while lying at site with tarpaulin to prevent it becoming airborne and causing a nuisance.

Noise Levels	<ul style="list-style-type: none"> ▪ Necessary control equipment and techniques to be applied to control noise levels and limit their nuisance effects as far as possible. ▪ Construction works in close proximity to patient wards/ICUs not to be conducted between 6pm to 7 am. ▪ Labor must be oriented and constantly reminded on the sensitivity of a hospital environment and to avoid talking in loud voices/high tones to minimize disturbance to patients and hospital staff.
Occupational Health and Safety	<ul style="list-style-type: none"> ▪ All labor and supervisory staff must be trained to adopt all required safety protocols as per WHO guidelines while conducting works in the premises of the health care facility to protect against exposure and subsequent transmission of COVID-19. ▪ All standard health and safety precautions such as use of PPEs and following method statements must be implemented by the Contractor to minimize risk of injury and accidents. ▪ Monitoring of the labor staff must be conducted by the Contractor management. ▪ Labor will not be permitted to enter hospital premises, unless necessary, to minimize risk of exposure/transmission of COVID-19.
Worker Camp Effluent	<ul style="list-style-type: none"> ▪ Closed sewage treatment system will treat the effluent. ▪ Open defecation will not be permitted.
Soil Erosion and Sedimentation	<ul style="list-style-type: none"> ▪ Sediment ponds must be developed, wherever felt necessary. ▪ Coverage of unpaved areas must be conducted

Soil & Site Contamination	<ul style="list-style-type: none"> ▪ Use of spill prevention trays ▪ Regular inspections ▪ Storage of chemicals etc. in covered bounded areas
Drainage & Storm water Run off	<ul style="list-style-type: none"> ▪ Compacting of all unpaved exposed surfaces ▪ Natural drainage must not be hampered or blocked
Operation Phase	
Air Quality Impacts (from Incinerator Operation)	<ul style="list-style-type: none"> ▪ All incinerators will be complying with the IFC Standards on 'Air quality emissions for incinerators at health care facilities'. ▪ Maintenance of incinerators on periodic basis as advised by manufacturers will be conducted. ▪ Monitoring of air quality emissions from incinerators will be conducted on periodic basis based on a pre-determined frequency, but not less than bi-annually. ▪ All incinerators will be purchased from reputed manufacturers holding international certification to manufacture incinerators in line with international standards.
Occupational Health and Safety	<p>Proper implementation of WHO guidelines related to use of PPEs and SOPs on equipment use must be ensured to prevent completely and/or minimize the risk of transmission.</p> <p>The ADB best practice guidance note on 'Managing Infectious Medical Waste during the COVID-19 pandemic'⁸ must be referred for guidance and implementation</p>

⁸ <https://www.adb.org/publications/managing-medical-waste-covid19>

	of advised measures and precautions.
Community Health and Safety	<ul style="list-style-type: none"> ▪ The WHO guidelines on handling and disposal of waste generated from the health care facilities must be followed to minimize risk of transmission of COVID-19 to communities. ▪ The ADB best practice guidance note on 'Managing Infectious Medical Waste during the COVID-19 pandemic'⁹ must be referred for guidance and implementation of advised measures and precautions. ▪ Any instances of non-compliance with the WHO guidelines and open dumping/land filling without prior approval from the relevant authorities must be immediately reported to the local government focal point for required legal action.
Solid Waste Management	<ul style="list-style-type: none"> ▪ The WHO guidelines on management and disposal of waste produced from all health facilities treating COVID-19 patients must be implemented in full, without any lapses or non-compliances. ▪ The ash/by-products from the incineration process must be collected and disposed off as per a pre-determined SOP in accordance with international good practices. ▪ The ADB best practice guidance note on 'Managing Infectious Medical Waste during the COVID-19 pandemic'¹⁰ must be referred for guidance and implementation of advised measures and precautions.

⁹ <https://www.adb.org/publications/managing-medical-waste-covid19>

¹⁰ <https://www.adb.org/publications/managing-medical-waste-covid19>

Climate Change impacts	<p>Following positive impacts from Climate Change perspective are expected:</p> <ul style="list-style-type: none"> ▪ Energy Efficient equipment (low energy rating specifications) ▪ Low energy footprint of physical facilities (use of insulation, solar panels, LED lights) ▪ Energy efficient construction (pre-engineered) ▪ Incineration of waste instead of land filling (less GHG footprint) ▪ WASH based interventions and water or input use efficiency (agriculture) in the community-based projects for economic revitalization.
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V. Environmental Assessments for Sub-projects and/or Components

A. Environmental Screening and Categorization Procedure

36. The proposed EAL will consist of different types of interventions under Output 1 of the planned assistance with majority of the activities expected to fall in Category 'C' such as equipment provision and capacity building activities specific to COVID-19 for the staff of the health care facilities. Some of the interventions such as installation of small scale/portal incinerators, construction of pre-fabricated isolation rooms and wards along with certain WASH interventions may fall into Category 'B'.
37. The environmental screening and categorization mechanism is already provided in the existing version of the ESMS for the NDRMF which will also be used for the proposed EAL project.

B. Environmental Assessment and Planning Procedure

38. The environmental assessment and planning for the subprojects/components will be conducted in accordance with the procedures under the updated ESMS of the NDRMF specifically for EAL projects.

VI. Consultation, Information Disclosure and Grievance Redress Mechanism

A. Public Consultation and Information Disclosure

- i. Since this is an EAL, based on the flexibilities that will be availed as per ADB SPS and considering the urgent need to respond to the COVID-19 pandemic, the public consultations and disclosure may be carried out after project appraisal, but these need to be conducted prior to commencement of construction works.
- ii. Considering the nature of the COVID-19 pandemic which necessitates social distancing to minimize risk of infection, consultations in areas that are affected by COVID-19 will be conducted using social media, print media and television/radio in order to inform people about the proposed interventions that will be conducted. The following measures will be employed:
 - **Print Media:** Information notices on the scope/scale and relevant details of the proposed project interventions in popular/widely read newspapers of each area along with contact information/helpline numbers for the community members requiring additional information.
 - **Social Media:** Use of online social networking platforms such as facebook and twitter to be used for disseminating the proposed interventions and their respective scopes and details. E-newspapers to also contain briefs on the proposed project interventions with helpline numbers for providing additional information and responding to any comments and/or concerns.
 - **Television/Radio:** Advertisements to be run on television summarizing the proposed project interventions and clearly explaining the scale and scope of the planned activities. The popular radio channels would air project briefs along with talk shown with community members invited to call and provide any comments and concerns regarding the proposed interventions.
- iii. This EARF document along with the updated ESMS will both be publicly disclosed to fulfill the information disclosure requirements.

B. Grievance Redress Mechanism

- iv. A grievance redress mechanism (GRM) is present within the existing ESMS of the NDRMF, which will be applicable for the EAL activities to be implemented. In addition, this existing GRM within the ESMS will be reviewed and updated, as felt necessary, to ensure any additional GRM aspects specific to this EAL are incorporated into it.

VII. Institutional Arrangement and Responsibilities

- i. The NDRMF, as the existing Financial Intermediary, will receive and disburse funds to its Fund Implementation Partners (FIPs), such as NDMA (which has the mandate at the federal level for managing and responding to all types of disasters).
- ii. The existing ESMS of the NDRMF will be updated to incorporate the health sector and the activities to be conducted under this proposed EAL. As part of implementation of this ESMS, the NDRMF will ensure the FIPs that are provided assistance through this EAL comply to the safeguard requirements as stated in the ESMS while conducting efforts to respond to this pandemic outbreak.

VIII. Monitoring and Reporting

- i. The NDRMF staff will monitor the activities being conducted by its FIPs, such as NDMA, to ensure that the ESMS is being implemented in its true spirit. While detailed monitoring considering the nature of this pandemic will not be possible, however, as far as possible, the NDRMF staff will closely liaise and coordinate with their FIP counterparts to follow up and ensure that the WHO and IFC guidelines are being implemented.
- ii. In addition, the NDRMF staff will agree on a reporting frequency with their FIP counterparts, which will be defined in the updated ESMS. These monitoring reports on the status of implementation of WHO and IFC guidelines by the FIPs will also be provided to ADB for review and comments, if any.

ANNEXURES

Annexure I

Updated Environment and Social Management System (ESMS) of NDRMF

Environmental and Social Management System
(ESMS)

National Disaster Risk Management Fund
(NDRMF)

April 2020

This document presents an ESMS of National Disaster Management Fund (NDRMF), approved by the Executive Committee to the Board of Directors of NDRMF.

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Record of Revisions/Updates

S/No.	Revision No.	Date	Summary of Revisions made
1	1	April 2020	Scope of ESMS has been increased to cover Emergency Assistance Loans (EALs).

Acronyms

ADB	Asian Development Bank
CEO	Chief Executive Officer
COVID	Coronavirus Disease
CPID	Consultation Participation Information Disclosure
DDMA	District Disaster Management Authority
DP	Displaced Person
DPC	Displaced Persons Committee
DRM	Disaster Risk Management
EA	Executive Agency
BoD	Board of Directors
BoR	Board of Revenue
EAAC	Environmental Assessment Advisory Committee
EAD	Economic Affairs Division
EAL	Emergency Assistance Loan
EIA	Environment Impact Assessment
EMA	External Monitoring Agent
EMP	Environmental Management Plan
ESMS	Environmental Social Management System
FI	Financial Intermediary
FIP	Fund Implementation Partners
GRC	Grievance Redress Committee
GOP	Government of Pakistan
GRM	Grievance Redress Mechanism
IA	Implementing Agency
IEE	Initial Environmental Examination
IP	Indigenous People
IPP	Indigenous Peoples Plan
IR	Involuntary Resettlement
NDMA	National Disaster Management Authority
NDRMF	National Disaster Risk Management Fund
NGO	Non Government Organization

PDMA	Provincial Disaster Management Authorities
PEPA	Pakistan Environmental Protection Agency
PIAL	Prohibited Investment Activities List
REA	Rapid Environmental Assessment
SGU	Safeguards & Gender Unit
SPS	Safeguard Policy Statement
VLD	Voluntary Land Donations
WASH	Water, Sanitation and Hygiene

Glossary

Project Affected Peoples means people who may be beneficially or adversely affected by a sub-project financed by NDRMF.

Due Diligence is a process of investigation/audit, performed by FIPs, into the details of a potential subproject, such as an examination of operations and management and the verification of material facts, especially from the Environment and Social safeguards point of view.

HSE Health, Safety and Environment – reference to standards on health, safety and environment and/or the NDRMF is responsible for building awareness, maintaining and monitoring and enforcing application of these standards.

Involuntary Resettlement refers to social and economic impacts that are permanent or temporary and are (i) caused by acquisition of land and other fixed assets, (ii) by change in the use of land, or (iii) restrictions imposed on land as a result of a subproject operation.

Indigenous Peoples are groups with social or cultural identities distinct from that of the dominant or mainstream society. Characteristics that may be used to define indigenous peoples include (i) descent from population groups present in a given area before modern states or territories were created, (ii) maintenance of cultural and social identities and cultural, social, economic and political traditions and institutions, distinct from the mainstream or dominant society; (iii) self-identification and identification by others as being part of a distinct indigenous cultural group, and the display of the desire to preserve their cultural identity; (iv) a linguistic identity different from that of the mainstream or dominant society; (v) an economic system oriented more toward a traditional system of production than toward the mainstream production system, and/or (vi) an unique tie with and attachment to traditional habitat and ancestral territory and its natural resources.

Indigenous Peoples Development Plan (IPDP) is a sub-project specific set of plans with respect to Indigenous People impacted or potentially impacted by sub-project operations. IPDP promotes the (i) participation of Indigenous People in project preparation and implementation; (ii) ensures benefit from development interventions that affect Indigenous People and (iii) provides effective safeguards against adverse impacts.

Voluntary land transactions refer to market transactions in which the seller is not obliged to sell and the buyer cannot resort to expropriation or other compulsory procedures if negotiations succeeded

Gender Responsive/Gender-Inclusive means different needs and priorities of women and men have been considered, and efforts have been made to ensure that they participate in and benefit equally from development activities.

Pandemic refers to the global outbreak of a disease.

1 Background

1.1 Overview

1. The Government of the Islamic Republic of Pakistan (GOP) has established National Disaster Risk Management Fund (NDRMF) to institutionalize a mechanism to enhance Pakistan's resilience to disasters by strengthening the government's ability to quickly respond to future disasters triggered by natural hazards. The Fund focuses on: (i) disaster risk reduction; (ii) design, development and seeding of disaster risk financing strategies and instruments; and (iii) partnerships with other organizations to provide relief and recovery support, including livelihood restoration initiatives and reconstruction and rehabilitation of key public infrastructure. NDRMF will provide a common mechanism to pool various contributions from a diverse base of contributors and serve as a vehicle for donor coordination on disaster risk management by the government.
2. NDRMF supports existing government entities and civil society organizations, involved in disaster risk management, including the National Disaster Management Authority (NDMA), Provincial Disaster Management Authorities (PDMA), District Disaster Management Authorities (DDMA), etc. The Fund is in line with existing policies and strategies of the GOP to address disasters, including (i) the Disaster Risk Reduction Policy (2013); (ii) Climate Change Policy (2013); (iii) Vision 2025; (iv) National Disaster Management Plan 2013-2022 (NDMP); (v) the draft National Flood Protection Plan IV (NFPP) (2016-2025); and (vi) Post-2015 Sendai Framework for Disaster Risk Reduction, 2015-2030.
3. In case of Emergency Assistance Loans (EALs), the NDRMF will be screening and categorizing project activities, and undertaking environmental planning based on flexible modalities, provided in this document, which will ensure an effective and timely response to the emergency.

1.2 Scope of Environment and Social Management System (ESMS)

4. NDRMF is an environmentally and socially responsible organization and has established a structured and systematic mechanism to address these issues as a core function of its management system. This shall ensure that the Fund's financing activities would avoid, minimize and/or manage adverse environment and social impacts and enhance any positive impacts. The Fund environment and social policy and principles adheres to the requirements of national legal and regulatory, and international ratified conventions and agreements. It also helps establishing a good reputation of the Fund among donors, civil society, Fund Implementation Partners (FIPs) and other national and international stakeholders to ensure its E&S practices are in line with international standards and international best practices such as ADB requirements for financial intermediaries. In addition to this, the Fund shall also comply with environment and social policies of the respective Financing Source(s).

1.3 Approach towards developing ESMS

5. NDRMF has employed an efficient and effective approach for developing the ESMS that is compatible with international standards and international best practices such as ADB requirements for financial intermediaries (FI) that entail: (i) collation of relevant national legal and regulatory requirements, and international ratified conventions and agreements, (ii) consultations with Economic Affairs Division, federal Ministry of Finance, NDRMF senior management, potential donors, civil society, academia and

potential FIPs for developing a draft ESMS, (iii) deliberations on draft ESMS, and (iv) finalizing the draft ESMS in line with the comments/feedback.

1.4 ESMS Defined

6. This ESMS defines policies, principles, procedures, institutional arrangements and its financing operations for managing adverse environmental and social risks and impacts that would be caused by the sub-projects, which are to be financed by the NDRMF. The Fund has established an appropriate ESMS as a part of its overall management system to meet E&S related national laws and regulations, and international conventions and agreements as well as international best practices such as ADB requirements for financial intermediaries (FI).
7. The ESMS has the following elements: (i) environmental and social policies that clearly articulate the Fund's commitment to environment, social (E&S) and gender mainstreaming objectives and principles based on applicable national E&S laws and regulations and international ratified applicable conventions and agreements that guide the Fund to achieve sound E&S performance, (ii) screening for identification of E&S risks and impacts, and categorization of sub-projects based on nature of activities, scale of operations, technology, locations, significance and severity of E&S risks and impacts, (iii) development of procedures to systematically and fully mitigate the identified risks and impacts, (iv) institutional arrangements including organizational structure and staffing with appropriate skills and competencies in ESMS and institutional accountability by defining roles and responsibilities, (v) gender responsive grievance redressal mechanism and (vi) gender inclusive monitoring and reporting procedures.

1.5 Purpose of ESMS

8. The purpose of this ESMS is to integrate environment and social governance into the Fund's overall management system by following national laws, rules and regulation and ratified international conventions and agreements, through developing a set of policies, principles, procedures and guidelines to proactively avoid, minimize/prevent and/or mitigate any potential adverse E&S risks and impacts on affected persons/communities workers, and the environment and enhance beneficial impacts of financing activities before they result in any adverse outcome.
9. In case of EALs, compliance and adherence of safeguard policies according to ESMS and preparation of corrective action measures according to the guidelines and requirements of donor agencies. Provide operational guidance to the Fund staff and FIPs in preparing subprojects which are compliant with the Fund ESMS;
10. Develop mechanisms for effective monitoring/auditing of compliance and reporting.

1.6 Outcome of ESMS:

11. The expected outcomes of this ESMS are as follows:
 - Enhancement of environmental and social performance;
 - Fulfillment of compliance obligations;
 - Achievement of environmental and social management objectives.

1.7 Structure of ESMS

12. The ESMS comprises a main volume and an annex volume. The main volume includes separate sections that provide the following:
- (i) Background of ESMS (this section),
 - (ii) Policies and principles on social and environment core values of the Fund for the management of environment and social risks and impacts.
 - (iii) Description of E&S safeguard requirements of national and provincial laws and regulations; international ratified conventions and agreements and safeguard policies of Financial Intermediaries (FIs),
 - (iv) Standard operating procedures that NDRMF will follow to address E&S safeguard requirements, e.g. sub-projects screening and categorization based on E&S risks and impacts, and assessing, avoiding, minimizing and/or managing them, development of supporting tools and guidance material,
 - (v) Organizational arrangements to ensure institutional accountability by defining roles and responsibilities, capacity-building through training and technical assistance in the use of supporting tools and guidance material, internal audits, monitoring and reporting, annual external audits and disclosure of audit reports.

1.8 Continual Improvement of ESMS

13. The Fund will continually improve the ESMS through periodic reviews and update, particularly when existing legal requirements are modified or new legislation is introduced. Need based review and revision (if any) will be the responsibility of the Fund.

1.9 Training and Capacity Building

14. NDRMF has developed a capacity building plan to provide gender inclusive training and technical assistance to SGU staff, FIPs and other relevant stakeholders in environmental and social safeguards through hands-on mentoring, formal training and exposure to the best practices. Also, information and guidance regarding the specific requirements for Category 'B' and 'C' sub-projects will also be provided to all relevant stakeholders.
15. In case of medical emergencies, the relevant WHO guidelines to manage and respond to any such situation are provided as **Annexures XVI-XX**.

1.10 Increase in Scope of ESMS to cover EALs

16. This ESMS did not previously cover the environment and social screening, categorization, assessment and monitoring processes to be adopted for EALs. This updated version clearly lays out the flexible approach to be adopted in time of emergencies to ensure implementation of environmental and social safeguard measures as far as possible, considering the constraints in an emergency.

2 Environmental and Social Policy for NDRMF

2.1 Policy Statement

17. The NDRMF Board of Directors (BoD) and management at all levels is fully committed to promoting sustainability in all its business operations by effectively managing environmental and social risks, impacts and ensuring gender equality and enhancing beneficial impacts through implementation of the following policy principles:
- Comply with applicable national and international environmental and social laws and international ratified conventions and agreements and ensure their adequate integration in financing contractual agreements of all FIPs to ensure compliance in planning, designing and construction/implementation of sub-projects.
 - Avoid, minimize/protect and/or mitigate, and fully compensate negative environmental (including health and safety) and social impacts in its operations and risks to the social and physical environment, particularly to eco-sensitive and culturally important areas and people who may be affected through financing sub-projects.
 - Fund adheres to social inclusion and gender equality and equity.
 - Communicating E&S policy and principles to all staff, potential FIPs, affected persons and external stakeholders, including both men and women and ensure transparency in implementation of ESMS;
 - No financing to sub-projects with high risks that would cause heavy and irreversible/harmful social and environment impacts.
 - Encourage the development of projects eligible for consideration for green financing.

2.2 Policy Principles for Environment and Social Management

18. The policy principles are provided in **Table 2.1** below.

Table 2.1 Policy Principles

S.No	Principles in Environment and Social	Actions
1	Environmental and Social Management System (ESMS)	<ul style="list-style-type: none">▪ Screening for identification of E&S risks and impacts and categorization of subprojects based on nature of activities, scale of operations, technology, locations, significance and severity of E&S risks and impacts; Development of procedures to systematically and fully mitigate the identified risks and impacts,▪ Institutional arrangements including organizational structure and staffing with appropriate skills and competencies in ESM and institutional accountability by defining roles and responsibilities,▪ Gender-inclusive consultations at different levels, including NDRMF, FIP and communities, and disclosure of environment and social safeguard instruments, and their internal and external audit reports through appropriate means of communication e.g. websites, dissemination to institutional stakeholders

S.No	Principles in Environment and Social	Actions
		<p>and affected persons/communities through localized means of communication.</p> <ul style="list-style-type: none"> ▪ Gender inclusive and responsive grievance redressal mechanism that will have 40% women representation at GRCs and reports back on grievances registered by men and women and their redressal. ▪ Formulation and integration of gender and age specific outcomes, outputs, and indicators to the project/s in order to enhance sustainable environmental management. ▪ Gender-sensitive monitoring, evaluation, and auditing systems/procedures in place at the Fund and FIP level. Reporting.
2	Land Acquisition and Involuntary Resettlement & Voluntary Land Donations (VLDs)	<ul style="list-style-type: none"> ▪ Refers to both physical displacement (relocation or loss of shelter) and economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood) as a result of project-related land acquisition; ▪ Does not apply to physical or resettlement resulting from voluntary land transactions; ▪ Avoid, minimize, mitigate or compensate for adverse social and economic impacts from land acquisition or restrictions on land use through the process of social and environmental assessment and no forced evictions will be carried out except in accordance with law and the requirements of this Principle. ▪ VLDs: Refers to obtaining parcels of land through voluntary donation where individuals/community are willing to donate land with their free will for construction of disaster management and emergency assisted projects.
3	Indigenous Peoples	<ul style="list-style-type: none"> ▪ Identification of all impacts (positive & negative) on IPs; social assessment, informed consultation and Participation (ICP) to Indigenous Peoples' Development Plan (IPDP); ▪ Emergency response projects can be executed in indigenous community territory without impacting the community adversely. Afterwards, Emergency Response IPPP will be prepared to mitigate the negative impact or a DDR incase of no negative impact. ▪ Anticipate and avoid, or when avoidance is not possible, minimize and/or compensate subproject adverse impacts on communities of Indigenous Peoples; and ▪ Applies to subprojects that impact individuals or communities that meet the definition of Indigenous

S.No	Principles in Environment and Social	Actions
		Peoples, determination of which may require Free, Prior, Informed, and Consent (FPIC).
4	Social Inclusion, Gender Equality and Equity	<ul style="list-style-type: none"> Compliance to all national and international conventions/treaties to which Pakistan is signatory, for the protection of human rights and dignity of women and men of all backgrounds, including TGs and PWD throughout NDRMF's engagement at different levels. The Fund will address different barriers, including discrimination against women, to enhance and promote equal representation of women in decision making process, ensuring equal protection of rights in VLD, and capacity strengthening NDRMF ensures compliances to all international guidelines, including ISAC guidelines to protect all those who are at a higher risk or affected or those who are more vulnerable due to their age, gender, physical capacities, and social and economic status by implementing GBV prevention and mitigation strategies, including Referral Mechanisms
5	Labor and Working Conditions	<ul style="list-style-type: none"> Comply with national labor laws and internationally recognised ILO Core Labor Standards as follows: Promote the fair treatment, non-discrimination, and equal opportunity of workers for both men and women; Establishes, maintains and improves worker-management relationship; Addresses child labour, forced labour, migrant workers, workers engaged by third parties, and workers in the client's supply chain; and Promotes safe and healthy working conditions and practices
6	Consultation, Communication and Information Disclosure	<ul style="list-style-type: none"> Fund is committed to carry out gender inclusive and gender responsive stakeholder consultations at all levels, including projects and operations. NDRMF is also committed to transparent communication to all its stakeholders including communities, PWDs and disclosure of environment and social safeguard instruments, and their internal and external audit reports through appropriate means of communication e.g. websites, dissemination to institutional stakeholders and particularly with affected persons/communities through localized means of communication. Information dissemination to internal and external stakeholders regarding the Fund policies and Principles. Ensure disclosure of ESMS and environment and social documents prepared by ESU and FIPs including internal and external audit reports.

S.No	Principles in Environment and Social	Actions
7	Cultural Property and Heritage	<ul style="list-style-type: none"> Recognizes the importance of cultural property and heritage for current and future generations, consistent with the Convention Concerning the Protection of the World Cultural and Natural Heritage; and Seeks to guide FIPs in identifying and protecting cultural heritage in the course of project design and execution.
8	Biodiversity Conservation and Natural Resource Management	<ul style="list-style-type: none"> Includes protection, conservation and sustainable management of biodiversity and living natural resources; Maintain the benefits from ecosystem services; and Evaluate primary suppliers' risk of significant conversion of natural and/or critical habitats.
9	Pollution Prevention and Abatement and Climate Change	<ul style="list-style-type: none"> Addresses pollution prevention and management of impacts arising from project activities; Ensures conformance with global good practice and standards; Promote more sustainable use of resources; and Ensures that climate change issues associated with project activities are assessed, mitigated and monitored
10	Community Health, Safety and Security	<ul style="list-style-type: none"> Seeks to avoid or minimize the risks and impacts to Affected Community health, safety and security that may arise from project activities. The project's direct impacts on priority ecosystem services may result in adverse health and safety risks and impacts to Affected Communities; Ensures that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks of communities Includes special requirements related to the safety of dams associated with projects.

3 Legal and Policy Framework

3.1 Overview

19. The NDRMF pipeline contains infrastructure sub-projects that may require acquisition of private land and assets that may cause physical as well as economic displacement of men and women within the sub-project boundaries. The impacts could be significant or insignificant, nevertheless they have to be effectively managed during the project lifecycle in order to enable the Affected Persons (APs), both men and women to atleast restore, if not improve, their living conditions. Therefore, a systematic safeguards management is necessary for smooth and effective sub-projects planning and implementation.

3.2 Environmental Safeguards

20. There are several project-related environmental impacts for which safeguards are essential. These impacts include direct, indirect, cumulative and induced impacts in the project's area of influence as well as transboundary impacts.
21. Each sub-project therefore needs to be scrutinized as to its type, location, scale, and sensitivity and the magnitude of its potential environmental impacts. Environmental impacts include those related to the natural environment (air, water, and land), human health and safety, and transboundary and global environmental aspects.
22. Environmental safeguards, policies and requirements, seek to avoid, minimize, or mitigate adverse environmental impacts.

3.2.1 National & Provincial Environmental Legislation

23. The Pakistan Environmental Protection Agency (Review of IEE/EIA) Regulations 2000 ("the PEPA regulations"), together with section 12 of the Pakistan Environmental Protection Act 1997, requires that every new development project in Pakistan is preceded by an environmental examination. Projects are categorized according to their potential environmental impacts. Projects that have reasonably foreseeable impacts (Schedule I) are required to have IEEs, while projects that have more adverse environmental impact (Schedule II) are required to have EIAs. For projects deemed to have minimal environmental impacts, no further action is required.
24. Under PEPA regulations, the Federal Environmental Protection Agency (EPA) delegated the review of IEEs/EIAs to the provincial EPAs. Thereafter, the rules and regulations under the PEPA 1997 have been adopted by the provinces. To date, the provincial assemblies have passed the following Acts: Sindh Environmental Protection Act (2014); KP Environmental Protection Act (2014); Baluchistan Environmental Protection Act (2013) and Punjab Environmental Protection Act (2012).
25. The provinces intend to update the related regulation and guidance according to their environmental requirements and sensitivities. Existing IEE/EIA Regulation, National Environmental Quality Standards (NEQS), Rules and Guidelines for Environmental Assessments notified by Pak-EPA are currently being used for compliance. These include the set of EIA guidelines prepared by the federal and provincial EPAs.
26. The Regulations provide details in preparing, submitting, and reviewing IEEs and EIAs. The following is a brief step-wise description of the approval process.

- i) An EIA or IEE is conducted as per the requirement and following the Pak-EPA guidelines;
- ii) The proponent submits the EIA or IEE to the concerned EPA, accompanied by an application in the format prescribed in Schedule IV of the regulations and pay the review fee;
- iii) The EPA conducts a preliminary scrutiny of the completeness of the IEE/EIA for review and replies to the proponent within 10 days;
- iv) In case of an EIA, simultaneous to the confirmation of completeness, the concerned EPA publishes in any English or Urdu national newspaper and in a local newspaper of general circulation in the area affected by the project, a public notice mentioning the type of project, its exact location, the name and address of the proponent and the places at which the EIA of the project can be accessed and fix a date, time and place for public hearing of any comments on the project or its EIA. EPA will also circulate the EIA to the concerned Government Agencies to solicit their comments;
- v) The EPA makes every effort to complete the IEE and EIA review within 45 and 90 days, respectively and accords its approval subject to certain conditions:
 - Before commencing construction of the project, the proponent submits (a) an undertaking accepting the EPA conditions, and (b) an EMP with a request for obtaining confirmation of compliance.
 - Before commencing operation of the project, the proponent obtains from the EPA a written confirmation of compliance with the approval conditions and requirements of the IEE/EIA.
 - The EPA issues confirmation of compliance within 15 days of the receipt of request and complete documentation. The IEE/EIA approval is valid for three years from the date of accord.
 - The proponent submits a monitoring report to the EPA after completion of construction, followed by annual monitoring reports during operation.

3.2.2 Other Environment Related Legislations

- 27. The other relevant environment related legislation is provided as **Annexure X** while the environmental health and safety related legislation from WHO related to responding to health emergencies are provided as **Annexures XVI to XX**.

3.3 Social Safeguards

- 28. The sub-projects that tend to or cause changes in patterns of use of land, water and other natural resources may entail adverse impacts on men and women who use these resources for their livelihoods. The sub-projects may involve VLD or acquisition of private land and other assets through expropriation (using eminent domain) that could affect structures i.e. housing, public and community structures and could disrupt community systems, social networks, social services; and could affect productive assets due to which income sources and livelihoods of men and women can be affected. The affected people have no option except to rebuild their lives, incomes and asset base elsewhere.

29. The Fund is committed to avoid, if avoidance is not possible, fully mitigate all adverse social and economic impacts. The Constitution of Pakistan safeguards the interests of people related to property rights of citizens of Pakistan and Land Acquisition Act 1894 of Pakistan is the only instrument for acquisition of private land and associated assets through a set of province specific rules. The NDRMF complies with the constitutional provision and Land Acquisition Act of Pakistan, as explained below.

3.3.1 National and Provincial Legislation on Social Safeguards

i. Constitution of the Islamic Republic of Pakistan

30. The Constitution of Pakistan (1973) clearly addresses the protection of property rights (Article 24) such that *“no person shall be deprived of his property save in accordance with law”* (Article 24(1)), and *“No property shall be compulsorily acquired or taken possession of save for a public purpose, and save by the authority of law which provides for compensation therefore and either fixes the amount of compensation or specifies the principles on and the manner in which compensation is to be determined and given”* (Article 24(2)).
31. Further, Article 4(2a) reiterates the right of the people by stating that: *“No action detrimental to the life, liberty, body, reputation or property of any person shall be taken except in accordance with law”*.

ii. The Land Acquisition Act of 1894 (Act)

32. The Land Acquisition Act of 1894 (LAA 1894), as amended from time to time, is the primary legislation governing the acquisition of land and associated assets and their compensation. However, the Act does not address “resettlement and rehabilitation” in accordance with international standards and best practices. The LAA1894 is a federal law but its implementation lies in the domain of provinces through Provincial Boards of Revenue (BOR). The provinces have amended rules of this law from time to time to address their needs. The Act is meant for the acquisition of land and associated assets only and does not explicitly consider the social, cultural, economic, and environmental conditions of those needing to be resettled / relocated and rehabilitated.
33. The LAA 1894 requires that following an impact assessment and valuation of land, structures, crops, trees and other physical assets are to be compensated in cash at market rate to titled landowners and registered land tenants/users/leaseholders. In addition, a 15% Compulsory Acquisition Surcharge is provided on the value of land.
34. Only legal owners and tenants registered with the land revenue department or have formal lease agreements are eligible for compensation. The LAA 1894 also does not mandate the provision of specific resettlement and rehabilitation assistance to poor and vulnerable groups, nor does it require restoration of income / livelihood losses. There is also no requirement to monitor and evaluate resettlement and rehabilitation process and medium to long term impacts and outcomes, or disclosure of monitoring and evaluation reports.
35. The land acquisition process officially starts with the publication of preliminary notification under Section 4 of the LAA to the public/affected people. This is followed with the conduct of surveys, measurements, valuation, inquiry on objections, formal declaration of intent to acquire land, dispute resolution, payment of compensation and taking possession of the acquired land as reflected in **Table 3.1** below.

Table 3.1 Land Acquisition Procedures as per LAA 1894

Relevant Section of LAA 1894	Procedural Description
Section 4	Publication of preliminary notification and power for conducting survey.
Section 5	Formal notification of land needed for a public purpose. Section 5a covering the need for enquiry of the concerns or grievances of the affected people related to land prices.
Section 6	The Government makes a more formal declaration of intent to acquire land.
Section 7	The Land Commissioner shall direct the Land Acquisition Collector (LAC) to take order the acquisition of the land.
Section 8	The LAC has then to direct that the land acquired to be physically marked out, measured and planned.
Section 9	The LAC gives notice to all DPs that the Government intends to take possession of the land and if they have any claims for compensation then these claims are to be made to him at an appointed time.
Section 10	Delegates power to the LAC to record statements of the DPs in the area of land to be acquired or any part thereof as co-proprietor, sub-proprietor, mortgage, and tenant or otherwise.
Section 11	Enables the Collector to make enquiries into the measurements, value and claim and then to issue the final “award”. The award includes the land’s marked area and the valuation of compensation.
Section 16	When the LAC has made an award under Section 11, he will then take possession and the land shall thereupon vest absolutely in the Government, free from all encumbrances.
Section 17	Emergency clause that allows acquisition of land prior to compensation of DPs. This clause will not be applied in any project of NDRMF as it denies consultations with landowners and their right to appeal to the land prices and matters related to the acquisition of land.
Section 18	In case of dissatisfaction with the award, DPs may request the LAC to refer the case onward to the court for a decision. This does not affect the Government taking possession of land.
Section 23	The award of compensation to the title holders for acquired land is determined at i) its market value of land, ii) loss of standing crops, trees and structures, iii) any damage sustained at the time of possession, iv) injurious affect to other property (moveable or immoveable) or his earnings, v) expanses incidental to compelled relocation of the residence or business and vi diminution of the profits between the time of publication of Section 6 and the time of taking possession plus 15% premium in view of the compulsory nature of the acquisition for public purposes.
Section 28	Relates to the determination of compensation values and interest premium for land acquisition.
Section 31	Section 31 provides that the LAC can, instead of awarding cash compensation in respect of any land, make any arrangement with a person having an interest in such land, including the grant of other lands in exchange.
Section 48A (LAA-	If within a period of one year from the date of publication of declaration

1986)	under section 6 in respect of any land, the Collector has not made an award under section 11 in respect to such land, the owner of the land shall, unless he has been to a material extent responsible for the delay be entitled to receive compensation for the damage suffered by him in consequence of the delay.
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36. Eligibility and entitlements of displaced persons (DPs), both men and women in NDRMF subprojects are shown in **Table 3.2** below. The types of losses typically encountered vary according to the nature and complexity of the subproject. Additional support may be provided to assist DPs in restoring their livelihood and living standards.

Table 3.2: Eligibility and Entitlements for DPs affected by NDRMF Sub-projects

Type of Loss	Specification	Eligible Person	Compensation Entitlement
1. Agricultural land, including, uncultivable wasteland	All land losses	Legal and legalizable owner(s) of Land	<ul style="list-style-type: none"> ▪ Cash compensation at replacement cost plus 15% CAS, free of taxes, registration and transfer costs; or ▪ Land for land compensation through provision of plots of equal value and productivity as that of lost.
		Sharecropper/ tenant (registered or not)	Cash compensation equal to the market value of gross annual yield of lost land, proportionate to their share for two years.
		Lessee (registered or not)	Cash equivalent of the market value of the gross yield of lost land for the remaining lease years, up to maximum of three years
		Non-titled user (squatter, encroacher)	<ul style="list-style-type: none"> ▪ No compensation for lost land ▪ Rehabilitation allowance equal to the market value of the gross annual yield of lost land in addition to standard crop compensation. (see Loss Type 7 below)
	Additional provision for DPs losing more than 10% their total operational agricultural holding	Owner / lessee/, sharecrop tenant/squatter/ encroacher	<ul style="list-style-type: none"> ▪ Severe agricultural land impact allowance equal to the market value of the gross annual yield of lost land for one year.
2. Temporary impact on arable land	Land required temporarily during civil works	All eligible persons, as above, (with and without title)	Crop compensation for lost season (s) and reclamation of land to original use.

Type of Loss	Specification	Eligible Person	Compensation Entitlement
3. Residential/ commercial land		Owner (legal/legalizable)	Cash compensation at replacement cost plus 15% compulsory acquisition surcharge (CAS) free of taxes, registration and transfer costs;
		Renter/ Leaseholder	Cash compensation of a value proportionate to the duration of the remaining lease period.
		Non-titled user (squatter, encroacher)	No compensation for lost land
		Non-titled owners (squatters) occupying land for dwelling identified by the census (only those actually occupying the dwellings)	Self relocation allowance (equivalent to one year's income calculated at the prevailing official monthly minimum wage)
		Non-titled owners (squatters) occupying land for shops/stalls/ kiosks identified by the census and inventory of lost assets (only those actually occupying the facilities)	Option to set up a stall through a space rental agreement with respective local governments or authority at a designated commercial area in public land and at a location comparable to the last location.
4. Residential, commercial, agricultural and community structures		Owner(s), titled and non-titled of the structure and squatters (in case of squatters only those actually occupying the structures and in case of community structures the members of the committee jointly)	<ul style="list-style-type: none"> ▪ Cash compensation at replacement cost for affected structures by type of construction and other fixed assets. ▪ In case of partial loss cash assistance compensation will be provided to restore the remaining structure. If more than 25% of the building's floor area is affected, cash compensation will be computed for the entire building/structure. Salvaged materials will be free of deductions. ▪ A lump sum transportation Allowance will be paid to relocating households, businesses, agricultural operations and mosques etc. for shifting their belongings, inventory, equipment and

Type of Loss	Specification	Eligible Person	Compensation Entitlement
			installations
		Renter/ Leaseholder	Cash compensation equivalent to three months rent or a value proportionate to the duration of the remaining lease.
5. Loss of livelihood during relocation	Residential structures affected	Head of the displaced household	Transition Allowance equivalent to 3 months of average monthly household income in the area.
6. Loss of business and employment	Shops, stalls and kiosks.	Business owners; (including, renters and informal settlers and squatters) and employees identified by the census.	<ul style="list-style-type: none"> ▪ Cash grant for net income loss for duration of business stoppage (6 months for permanent loss and no more than 3 months for temporary stoppage.) ▪ A one- time cash grant will be paid to affected employees equivalent to 2 month's official monthly minimum wage.
7. Crops	Affected crops	Cultivator of crops irrespective of status of tenure	Crop compensation in cash at the full market rate for one year's gross crop yield.
8. Trees	All affected trees	Owners of fruit and wood trees	<ul style="list-style-type: none"> ▪ Compensation for mature fruit- bearing trees will comprise of the market rate of the yearly yield multiplied by the number of years required to grow such a tree to the same productive level it was cut; and for immature trees that are yet to bear fruit compensation will be based on the gross expense needed to reproduce the tree to the same age it was cut. ▪ Timber trees will be valued based on the market value of their dry wood volume. The wood of the fallen tree will remain with the owner and its value will not be deducted from the compensation.
9. Affected Vulnerable households	Poor and female-headed households and other vulnerable households, including the elderly, identified through the SIA.	Head of the household	<ul style="list-style-type: none"> ▪ Lump sum assistance allowance in cash equivalent to 3 months of average monthly household income in the area. ▪ Temporary or permanent employment during construction or operation of the facility that necessitated involuntary resettlement,

Type of Loss	Specification	Eligible Person	Compensation Entitlement
			where feasible.
10. Unidentified Losses	Unanticipated impacts	All DPs	Dealt with as appropriate during sub-project implementation according to the applicable Safeguard Policy.

Voluntary Land Donation Framework:

37. The project intends to take up the disaster related and emergency assisted sub projects of small scale schemes on the demand of communities that are being affected by natural disasters and emergencies, this however, is not possible by the relevant government departments or nonpublic organizations due to non availability of state land. In case of Emergency response projects where land is essentially required and it is anticipated that community will donate the land with a free will, by assenting the proposal nonetheless to mitigate the disasters or emergency on priority basis and to save the communities from the threat of immediate future floods and droughts, small portions of privately owned lands may be used for the project interventions. Such lands are provided by the local communities voluntarily through Voluntary Land Donations (VLD). The Fund has prepared a VLD framework, which paves the way for utilizing such lands for the projects aimed at developing resilience and protecting the community infrastructure in times of natural disasters and emergencies. The VLDs are to be executed through mutual land use agreements between the host communities and the project. VLD framework and the suggested agreement formats are attached as **Annexures XXIV, XXV and XXVI**.

38. Process for executing the VLDs is as follows:

- I. Application from community to the concern department/FIP with a demand for execution of the proposed disaster related project.
- II. Local communities/landowners/APs will be consulted meaningfully and purpose of the Project, the selection of sites and options to avoid or minimize impacts. Terms and conditions of voluntary land use agreement will be discussed in detail. It will be ensured that it is, in fact voluntary, and no one will be forced to provide their land or assets.
- III. Preparation of a location map identifying the proposed land and Project RoW.
- IV. Coordination with the Revenue Department for verification of the land ownership record.
- V. An agreement for VLD on Judicial Stamp paper of nominal minimal legal value will be obtained from land owners.
- VI. Proposed site should be free of any private residential structures or major sources of livelihoods to APs.
- VII. Particular attention will be paid to women, women-headed households, elderly and other vulnerable people. It will be taken care that no adverse negative impact may be occurred on them. In case of Emergency Response Project, the community whose land will be required, be engaged informally and informal consent will be retrieved at project proposal stage.

3.4 Indigenous Peoples

Overview

39. To design and implement DRR and emergency response sub-projects in a way that fosters full respect for Indigenous Peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the Indigenous Peoples themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts as a result of projects, and (iii) can participate actively in sub-projects that affect them.

3.5 Addressing Gender Issues in Environment and Social Safeguards Management:

40. Gender equality is one of the pivotal considerations for the achievements during, before and after disasters, emergencies (e.g. COVID 19), and environmental sustainability. To ensure that women and men of different ages and backgrounds can equally benefit from different projects, differences in their needs, experiences, knowledge, skills, vulnerabilities, correlation should be considered during entire project cycle. Keeping in view, the scope and mandate of different projects, the 'NDRMF Gender & Inclusion Categorization Tool' provides means to categorize NDRMF financed projects into four different gender and inclusion categories.
41. Processes of compulsory land acquisition, physical displacement or any form of involuntary resettlement and their aftermath affect men and women differently and it is therefore imperative to have gender as a frame of analysis mainstreamed in ESMS to identify entry points and determine the most effective strategies to intervene as preparedness and also in emergencies. E&S due diligence process will be carried out with due regard to gender considerations, entitlements, and other measures under the E&S safeguard instruments. To touch upon key dimensions to be looked into throughout aforementioned situations and process, a set of minimum considerations to be considered as part of gender analysis tabled below, the same can be applied to assess gender issues:

Variables	Considerations specific to social management	Considerations specific to environmental management
What is the context?	<ul style="list-style-type: none"> What are national and internal bindings to safeguard rights of men and women? What are the social norms and values? What are commonly held beliefs, perceptions and stereotypes in relation to different genders? 	<ul style="list-style-type: none"> What different activities do men and women perform in the agri field/agribusiness (for example)? Do men and women have equal access and control over labor market? Are there any barriers that impede women's and men engagement in the sector? Do environmental policies address men's and women's issues equally? If, not addressing, how such policies are broadening the gender gap?
Who does what?	<ul style="list-style-type: none"> What different social roles are being played by men and women? Who plays productive and non-productive roles? Are women and men paid for their different social roles? Who has the decision making power? Who decides at the household and community level? 	<ul style="list-style-type: none"> Are women and men consulted equally while designing the project? Are there any differences in the decisions, knowledge and skills of women and men with regards to project designing? Are different stances of men and women considered while designing the project/or

		assessing any situation?
Who has what?	<ul style="list-style-type: none"> Do women and men have equal access and control over resource, including, information, education, health facilities, assets (land e.g.)? What are different vulnerabilities of men and women, including social vulnerabilities? What are different coping strategies of men and women to different vulnerabilities? 	<ul style="list-style-type: none"> Do women and men have equal right to land, forest and other related resources? Who controls credit? Do women and men control their own credit? Who owns what, including land? Who takes decisions related to these assets?
Who benefits?	<ul style="list-style-type: none"> What re the entry points to ensure equal opportunity for men and women to benefit from and participate across the project cycle? How is the project addressing different needs, vulnerabilities, issues and challenges faced by men and women, including PWDS, and TGs (where applicable)? Is the project taking up all concerns/grievances, including VLD, without sowing any biasness on the basis of gender or religious affiliation? 	<ul style="list-style-type: none"> Will the project enhance/positively impact health of the targeted population? Will the project decrease/increase workload of women and men in the project area e.g. due to diversions created as a result of installation of machinery, labor camps, or any other situation relating to health and safety? Are/will men and women benefit from the employment opportunities created in the project are in shape of skilled and unskilled labor? Are/will women and men equally benefiting from skilled and unskilled labor payment? Are/will women and men be equally benefitting from capacity building/awareness raising interventions?

42. The analysis gathered from this minimum standard will be intergrated into different project management stages with a purpose to improve and complement project achivements. Majority of gender related risks/situations, including GBV have been revealed in other countries at later stages during any emergency.

43. The spousal consent will be used to include women in making choices about compensation options. The NDRMF will ensure participation of women in all phases of sub-project activities. Women will be consulted on the issues pertaining to them and those issues will be dealt adequate. Negative impacts of subprojects on female-headed households will be taken up on a case-to-case basis and assistance to these households will be prioritized under the subprojects. The specific measures will be formulated to ensure that socio-economic conditions, needs, and priorities of women are identified and the process of land acquisition and resettlement does not disadvantage women. During disbursement of compensation and resettlement and rehabilitation assistance, priority will be given to female headed households. Joint ownership in the name of husband and wife will be encouraged, particularly in cases where land and other assets were acquired after marriages.

44. Potentially harmful impacts on women, men, girls and boys, including changes in livelihood, environmental degradation, and heightened violence directly or indirectly related to sub-projects will be identified and prevented. In case of substantial impacts on women, based on gender analysis, FIPs will develop a Gender Action Plan to address women and men issues separately. FIPs will pay adequate attention to gender concerns, including specific measures addressing the need of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms, to ensure that both men and women receive adequate and appropriate compensation for their lost property and resettlement assistance, if required, as well as assistance to restore and improve their incomes and living standards. The resettlement plans will specify the gender inclusive income and livelihoods restoration plans.

3.6 Incorporating Social Dimensions and Social Protection in NDRMF ESMS

45. The NDRMF will follow international standards of donor agencies for incorporating social protection elements in its ESMS to ensure that vulnerable groups (men, women and children) that maybe negatively affected by any of the subprojects are adequately compensated and mitigation measures put in place to avoid creating further poverty, and comply with internationally recognized core labor standards in the designing and implementation subprojects, and monitor compliance. As an example of international best practice, ADB Social Protection Strategy (2001) is provided as **Annexure-III**.

3.7 Applicable Policies

46. It is expected that the Fund will receive financing from various IFIs and donor agencies. Keeping in view this scope, the following policies could be applicable subject to the source of financing:
- ADB SPS 2009
- (Other applicable policies can be added as an Addendum(s) to this ESMS).

4 Organizational Responsibilities, Resources and Capacity

47. This chapter presents the institutional arrangements and role of the different organizations in development of sub-projects in different provinces of Pakistan.

4.1 Institutional Set-up of NDRMF w.r.t. ESMS

48. NDRMF has a Safeguards and Gender Unit (SGU) under the Quality Assurance Group (QAG) to support the conduct of safeguards, social protection and gender due diligence in the subproject appraisal, monitoring and reporting.
49. The General Manager, QAG is the ESMS Focal Point for the Fund and consolidate inputs from the SGU technical staff. He/She reports to the CEO and ensures that adequate resources are committed to allow for the effective implementation of this ESMS policy and procedures.
50. The institutional set up of the Fund with respect to the ESMS is provided in **Figure 4.1** below.

4.1.1 Quality Assurance Group (QAG)

51. This unit looks after monitoring and evaluation, management information systems, safeguards and gender, media and communication functions. The SGU unit is responsible for all aspects of the ESMS.

4.1.2 Safeguards and Gender Unit (SGU)

52. The SGU has a core technical team composed of an Deputy Manager (DM) Environment , a Deputy Manager (DM) Social Safeguards and a Deputy Manager (DM) Social Development and Gender supported by 3 technical/field-support and 2 administration-support staff. Among these staff, minimum 3 (40%) are women, but maximum number is not limited. This staffing arrangement is also shown in **Figure 4.2** below.
53. The SGU has the following functions:
- (i) Maintain and update the ESMS;
 - (ii) Implement and update Gender Strategy;
 - (iii) Ensure all subprojects financed by NDRMF are screened, categorized based on their E&S risks and impacts, and reviewed in accordance with the ESMS;
 - (iv) Review and screen proposals submitted by FIPs from social protection, social development and gender perspective.
 - (v) Ensure that the Fund does not finance any category A sub-projects;
 - (vi) During screening, provide advice to the FIP to ensure that safeguard (environment, involuntary resettlement, and indigenous peoples) impacts are avoided or minimized, and/or mitigated sufficiently;
 - (vii) Participate in decision making for selection of sub-projects for financing;

- (viii) In accordance with the ESMS ensure that safeguard documents (environmental management plan, LARPs/RPs, and IPPs) as required are prepared;
- (ix) Set financing conditions for subprojects and ensure all safeguards requirements are fulfilled including but not limited to award of civil works contracts only after payment of full compensation, resettlement and rehabilitation assistance, where involuntary resettlement occurs;
- (x) Monitor subprojects to ensure safeguards compliance in accordance with safeguards documents prepared, in case of non-compliance assist FIPs on preparation a time bound Corrective Action Plan and ensure its effective implementation;
- (xi) Conduct outreach on the safeguards requirements and processes under the ESMS and provide training and capacity-building to NDRMF FIPs; Manage a transparent, gender responsive and culturally appropriate grievance redress mechanism within NDRMF, ensure the establishment and operations of similar mechanisms in the FIPs and facilitate/follow-up on the resolution of complaints related to the NDRMF operations and financed sub-projects;
- (xii) Keep updated record/documentation of ESMS activities, and provide periodic progress reports to the senior management as a part of overall performance reporting, and provide information to the Funding Source and other stakeholders on ESMS as and when required;
- (xiii) Conduct periodic audits and prepare reports in accordance with the ESMS.
- (xiv) Provide assistance and required information to external ESMS auditors for the conduct of annual audits; and
- (xv) Contribute to capacity building of the Fund and FIPs staff in planning and implementing social and gender inclusive disaster prevention interventions.
- (xvi) Ensure the implementation, monitoring and reporting of Gender Action Plan, prepared for the fund
- (xvii) Conduct periodic reviews of procedures, guidelines and checklists for continuous improvements in the light of lessons learnt.

4.1.3 Fund Implementing Partners (FIPs)

54. FIPs can be government entities, international donors, civil society, and academia, and could include public-private partnership models. Entities seeking financing support from the Fund should first be accredited in order to be eligible to receive support. FIPs already accredited by reputed international and national funds will be provided special exemptions to fast track the accreditation process. Each FIP will use the resources transferred by NDRMF and carry out activities in accordance with the contract signed between the FIP and NDRMF.
55. Accredited FIPs will submit an application for financing and an initial sub-project concept (ISPC) based on criteria approved by the NDRMF Board and scope of activities in line with the NDMP, and NFPP IV. NDRMF will review the ISPC, screen the subproject in terms of safeguards and gender impacts and risks, and recommend appropriate more detailed assessments and plans. Upon approval of the ISPC, the

FIP will prepare a detailed sub-project report (DSPR) that includes the detailed design, implementation plan based on social and gender analysis, and required safeguards assessments and plans, required government approvals and other documents needed for appraisal of the subproject. Once approved, NDRMF will sign a contract with the FIP for the subproject implementation and release the required funds. During the subproject implementation, the FIP will submit periodic reports, while NDRMF reviews and supervises subproject performance the commitments of the FIP as per the contract.

56. The NDRMF basic project cycle is provided as **Figure 4.3** below.

Figure 4.1: Proposed Organisational Structure for NDRMF

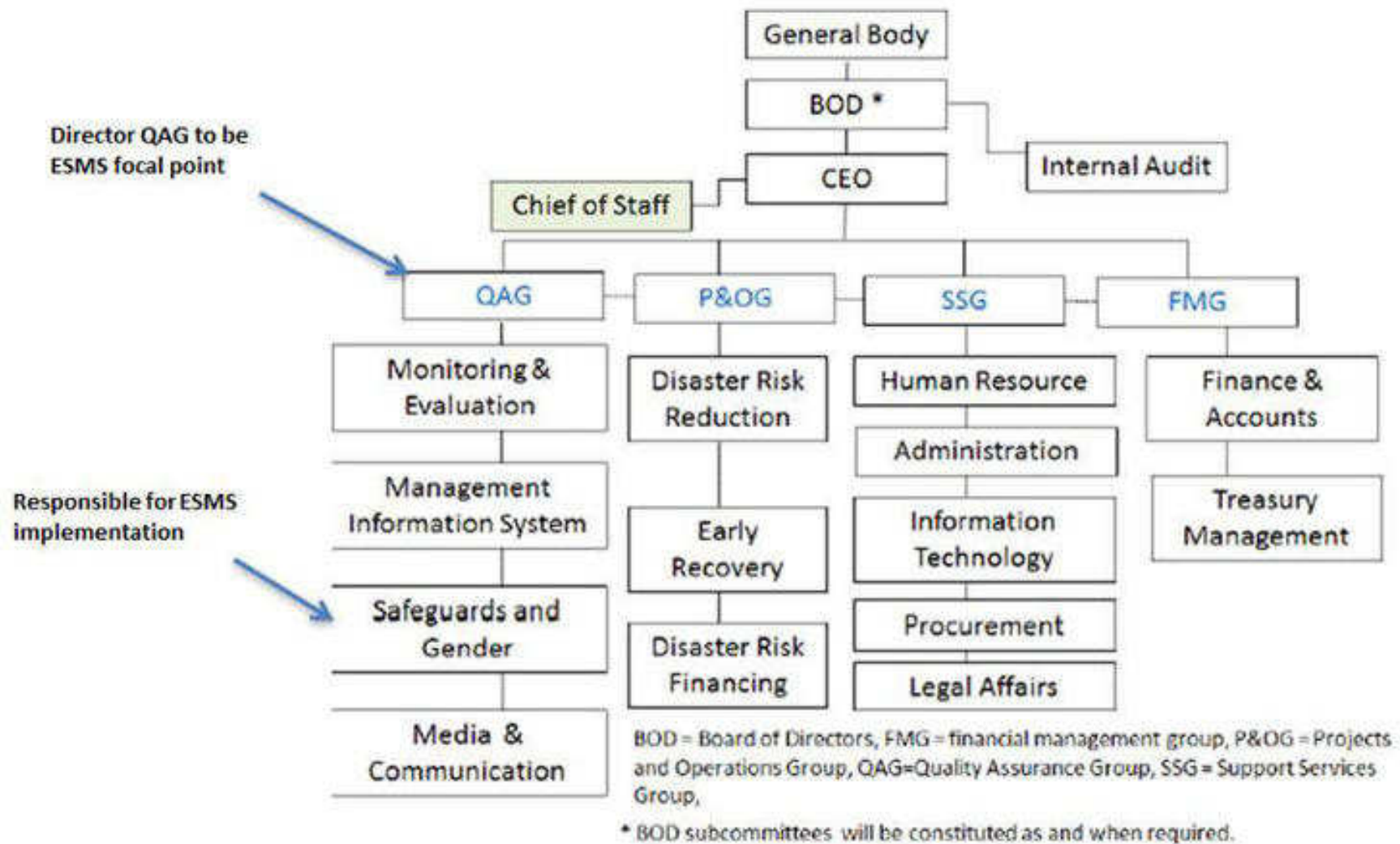


Figure 4.2: Proposed Staffing Arrangement of SGU

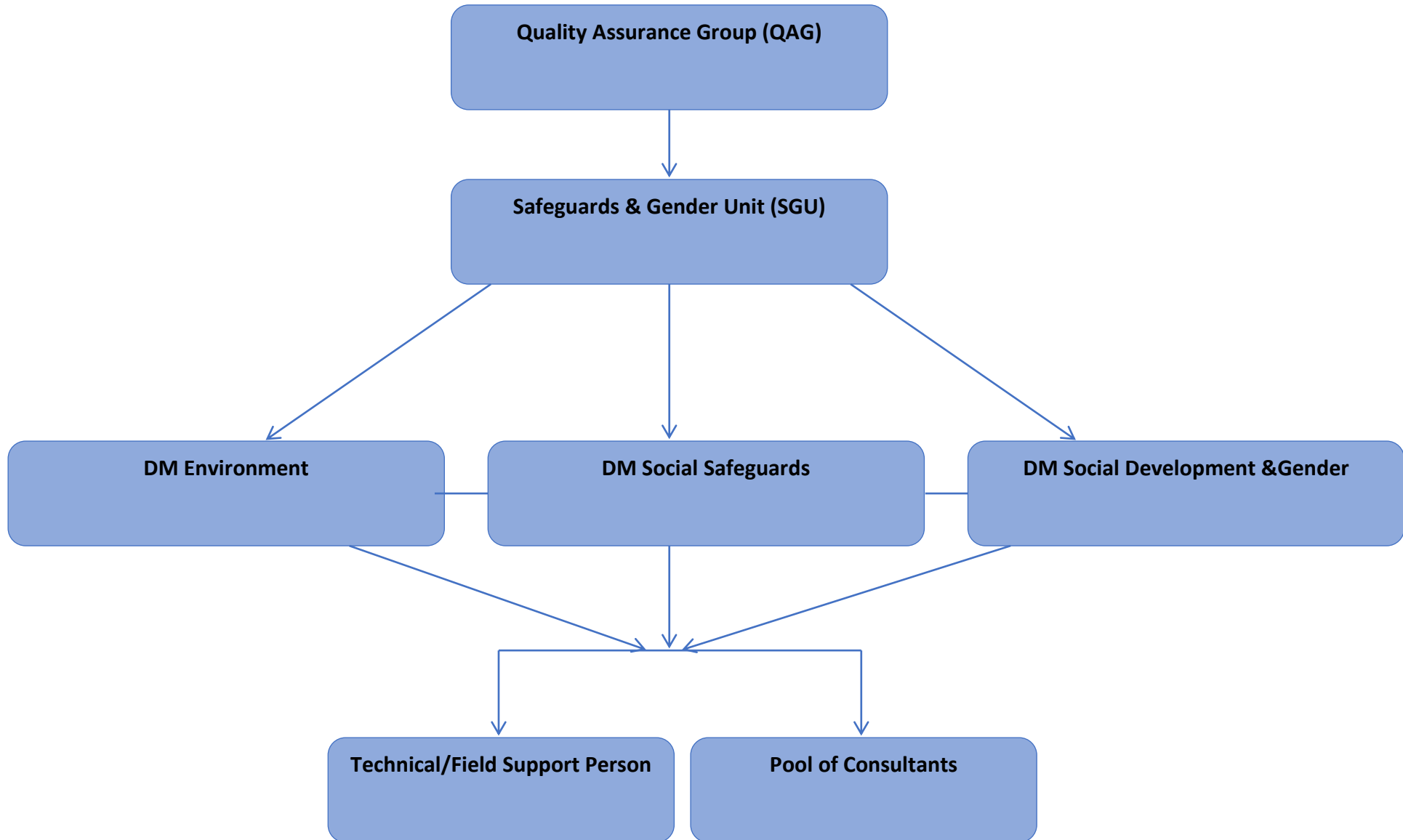
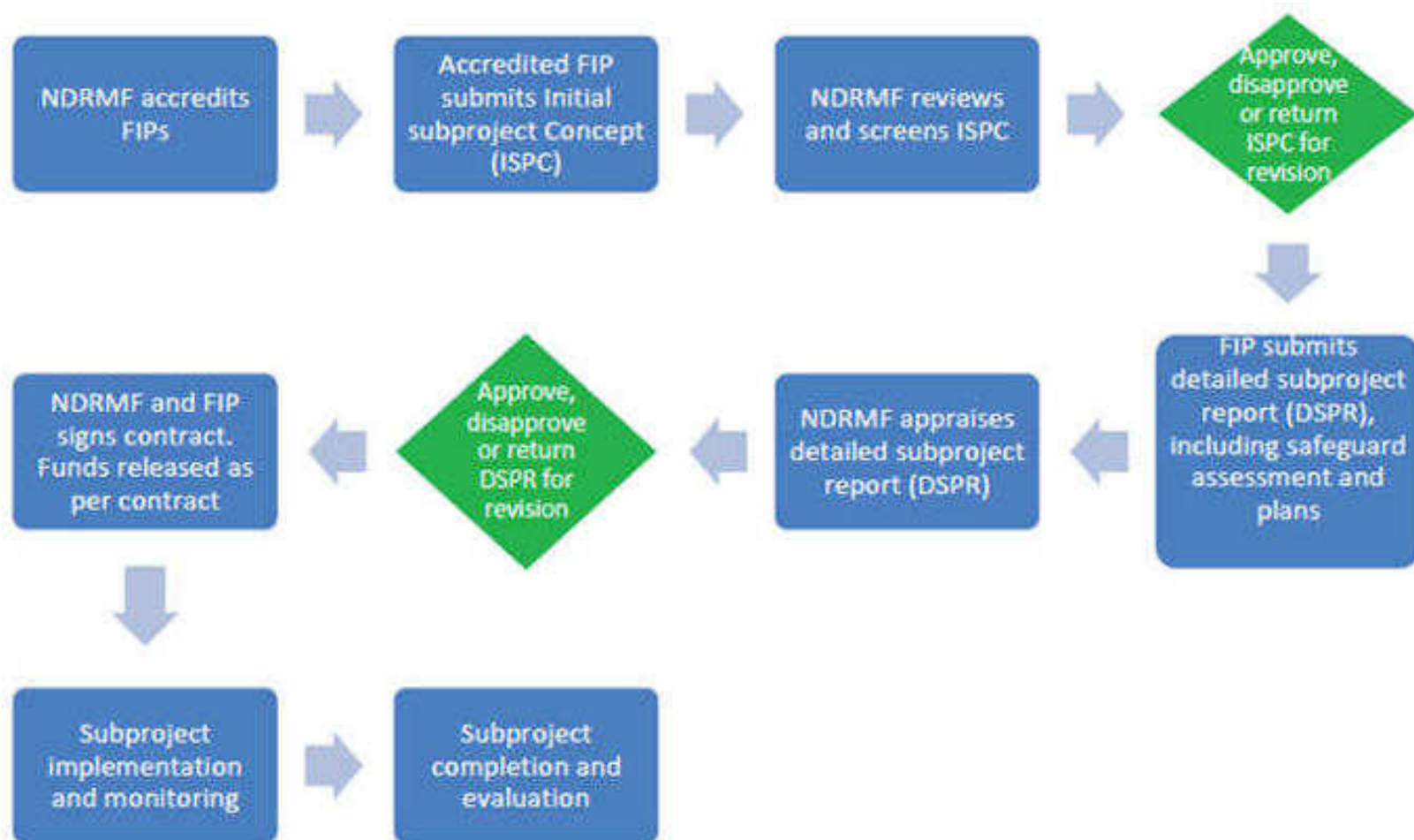


Figure 4.3: NDRMF Basic Project Cycle



4.2 Staffing

57. The SGU staff will be responsible for management of the ESMS. The staff required related to ESMS is shown in **Figure 4.2** above. The ESMS related tasks of each of the respective staff are provided below.

4.2.1 General Manager QAG

58. The key functions are as follows:

- Serve as ESMS focal point for NDRMF and have oversight for environmental and social issues (including involuntary resettlement, indigenous peoples, gender, labor, and other social risks) in subprojects funded under the Fund;
- Ensure that relevant NDRMF units and FIPs are fully aware of the ESMS, including the policy, standards, procedures, and guidelines;
- Supervise the work of the SGU technical staff; ensure a proactive and strong integration and engagement of the QAG functions, skills and capacity across the Fund;
- Consolidate inputs from the SGU technical staff in the safeguards screening proposals, and review of safeguard requirements and discuss with the Management Team (MT);
- Ensure that sub-projects assisted by NDRMF are properly monitored in terms of compliance with the safeguards requirements;
- Advise the MT on emerging safeguards issues and risks in financed sub-projects and propose appropriate measures for addressing these issues and risks;
- Serve as the grievance focal point for NDRMF and ensure that the grievance redress mechanism for the Fund is operational and effective;
- Sign and endorse the semi-annual environmental and social performance report for submission to the Funding Source, and ensure that the Funding Source is notified if and when the responsible staff has been changed or replaced with new staff;
- Ensure that no private land is acquired under urgency clause of the LAA;
- Assist the CEO in reporting to the Board on the status of ESMS implementation in sub-projects and overall ESMS implementation;

4.2.2 Deputy Manager Environment Safeguards

59. The key functions are as follows:

- Provide support in trainings of FIPs and internal staff of NDRMF on the ESMS;
- Screen sub-project proposals for environmental and social impacts and climate change risks, recommend environment and social categorization and advise on further assessment and due diligence for the review of the proposal;
- Inform the GM, QAG on emerging environmental safeguards issues, risks and complaints and propose appropriate measures for addressing these;

- Review of environmental assessment reports and plans, confirm compliance with PEPA regulations and prepare due diligence report for category A/B subprojects.
- Validate the conduct of meaningful gender inclusive and responsive consultations and disclosure of the subprojects and environmental assessment with key stakeholders and affected men, women and children.
- Ensure that all Category A sub-projects are screened out since the Fund will not finance any Category A subprojects.
- Ensure disclosure of IEE or EIAs (as per PEPA) and environmental monitoring reports on the Fund's website.
- Conduct field visits, oversee the monitoring of subproject implementation for compliance with environmental requirements and preparation of monitoring reports.
- Prepare the semi-annual environmental performance report for submission to the Funding Source.

4.2.3 Deputy Manager Social Safeguards

60. The key functions are as follows:

- Provide support in training internal staff of NDRMF and FIPs on ESMS requirements;
- Screen sub-project proposals for social safeguards impacts and risks, recommend IR/IP categorization and advise on further assessment and due diligence on social safeguards for the review of the proposal;
- Inform the GM, QAG on emerging social safeguards issues, risks and complaints and propose appropriate measures for addressing these;
- Review of LARPs/RPs/IPPs, confirm compliance with LAA provisions and gap filling measures required under NDRF ESMS, and prepare due diligence report for sub-projects;
- Validate the conduct of meaningful gender inclusive consultations and disclosure of the sub-project social safeguard instruments to key stakeholders and affected men and women;
- Ensure that all category A subprojects are screened out, the Fund will not finance any Environment/IR/IP category A subprojects;
- Ensure disclosure of social safeguards documents (such as LARPs/RPs/IPPs) and social monitoring reports in the NDRF website;
- Conduct field visits, conduct audits of subproject implementation for compliance with social safeguards requirements and preparation of audit reports;
- Prepare semi-annual social safeguards performance report for submission to the Funding Source.

4.2.4 Deputy Manager Social Development and Gender

61. The key functions are as follows:

- Support finalization and operationalization of the Gender Strategy. Ensure compliance with the Gender Strategy internally, and by the fund implementation partners (FIPs);
- Support Information Management Unit in putting a system in place to ensure collection of gender disaggregated data including number of beneficiaries.
- Oversee the implementation and monitoring of the Gender Action Framework (GAF) and related gender action plans aligned with GAF.
- Contribute to regular capacity building of NDMA and FIPs in planning and implementing social and gender inclusive disaster response programs.
- Participate in reviewing and screening of proposals submitted by FIPs from social protection, social development and gender perspective.
- Review FIPs existing policies and plans related to gender mainstreaming in disaster reduction, preparedness and response and make recommendations for further improvements.
- Prepare monitoring/periodic progress reports against the gender mainstreaming targets.

4.2.5 Resources and Capabilities

62. The GM QAG and SGU core and technical support staff will need to be technically qualified to be able to carry out the screening and due diligence or able to review the work carried out by SGU. SGU staff would attend Funding Source sponsored or approved environmental, social safeguards and gender training(s) related to compliance and auditing/monitoring activities.
63. NDRMF will maintain a pool of qualified environmental, social and gender consultants who can be called upon to assist in conducting environmental and social reviews as appropriate. Indicative tasks of these safeguards consultants include (i) providing desk-review and field support to the SGU safeguard officers in the screening and categorization of proposals; (ii) assisting in the conduct of safeguards due diligence for the proposed subprojects and help in preparing the environment and social sections of the DDRs; (iii) conducting external environment and social auditing/monitoring of subprojects (iv) support in preparing annual environmental, social and gender performance reports.
64. In the case of EALs, the Fund staff in collaboration with the respective FIPs will conduct the screening and categorization of the proposed activities. As mentioned above, in case of Category 'B' projects with regards to environmental safeguards, the EMP documents will be prepared by the Fund's inhouse resources. However, if felt necessary, the Fund will hire experienced environmental and social safeguard consultants to support them in preparation of required environmental and social safeguard documentation.
65. Furthermore, in order to effectively respond to any EALs related to health emergencies, the Terms of Reference (ToRs) of experts needed for medical waste management, incinerator design and installation and air quality and air emission monitoring are provided as **Annexures XXVII, XXVIII and XXIX** respectively.

5 Operational Procedures for Environmental and Social Compliance

5.1 Overview

66. A summary of key operating procedures has been provided in the following sections. However, detailed procedures shall be developed and provided as a part of the ESMS Manual.

5.2 Screening and Categorization

67. Since the Fund is a development institution and committed to follow international standards for the management of its environment and social system including gender aspects, by following international best practices, the Fund has adopted a list of Prohibited Investment Activities List (PIAL), which can be expanded, if necessary (refer to **Annexure-I**).
68. At the initial subproject concept (ISPC) review stage, the SGU staff applies the PIAL. If the proposal involves a prohibited activity or fall in the category of high risk, the FIP is informed for not considering the proposal. Otherwise, the SGU staff indicates the applicable environmental and social safeguard requirements for the proposal to applicant/FIP.
69. The step wise procedural flow for the screening and subsequent categorization of sub-projects as shown in **Figure 5.1** below.
70. The SGU implements the following rigorous screening system to assess whether the proposed sub-projects have adequately addressed environment, social and Indigenous Peoples safeguards. As best practice examples, ADB's Screening and Categorization mechanism and Checklists are provided as **Annexures IV, V and VI**). The Fund's specific checklists are provided in the ESMS manual. The sub-projects are classified under one of the categories provided in **Table 5.1** below. In addition, the safeguard requirements are provided as **Table 5.2** below.

Table 5.1: Safeguards Categorization of Proposals for NDRMF support

Category	Environment	Involuntary Resettlement	Indigenous Peoples
A- Significant (To be screened out)	Investments that anticipate significant adverse environmental impacts that are irreversible. These impacts may affect an area larger than the sites or facilities subject to physical works.	Investments where 200 or more persons will experience major impacts, which are defined as (i) being physically displaced from housing, or (ii) losing 10% or more of their productive assets (income generating).	Investments that are expected to significantly affect the dignity, human rights, livelihood systems, or culture of Indigenous peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use, occupy, or claim as an ancestral domain or asset.
B - Less	Investments with potential adverse	Investments with involuntary resettlement	Investments that are likely to have limited

Category	Environment	Involuntary Resettlement	Indigenous Peoples
Significant	impacts that are site-specific, few if any of them are irreversible, and in most cases mitigation measures can be more readily designed than for Category A investments.	impacts that are not deemed significant.	impacts on Indigenous Peoples.
C - Minimal or No Impact	Investments that have minimal or no adverse environmental impacts.	Investments with no involuntary resettlement impacts.	Investments that are not expected to have impacts on Indigenous Peoples.

Table 5.2: ESMS Requirements

Category (Risk Rating)	Environmental Safeguards	Involuntary Resettlement Safeguards	Indigenous Peoples Safeguards
Category A (with potential significant impacts)	Screened out		
Category B (with less significant impacts)	Comply with national laws and PIAL and Funding Source specific international laws	Comply with PIAL and/or SR2 including RP and national laws and Funding Source specific international laws	Comply with national laws and PIAL and Funding Source specific international laws
Category C (with minimal or no impacts)	Comply with national laws and PIAL and Funding Source specific international laws	Comply with national laws and PIAL and Funding Source specific international laws	Comply with national laws and PIAL and Funding Source specific international laws

71. The details of the three types of environmental and social categorizations for the different sub-projects are as follows:

Category 'A': For a proposal likely to be classified as category A for environment, involuntary resettlement, or indigenous peoples impacts, NDRMF will not be allowed to finance the sub-project. **All such sub-projects will be screened out.**

Category 'B': For proposals classified as category B, NDRMF will communicate the applicable ESMS requirements to FIPs. The Financing source may choose to review safeguards categorization and related documents while also conducting third party

validation for a certain period until it feels the Fund has developed the required capacities to conduct the categorization itself. The FIPs will be required to prepare all necessary safeguard documents and present them to the Fund for review and clearance.

The Category 'B' sub-projects will be further sub-classified as 'B1' and 'B2' sub-projects. The B1 sub-projects will require an IEE to be conducted to fulfill applicable national requirements while B2 sub-projects will require an EIA to be conducted to fulfill applicable national requirements. In the case of both B1 or B2 sub-project types, the categorization of the sub-projects according to applicable regulations of the Funding Source shall be Category 'B'.

All due diligence and other safeguard documents could be reviewed by the Financing source prior to the approval of the proposals by the Fund till the third party assessment shows that the ESMS implementation is satisfactory. In the case of environmental safeguards, the FIP will obtain environmental clearance from the relevant provincial Environmental Protection Agency. The FIP will be required to share the environmental no-objection certificate (NOC) with the Fund. The Fund will then communicate the approval to the Funding Source as part of its regular reporting.

Category 'C': The sub-projects that may have minimal or no adverse environmental and social impacts and are listed under Schedule III of the EPA Review of IEE/EIA Regulations, 2014 will require the completion of an environmental checklist. However, such subprojects may be required to follow the sectoral environmental and social guidelines issued by the Pakistan EPA as well as applicable international standards as required by the specific Funding Source.

5.3 Screening and Categorization of projects under Emergency Assistance Loans (EAL):

5.3.1 Environmental Safeguard Requirements

72. All sub-projects/activities proposed under EALs will be screened for potential environmental impacts using the screening checklists (attached as **Annex IV**). For EAL projects, the following approach will be adopted:

Category B: For projects categorized as 'B', the preparation of an Environmental Management Plan (EMP) will be sufficient. No IEE studies will be required.

Category C: For projects categorized as 'C', only the completion of the screening checklist will be sufficient. No additional documentation will be required.

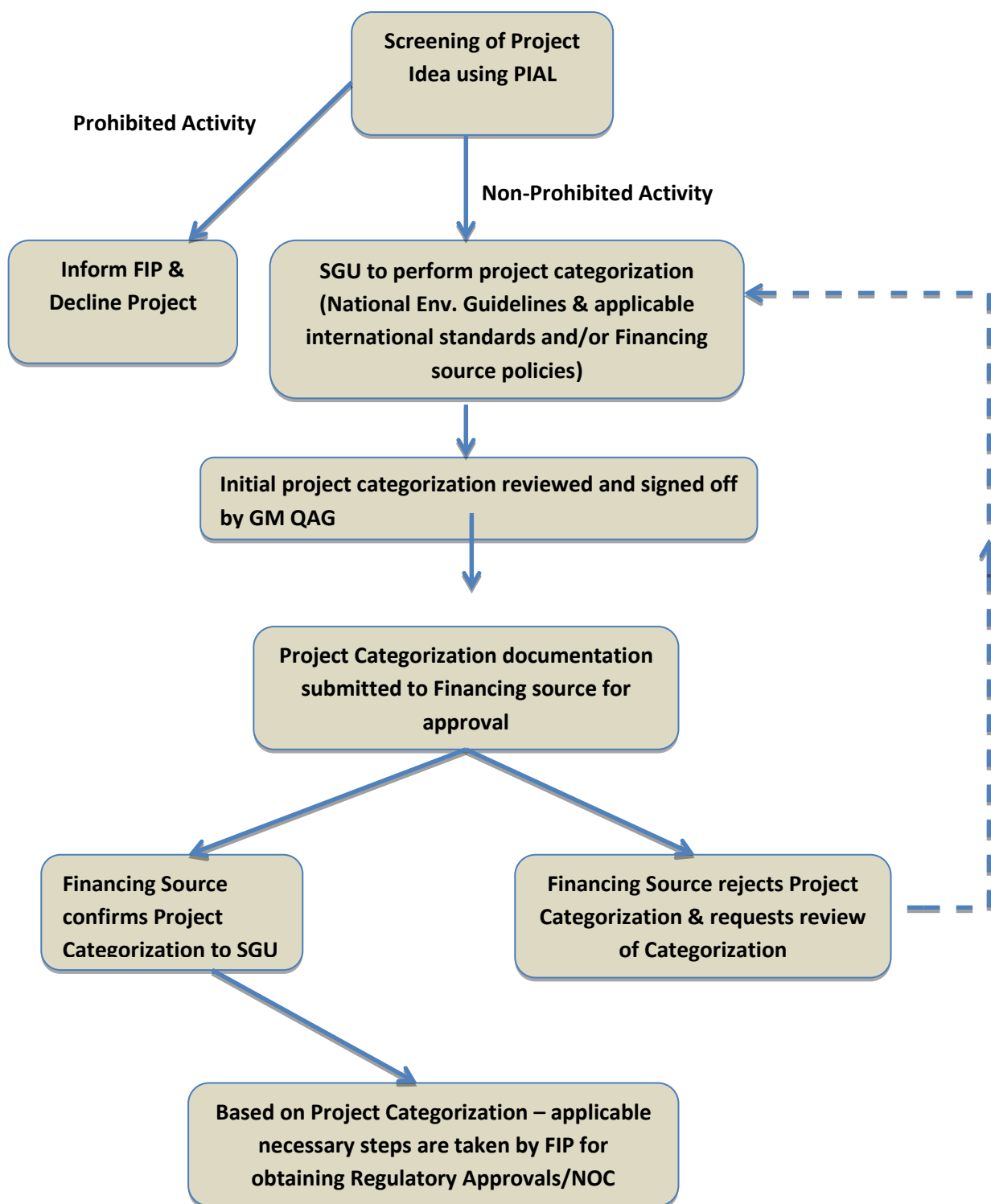
5.3.2 Social Safeguards Requirements

73. All the sub-projects/activities proposed under the EALs will be screened for Social Impacts using the screening checklists (attached as **Annexures V, VI and XXX**). For EAL projects, only Category "C" for Involuntary Resettlement and Indigenous Peoples impacts will be eligible for financing. A simplified DDR will be prepared for all such projects with the objective to identify all key potential social impacts and risks and suggest effective measures to avoid, mitigate such impacts and risks. **Annexure XXX** will be used to prepare simplified DDR. For EALs, social safeguards monitoring will be conducted along

with environmental safeguards monitoring during implementation of the project. The results of such monitoring will be summarized in social safeguards section of semi-annual and annual safeguards monitoring reports. The NDRMF will re-assess and augment its social safeguards capacity as needed to ensure timely due diligence and monitoring of all subprojects, including those financed under advance and retroactive financing.

74. For the projects to be carried out on the existing facilities, a social safeguards compliance audit will be conducted to identify past or present concerns related to impacts on involuntary resettlement and indigenous peoples. Where non compliance is identified, a corrective action plan, agreed upon by the financing source and the client, will be prepared.

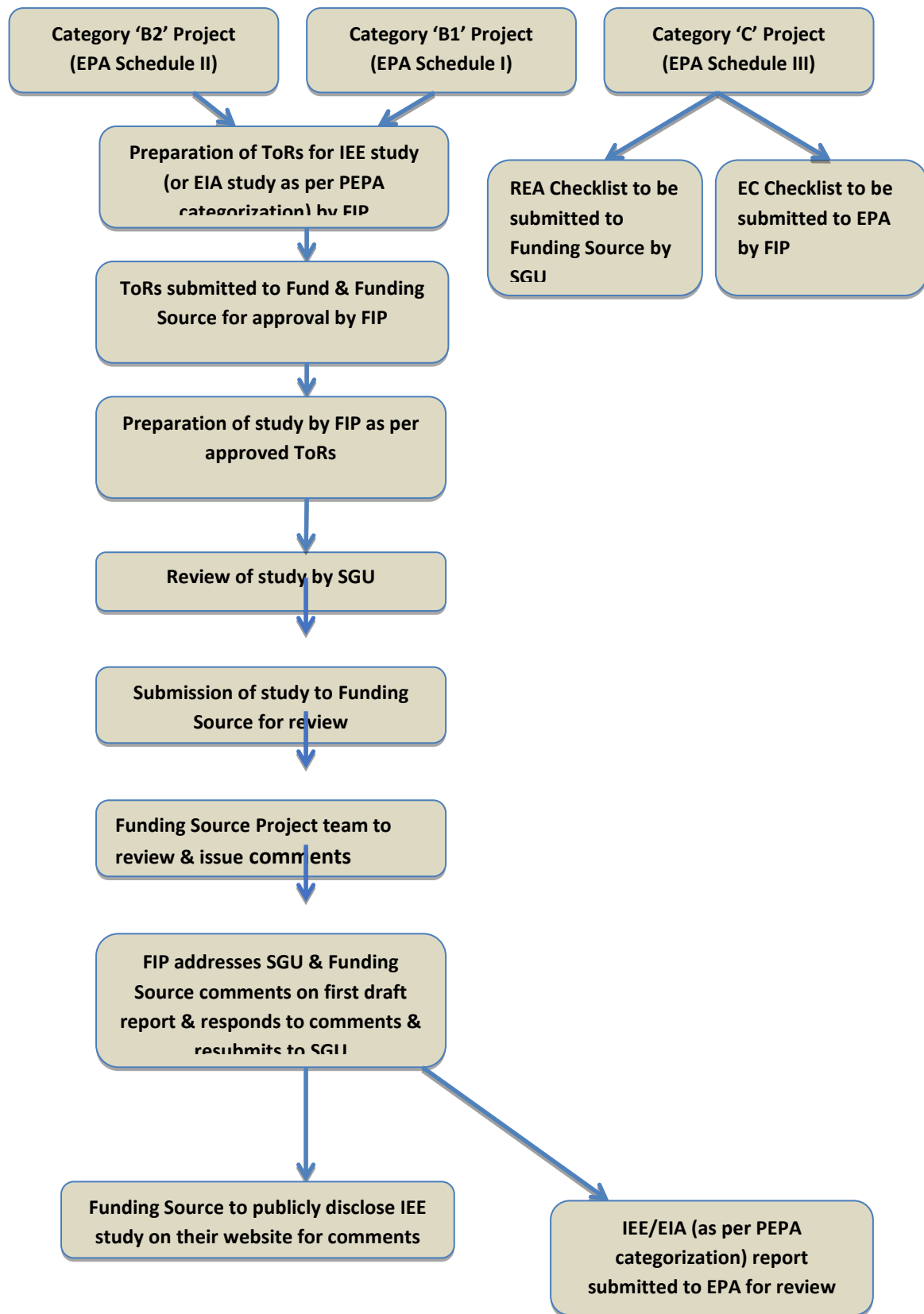
Figure 5.1: Procedure Flow – Project Screening and Categorization



5.4 Environmental and Social Assessment, Planning and Management Processes

75. The procedural flow for the environmental and social assessment process as part of the subproject preparation based on their respective categorization is provided in **Figure 5.2** below. The timelines for approval of the different sub-projects based on their respective environmental and social categorization are provided as **Figure 5.3** below.
76. The detailed environmental review and assessment procedures for Pak-EPA and a Financing Source (as an example, ADB as best practice case) for the different categories of subprojects are provided as **Annexure X**. The procedural flow for the social assessment process is reflected as **Figure 5.5** below.
77. The Environmental Management Plan (EMP) is the key environmental planning and management document, which as described below in **Figure 5.4**, will be used as the tool for environmental compliance monitoring during the implementation phase. The EMP document will clearly lay out the required mitigation measures along with responsible entities for implementing and monitoring of these measures during the pre-construction/design, construction and operation phases of each sub-project. In addition, the EMP document will also provide details on the types and levels of monitoring that will be conducted during the different project phases along with providing capacity development plans and expected costs for implementation of the measures and trainings laid out in the EMP document. This EMP document will be appended to each Works Contract and will be binding on each Contractor while performing the planned Works.
78. All sub-projects being considered for financing from NDRMF will follow the screening and categorization procedure as provided in **Figure 5.1** below. However, after this step, in the case of projects being considered for financing under normal circumstances by the Fund, the step wise environmental assessment and planning process provided in **Figure 5.2** below will be followed. On the other hand, for EALs, as already mentioned in **Section 5.3.1** above, only an EMP will be prepared and will be sufficient for sub-projects categorized as 'B' while no environmental due diligence documentation will be required for sub-projects categorized as 'C'.

Figure 5.2: Procedure Flow – Project Preparation



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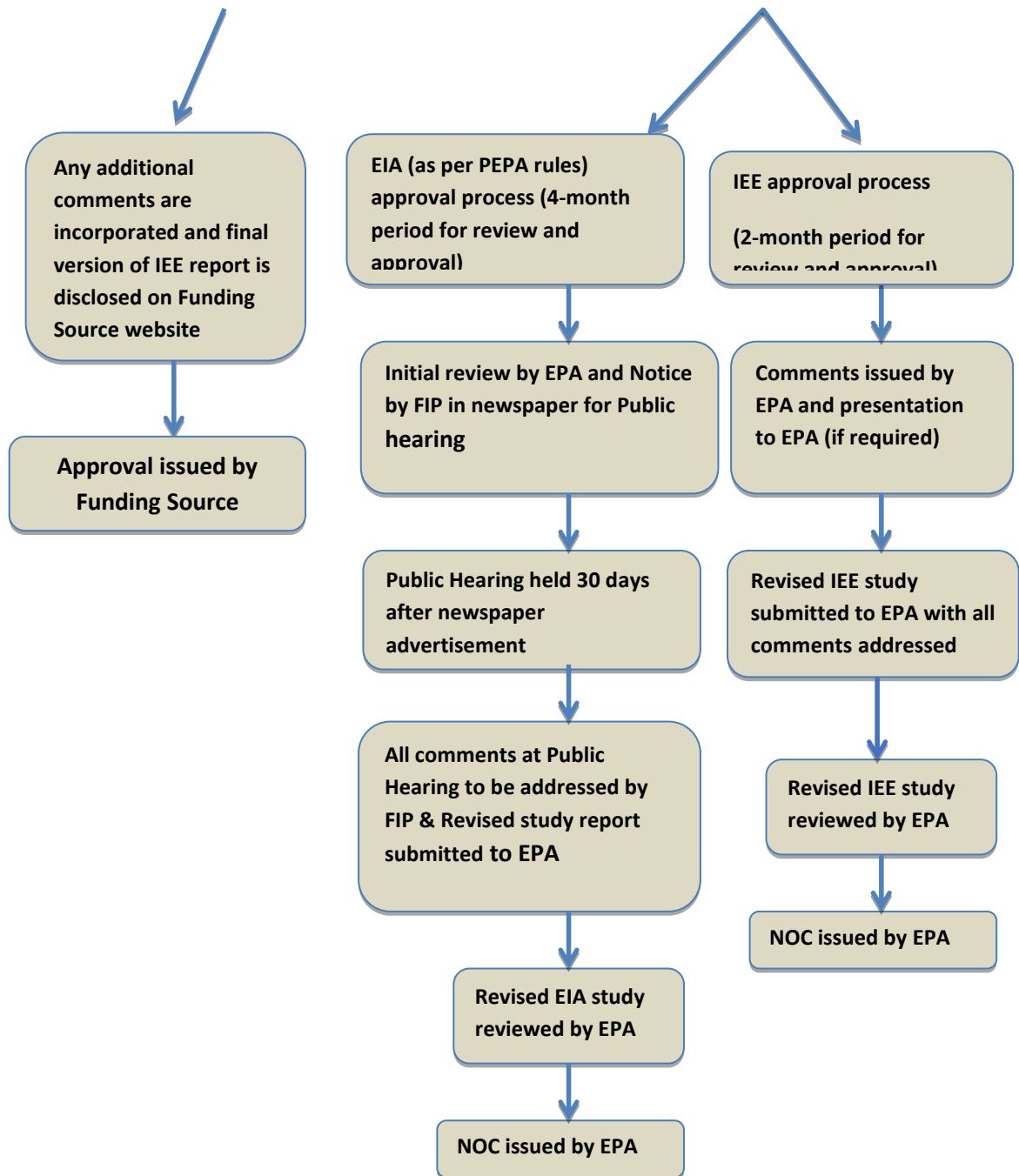


Figure 5.3: Expected Timelines for Category wise Environmental Approvals

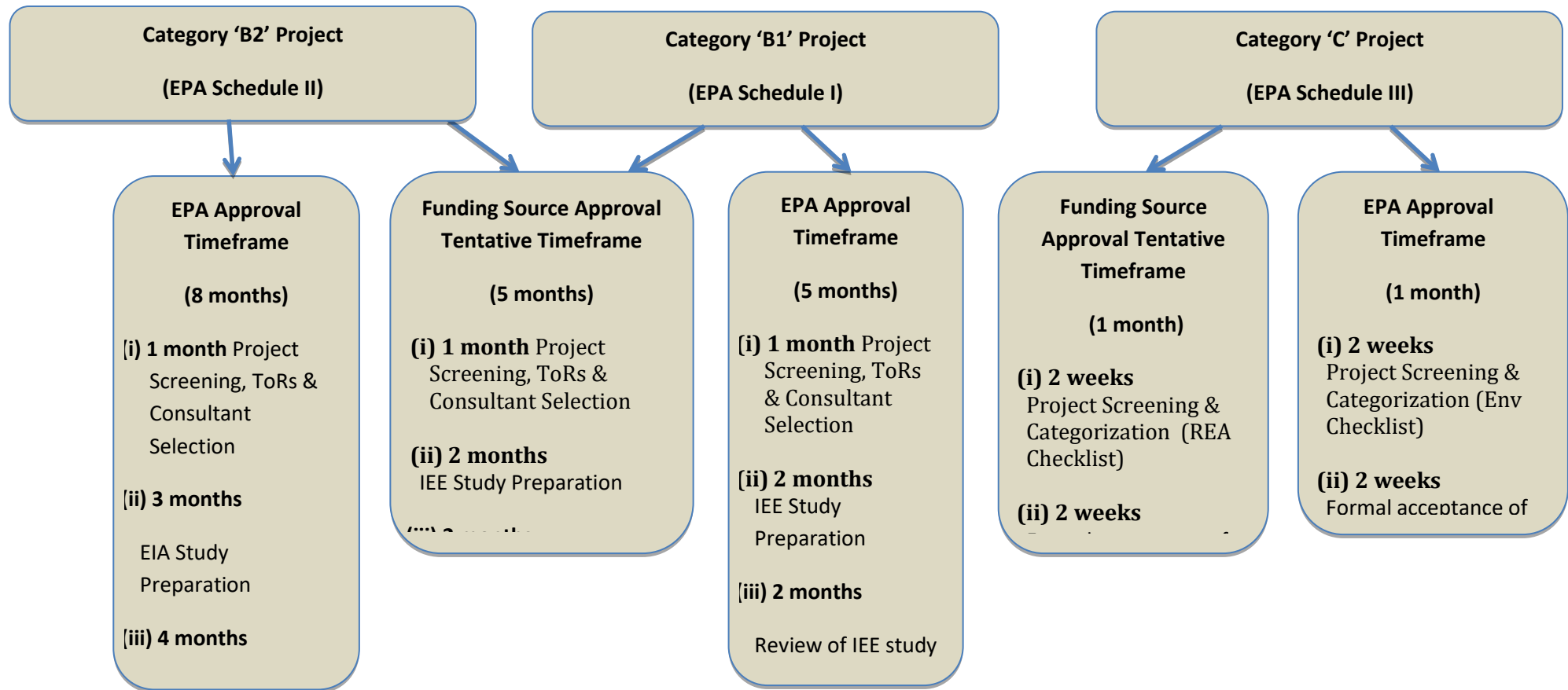


Figure 5.4: Procedure Flow – Project Implementation

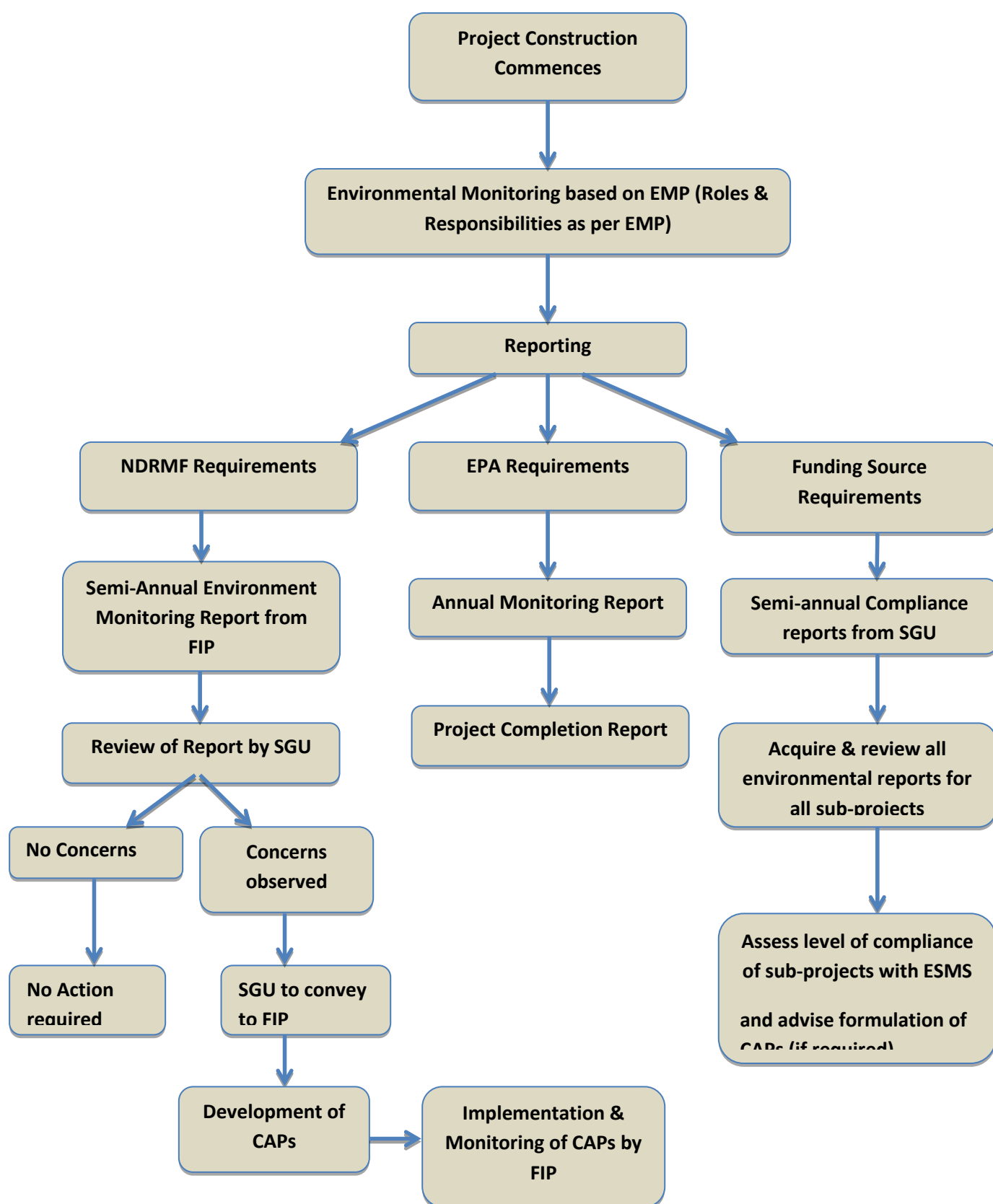
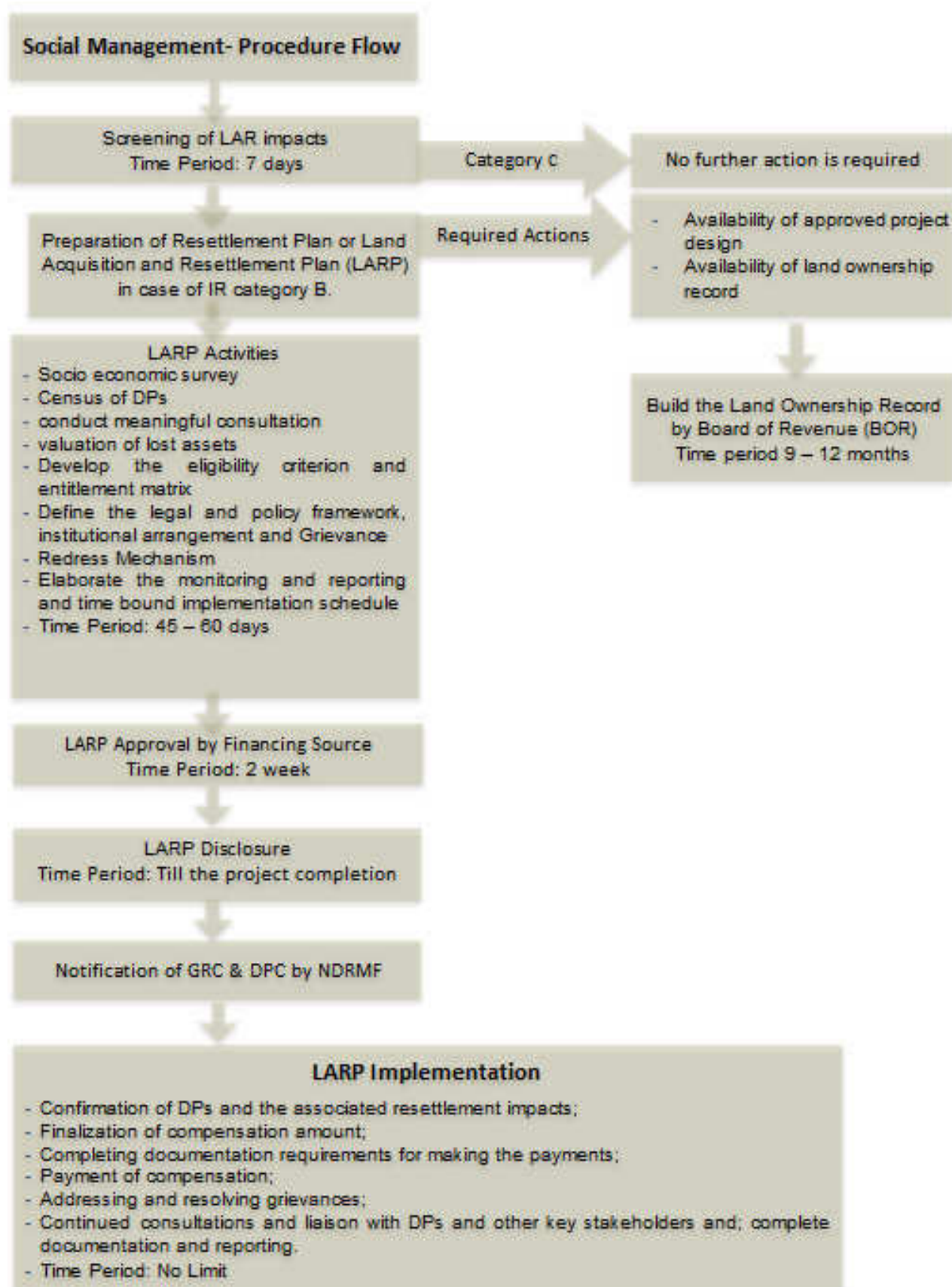


Figure 5.5: Social Management- Procedure Flow



5.5 Monitoring and Reporting

79. During the sub-project implementation phase, the procedure flow for conducting the different activities is provided as **Figure 5.4** above.
80. After a proposal is approved, the GMQAG will communicate with the FIP and confirm from time to time that the FIP is undertaking the obligations of compliance with all applicable environmental and social safeguard requirements, and NDRMF will also promptly report to Financing Source any actual or potential breach of the compliance requirements after becoming aware of it. SGU staff will visit the site to review and verify implementation of the safeguards requirements.
81. Environmental and social performance will be reviewed and evaluated on a semi-annual basis. The benchmark for performance will be the ongoing compliance against the applicable environmental and social safeguard requirements. NDRMF will ensure that the FIP prepares and submits a semi-annual environmental and social compliance monitoring report (**Annexure XIV**) and will review and assess the FIP's performance on environmental and social safeguard issues. The M&E system to be developed for NDRMF will include information on safeguards compliance status and activities. After 2 years from the establishment of the Fund, a third-party review will be done on the NDRMF ESMS and recommend corrective measures. In case sufficient capacity has been developed, the prior review of proposals categorization and safeguards plans by the Financing Source will no longer be required.
82. Based on the review of the semi-annual compliance reports for Category B sub-projects by the FIPs, the GM QAG will prepare a semi-annual environmental and social performance report, and submit it to the NDRMF management and Financing Source¹¹.
83. In case of EALs, the FIP(s) will agree with the NDRMF on a suitable compliance and reporting mechanism to ensure environmental and social safeguard monitoring of the EAL activities are conducted, as far as possible, based on the nature, scale and duration of the emergency.

5.6 ESMS Audit Procedure

84. Once the ESMS of the Fund is found to be performing "satisfactorily" after the third party independent detailed assessment study, the Fund will continue to undergo annual independent auditing of its ESMS that will include (a) an assessment NDRMF's ability to manage and address all relevant social and environmental risks and impacts of its business operations, in particular, the issues identified in donor's safeguard requirements, build NDRMF's capacity in enhanced safeguards management; (b) a review of NDRMF's compliance record with applicable laws and regulations in Pakistan related to environmental and social matters, and international ratified conventions and agreements by Pakistan (c) identify the NDRMF's and its FIPs' main stakeholder groups and current stakeholder engagement/consultation activities. The audit will cover both the ESMS within NDRMF and selected subprojects for their implementation compliance to safeguard requirements.
85. External and independent resource persons will be identified as ESMS auditors and will undertake this audit. The ESMS auditors will have the experience to do both ESMS audits as well as audits of FIs subprojects. Resource persons either as individuals or agencies certified as auditors by reputed accreditation bodies will be employed. NDRMF will ensure that the audit team has a good mix of both auditing,

¹¹ Until the duration of the financing period

subject knowledge/experience on both environment and social safeguards, and have both gender in the team.

86. SGU will furnish required information on their activities to the auditor and provide proper support and cooperation in the conduct of the audit. All subprojects that are categorized as B will be covered in these audits as long as disbursements have been made in the current or the previous year. Approximately 25% of other subprojects will be selected, and will necessarily include at least one subproject from different subproject types.
87. ESMS auditors will submit an audit report including capacity assessment of and training in safeguards management for NDRMF's and FIPs' follow-up. NDRMF will agree on the follow-up action for each of the audit findings and agree on a timeframe to implement the follow-up actions. In case where non compliance is identified, a corrective action plan (agreed upon by the Financing Source and the client) will be prepared. The plan will define necessary remedial actions, the budget for such actions and the time frame for resolution of noncompliance.

5.7 Gender Responsive Information Disclosure and Grievance Redressal Procedure

88. The QAG, through its Media and Communication Unit, will develop the website for the NDRMF. All environmental and social information related to the ESMS and subprojects supported by the fund will be disclosed on the NDRMF website. These include the Board approved environmental and social policy and procedures described in the ESMS, environmental and social assessment documents and plans, environmental approvals for specific subprojects, monitoring and progress reports on subprojects supported by the Fund, annual environment and social safeguards performance report, and NDRMF gender responsive grievance redress mechanism (including complaints hotline, email and contact numbers).
89. The Director, QAG will ensure that the Fund has a mechanism in place to address complaints that arise at the project level, and non-compliances in accordance with ESMS and national regulations. The Director, QAG (supported by the SGU) will ensure there is a record of the following:
 - Complaints, grievances, or protests received from local communities, affected persons or other stakeholders, both men and women, recording dates and organizations involved, actions taken to resolve grievances, any outstanding issues, and proposed measures for resolution;
 - Details of information disclosure and consultations, if any, with affected men and women, local communities, civil society groups, and other stakeholders; and
 - Details of approach/methodology on addressing the concerns and issues raised in consultations.
90. The Fund will ensure that all investment agreements for subprojects contain provisions enabling: (a) Representatives of Financing Source to inspect the subprojects and any relevant records and documents; and (b) The Financing Source, in case of any breach, to require FIPs to bring the subprojects into compliance with all applicable laws and regulations of Pakistan and international and/or Funding Source specific policies.

5.8 Capacity Building

91. NDRMF has developed a capacity building plan to provide training and technical assistance to SGU staff, FIPs and other relevant stakeholders in environmental and social safeguards

through hands-on mentoring, formal training and exposure to the best practices for both men and women. Also, information and guidance regarding the specific requirements for Category 'B' and 'C' sub-projects will also be provided to all relevant stakeholders. The capacity development plan includes:

- (i) **Develop capacity of SGU:** to be well versed with the ESMS, its policies, principles, guideline and procedures to screen and categorize proposals received from FIPs, conduct due diligence of potential sub-projects, along with required monitoring and reporting, to attribute to accreditation of FIPs to certify their eligibility for financing.
 - (ii) **Develop the capacity of Fund Implementation Partners:** to orient potential FIPs on the Fund requirements regarding ESMS.
 - (iii) Ensure effective implementation of ESMS and results monitoring.
92. In case of EALs, the required capacity building measures and trainings on environmental and social safeguard aspects will be conducted based on the most suitable modality possible, dependent on the nature, duration and scale of the emergency. This modality shall be agreed between the NDRMF and respective FIP(s) prior to disbursement of funds.

5.9 Track record in Environmental and Social Management

93. Since the Fund is recently established as a new entity, therefore so far there is no track record of past sub-projects that have been developed under it. Thus, at this point, it is not possible to assess the performance of the Fund with regards to compliance of past sub-projects from an environmental and social perspective.
94. In the future, once sub-projects have been financed and implemented, this section shall be updated based on the track record as a result of the performance of the NDRMF with regards to implementation of environmental and social safeguards for the respective sub-projects.

6 References

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ANNEXURES

Annexure – I: Prohibited Investment Activities List (PIAL)

Prohibited Investment Activities List

The following do not qualify for NDRMF financing:

- (i) Production or activities involving harmful or exploitative forms of forced labor¹² or child labor;¹³
- (ii) Production of or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements or subject to international phase outs or bans, such as (a) pharmaceuticals,¹⁴ pesticides, and herbicides,¹⁵ (b) ozone-depleting substances,¹⁶ (c) polychlorinated biphenyls¹⁷ and other hazardous chemicals,¹⁸ (d) wildlife or wildlife products regulated under the Convention on International Trade in Endangered Species of Wild Fauna and Flora,¹⁹ and (e) transboundary trade in waste or waste products;²⁰
- (iii) Production of or trade in weapons and munitions, including paramilitary materials;
- (iv) Production of or trade in alcoholic beverages, excluding beer and wine;²¹
- (v) Production of or trade in tobacco;²²
- (vi) Gambling, casinos, and equivalent enterprises;²³
- (vii) Production of or trade in radioactive materials,²⁴ including nuclear reactors and components thereof;^[SEP]
- (viii) Production of, trade in, or use of unbonded asbestos fibers;²⁵
- (ix) Commercial logging operations or the purchase of logging equipment for use in [SEP] primary tropical moist forests or old-growth forests; and [SEP]

¹² Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

¹³ Child labor means the employment of children whose age is below the host country's statutory minimum age of employment or employment of children in contravention of International Labor Organization Convention No. 138 "Minimum Age Convention" (www.ilo.org).

¹⁴ A list of pharmaceutical products subject to phaseouts or bans is available at <http://www.who.int>.

¹⁵ A list of pesticides and herbicides subject to phaseouts or bans is available at <http://www.pic.int>.

¹⁶ A list of the chemical compounds that react with and deplete stratospheric ozone resulting in the widely publicized ozone holes is listed in the Montreal Protocol, together with target reduction and phaseout dates. Information is available at <http://www.unep.org/ozone/montreal.shtml>.

¹⁷ A group of highly toxic chemicals, polychlorinated biphenyls are likely to be found in oil-filled electrical transformers, capacitors, and switchgear dating from 1950 to 1985.

¹⁸ A list of hazardous chemicals is available at <http://www.pic.int>.

¹⁹ A list is available at <http://www.cites.org>.

²⁰ As defined by the Basel Convention; see <http://www.basel.int>.


²¹ This does not apply to subproject sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a subproject sponsor's primary operations.

²² This does not apply to subproject sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a subproject sponsor's primary operations.

²³ This does not apply to subproject sponsors who are not substantially involved in these activities. Not substantially involved means that the activity concerned is ancillary to a subproject sponsor's primary operations.

²⁴ This does not apply to the purchase of medical equipment, quality control (measurement) equipment, and any equipment for which the NDRMF considers the radioactive source to be trivial and adequately shielded.

²⁵ This does not apply to the purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20%.

- (x) Marine and coastal fishing practices, such as large-scale pelagic drift net fishing and fine mesh net fishing, harmful to vulnerable and protected species in large numbers and damaging to marine biodiversity and habitats. 

Annexure – II: Safeguard Requirements 1 To 3: Involuntary Resettlement & Indigenous People

Safeguard Requirements 1: ENVIRONMENT²⁶

A. Introduction

1. Safeguard Requirements 1 outlines the requirements that borrowers/clients are required to meet when delivering environmental safeguards for projects supported by the Asian Development Bank (ADB). It discusses the objectives and scope of application, and underscores the requirements for undertaking the environmental assessment process. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking consultation, establishing a gender responsive grievance mechanism, and monitoring and reporting. The document also includes particular environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources. The applicability of particular requirements is established through the environmental assessment process and compliance with the requirements is achieved through implementation of environmental management plans.

B. Objectives

2. The objectives are to ensure the environmental soundness and sustainability of projects, and to support the integration of environmental considerations into the project decision-making process.

C. Scope of Application

3. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects).

D. Requirements

1. Environmental Assessment

4. Environmental assessment is a generic term used to describe a process of environmental analysis and planning to address the environmental impacts and risks associated with a project. At an early stage of project preparation, the borrower/client

²⁶ In this attachment, the term "projects" refers to subprojects financed in part or in full by [Name of Bank] using ADB funds, and the term "borrower/client" refers to "subproject company".

will identify potential direct, indirect, cumulative and induced environmental impacts on and risks to physical, biological, socioeconomic, and physical cultural resources and determine their significance and scope, in consultation with stakeholders, including affected people and concerned nongovernment organizations (NGOs). If potentially adverse environmental impacts and risks are identified, the borrower/client will undertake an environmental assessment as early as possible in the project cycle. For projects with potentially significant adverse impacts that are diverse, irreversible, or unprecedented, the borrower/client will examine alternatives to the project's location, design, technology, and components that would avoid, and, if avoidance is not possible, minimize adverse environmental impacts and risks. The rationale for selecting the particular project location, design, technology, and components will be properly documented, including, cost-benefit analysis, taking environmental costs and benefits of the various alternatives considered into account. The "no project" alternative will be also considered.

5. The assessment process will be based on current information, including an accurate project description, and appropriate environmental and social baseline data. The environmental assessment will consider all potential impacts and risks of the project on physical, biological, socioeconomic (occupational health and safety, community health and safety, vulnerable groups and gender issues, and impacts on livelihoods through environmental media (see also para. 6 of Safeguard Requirements 2 - Involuntary Resettlement of this Attachment) and physical cultural resources in an integrated way. The project's potential environmental impacts and risks will be reviewed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to environmental matters, including host country obligations under international law.
6. Impacts and risks will be analyzed in the context of the project's area of influence. This area of influence encompasses (i) the primary project site(s) and related facilities that the borrower/client (including its contractors) develops or controls, such as power transmission corridors, pipelines, canals, tunnels, access roads, borrow pits and disposal areas, and construction camps; (ii) associated facilities that are not funded as part of the project (funding may be provided separately by the borrower/client or by third parties), and whose viability and existence depend exclusively on the project and whose goods or services are essential for successful operation of the project; (iii) areas and communities potentially affected by cumulative impacts from further planned development of the project, other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that are realistically defined at the time the assessment is undertaken; and (iv) areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. The area of influence does not include potential impacts that might occur without the project or independently of the project. Environmental impacts and risks will also be analyzed for all relevant stages of the project cycle, including preconstruction, construction, operations, decommissioning, and postclosure/post closure activities such as rehabilitation or restoration.

7. The assessment will identify potential transboundary effects, such as air pollution, increased use or contamination of international waterways, as well as global impacts, such as emission of greenhouse gases and impacts on endangered species and habitats.
8. The environmental assessment will examine whether particular individuals and groups may be differentially or disproportionately affected by the project's potential adverse environmental impacts because of their disadvantaged or vulnerable status, in particular, the poor, women and children, and Indigenous Peoples. Where such individuals or groups are identified, the environmental assessment will recommend targeted and differentiated measures so that adverse environmental impacts do not fall disproportionately on them.
9. Depending on the significance of project impacts and risks, the assessment may comprise a full-scale environmental impact assessment (EIA) for category A projects, an initial environmental examination (IEE) or equivalent process for category B projects, or a desk review. An EIA report includes the following major elements: (i) executive summary, (ii) description of the project, (iii) description of the environment (with comprehensive baseline data), (iv) anticipated environmental impacts and mitigation measures, (v) analysis of alternatives, (vi) environmental management plan(s), (vii) consultation and information disclosure, and (viii) conclusion and recommendations. An IEE, with its narrower scope, may be conducted for projects with limited impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
10. When the project involves existing activities or facilities, relevant external experts will perform environmental audits to determine the existence of any areas where the project may cause or is causing environmental risks or impacts. If the project does not foresee any new major expansion, the audit constitutes the environmental assessment for the project. A typical environmental audit report includes the following major elements: (i) executive summary; (ii) facilities description, including both past and current activities; (iii) summary of national, local, and any other applicable environmental laws, regulations, and standards; (iv) audit and site investigation procedure; (v) findings and areas of concern; and (vi) corrective action plan that provides the appropriate corrective actions for each area of concern, including costs and schedule.
11. When the project involves the development of or changes to policies, plans, or programs that are likely to have significant environmental impacts that are regional or sectoral, a strategic environmental assessment will be required. A strategic environmental assessment report will include (i) an analysis of the scenario, (ii) an assessment of long-term and indirect impacts, (iii) a description of the consultation process, and (iv) an explanation of option selection.

2. Environmental Planning and Management

12. The borrower/client will prepare an environmental management plan (EMP) that addresses the potential impacts and risks identified by the environmental assessment. The EMP will include the proposed mitigation measures, environmental

monitoring and reporting requirements, emergency response procedures, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators. Where impacts and risks cannot be avoided or prevented, mitigation measures and actions will be identified so that the project is designed, constructed, and operated in compliance with applicable laws and regulations and meets the requirements specified in this document. The level of detail and complexity of the environmental planning documents and the priority of the identified measures and actions will be commensurate with the project's impacts and risks. Key considerations include mitigation of potential adverse impacts to the level of "no significant harm to third parties," the polluter pays principle, the precautionary approach, and adaptive management.

13. If some residual impacts are likely to remain significant after mitigation, the EMP will also include appropriate compensatory measures (offset) that aim to ensure that the project does not cause significant net degradation to the environment. Such measures may relate, for instance, to conservation of habitat and biodiversity, preservation of ambient conditions, and greenhouse gas emissions. Monetary compensation in lieu of offset is acceptable in exceptional circumstances, provided that the compensation is used to provide environmental benefits of the same nature and is commensurate with the project's residual impact.
14. The EMP will define expected outcomes as measurable events to the extent possible and will include performance indicators or targets that can be tracked over defined periods. It will be responsive to changes in project design, such as a major change in project location or route, or in technology, unforeseen events, and monitoring results.
15. At times, a third party's involvement will influence implementation of the EMP. A third party may be, inter alia, a government agency, a contractor, or an operator of an associated facility. When the third-party risk is high and the borrower/client has control or influence over the actions and behavior of the third party, the borrower/client will collaborate with the third party to achieve the outcome consistent with the requirements for the borrower/client. Specific actions will be determined on a case-by-case basis.
16. The borrower/client will use qualified and experienced experts to prepare the environmental assessment and the EMP. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.

3. Information Disclosure

17. For subprojects financed by [Name of Bank], the requirements for public disclosure laid out in paragraph 12 of the main text of this ESMS (page 3) apply.
18. The borrower/client will provide relevant environmental information, including information from the environmental impact assessment in a timely manner, in an accessible place and in a form and language(s) understandable to affected people

and other stakeholders. For illiterate people, other suitable communication methods will be used.

4. Consultation and Participation

19. The borrower/client will carry out meaningful consultation with affected people and other concerned stakeholders, including civil society, and facilitate their informed participation. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle;²⁷ (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results are to be documented and reflected in the environmental assessment report.

5. Grievance Redress Mechanism

20. The borrower/client will establish a gender responsive mechanism to receive and facilitate resolution of affected peoples' concerns, complaints, and grievances about the project's environmental performance. 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 country's judicial or administrative remedies. The affected people will be appropriately informed about the mechanism.

6. Monitoring and Reporting

21. The borrower/client will monitor and measure the progress of implementation of the EMP. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording information to track performance, the borrower/client will undertake inspections to verify compliance with the EMP and progress toward the expected outcomes. For projects likely to have significant adverse environmental impacts, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify its monitoring information. The borrower/client will document monitoring results, identify the necessary corrective actions, and reflect them in a corrective action plan. The borrower/client will implement these corrective actions and follow up on these actions to ensure their

²⁷ For environment category A projects, such consultations will necessarily include consultations at the early stage of EIA field work and when the draft EIA report is available during project preparation, and before project appraisal by ADB.

effectiveness.

22. The borrower/client will prepare periodic monitoring reports that describe progress with implementation of the EMP and compliance issues and corrective actions, if any. The borrower/client will submit at least semiannual monitoring reports during construction for projects likely to have significant adverse environmental impacts, and quarterly monitoring reports for highly complex and sensitive projects. For projects likely to have significant adverse environmental impacts during operation, reporting will continue at the minimum on an annual basis. Such periodic reports will be posted in a location accessible to the public. Project budgets will reflect the costs of monitoring and reporting requirements.

7. Unanticipated Environmental Impacts

23. Where unanticipated environmental impacts become apparent during project implementation, the borrower/client will update the environmental assessment and EMP or prepare a new environmental assessment and EMP to assess the potential impacts, evaluate the alternatives, and outline mitigation measures and resources to address those impacts.

8. Biodiversity Conservation and Sustainable Natural Resource Management

24. The borrower/client will assess the significance of project impacts and risks on biodiversity²⁸ and natural resources as an integral part of the environmental assessment process specified in paras. 4–10. The assessment will focus on the major threats to biodiversity, which include destruction of habitat and introduction of invasive alien species, and on the use of natural resources in an unsustainable manner. The borrower/client will need to identify measures to avoid, minimize, or mitigate potentially adverse impacts and risks and, as a last resort, propose compensatory measures, such as biodiversity offsets, to achieve no net loss or a net gain of the affected biodiversity.

a. Modified Habitats

25. In areas of modified habitat, where the natural habitat has apparently been altered, often through the introduction of alien species of plants and animals, such as in agricultural areas, the borrower/client will exercise care to minimize any further conversion or degradation of such habitat, and will, depending on the nature and scale of the project, identify opportunities to enhance habitat and protect and conserve biodiversity as part of project operations.

b. Natural Habitats

²⁸ The variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

26. In areas of natural habitat,²⁹ the project will not significantly convert or degrade³⁰ such habitat, unless the following conditions are met:
- (i) No alternatives are available.
 - (ii) A comprehensive analysis demonstrates that the overall benefits from the project will substantially outweigh the project costs, including environmental costs.
 - (iii) Any conversion or degradation is appropriately mitigated.
27. Mitigation measures will be designed to achieve at least no net loss of biodiversity. They may include a combination of actions, such as post subproject restoration of habitats, offset of losses through the creation or effective conservation of ecologically comparable areas that are managed for biodiversity while respecting the ongoing use of such biodiversity by Indigenous Peoples or traditional communities, and compensation to direct users of biodiversity.

c. Critical Habitats

28. No project activity will be implemented in areas of critical habitat³¹ unless the following requirements are met:
- (i) There are no measurable adverse impacts, or likelihood of such, on the critical habitat which could impair its high biodiversity value or the ability to function.
 - (ii) The project is not anticipated to lead to a reduction in the population of any recognized endangered or critically endangered species³² or a loss in area of the habitat concerned such that the persistence of a viable and representative host ecosystem be compromised.
 - (iii) Any lesser impacts are mitigated in accordance with para. 27.

²⁹ Land and water areas where the biological communities are formed largely by native plant and animal species, and where human activity has not essentially modified the area's primary ecological functions.

³⁰ Significant conversion or degradation is (i) the elimination or severe diminution of the integrity of a habitat caused by a major, long-term change in land or water use; or (ii) the modification of a habitat that substantially reduces the habitat's ability to maintain viable populations of its native species. Significant conversion may include, for example, land clearing; replacement of natural vegetation (for example, by crops or tree plantations); permanent flooding (by a reservoir for instance); drainage, dredging, filling, or canalization of wetlands; or surface mining.

³¹ Critical habitat is a subset of both natural and modified habitat that deserves particular attention. Critical habitat includes areas with high biodiversity value, including habitat required for the survival of critically endangered or endangered species; areas having special significance for endemic or restricted-range species; sites that are critical for the survival of migratory species; areas supporting globally significant concentrations or numbers of individuals of congregatory species; areas with unique assemblages of species or that are associated with key evolutionary processes or provide key ecosystem services; and areas having biodiversity of significant social, economic, or cultural importance to local communities. Critical habitats include those areas either legally protected or officially proposed for protection, such as areas that meet the criteria of the World Conservation Union classification, **the Ramsar List of Wetlands of International Importance**, and the United Nations Educational, Scientific, and Cultural Organization's world natural heritage sites.

³² As defined by the World Conservation Union's Red List of Threatened Species or as defined in any national legislation.

29. When the project involves activities in a critical habitat, the borrower/client will retain qualified and experienced external experts to assist in conducting the assessment.

d. Legally Protected Areas

30. In circumstances where some project activities are located within a legally protected area, in addition to the requirement specified in para. 28, the borrower/client will meet the following requirements:
- (i) Act in a manner consistent with defined protected area management plans.
 - (ii) Consult protected area sponsors and managers, local communities, and other key stakeholders on the proposed project.
 - (iii) Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area.

e. Invasive Alien Species

31. The borrower/client will not intentionally introduce any new alien species (that is, species not currently established in the country or region of the project) unless carried out in accordance with the existing regulatory framework for such introduction, if such a framework is present, or unless the introduction is subject to a risk assessment (as part of the environmental assessment) to determine the potential for invasive behavior. Under no circumstances must species known to be invasive be introduced into new environments. The borrower/client will undertake assessment of the possibility of accidental or unintended introduction of such invasive alien species and identify measures to minimize the potential for release.

f. Management and Use of Renewable Natural Resources

32. Renewable natural resources will be managed in a sustainable manner. Sustainable resource management is management of the use, development, and protection of resources in a way, or at a rate, that enables people and communities, including Indigenous Peoples, to provide for their current social, economic, and cultural well-being while also sustaining the potential of those resources to meet the reasonably foreseeable needs of future generations. This includes safeguarding the life-supporting capacity of air, water, and soil ecosystems. Where possible, the borrower/client will demonstrate the sustainable management of resources through an appropriate system of independent certification.

9. Pollution Prevention and Abatement

33. During the design, construction, and operation of the project the borrower/client will apply pollution prevention and control technologies and practices consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's *Environment, Health and Safety Guidelines*.³³ These standards contain performance levels and measures that are normally acceptable

³³ World Bank Group, 2007. *Environmental, Health, and Safety General Guidelines*. Washington, DC.

and applicable to projects. When host country regulations differ from these levels and measures, the borrower/client will achieve whichever is more stringent. If less stringent levels or measures are appropriate in view of specific project circumstances, the borrower/client will provide full and detailed justification for any proposed alternatives that are consistent with the requirements presented in this document.

a. Pollution Prevention, Resource Conservation, and Energy Efficiency

34. The borrower/client will avoid, or where avoidance is impossible, will minimize or control the intensity or load of pollutant emission and discharge. In addition the borrower/client will examine and incorporate in its operations resource conservation and energy efficiency measures consistent with the principles of cleaner production. When the project has the potential to constitute a significant source of emissions in an already degraded area, strategies that help improve ambient conditions, such as evaluating alternative project locations and considering emissions offsets, will be introduced.

b. Wastes

35. The borrower/client will avoid, or where avoidance is not possible, will minimize or control the generation of hazardous and nonhazardous wastes and the release of hazardous materials resulting from project activities. Where waste cannot be recovered or reused, it will be treated, destroyed, and disposed of in an environmentally sound manner. If the generated waste is considered hazardous, the client will explore reasonable alternatives for its environmentally sound disposal considering the limitations applicable to its transboundary movement.³⁴ When waste disposal is conducted by third parties, the borrower/client will use contractors that are reputable and legitimate enterprises licensed by the relevant regulatory agencies.

c. Hazardous Materials

36. The borrower/client will avoid the manufacture, trade, and use of hazardous substances and materials subject to international bans or phase outs because of their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer³⁵ and will consider the use of less hazardous substitutes for such chemicals and materials.

d. Pesticide Use and Management

37. The environmental assessment will ascertain that any pest and/or vector management activities related to the project are based on integrated pest management approaches and aim to reduce reliance on synthetic chemical pesticides in agricultural and public health projects. The borrower/client's integrated pest/vector management program will entail coordinated use of pest and

³⁴ Consistent with the objectives of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes.

³⁵ Consistent with the objectives of the Stockholm Convention on Persistent Organic Pollutants and the Montreal Protocol on Substances that Deplete the Ozone Layer.

environmental information along with available pest/vector control methods, including cultural practices, biological, genetic and, as a last resort, chemical means to prevent unacceptable levels of pest damage. The health and environmental risks associated with pest management should be minimized with support, as needed, to institutional capacity development, to help regulate and monitor the distribution and use of pesticides and enhance the application of integrated pest management.

38. The borrower/client will not use products that fall in World Health Organization Recommended Classification of Pesticides by Hazard Classes Ia (extremely hazardous) and Ib (highly hazardous) or Class II (moderately hazardous), if the project host country lacks restrictions on distribution and use of these chemicals, or if they are likely to be accessible to personnel without proper training, equipment, and facilities to handle, store, apply and dispose of these products properly. The borrower/client will handle, store, apply and dispose of pesticides in accordance with international good practice such as the Food and Agricultural Organization's International Code of Conduct on the Distribution and Use of Pesticides.

e. Greenhouse Gas Emissions

39. The borrower/client will promote the reduction of project-related anthropogenic greenhouse gas emissions in a manner appropriate to the nature and scale of project operations and impacts. During the development or operation of projects that are expected to or currently produce significant quantities of greenhouse gases,³⁶ the borrower/client will quantify direct emissions from the facilities within the physical project boundary and indirect emissions associated with the off-site production of power used by the project. The borrower/client will conduct quantification and monitoring of greenhouse gas emissions annually in accordance with internationally recognized methodologies.³⁷ In addition, the borrower/client will evaluate technically and financially feasible and cost-effective options to reduce or offset project-related greenhouse gas emissions during project design and operation, and pursue appropriate options.

10. Health and Safety

a. Occupational Health and Safety

40. The borrower/client will provide workers³⁸ with a safe and healthy working environment, taking into account risks inherent to the particular sector and specific classes of hazards in the borrower's/client's work areas, including physical, chemical, biological, and radiological hazards. The borrower/client will take steps to prevent accidents, injury, and disease arising from, associated with, or occurring during the

³⁶ Even though the significance of a project's contribution to greenhouse gas emissions varies between industry sectors, the significance threshold to be considered for these requirements is generally 100,000 tons of carbon dioxide equivalent per year for the aggregate emissions of direct sources and indirect sources associated with electricity purchased for own consumption.

³⁷ Estimation methodologies are provided by the Intergovernmental Panel on Climate Change (IPCC), various international organizations, and relevant host country agencies.

³⁸ Including nonemployee workers engaged by the borrower/client through contractors or other intermediaries to work on project sites or perform work directly related to the project's core functions.

course of work by (i) identifying and minimizing, so far as reasonably practicable, the causes of potential hazards to workers; (ii) providing preventive and protective measures, including modification, substitution, or elimination of hazardous conditions or substances; (iii) providing appropriate equipment to minimize risks and requiring and enforcing its use; (iv) training workers and providing them with appropriate incentives to use and comply with health and safety procedures and protective equipment; (v) documenting and reporting occupational accidents, diseases, and incidents; and (vi) having emergency prevention, preparedness, and response arrangements in place.

41. The borrower/client will apply preventive and protective measures consistent with international good practice, as reflected in internationally recognized standards such as the World Bank Group's *Environment, Health and Safety Guidelines* (footnote 7).

b. Community Health and Safety

42. The borrower/client will identify and assess the risks to, and potential impacts on, the safety of affected communities during the design, construction, operation, and decommissioning of the project, and will establish preventive measures and plans to address them in a manner commensurate with the identified risks and impacts. These measures will favor the prevention or avoidance of risks and impacts over their minimization and reduction. Consideration will be given to potential exposure to both accidental and natural hazards, especially where the structural elements of the project are accessible to members of the affected community or where their failure could result in injury to the community. The borrower/client will avoid or minimize the exacerbation of impacts caused by natural hazards, such as landslides or floods, which could result from land use changes due to project activities.
43. The borrower/client will inform affected communities of significant potential hazards in a culturally appropriate manner. The borrower/client will be prepared to respond to accidental and emergency situations. This preparation will include response planning document(s) that addresses the training, resources, responsibilities, communications, procedures, and other aspects required to respond effectively to emergencies associated with project hazards. Appropriate information about emergency preparedness and response activities, resources, and responsibilities will be disclosed to affected communities.
44. When structural elements or components, such as dams, tailings dams, or ash ponds, are situated in high-risk locations and their failure or malfunction may threaten the safety of communities, the borrower/client will engage qualified and experienced experts, separate from those responsible for project design and construction, to conduct a review as early as possible in project development and throughout project design, construction, and commissioning.

11. Physical Cultural Resources

45. The borrower/client is responsible for siting and designing the project to avoid significant damage to physical cultural resources.³⁹ Such resources likely to be affected by the project will be identified, and qualified and experienced experts will assess the project's potential impacts on these resources using field-based surveys as an integral part of the environmental assessment process specified in paras. 4–10.
46. When a project may affect physical cultural resources, the borrower/client will consult with affected communities who use, or have used them within living memory, for long-standing cultural purposes to identify physical cultural resources of importance and to incorporate the views of the affected communities on such resources into the borrower's/client's decision-making process. Consultation will also involve relevant national or local regulatory agencies that are entrusted with protecting physical cultural resources. The findings are disclosed as part of, and in the same manner as, the environmental assessment report, except when such disclosure would compromise or jeopardize the safety or integrity of the physical cultural resources.
47. When the project is likely to have adverse impacts on physical cultural resources, the borrower/client will identify appropriate measures for avoiding or mitigating these impacts as part of the environmental planning process specified in paras. 12–16. These measures may range from avoidance to full site protection to selective mitigation, including salvage and documentation, in cases where a portion or all of the physical cultural resources may be lost.
48. When the proposed location of a project is in areas where physical cultural resources are expected to be found as determined during the environmental assessment process, chance finds procedures will be included in the EMP. Chance finds shall not be disturbed until an assessment by a competent specialist is made and actions consistent with these requirements are identified.
49. The project will not remove any physical cultural resources unless the following conditions are met:
 - (i) No alternatives to removal are available.
 - (ii) The overall benefits of the project substantially outweigh the anticipated cultural heritage loss from removal.
 - (iii) Any removal is conducted in accordance with relevant provisions of national and/or local laws, regulations, and protected area management plans and national obligations under international laws, and employs the best available techniques.

³⁹ Defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be located in urban or rural settings and may be above or below ground or under water. Their cultural interest may be at the local, provincial, national, or international level.

Safeguard Requirements 2: Involuntary Resettlement

A. Introduction

1. Asian Development Bank (ADB) experience indicates that involuntary resettlement under development projects⁴⁰, if unmitigated, could give rise to severe economic, social, and environmental risks: production systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable, and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost. ADB therefore seeks to avoid involuntary resettlement wherever possible; minimize involuntary resettlement by exploring project and design alternatives; enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and improve the standards of living of the affected poor and other vulnerable groups.
2. Safeguard Requirements 2 outlines the requirements that borrowers/clients are required to meet in delivering involuntary resettlement safeguards to projects supported by ADB. It discusses the objectives, scope of application, and underscores the requirements for undertaking the social impact assessment and resettlement planning process, preparing social impact assessment reports and resettlement planning documents, exploring negotiated land acquisition, disclosing information and engaging in consultations, establishing a gender responsive grievance mechanism, and resettlement monitoring and reporting.

B. Objectives

3. The objectives are to avoid involuntary resettlement wherever possible; to minimize involuntary resettlement by exploring project and design alternatives; to enhance, or at least restore, the livelihoods of all displaced persons⁴¹ in real terms relative to pre-project levels; and to improve the standards of living of the displaced poor and other vulnerable groups.

C. Scope of Application

4. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects). The

⁴⁰ In this attachment, the term "projects" refers to subprojects by a subproject financed in part or in full by [Name of Bank] using ADB funds, and the term "borrower/client" refers to "subproject company."

⁴¹ In the context of involuntary resettlement, displaced persons are those who are physically displaced (relocation, loss of residential land, or loss of shelter) and/or economically displaced (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas.

requirements also cover involuntary resettlement actions conducted by the borrower/client in anticipation of ADB support.

5. The involuntary resettlement requirements apply to full or partial, permanent or temporary physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) resulting from (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. Resettlement is considered involuntary when displaced individuals or communities do not have the right to refuse land acquisition that results in displacement. This occurs in cases where (i) lands are acquired through expropriation based on eminent domain; and (ii) lands are acquired through negotiated settlements, if expropriation process would have resulted upon the failure of negotiation.
6. If potential adverse economic, social, or environmental impacts from project activities other than land acquisition (including involuntary restrictions on land use, or on access to legally designated parks and protected areas) are identified, such as loss of access to assets or resources or restrictions on land use, they will be avoided, or at least minimized, mitigated, or compensated for, through the environmental assessment process. If these impacts are found to be significantly adverse at any stage of the project, the borrower/client will be required to develop and implement a management plan to restore the livelihood of affected persons to at least pre-project level or better.

A. Requirements

1. Compensation, Assistance and Benefits for Displaced Persons

7. Displaced persons in a project area could be of three types: (i) persons with formal legal rights to land lost in its entirety or in part; (ii) persons who lost the land they occupy in its entirety or in part who have no formal legal rights to such land, but who have claims to such lands that are recognized or recognizable under national laws; and (iii) persons who lost the land they occupy in its entirety or in part who have neither formal legal rights nor recognized or recognizable claims to such land. The involuntary resettlement requirements apply to all three types of displaced persons.
8. The borrower/client will provide adequate and appropriate replacement land and structures or cash compensation at full replacement cost for lost land and structures, adequate compensation for partially damaged structures, and relocation assistance, if applicable, to those persons described in para. 7(i) and 7(ii) prior to their relocation. For those persons described in para. 7(iii), the borrower/client will compensate them for the loss of assets other than land, such as dwellings, and also for other improvements to the land, at full replacement cost. The entitlements of those under para. 7(iii) is given only if they occupied the land or structures in the project area prior to the cutoff date for eligibility for resettlement assistance.
9. Preference will be given to land-based resettlement strategies for displaced persons whose livelihoods are land-based. These strategies may include resettlement on public land, or on private land acquired or purchased for resettlement. Whenever replacement land is offered, displaced persons are provided with land for which a

combination of productive potential, locational advantages, and other factors is at least equivalent to the advantages of the land taken. If land is not the preferred option of the displaced persons, or sufficient land is not available at a reasonable price, non-land-based options built around opportunities for employment or self-employment should be provided in addition to cash compensation for land and other assets lost. The lack of land will be demonstrated and documented to the satisfaction of ADB.

10. The rate of compensation for acquired housing, land and other assets will be calculated at full replacement costs. The calculation of full replacement cost will be based on the following elements: (i) fair market value; (ii) transaction costs; (iii) interest accrued, (iv) transitional and restoration costs; and (v) other applicable payments, if any. Where market conditions are absent or in a formative stage, the borrower/client will consult with the displaced persons and host populations to obtain adequate information about recent land transactions, land value by types, land titles, land use, cropping patterns and crop production, availability of land in the project area and region, and other related information. The borrower/client will also collect baseline data on housing, house types, and construction materials. Qualified and experienced experts will undertake the valuation of acquired assets. In applying this method of valuation, depreciation of structures and assets should not be taken into account.
11. In the case of physically displaced persons, the borrower/client will provide (i) relocation assistance, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, and civic infrastructure and community services as required; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) opportunities to derive appropriate development benefits from the project.
12. In the case of economically displaced persons, regardless of whether or not they are physically displaced, the borrower/client will promptly compensate for the loss of income or livelihood sources at full replacement cost. The borrower/client will also provide assistance such as credit facilities, training, and employment opportunities so that they can improve, or at least restore, their income-earning capacity, production levels, and standards of living to pre-displacement levels. The borrower/client will also provide opportunities to displaced persons to derive appropriate development benefits from the project. The borrower/client will compensate economically displaced people under paragraph 7(iii) for lost assets such as crops, irrigation infrastructure, and other improvements made to the land (but not for the land) at full replacement cost. In cases where land acquisition affects commercial structures, affected business owners are entitled to (i) the costs of reestablishing commercial activities elsewhere; (ii) the net income lost during the transition period; and (iii) the costs of transferring and reinstalling plant, machinery, or other equipment. Business owners with legal rights or recognized or recognizable claims to land where they carry out commercial activities are entitled to replacement property of equal or greater value or cash compensation at full replacement cost.

13. Involuntary resettlement should be conceived of and executed as part of a development project or program. In this regard, the best strategy is to provide displaced persons with opportunities to share project benefits in addition to providing compensation and resettlement assistance. Such opportunities would help prevent impoverishment among affected persons, and also help meet the ethical demand for development interventions to spread development benefits widely. Therefore borrowers/clients are encouraged to ascertain specific opportunities for engaging affected persons as project beneficiaries and to discuss how to spread such opportunities as widely as possible among affected persons in the resettlement plan.
14. The borrower/client will ensure that no physical displacement or economic displacement will occur until (i) compensation at full replacement cost has been paid to each displaced person for project components or sections that are ready to be constructed; (ii) other entitlements listed in the resettlement plan have been provided to displaced persons; and (iii) a comprehensive income and livelihood rehabilitation program, supported by an adequate budget, is in place to help displaced persons improve, or at least restore, their incomes and livelihoods. While compensation is required to be paid before displacement, full implementation of the resettlement plan might take longer. If project activities restrict land use or access to legally designated parks and protected areas, such restrictions will be imposed in accordance with the timetable outlined in the resettlement plan agreed between the borrower/client and ADB.

2. Social Impact Assessment

15. The borrower/client will conduct socioeconomic survey(s) and a census, with appropriate socioeconomic baseline data to identify all persons who will be displaced by the project and to assess the project's socioeconomic impacts on them. For this purpose, normally a cut-off date will be established by the host government procedures. In the absence of such procedures, the borrower/client will establish a cut-off date for eligibility. Information regarding the cutoff date will be documented and disseminated throughout the project area. The social impact assessment (SIA) report will include (i) identified past, present and future potential social impacts, (ii) an inventory of displaced persons⁴² and their assets,⁴³ (iii) an assessment of their income and livelihoods, and (iv) gender-disaggregated information pertaining to the economic and sociocultural conditions of displaced persons. The project's potential social impacts and risks will be assessed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to involuntary resettlement matters, including host country obligations under international law.

⁴² A population record of all displaced persons by their residence based on the census. If a census is not conducted prior to project appraisal and the resettlement plan is based on a sample survey, an updated resettlement plan will be prepared based on a census of displaced persons after the detailed measurement survey has been completed but before any land acquisition for the project.

⁴³ The asset inventory is a preliminary record of affected or lost assets at the household, enterprise, or community level.

16. As part of the social impact assessment, the borrower/client will identify individuals and groups who may be differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. Where such individuals and groups are identified, the borrower/client will propose and implement targeted measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in relation to sharing the benefits and opportunities resulting from development.

3. Resettlement Planning

17. The borrower/client will prepare a resettlement plan, if the proposed project will have involuntary resettlement impacts. The objective of a resettlement plan is to ensure that livelihoods and standards of living of displaced persons are improved, or at least restored to pre-project (physical and/or economic) levels and that the standards of living of the displaced poor and other vulnerable groups are improved, not merely restored, by providing adequate housing, security of land tenure and steady income and livelihood sources. The resettlement plan will address all relevant requirements specified in Safeguard Requirements 2, and its level of detail and comprehensiveness of the resettlement plan will be commensurate with the significance of involuntary resettlement impacts.
18. A resettlement plan will be based on the social impact assessment and through meaningful gender inclusive consultation with the affected persons. A resettlement plan will include measures to ensure that the displaced persons are (i) informed about their options and entitlements pertaining to compensation, relocation, and rehabilitation; (ii) consulted on resettlement options and choices; and (iii) provided with resettlement alternatives. During the identification of the impacts of resettlement and resettlement planning, and implementation, the borrower/client will pay adequate attention to gender concerns, including specific measures addressing the need of female headed households, gender-inclusive consultation, information disclosure, and grievance mechanisms, to ensure that both men and women receive adequate and appropriate compensation for their lost property and resettlement assistance, if required, as well as assistance to restore and improve their incomes and living standards.
19. The borrower/client will analyze and summarize national laws and regulations pertaining to land acquisition, compensation payment, and relocation of affected persons in the resettlement plan. The borrower/client will compare and contrast such laws and regulations with ADB's involuntary resettlement policy principles and requirements. If a gap between the two exists, the borrower/client will propose a suitable gap-filling strategy in the resettlement plan.
20. All costs of compensation, relocation, and livelihood rehabilitation will be considered project costs. To ensure timely availability of required resources, land acquisition and resettlement costs may be considered for inclusion in ADB financing. Resettlement expenditure is eligible for ADB financing if incurred in compliance with ADB's safeguard policy statement and with ADB-approved resettlement planning

documents. If ADB funds are used for resettlement costs, such expenditure items will be clearly reflected in the resettlement plan.

21. The borrower/client will include detailed measures for income restoration and livelihood improvement of displaced persons in the resettlement plan. Income sources and livelihoods affected by project activities will be restored to pre-project levels, and the borrower/client will make every attempt to improve the incomes of displaced persons so that they can benefit from the project. For vulnerable persons and households affected, the resettlement plan will include measures to provide extra assistance so that they can improve their incomes in comparison with pre-project levels. The resettlement plan will specify the income and livelihoods restoration strategy, the institutional arrangements, the monitoring and reporting framework, the budget, and the time-bound implementation schedule.
22. The information contained in a resettlement plan may be tentative until a census of affected persons has been completed. Soon after the completion of engineering designs, the borrower/client will finalize the resettlement plan by completing the census and inventories of loss of assets. At this stage, changes to the resettlement plan take the form of revising the number of displaced persons, the extent of land acquired, the resettlement budget, and the timetable for implementing the resettlement plan. The entitlement matrix of the resettlement plan may be updated at this stage to reflect the relevant changes but the standards set in the original entitlement matrix cannot be lowered when the resettlement plan is revised and finalized. The borrower/client will ensure that the final resettlement plan (i) adequately addresses all involuntary resettlement issues pertaining to the project, (ii) describes specific mitigation measures that will be taken to address the issues, and (iii) ensures the availability of sufficient resources to address the issues satisfactorily.
23. Projects with significant involuntary resettlement impacts will need adequate contingency funds to address involuntary resettlement impacts that are identified during project implementation. The borrower/client will ensure that such funds are readily available. Moreover, the borrower/client will consult with displaced persons identified after the formulation of the final resettlement plan and inform them of their entitlements and relocation options. The borrower/client will prepare a supplementary resettlement plan, or a revised resettlement plan, and will submit it to ADB for review before any contracts are awarded.
24. The borrower/client will use qualified and experienced experts to prepare the social impact assessment and the resettlement plan. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation.

4. Negotiated Land Acquisition

25. Safeguard Requirements 2 does not apply to negotiated settlements, unless expropriation would result upon the failure of negotiations. Negotiated settlements help avoid expropriation and eliminate the need to use governmental authority to remove people forcibly. The borrower/client is encouraged to acquire land and other assets through a negotiated settlement wherever possible, based on meaningful

consultation with affected persons, including those without legal title to assets. A negotiated settlement will offer adequate and fair price for land and/or other assets. The borrower/client will ensure that any negotiations with displaced persons openly address the risks of asymmetry of information and bargaining power of the parties involved in such transactions. For this purpose, the borrower/client will engage an independent external party to document the negotiation and settlement processes. The borrower/client will document consultation processes, policies, and laws that are applicable to such transactions; third-party validation; mechanisms for calculating the replacement costs of land and other assets affected; and record-keeping requirements, and submit the documentation, together with the resettlement plan, through the [Name of Bank], to ADB for review in accordance with paragraph 10 of the main text of this ESMS (page 2).

5. Information Disclosure

26. The borrower/client will provide relevant resettlement information, including information from the documents in the resettlement plan in a timely manner, in an accessible place and in a form and language(s) understandable to affected persons and other stakeholders. For illiterate people, suitable other communication methods will be used.

6. Consultation and Participation

27. The borrower/client will conduct meaningful consultation with affected persons, their host communities, and civil society for every project identified as having involuntary resettlement impacts. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The borrower/client will pay particular attention to the need of disadvantaged or vulnerable groups, especially those below the poverty line, the landless, the elderly, female headed households, women and children, Indigenous Peoples, and those without legal title to land.

7. Grievance Redress Mechanism

289. The borrower/client will establish a gender responsive mechanism to receive and facilitate the resolution of affected persons' concerns and grievances about physical and economic displacement and other project impacts, paying particular attention to the impacts on vulnerable groups. The grievance redress mechanism should be scaled to the risks and adverse impacts of the project. It should address affected persons' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily

accessible to the affected persons at no costs and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The borrower/client will inform affected persons about the mechanism.

8. Monitoring and Reporting

29. The borrower/client will monitor and measure the progress of implementation of the resettlement plan. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording the progress in compensation payment and other resettlement activities, the borrower/client will prepare monitoring reports to ensure that the implementation of the resettlement plan has produced the desired outcomes. For projects with significant involuntary resettlement impacts, the borrower/client will retain qualified and experienced external experts or qualified NGOs to verify the borrower's/client's monitoring information. The external experts engaged by the borrower/client will advise on safeguard compliance issues, and if any significant involuntary resettlement issues are identified, a corrective action plan will be prepared to address such issues. Until such planning documents are formulated, disclosed and approved, the borrower/client will not proceed with implementing the specific project components for which involuntary resettlement impacts are identified.
30. The borrower/client will prepare semiannual monitoring reports that describe the progress of the implementation of resettlement activities and any compliance issues and corrective actions. These reports will closely follow the involuntary resettlement monitoring indicators agreed at the time of resettlement plan approval. The costs of internal and external resettlement monitoring requirements will be included in the project budget.

9. Unanticipated Impacts

31. If unanticipated involuntary resettlement impacts are found during project implementation, the borrower/client will conduct a social impact assessment and update the resettlement plan or formulate a new resettlement plan covering all applicable requirements specified in this document.

10. Special Considerations for Indigenous Peoples

32. The borrower/client will explore to the maximum extent possible alternative project designs to avoid physical relocation of Indigenous Peoples that will result in adverse impacts on their identity, culture, and customary livelihoods. If avoidance is impossible, a combined Indigenous Peoples plan and resettlement plan could be formulated to address both involuntary resettlement and Indigenous Peoples issues.⁴⁴ Such a combined plan will also meet all relevant requirements specified under Safeguard Requirements 3.

⁴⁴ In accordance with paragraph 10 of this ESMS (page 2), [Name of Bank] will submit the combined involuntary resettlement and Indigenous Peoples plan of a category A investment to ADB for review

SAFEGUARD REQUIREMENTS 3: INDIGENOUS PEOPLES⁴⁵

A. Introduction

33. The United Nations Declaration on the Rights of Indigenous Peoples was adopted by the United Nations General Assembly in September 2007. Many countries in Asia and the Pacific have voted in favor of this nonbinding declaration. The Asian Development Bank (ADB) recognizes the rights of Indigenous Peoples to direct the course of their own development. Indigenous Peoples do not automatically benefit from development, which is often planned and implemented by those in the mainstream or dominant population in the countries in which they live. Special efforts are needed to engage Indigenous Peoples in the planning of development programs that affect them, in particular, development programs that are supposedly designed to meet their specific needs and aspirations. Indigenous Peoples are increasingly threatened as development programs infringe into areas that they traditionally own, occupy, use, or view as ancestral domain.

Safeguard Requirements 3 outlines the requirements that borrowers/clients are required to meet in delivering Indigenous Peoples safeguards to projects supported by ADB. It discusses the objectives and scope of application, and underscores the requirements pertaining to (i) undertaking the social impact assessment and planning process; (ii) preparing social impact assessment reports and planning documents; (iii) disclosing information and undertaking consultation, including ascertaining consent of affected Indigenous Peoples community to selected project activities; (iv) establishing a gender responsive grievance mechanism; and (v) monitoring and reporting. This set of policy requirements will safeguard Indigenous Peoples' rights to maintain, sustain, and preserve their cultural identities, practices, and habitats and to ensure that projects affecting them will take the necessary measures to protect these rights.

B. Objectives

33. The objective is to design and implement projects in a way that fosters full respect for Indigenous Peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness as defined by the Indigenous Peoples themselves so that they (i) receive culturally appropriate social and economic benefits, (ii) do not suffer adverse impacts as a result of projects, and (iii) can participate actively in projects that affect them.

C. Scope of Application

34. The requirements apply to all ADB-financed and/or ADB-administered sovereign and non-sovereign projects, and their components regardless of the source of financing, including investment projects funded by a loan; and/or a grant; and/or other means, such as equity and/or guarantees (hereafter broadly referred to as projects). The requirements also cover actions conducted by the borrower/client in anticipation of ADB projects.

⁴⁵ In this attachment, the term "projects" refers to subprojects by a subproject financed by [Name of Bank] using ADB funds, and the term "borrower/client" refers to "subproject company".

Within Asia and the Pacific, individual indigenous communities reflect tremendous diversity in their cultures, histories, and current circumstances. The contexts in which such peoples live are varied and changing and no universally accepted definition of Indigenous Peoples exists. Indigenous Peoples may be referred to in different countries by such terms as indigenous ethnic minorities, indigenous cultural communities, aboriginals, hill tribes, minority nationalities, scheduled tribes, or tribal groups. Such groups can be considered Indigenous Peoples for operational purposes when they possess the characteristics listed in para. 6.

35. For operational purposes, the term Indigenous Peoples is used in a generic sense to refer to a distinct, vulnerable, social and cultural group possessing the following characteristics in varying degrees:
- (i) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others;
 - (ii) collective attachment to geographically distinct habitats or ancestral territories in the project area and to the natural resources in these habitats and territories;
 - (iii) customary cultural, economic, social, or political institutions that are separate from those of the dominant society and culture; and
 - (iv) a distinct language, often different from the official language of the country or region.
36. In considering these characteristics, national legislation, customary law, and any international conventions to which the country is a party will be taken into account.
37. A group that has lost collective attachment to geographically distinct habitats or ancestral territories in the project area because of forced severance remains eligible for coverage under this policy.
38. The Indigenous Peoples safeguards are triggered if a project directly or indirectly affects the dignity, human rights, livelihood systems, or culture of Indigenous Peoples or affects the territories or natural or cultural resources that Indigenous Peoples own, use, occupy, or claim as their ancestral domain.

D. General Requirements

1. Consultation and Participation

39. The borrower/client will undertake meaningful consultation with affected Indigenous Peoples to ensure their informed participation in (i) designing, implementing, and monitoring measures to avoid adverse impacts on them or, when avoidance is not possible, to minimize, mitigate, and compensate for such effects; and (ii) tailoring project benefits that accrue to them in a culturally appropriate manner. Meaningful consultation is a process that (i) begins early in the project preparation stage and is carried out on an ongoing basis throughout the project cycle; (ii) provides timely disclosure of relevant and adequate information that is understandable and readily accessible to affected people; (iii) is undertaken in an atmosphere free of intimidation

or coercion; (iv) is gender inclusive and responsive, and tailored to the needs of disadvantaged and vulnerable groups; and (v) enables the incorporation of all relevant views of affected people and other stakeholders into decision making, such as project design, mitigation measures, the sharing of development benefits and opportunities, and implementation issues. Consultation will be carried out in a manner commensurate with the impacts on affected communities. The consultation process and its results will be documented and reflected in the Indigenous Peoples plan (IPP).

40. To carry out meaningful consultation with affected Indigenous Peoples, the borrower/client will establish a context-specific strategy for inclusive and participatory consultation, including approaches of identifying appropriate Indigenous Peoples representatives, and consultation methods appropriate to the social and cultural values of the affected Indigenous Peoples communities. The borrower/client will pay special attention to the concerns of indigenous women and youth.
41. When the borrower/client and the affected Indigenous Peoples have serious differences and disagreements in relation to the project, its components, or the IPP, the borrower/client will undertake good faith negotiations to resolve such differences and disagreements.

Social Impact Assessment

42. When screening by ADB confirms likely impacts on Indigenous Peoples, the borrower/client will retain qualified and experienced experts to carry out a full social impact assessment (SIA), and if impacts on Indigenous Peoples are identified, the borrower/client will prepare an IPP in conjunction with the feasibility study. The project's potential social impacts and risks will be assessed against the requirements presented in this document and applicable laws and regulations of the jurisdictions in which the project operates that pertain to Indigenous Peoples matters, including host country obligations under international law.
43. Based on the screening, a field-based SIA will be conducted either as part of the feasibility study or as a stand-alone activity. The SIA will, in a gender-sensitive manner, in consultation with Indigenous Peoples communities, identify the project-affected Indigenous Peoples and the potential impacts of the proposed project on them. The SIA will provide a baseline socioeconomic profile of the indigenous groups in the project area and project impact zone; assess their access to and opportunities to avail themselves of basic social and economic services; assess the short- and long-term, direct and indirect, and positive and negative impacts of the project on each group's social, cultural, and economic status; assess and validate which indigenous groups will trigger the Indigenous Peoples policy principles; and assess the subsequent approaches and resource requirements for addressing the various concerns and issues of projects that affect them.
44. The level of detail and comprehensiveness of the SIA will be proportional to the complexity of the proposed project and commensurate with the nature and scale of the proposed project's potential effects on Indigenous Peoples, whether positive or negative.

Indigenous Peoples Planning

45. If the screening and SIA indicate that the proposed project will have impacts, positive and/or negative, on Indigenous Peoples, the borrower/client will prepare an IPP in the context of the SIA and through meaningful consultation with the affected Indigenous Peoples communities. The IPP will set out the measures whereby the borrower/client will ensure (i) that affected Indigenous Peoples receive culturally appropriate social and economic benefits; and (ii) that when potential adverse impacts on Indigenous Peoples are identified, these will be avoided to the maximum extent possible. Where this avoidance is proven to be impossible, based on meaningful consultation with indigenous communities, the IPP will outline measures to minimize, mitigate, and compensate for the adverse impacts. The level of detail and comprehensiveness of IPPs will vary depending on the specific project and the nature of impacts to be addressed. The borrower/client will integrate the elements of the IPP into the project's design.
46. If Indigenous Peoples are the sole or the overwhelming majority of direct project beneficiaries,⁴⁶ and when only positive impacts are identified, the elements of an IPP could be included in the overall project design in lieu of preparing a separate IPP. In such cases, the project document will include a summary of about how the project complies with Indigenous Peoples safeguards. In particular, it will explain how the requirements for meaningful consultation are fulfilled and how the accrual of benefits has been integrated into the project design.
47. The borrower/client will update the IPP following the completion of detailed engineering design and detailed measurement surveys. The updated IPP will closely follow the award of contract packages and the implementation time schedules of each project component or subproject. Mitigating measures to avoid adverse impacts on Indigenous Peoples and measures to enhance culturally appropriate development benefits will be adjusted, but the agreed outcomes as specified in the draft IPP will not be lowered or minimized. If new groups of Indigenous Peoples are identified prior to submission of the final IPP, through the [Name of Bank], to ADB, meaningful consultation will be undertaken with them also.
48. The borrower/client will use qualified and experienced experts to prepare the social impact assessment and IPP. For highly complex and sensitive projects, independent advisory panels of experts not affiliated with the project will be used during project preparation and implementation. Any highly complex and sensitive projects affecting Indigenous Peoples will require an Indigenous Peoples expert on the advisory panel.

Information Disclosure

49. The borrower/client will provide relevant information, including information from the IPP in a timely manner, in an accessible place and in a form and language(s) understandable to the affected Indigenous Peoples and other stakeholders. If the Indigenous Peoples are illiterate, other appropriate communication methods will be used.

⁴⁶ This may be the case in certain developing countries such as Pacific island nations.

Grievance Redress Mechanism

50. The borrower/client will establish a gender responsive mechanism to receive and facilitate resolution of the affected Indigenous Peoples communities' concerns, complaints, and grievances. The grievance mechanism will be scaled to the impacts of the project. It should address concerns and complaints promptly, using an understandable and transparent process that is culturally appropriate, gender responsive, and accessible to the affected Indigenous Peoples communities at no cost and without retribution. The mechanism should not impede access to the country's judicial or administrative remedies. The affected Indigenous Peoples communities will be appropriately informed about the mechanism.

Monitoring and Reporting

51. The borrower/client will monitor and measure the progress of implementation of the IPP. The extent of monitoring activities will be commensurate with the project's risks and impacts. In addition to recording information to track performance, the borrower/client should use dynamic mechanisms, such as inspections and audits, to verify compliance with requirements and progress toward achieving the desired outcomes. For projects with significant adverse impacts on Indigenous Peoples, the borrower/client will retain qualified and experienced external experts or qualified nongovernment organizations to verify monitoring information. The external experts engaged by the borrower/client will advise on compliance issues, and if any significant Indigenous Peoples issues are found, the borrower/client will prepare a corrective action plan or an update to the approved IPP. The borrower/client will implement the corrective actions and follow up on these actions to ensure their effectiveness.
52. The borrower/client will prepare periodic monitoring reports on the progress of IPP implementation, highlighting compliance issues and corrective actions, if any. The borrower/client will submit semiannual monitoring reports. The costs of monitoring requirements will be reflected in project budgets.

Unanticipated Impacts

53. If unanticipated impacts on Indigenous Peoples become apparent during project implementation, such as a change in the project's footprint, the borrower/client will carry out a social impact assessment and update the IPP or formulate a new IPP covering all applicable requirements specified in this document.

E. Special Requirements

1. Ancestral Domains and Lands and Related Natural Resources

54. Indigenous Peoples are closely tied to land, forests, water, wildlife, and other natural resources, and therefore special considerations apply if the project affects such ties. In this situation, when carrying out the social impact assessment and preparing the IPP, the borrower/client will pay particular attention to the following:
 - (i) the customary rights of the Indigenous Peoples, both individual and collective, pertaining to ancestral domains, lands, or territories that they traditionally own or customarily use or occupy, and where access to natural resources is vital to the sustainability of their cultures and livelihood systems;

- (ii) the need to protect such ancestral domains, lands, and resources against illegal intrusion or encroachment;
 - (iii) the cultural and spiritual values that the Indigenous Peoples attribute to such lands and resources;
 - (iv) the Indigenous Peoples' natural resources management practices and the long-term sustainability of such practices; and
 - (v) the need to rehabilitate the livelihood systems of Indigenous Peoples who have been evicted from their lands.
55. If the project involves activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples have traditionally owned or customarily used or occupied, such as land titling projects, or the acquisition of such lands, the borrower/client will integrate an action plan for the legal recognition of customary rights to such lands, territories, and ancestral domains in the IPP. The action plan is normally carried out before project implementation, but in some cases it may need to be formulated concurrently with the project itself. Such legal recognition may take the following forms:
- (i) full legal recognition of existing customary land tenure systems of Indigenous Peoples, or
 - (ii) conversion of customary usage rights to communal and/or individual ownership rights.
56. If neither option is possible under national law, the IPP will include an action plan for legal recognition of perpetual or long-term renewable custodial or user rights.
57. In addition, for projects with potential impacts on Indigenous Peoples, the borrower/client will ensure their meaningful consultation and facilitate their informed participation on matters affecting them directly, such as proposed mitigation measures, sharing of project benefits and opportunities, and implementation arrangements.

2. Consent of Affected Indigenous Peoples Communities

58. Indigenous Peoples may be particularly vulnerable when project activities include (i) commercial development of the cultural resources and knowledge of Indigenous Peoples; (ii) physical displacement from traditional or customary lands; and (iii) commercial development of natural resources within customary lands under use that that would impact the livelihoods or the cultural, ceremonial, or spiritual uses that define the identity and community of Indigenous Peoples. In deciding whether to proceed with a project involving such project activities, the borrower/client will seek the consent of affected Indigenous Peoples communities.

59. For purposes of policy application, consent of affected Indigenous Peoples communities refers to a collective expression by the affected Indigenous Peoples communities, through individuals and/or their recognized representatives, of broad community support for the project activities listed in para. 30. Such broad community support may exist even if some individuals or groups object to the project activities.
60. Where broad community support has been ascertained, the borrower/client will provide documentation that details the process and outcomes of consultations with Indigenous Peoples and Indigenous Peoples' organizations, including (i) the findings of the SIA; (ii) the process of meaningful consultation with the affected Indigenous Peoples communities; (iii) the additional measures, including project design modification, that may be required to address adverse impacts on the Indigenous Peoples and to provide them with culturally appropriate project benefits; (iv) the recommendations for meaningful consultation with and participation by Indigenous Peoples communities during project implementation, monitoring, and evaluation; and (v) the content of any formal agreements reached with Indigenous Peoples communities and/or Indigenous Peoples' organizations. The borrower/client will submit documentation of the engagement process, through the [name of Bank], to ADB for review and for ADB's own investigation to assure itself of the existence of broad community support for the project activities. For investments that are deemed by ADB not to have such support, the [Name of Bank] will reject the investments.
61. When the borrower/client and the affected Indigenous Peoples have major disagreements relating to the design, the IPP, or the implementation of the activities relating to commercial development of the cultural resources, physical displacement of Indigenous Peoples, and/or to commercial development of natural resources, the borrower/client will adopt a process of good faith negotiations for resolving such differences and disagreements.
62. **Commercial Development of Cultural Resources.** If the project involves the commercial development of Indigenous Peoples' cultural resources and knowledge, the borrower/client will ensure that the affected communities are informed of (i) their rights to such resources under statutory and customary law; (ii) the scope and nature of the proposed commercial development and the parties interested or involved in such development; and (iii) the potential effects of such development on Indigenous Peoples' livelihoods, environment, and use of such resources. The IPP will reflect the nature and content of agreements and will include arrangements to ensure that Indigenous Peoples receive an equitable share of the benefits to be derived from such commercial development in a culturally appropriate way.
63. **Physical Displacement of Indigenous Peoples.** The borrower/client will explore to the maximum extent possible alternative project designs to avoid physical displacement of Indigenous Peoples that will result in adverse impacts on their identity, culture, and customary livelihoods. In exceptional circumstances, when avoidance is impossible, the borrower/client will prepare an IPP that could be combined with a resettlement plan. Such a combined plan needs to be compatible with the Indigenous Peoples' cultural preferences and will include a land-based resettlement strategy. Where possible, the plan will allow the affected Indigenous

Peoples to return to the lands and territories they traditionally owned or customarily used or occupied if the reasons for their relocation cease to exist. The plan should include provisions to rehabilitate such lands, if needed.

64. **Commercial Development of Natural Resources.** If the project involves the commercial development of natural resources (such as minerals, hydrocarbons, forests, water, or hunting or fishing grounds) within customary lands under use by Indigenous Peoples, the borrower/client will ensure that the affected communities are informed of (i) their rights to such resources under statutory and customary law; (ii) the scope and nature of the proposed commercial development and the parties interested or involved in such development; and (iii) the potential effects of such development on the Indigenous Peoples' livelihoods, environment, and use of such resources. The borrower/client will include in the IPP arrangements to enable the Indigenous Peoples to receive in a culturally appropriate manner an equitable share of the benefits to be derived from such commercial development that is at least equal to or higher than that of any other affected landowners.

3. Indigenous Peoples and Development

65. In furtherance of the objectives to benefit Indigenous Peoples, developing member countries can ask ADB to support them in their development planning and poverty reduction strategies by providing financial assistance for a variety of initiatives, such as the following:
- (i) strengthen local legislation to establish legal recognition of the customary or traditional land tenure systems of Indigenous Peoples;
 - (ii) enhance participation by Indigenous Peoples in the development process by incorporating their perspectives into the design of development programs and poverty reduction strategies and providing them with opportunities to benefit more fully from development programs through policy and legal reforms, capacity building, and meaningful consultations, participation, and empowerment;
 - (iii) support the development priorities of Indigenous Peoples through programs developed by governments in cooperation with Indigenous Peoples;
 - (iv) address the gender and intergenerational issues that exist among many Indigenous Peoples, including the special needs of indigenous women, youth, and children;
 - (v) prepare participatory profiles of Indigenous Peoples to document their culture, demographic structure, gender and intergenerational relations, and social organization, institutions, production systems, religious beliefs, and resource use patterns;
 - (vi) strengthen the capacity of Indigenous Peoples communities and Indigenous Peoples' organizations to prepare, implement, monitor, and evaluate development programs;
 - (vii) strengthen the capacity of government agencies responsible for providing development services to Indigenous Peoples;

- (viii) preserve and respect indigenous knowledge, including strengthening intellectual property rights; and
- (ix) facilitate partnerships among the government, Indigenous Peoples' organizations, civil society organizations, and the private sector to promote Indigenous Peoples' development programs.

Annexure – III: ADB’S Social Protection Requirements

ADB’s Social Protection Requirements

The Social Protection Strategy requires NDRMF to comply with applicable labor laws in relation to the Investment. Sub-borrowers should take the following measures to comply with the core labor standards⁴⁷:

- (a) Carry out its activities consistent with the intent of ensuring legally permissible equal opportunity, fair treatment and non-discrimination in relation to recruitment and hiring, compensation, working conditions and terms of employment for its workers (including prohibiting any form of discrimination against women during hiring and providing equal work for equal pay for men and women engaged by the sub-borrower);
- (b) Not restrict its workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and
- (c) Engage contractors and other providers of goods and services:
 - (i) Who do not employ child labor⁴⁸ or forced labor⁴⁹;
 - (ii) Who have appropriate management systems that will allow them to operate in a manner which is consistent with the intent of (A) ensuring legally permissible equal opportunity and fair treatment and nondiscrimination for their workers, and (B) not restricting their workers from developing a legally permissible means of expressing their grievances and protecting their rights regarding working conditions and terms of employment; and
 - (iii) Whose subcontracts contain provisions which are consistent with paragraphs (i) and (ii) above.

The above measures should be incorporated in the sub-borrowers’ environmental (and/or social) management plan (ESMP).

The monitoring and reporting requirements should also state that the (i) the sub-borrower will provide NDRMF with an annual report on its compliance with the measures identified

⁴⁷ The core labor standards are the elimination of all forms of forced or compulsory labor; the abolition of child labor; elimination of discrimination in respect of employment and occupation; and freedom of association and the effective recognition of the right to collective bargaining, as per the relevant conventions of the International Labor Organization.

⁴⁸ Child labor means the employment of children whose age is below the statutory minimum age of employment in the relevant country, or employment of children in contravention of International Labor Organization Convention No. 138 ‘Minimum Age Convention’ (www.ilo.org).

⁴⁹ Forced labor means all work or services not voluntarily performed, that is, extracted from individuals under threat of force or penalty.

above. NDRMF should monitor the compliance of the sub-borrower and include this in this in the Semi-Annual Environmental and Social Performance Report.

Annexure – IV: ADB Environmental Assessment Checklists For Different Project Types

URBAN DEVELOPMENT PROJECTS

Rapid Environmental Assessment (REA) Checklist

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 the 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:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area...			
▪ Densely populated?			
▪ Heavy with development activities?			

Screening Questions	Yes	No	Remarks
▪ Adjacent to or within any environmentally sensitive areas?			
• Cultural heritage site			
• Protected Area			
• Wetland			
• Mangrove			
• Estuarine			
• Buffer zone of protected area			
• Special area for protecting biodiversity			
• Bay			
B. Potential Environmental Impacts Will the Project cause...			
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems and their interactions with other urban services.			
▪ Deterioration of surrounding environmental conditions due to rapid urban population growth, commercial and industrial activity, and increased waste generation to the point that both manmade and natural systems are overloaded and the capacities to manage these systems are overwhelmed?			
▪ Degradation of land and ecosystems (e.g. loss of wetlands and wild lands, coastal zones, watersheds and forests)?			
▪ Dislocation or involuntary resettlement of people?			
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable group?			
▪ Degradation of cultural property, and loss of cultural heritage and tourism revenues?			
▪ Occupation of low-lying lands, floodplains and steep hillsides by squatters and low-income groups, and their exposure to increased health hazards and risks due to pollutive industries?			

Screening Questions	Yes	No	Remarks
▪ Water resource problems (e.g. depletion/degradation of available water supply, deterioration for surface and ground water quality, and pollution of receiving waters?			
▪ Air pollution due to urban emissions?			
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical and biological hazards during project construction and operation?			
▪ Road blocking and temporary flooding due to land excavation during rainy season?			
▪ Noise and dust from construction activities?			
▪ Traffic disturbances due to construction material transport and wastes?			
▪ Temporary silt runoff due to construction?			
▪ Hazards to public health due to ambient, household and occupational pollution, thermal inversion, and smog formation?			
▪ Water depletion and/or degradation?			
▪ Overpaying of ground water, leading to land subsidence, lowered ground water table, and Stalinization?			
▪ Contamination of surface and ground waters due to improper waste disposal?			
▪ Pollution of receiving waters resulting in amenity losses, fisheries and marine resource depletion, and health problems?			
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ Social conflicts if workers from other regions or countries are hired?			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> ▪ 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 operation and construction? 			
<ul style="list-style-type: none"> ▪ Community safety risks due to both accidental and natural hazards, 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? 			

BUILDINGS

Rapid Environmental Assessment (REA) Checklist

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:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following areas:			
▪ Underground utilities			
▪ Cultural heritage site			
▪ Protected Area			
▪ Wetland			
▪ Mangrove			

Screening Questions	Yes	No	Remarks
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
▪ Bay			
B. Potential Environmental Impacts Will the Project cause...			
▪ Encroachment on historical/cultural areas?			
▪ Encroachment on precious ecology (e.g. sensitive or protected areas)?			
▪ Impacts on the sustainability of associated sanitation and solid waste disposal systems?			
▪ Dislocation or involuntary resettlement of people?			
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ Accident risks associated with increased vehicular traffic, leading to loss of life?			
▪ Increased noise and air pollution resulting from increased traffic volume?			
▪ Occupational and community health and safety risks?			
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ Generation of dust in sensitive areas during construction?			
▪ Requirements for disposal of fill, excavation, and/or spoil materials?			
▪ Noise and vibration due to blasting and other civil works?			
▪ Long-term impacts on groundwater flows as result of needing to drain the project site prior to construction?			
▪ Long-term impacts on local hydrology as a result of building hard surfaces in or near the building?			
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ Social conflicts if workers from other regions or countries are hired?			
▪ Risks to community safety caused by fire, electric shock, or failure of the buildings safety features during operation?			

Screening Questions	Yes	No	Remarks
<ul style="list-style-type: none"> ▪ Risks to community health and safety caused by management and disposal of waste? 			
<ul style="list-style-type: none"> ▪ Community safety risks due to both accidental and natural hazards, 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? 			

IRRIGATION

Rapid Environmental Assessment (REA) Checklist

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 the 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:

Sector Division:

Screening Questions	Yes	No	Remarks
A. Project Siting Is the Project area adjacent to or within any of the following environmentally sensitive areas?			
▪ Protected Area			
▪ Wetland			

Screening Questions	Yes	No	Remarks
▪ Mangrove			
▪ Estuarine			
▪ Buffer zone of protected area			
▪ Special area for protecting biodiversity			
B. Potential Environmental Impacts Will the Project cause...			
▪ Loss of precious ecological values (e.g. result of encroachment into forests/swamplands or historical/cultural buildings/areas, disruption of hydrology of natural waterways, regional flooding, and drainage hazards)?			
▪ Conflicts in water supply rights and related social conflicts?			
▪ Impediments to movements of people and animals?			
▪ Potential ecological problems due to increased soil erosion and siltation, leading to decreased stream capacity?			
▪ Insufficient drainage leading to salinity intrusion?			
▪ Over pumping of groundwater, leading to salinization and ground subsidence?			
▪ Impairment of downstream water quality and therefore, impairment of downstream beneficial uses of water?			
▪ Dislocation or involuntary resettlement of people?			
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ Potential social conflicts arising from land tenure and land use issues?			
▪ Soil erosion before compaction and lining of canals?			
▪ Noise from construction equipment?			
▪ Dust during construction?			

Screening Questions	Yes	No	Remarks
▪ Waterlogging and soil salinization due to inadequate drainage and farm management?			
▪ Leaching of soil nutrients and changes in soil characteristics due to excessive application of irrigation water?			
▪ Reduction of downstream water supply during peak seasons?			
▪ Soil pollution, polluted farm runoff and groundwater, and public health risks due to excessive application of fertilizers and pesticides?			
▪ Soil erosion (furrow, surface)?			
▪ Scouring of canals?			
▪ Clogging of canals by sediments?			
▪ Clogging of canals by weeds?			
▪ Seawater intrusion into downstream freshwater systems?			
▪ Introduction of increase in incidence of waterborne or water related diseases?			
▪ Dangers to a safe and healthy working environment due to physical, chemical and biological hazards during project construction and operation?			
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ Social conflicts if workers from other regions or countries are hired?			
▪ 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?			
▪ Community safety risks due to both accidental and natural hazards, especially where the structural elements or components of the project (e.g., irrigation dams) 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?			

GENERAL

Rapid Environmental Assessment (REA) Checklist

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:

Sector Division:

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			
▪ Legally protected Area (core zone or buffer zone)			

Screening Questions	Yes	No	Remarks
▪ Wetland			
▪ Mangrove			
▪ Estuarine			
▪ Special area for protecting biodiversity			
B. Potential Environmental Impacts Will the Project cause...			
▪ Impairment of historical/cultural areas; disfiguration of landscape or potential loss/damage to physical cultural resources?			
▪ Disturbance to precious ecology (e.g. sensitive or protected areas)?			
▪ Alteration of surface water hydrology of waterways resulting in increased sediment in streams affected by increased soil erosion at construction site?			
▪ Deterioration of surface water quality due to silt runoff and sanitary wastes from worker-based camps and chemicals used in construction?			
▪ Increased air pollution due to project construction and operation?			
▪ Noise and vibration due to project construction or operation?			
▪ Involuntary resettlement of people? (physical displacement and/or economic displacement)			
▪ Disproportionate impacts on the poor, women and children, Indigenous Peoples or other vulnerable groups?			
▪ 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?			
▪ Creation of temporary breeding habitats for diseases such as those transmitted by mosquitoes and rodents?			
▪ Social conflicts if workers from other regions or countries are hired?			

Screening Questions	Yes	No	Remarks
▪ Large population influx during project construction and operation that causes increased burden on social infrastructure and services (such as water supply and sanitation systems)?			
▪ Risks and vulnerabilities related to occupational health and safety due to physical, chemical, biological, and radiological hazards during project construction and operation?			
▪ 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?			
▪ 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?			
▪ Generation of solid waste and/or hazardous waste?			
▪ Use of chemicals?			
▪ Generation of wastewater during construction or operation?			

Annexure – V: Involuntary Resettlement Impact Categorization

Involuntary resettlement impact categorization

Date:

A. Project Data Country / Project No. / Project Title _____ _____			
B. Involuntary Resettlement Category <input type="checkbox"/> New <input type="checkbox"/> Re-categorization — Previous Category <input type="checkbox"/>			
<input type="checkbox"/> Category A	<input type="checkbox"/> Category B	<input type="checkbox"/> Category C	<input type="checkbox"/> Category FI
C. Comments by Project:			
Field Team:		Consultant:	
D. Approval			
Prepared by: Date:		Reviewed/Cleared by: ADB Safeguard Unit: Date:	

Involuntary Resettlement Impact Categorization Checklist

Probable Involuntary Resettlement Effects (Please elaborate in the Remarks column)	Yes	No	Not Known	Remarks
Involuntary Acquisition of Land				
1. Will there be land acquisition?				

Probable Involuntary Resettlement Effects (Please elaborate in the Remarks column)	Yes	No	Not Known	Remarks
2. Is the site for land acquisition known?				
3. Is the ownership status and current usage of land to be acquired known?				
4. Will easement be utilized within an existing right of way (ROW)?				
5. Will there be loss of shelter and residential land due to land acquisition?				
6. Will there be loss of agricultural and other productive assets due to land acquisition?				
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?				
8. Will there be loss of businesses or enterprises due to land acquisition?				
9. Will there be loss of income sources and means of livelihoods due to land acquisition?				
Involuntary Restrictions on Land Use or on Access to Legally Designated Parks and Protected Areas				
10. Will people lose access to natural resources, communal facilities and services?				
11. If land use is changed, will it have an adverse impact on social and economic activities?				
12. Will access to land and resources owned communally or by the state be restricted?				
Information on Displaced Persons:				
Any estimate of the likely number of persons that will be displaced by the Subproject? <input type="checkbox"/> No <input type="checkbox"/> Yes If yes, approximately how many? _____				
Are any of them poor, female-heads of households, or vulnerable to poverty risks? <input type="checkbox"/> No <input type="checkbox"/> Yes				

Probable Involuntary Resettlement Effects (Please elaborate in the Remarks column)	Yes	No	Not Known	Remarks
<p align="center">Are any displaced persons from indigenous or ethnic minority groups?</p> <p align="center"><input type="checkbox"/> No <input type="checkbox"/> Yes</p>				

Annexure – VI: Indigenous Peoples Impact Categorization

Indigenous peoples impact categorization

Date:

A. Project Data Country / Project No. / Project Title _____ _____							
B. Indigenous Peoples Category [] New [] Re-categorization — Previous Category [] <table border="1"><tr><td><input type="checkbox"/> Category A</td><td><input type="checkbox"/> Category B</td><td><input type="checkbox"/> Category C</td><td><input type="checkbox"/> Category FI</td></tr></table> Project requires the broad community support of affected Indigenous Peoples communities. <input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> Category A	<input type="checkbox"/> Category B	<input type="checkbox"/> Category C	<input type="checkbox"/> Category FI
<input type="checkbox"/> Category A	<input type="checkbox"/> Category B	<input type="checkbox"/> Category C	<input type="checkbox"/> Category FI				
C. Comments by Project Team							
Field Team:		Consultant					
D. Approval							
Prepared by: Date:		Reviewed/Cleared by: ADB Safeguard Unit Date:					

Indigenous Peoples Impact Screening Checklist

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
A. Indigenous Peoples Identification				
1. Are there socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the project area?				
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?				
3. Do such groups self-identify as being part of a distinct social and cultural group?				
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?				
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?				
6. Do such groups speak a distinct language or dialect?				
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?				
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?				
B. Identification of Potential Impacts				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?				

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)				
11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)				
12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?				
C. Identification of Special Requirements <i>Will the project activities include:</i>				
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?				
14. Physical displacement from traditional or customary lands?				
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?				
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples ?				
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples ?				

D. Anticipated project impacts on Indigenous Peoples

Project component/ activity/ output	Anticipated positive effect	Anticipated negative effect
1. Not applicable	Not applicable	Not applicable

EPA - Projects requiring an IEE

A. Agriculture, Livestock and Fisheries

1. Poultry, livestock, stud and fish farms
2. Projects involving packaging, formulation, cold storage and warehouse of agricultural products.

B. Energy

1. Hydroelectric power generation less than 50 MW
2. Thermal power generation less than 100MW
3. Coal fired power plants with capacity less than 50 MW
4. Transmission lines less than 11 KV, and grid station
5. Waste-to-energy generation projects including bio-mass less than 25 MW
6. Solar project
7. Wind project

C. Oil and Gas projects:

1. Oil and gas 2D/3D Seismic survey and drilling activities
2. Oil and gas extraction projects including exploration and production located outside the environmentally sensitive areas
3. Construction of LPG storage facilities
4. Construction of LPG, CNG filling station and petrol pumps

D. Manufacturing and processing

1. Ceramics and glass units less than 500 million
2. Food processing industries with total cost less than Rs. 200 millions
3. Pharmaceutical units.
4. Marble units
5. Carpet manufacturing units
6. Rice mills, ghee/oil mills ,
7. Brick kilns
8. Stone crushing units
9. Man-made fibers and resin projects with total cost less than Rs. 200 millions

10. Manufacturing of apparel, textile garments unit , including dyeing, bleaching and printing, with total cost less than Rs.50 million
11. Wood products with total cost more than Rs.100 million
12. Steel re-rolling mills
13. Recycling plants

E. Mining and mineral processing

1. Commercial extraction of sand, gravel, limestone, clay, sulphur and other minerals not included in Schedule II with total cost less than Rs.100 million
2. Crushing, grinding and separation processes
3. Smelting plants with total cost less than Rs100 millions

F. Transport

1. Flyovers, underpasses and bridges having total length less than 500 meters

G. Water management, dams, irrigation and flood protection

1. Dams and reservoirs with storage volume less than 25 million cubic meters of surface area less than 4 square kilometers
2. Small-scale irrigation systems and drainage system with total cost less than Rs. 100 million

H. Water supply and filtration

1. Water supply schemes and filtration plants with total cost less than 100 million (Including projects of maintenance, up gradation, reconstruction of existing projects.)

I. Waste disposal and treatment

1. Solid and non-hazardous waste with annual capacity less than 10,000 tons
2. Waste water treatment for sewage treatment facility with total cost less than 200M
3. Industry specific Waste water treatment facility for Industrial effluent (small scale plant)

J. Urban development

1. Housing schemes less than 10 acres
2. Multi-story buildings having residential and commercial setup on the total plot size is less than 2000 sq. yards
3. Hospitals with capacity of 50 beds, health care unit/laboratories with 500 OPD/day.
4. Construction of Educational, Academic institutions on land less than 10 acres.

K. Other projects

2. Any other project for which filing of an IEE is required by the Agency under sub-regulation (2) of Regulation 6.

Annexure – VIII: EPA - Projects Requiring Environmental Screening (Through Checklist)

EPA - Projects requiring Environmental Screening (through Checklist)

- A.** Construction of, offices and small commercial buildings (1-6 story), home industrial units, warehouses, marriage / banquet facilities, large scale motor vehicles workshops, restaurants / food outlets, large baking unit subject to the compliance with existing zoning laws.
- B.** Reconstruction / rehabilitation of roads (small roads in urban area and farm to market roads more than 2 km.
- C.** On-farm dams and fish farms.
- D.** Pulses mills.
- E.** Flour Mills
- F.** Projects promoting energy efficiency (small scale).
- G.** Lining of existing minor canals and /or water courses.
- H.** Canal cleaning
- I.** Forest harvesting operations
- J.** Rain harvesting projects
- K.** Rural schools (Secondary and Higher Secondary) and rural and basic health units having at least ten beds capacity.
- L.** BTS Towers
- M.** Lime Kilns
- N.** Ice factories and cold storage.
- O.** Cotton oil mill
- P.** Warehouses for pesticides and pharmaceuticals

Procedural and Sectoral Guidelines for Environmental Assessment

- *Guidelines for the Preparation and Review of Environmental Reports, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Guidelines for Public Consultation, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Guidelines for Sensitive and Critical Areas, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Major Thermal Power Stations, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Major Chemical and Manufacturing Plants, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Housing Estates and New Town Development, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Industrial Estates, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Major Roads, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Major Sewerage Schemes, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines: Oil and Gas Exploration, 1997.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *National Biosafety Guidelines, 2005.* Pakistan Environmental Protection Agency, Government of Pakistan.
- *Sectoral Guidelines for Environmental Reports: Wind Power Projects, 2010.* Pakistan Environmental Protection Agency, Government of Pakistan.

EPA & ADB Project Environmental Assessment Guidelines

Category ‘B’ sub-projects

IEE Preparation

- Once the categorization for the sub-project is agreed by both ADB and in accordance with national environmental guidelines, the Terms of Reference for the IEE will be prepared by the FIP and provided to the SGU and will then be shared with ADB,
- Any comments from SGU or ADB will be incorporated into the ToRs for the study
- The IEE will be prepared by the FIP to meet national environmental regulations and guidelines as well as the ADB SPS, 2009 requirements and standards.
- The SGU will review and approve this draft version of the IEE report prior to submitting to ADB for review and comments.
- Any comments from ADB will be incorporated into the IEE report by FIP and this finalized version of the report shall be submitted to the respective EPA for review.

ADB review process

- The ADB project focal staff will review the report and assess compliance in terms of quality and compliance with the ADB SPS, 2009.
- The project environmental focal team will issue comments (if any), which will be compiled and provided to the Director QAG who will share the comments with the environment consultant and submit the revised IEE report with all comments incorporated to ADB for a second review.
- Upon satisfactory review of this revised IEE draft report, this version of the report will be approved internally and placed on the ADB website for public disclosure.

EPA review process

- The EPA will scrutinize the IEE report for its completeness within 15 days of submission and may require additional information.
- The EPA will also circulate the IEE report to the concerned Government Agencies and solicit their comments, which will be collated, tabulated and duly considered by it before decision on the IEE report.
- The EPA will commission review and/or field visit of the proposed project site to its staff or a committee of experts.
- Once the review and feedback process is complete, the EPA will communicate its approval of IEE along with conditions of approval, or otherwise to the FIP.
- Upon receiving the environmental approval with conditions, the FIP will acknowledge

acceptance of the stipulated conditions through an undertaking before commencing construction or operations of the project. The FIP will request to the EPA for confirmation of compliance accompanied by an Environmental Management Plan indicating the measures and procedures proposed to be taken to manage or mitigate the environmental impacts for the life of the project, including provisions for monitoring, reporting and auditing.

- The EPA will issue the requisite confirmation of compliance, ideally within 20 days, and may impose some other conditions regarding the Environmental Management Plan, operation, maintenance and monitoring of the project.
- Since, in most cases, the EMP is submitted along with the environmental assessment report, and the environmental approval includes conditions to be met with regard to EMP, this step is merely procedural.
- The EPA is bound to complete the review of an IEE within 60 days. If a decision on the IEE report is not made and communicated to the proponent within this deadline, the same would be deemed approved.

Category 'C' sub-projects

REA/EC Preparation

An Environmental Checklist on the format as provided by EPA shall be completed while in the case of fulfillment of ADB requirements, an ADB REA Checklist will be completed by choosing the applicable Checklist, based on the respective sub-project sector.

ADB review process

The completed REA Checklist will be submitted to the ADB project team, which will review the information provided and might request for additional information, if felt necessary. Once satisfied with the project information provided, the categorization of the project as Category 'C' will be confirmed. If felt necessary, due diligence visits will be conducted during the project construction phase to ensure as per REA Checklist, no significant impacts are taking place in the project area(s).

EPA review process

- The EPA will scrutinize the Environmental Checklist (EC) for its completeness within 15 days of submission and may require additional information.
- The EPA will also circulate the EC to the concerned Government Agencies and solicit their comments, which will be collated, tabulated and duly considered by it before the decision on the EC.
- The EPA will commission review and/or field visit of the proposed project site to its staff or a committee of experts.
- Once the review and feedback process is complete, the EPA will communicate its approval of EC along with conditions of approval, or otherwise to the FIP.
- The EPA is bound to complete the review of an Environmental Checklist within 30 days from the date of confirmation of completeness. If a decision on the environmental assessment report is not made and communicated to the FIP within this deadline, the same would be deemed approved.

Outline of a Resettlement Plan for Sub-Projects

A resettlement plan is required for all projects with involuntary resettlement impacts. Its level of detail and comprehensiveness is commensurate with the significance of potential involuntary resettlement impacts and risks. The substantive aspects of the outline will guide the preparation of the resettlement plans, although not necessarily in the order shown.

A. Executive Summary

This section provides a concise statement of project scope, key survey findings, entitlements and recommended actions.

B. Project Description

This section provides a general description of the project, discusses project components that result in land acquisition, involuntary resettlement, or both and identify the project area. It also describes the alternatives considered to avoid or minimize resettlement. Include a table with quantified data and provide a rationale for the final decision.

C. Scope of Land Acquisition and Resettlement

This section:

- i. Discusses the project's potential impacts, and includes maps of the areas or zone of impact of project components or activities;
- ii. Describes the scope of land acquisition (provide maps) and explains why it is necessary for the main investment project;
- iii. Summarizes the key effects in terms of assets acquired and displaced persons; and
- iv. Provides details of any common property resources that will be acquired.

D. Socioeconomic Information and Profile

This section outlines the results of the social impact assessment, the census survey, and other studies, with information and/or data disaggregated by gender, vulnerability, and other social groupings, including:

- i. Define, identify, and enumerate the people and communities to be affected;
- ii. Describe the likely impacts of land and asset acquisition on the people and communities affected taking social, cultural, and economic parameters into account;
- iii. Discuss the project's impacts on the poor, indigenous and/or ethnic minorities, and other vulnerable groups; and

- iv. Identify gender and resettlement impacts, and the socioeconomic situation, impacts, needs, and priorities of women.

E. Information Disclosure, Consultation, and Participation

This section:

- i. Identifies project stakeholders, especially primary stakeholders;
- ii. Describes the consultation and participation mechanisms to be used during the different stages of the project cycle;
- iii. Describes the activities undertaken to disseminate project and resettlement information during project design and preparation for engaging stakeholders;
- iv. Summarizes the results of consultations with affected persons (including host communities), and discusses how concerns raised and recommendations made were addressed in the resettlement plan;
- v. Confirms disclosure of the draft resettlement plan to affected persons and includes arrangements to disclose any subsequent plans; and
- vi. Describes the planned information disclosure measures (including the type of information to be disseminated and the method of dissemination) and the process for consultation with affected persons during project implementation.

F. Grievance Redress Mechanisms

This section describes mechanisms to receive and facilitate the resolution of affected persons' concerns and grievances. It explains how the procedures are accessible to affected persons and gender sensitive.

G. Legal Framework

This section:

- i. Describes national and local laws and regulations that apply to the project and identify gaps between local laws and ADB's policy requirements; and discuss how any gaps will be addressed.
- ii. Describes the legal and policy commitments from the executing agency for all types of displaced persons;
- iii. Outlines the principles and methodologies used for determining valuations and compensation rates at replacement cost for assets, incomes, and livelihoods; and set out the compensation and assistance eligibility criteria and how and when compensation and assistance will be provided.
- iv. Describes the land acquisition process and prepare a schedule for meeting key procedural requirements.

H. Entitlements, Assistance and Benefits

This section:

- i. Defines displaced persons' entitlements and eligibility, and describes all resettlement assistance measures (includes an entitlement matrix);
- ii. Specifies all assistance to vulnerable groups, including women, and other special groups; and.
- iii. Outline opportunities for affected persons to derive appropriate development benefits from the project.

I. Relocation of Housing and Settlements

This section:

- i. Describes options for relocating housing and other structures, including replacement housing, replacement cash compensation, and/or self-selection (ensure that gender concerns and support to vulnerable groups are identified);
- ii. Describes alternative relocation sites considered; community consultations conducted; and justification for selected sites, including details about location, environmental assessment of sites, and development needs;
- iii. Provides timetables for site preparation and transfer;
- iv. Describes the legal arrangements to regularize tenure and transfer titles to resettled persons;
- v. Outlines measures to assist displaced persons with their transfer and establishment at new sites;
- vi. Describes plans to provide civic infrastructure; and
- vii. Explains how integration with host populations will be carried out.

J. Income Restoration and Rehabilitation

This section:

- i. Identifies livelihood risks and prepare disaggregated tables based on demographic data and livelihood sources;
- ii. Describes income restoration programs, including multiple options for restoring all types of livelihoods (examples include project benefit sharing, revenue sharing arrangements, joint stock for equity contributions such as land, discuss sustainability and safety nets);
- iii. Outlines measures to provide social safety net through social insurance and/or project special funds;
- iv. Describes special measures to support vulnerable groups;
- v. Explains gender considerations; and
- vi. Describe training programs.

K. Resettlement Budget and Financing Plan

This section:

- i. Provide an itemized budget for all resettlement activities, including for the resettlement unit, staff training, monitoring and evaluation, and preparation of resettlement plans during loan implementation.
- ii. Describes the flow of funds (the annual resettlement budget should show the budget-scheduled expenditure for key items).
- iii. Includes a justification for all assumptions made in calculating compensation rates and other cost estimates (taking into account both physical and cost contingencies), plus replacement costs.
- iv. Include information about the source of funding for the resettlement plan budget.

L. Institutional Arrangements

This section:

- i. Describes institutional arrangement responsibilities and mechanisms for carrying out the measures of the resettlement plan;
- ii. Includes institutional capacity building program, including technical assistance, if required;
- iii. Describes role of NGOs, if involved, and organizations of affected persons in resettlement planning and management; and
- iv. Describes how women's groups will be involved in resettlement planning and management,

M. Implementation Schedule

This section includes a detailed, time bound, implementation schedule for all key resettlement and rehabilitation activities. The implementation schedule should cover all aspects of resettlement activities synchronized with the project schedule of civil works construction, and provide land acquisition process and timeline.

N. Monitoring and Reporting

This section describes the mechanisms and benchmarks appropriate to the project for monitoring and evaluating the implementation of the resettlement plan. It specifies arrangements for participation of affected persons in the monitoring process. This section will also describe reporting procedures.

Outline of an Indigenous Peoples Plan for Subprojects

1. An Indigenous Peoples plan (IPP) is required for all subprojects with impacts on Indigenous Peoples. Its level of detail and comprehensiveness is commensurate with the significance of potential impacts on Indigenous Peoples. The substantive aspects of this outline will guide the preparation of IPPs, although not necessarily in the order shown.

A. Executive Summary of the Indigenous Peoples Plan

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

B. Description of the Subproject

3. This section provides a general description of the subproject; discusses subproject components and activities that may bring impacts on Indigenous Peoples; and identifies the subproject area.

C. Social Impact Assessment

4. This section:

- (i) Reviews the legal and institutional framework applicable to Indigenous Peoples in subproject context;
- (ii) Provides baseline information on the demographic, social, cultural, and political characteristics of the affected Indigenous Peoples communities; the land and territories that they have traditionally owned or customarily used or occupied; and the natural resources on which they depend;
- (iii) Identifies key subproject stakeholders and elaborate a culturally appropriate and gender-sensitive process for meaningful consultation with Indigenous Peoples at each stage of subproject preparation and implementation, taking the review and baseline information into account;
- (iv) Assesses, based on meaningful consultation with the affected Indigenous Peoples communities, the potential adverse and positive effects of the subproject. Critical to the determination of potential adverse impacts is a gender-sensitive analysis of the relative vulnerability of, and risks to, the affected Indigenous Peoples communities given their particular circumstances and close ties to land and natural resources, as well as their lack of access to opportunities relative to those available to other social groups in the communities, regions, or national societies in which they live;
- (v) Includes a gender-sensitive assessment of the affected Indigenous Peoples' perceptions about the subproject and its impact on their social, economic, and cultural status; and

- (vi) Identifies and recommends, based on meaningful consultation with the affected Indigenous Peoples communities, the measures necessary to avoid adverse effects or, if such measures are not possible, identifies measures to minimize, mitigate, and/or compensate for such effects and to ensure that the Indigenous Peoples receive culturally appropriate benefits under the subproject.

D. Information Disclosure, Consultation and Participation

5. This section:

- i. Describes the information disclosure, consultation and participation process with the affected Indigenous Peoples communities that was carried out during subproject preparation;
- ii. Summarizes their comments on the results of the social impact assessment and identifies concerns raised during consultation and how these have been addressed in subproject design;
- iii. In the case of subproject activities requiring broad community support, documents the process and outcome of consultations with affected Indigenous Peoples communities and any agreement resulting from such consultations for the subproject activities and safeguard measures addressing the impacts of such activities;
- iv. Describes consultation and participation mechanisms to be used during implementation to ensure Indigenous Peoples participation during implementation; and
- v. Confirms disclosure of the draft and final IPP to the affected Indigenous Peoples communities.

E. Beneficial Measures

6. This section specifies the measures to ensure that the Indigenous Peoples receive social and economic benefits that are culturally appropriate, and gender responsive.

F. Mitigative Measures

7. This section specifies the measures to avoid adverse impacts on Indigenous Peoples; and where the avoidance is impossible, specifies the measures to minimize, mitigate and compensate for identified unavoidable adverse impacts for each affected Indigenous Peoples groups.

G. Capacity Building

8. This section provides measures to strengthen the social, legal, and technical capabilities of (a) government institutions to address Indigenous Peoples issues in the subproject area; and (b) Indigenous Peoples organizations in the subproject area to enable them to represent the affected Indigenous Peoples more effectively.

H. Grievance Redress Mechanism

9. This section describes the procedures to redress grievances by affected Indigenous Peoples communities. It also explains how the procedures are accessible to Indigenous Peoples and culturally appropriate and gender sensitive.

I. Monitoring, Reporting and Evaluation

10. This section describes the mechanisms and benchmarks appropriate to the subproject for monitoring, and evaluating the implementation of the IPP. It also specifies arrangements for participation of affected Indigenous Peoples in the preparation and validation of monitoring, and evaluation reports.

J. Institutional Arrangement

11. This section describes institutional arrangement responsibilities and mechanisms for carrying out the various measures of the IPP. It also describes the process of including relevant local organizations and NGOs in carrying out the measures of the IPP.

K. Budget and Financing

12. This section provides an itemized budget for all activities described in the IPP.

Annexure – XIII: Suggested Outline Of Environmental And Social Due Diligence Report

Suggested Outline Of Environmental And Social Due Diligence Report

A. Introduction

1. Subproject description: title, type of subproject, location and setting, amount, size (production capacity, number of staff, etc.).
2. Environmental and social categorization and rationale.
3. Applicable Environmental and Social Requirements. See Section II B of [Name of Bank]'s ESMS).

B. Scope of Review and Methodology

1. Documents reviewed (e.g., environmental assessment reports, involuntary resettlement plan, Indigenous Peoples plan, or environmental and social compliance audit reports, copies of permits/licenses, etc.).
2. Methodology adopted (e.g. site visit, inspection report, etc)

C. Compliance and Liability (by relevant safeguard requirements applicable for the specific subproject, examine environmental and social issues and compliance)

1. Examine issues in terms of environmental, involuntary resettlement and indigenous peoples impacts, mitigation measures to address these issues (or corrective action plan for existing facilities) and compliance status with applicable ADB environmental and social safeguard requirements and national laws, regulations, and standards:

(i) Environmental Safeguards

- a. Appropriate identification of major anticipated environmental impacts and risks;
- b. Adequacy of environmental assessment
- c. Compliance status with applicable requirements on (i) information disclosure, (ii) consultation with affected people and other stakeholders, (iii) occupational and community health and safety, biodiversity conservation and sustainable natural resource management, and physical cultural resources; and
- d. Adequacy of mitigation measures and EMP (mitigation measures, monitoring and reporting, institutional arrangement, budget), or corrective action plan for existing facilities, if any.

(ii) Involuntary Resettlement Safeguards

- a. Appropriate identification of major anticipated involuntary resettlement impacts and risks (including both physical displacement and economic displacement);

- b. Adequacy of assessment of social impacts, information disclosure and consultation with affected people and other stakeholders;
- c. Adequacy of compensation and benefits for displaced persons
- d. Adequacy of resettlement plan (measures to enhance or restore the livelihoods of displaced persons, monitoring and reporting, institutional arrangement, budget), or corrective action plan for existing facilities, if any; and
- e. Private sector responsibilities under government-manages resettlement.

(iii) Indigenous Peoples Safeguards

- a. Appropriate identification of major anticipated impacts on Indigenous Peoples (including potential impacts on traditional or customary lands under use; relocation of Indigenous Peoples from traditional and customary lands, and impacts on cultural resources);
- b. Adequacy of information disclosure and meaningful consultation;
- c. Broad community support, where applicable;
- d. Adequacy of measures to avoid adverse impacts; and
- e. Adequacy of Indigenous Peoples plan (benefit sharing, measures to mitigate and minimize adverse impacts, monitoring and reporting, institutional arrangement, budget), or corrective action plan for existing facilities, if any.

(iv) Adequacy of grievance redress mechanism arrangements

- 2. Recommend mitigation measures, or corrective action plans, if gaps are identified
- 3. For existing facilities including subprojects under construction, examine whether the subproject company paid pollution charges or fines/penalties for non-compliance in the last two years in accordance with national laws, whether the subproject company is exposed to potentially significant liabilities, such as those arising from known or suspected land/groundwater contamination, major accidents and incidents related to the company's past or ongoing operations, and state further actions required/planned by the subproject, in particular actions to address any non-compliance problems and liabilities. Also examine whether there are complaints from the public or local communities regarding the subproject company's environmental and social performance.
- 4. State any risk control or mitigation measures to be taken by the subproject, such as conditions, loan covenants or monitoring and reporting requirements

D. Other Subproject Specific Issues, if any

E. Conclusion and Recommendations

Annexure – XIV: Suggested Scope For A Semi-Annual Social Safeguards Monitoring Report For Subprojects

Suggested scope for an annual social safeguards Monitoring report for subproject companies

A. Introduction

- i. Brief subproject description

B. Physical Progress of Subproject Components with Resettlement and Indigenous Peoples Impacts

- i. List of subproject components with resettlement and indigenous peoples impacts and progress updates (including engineering progress, and ground clearing, land acquisition and structure demolition progress)

C. Scope of Resettlement Impacts and and/or Impacts on Indigenous Peoples

- i. Actual scope of land acquisition and resettlement (including the methodology to determine the actual scope of land acquisition and resettlement, and comparison with the scope of impacts in resettlement plan(s))
- ii. Actual impacts on Indigenous Peoples (including the methodology to determine the actual scope of impacts on Indigenous Peoples, and comparison with the scope of impacts in Indigenous Peoples plan(s))

D. Institutional Arrangements

- i. Key organizations involved in resettlement plan and/or IPP implementation
- ii. Progress of activities implemented by other organizations
- iii. Specific implementation arrangements for Indigenous Peoples

E. Compensation Rates, Payment and Assistance Delivery

- i. Compensation rates for land, resettlement subsidies, standing crops, and trees
- ii. Compensation for buildings and allowances for relocation
- iii. Allocation and utilization of resettlement compensation
- iv. Payment delivery to affected village groups and individuals
- v. Assistance delivery to affected Indigenous Peoples

F. Status of Land Acquisition, Resettlement, and Reconstruction

- i. Housing relocation and reconstruction
- ii. Provision of replacement agricultural and/or commercial land
- iii. Restoration of affected public infrastructure and facilities
- iv. Restoration of land used for construction-related activities
- v. Implementation progress of income restoration activities
- vi. Support to vulnerable groups
- vii. Implementation progress of specific measures for affected Indigenous Peoples

G. Status of Provisions for Indigenous Peoples

- i. Culturally appropriate beneficial measures for each affected IP groups
- ii. Mitigative measures for each affected IP groups
- iii. Capacity Building measures for IP communities in the subproject area
- iv. Broad community support, where required

H. Consultation and Disclosure Activities and Grievance Procedures

- i. Consultations on compensation standards and fees, relocation options, etc.
- ii. Specific consultations conducted with Indigenous Peoples on the subproject, its impacts and assistance to Indigenous Peoples
- iii. Any good faith negotiation to resolve major disagreements with Indigenous Peoples
- iv. Grievances received and actions taken to address them

I. Grievance Redress Mechanism

- i. Gender disaggregated Date established and description of organizational arrangements
- ii. Grievances reported and resolution processes (e.g., nature of grievance, recorded dates and organizations involved, actions taken to resolve grievances, and media or community reactions (if any)

J. Compliance with Applicable Social Safeguard Requirements as Defined in the Section II B of [Name of Bank]’s ESMS

K. Concerns and Work Plan

- i. Concerns encountered, solutions provided and good practices established

- ii. Work plan (staffing, training, and work schedules)

Name and Signature

Name:

Date:

Position:

Phone:

Signature:

E-mail

Outline Of A Semi-Annual Environmental And Social Performance Report For Funds

A. INTRODUCTION

- I. Brief Project Description
- II. Report Purpose

B. PHYSICAL PROGRESS

- I. List of major work and progress

C. ENVIRONMENT ASSESSMENT AND REVIEW PROCEDURES

- I. Project Scope & Environmental Safeguard due diligence

Table 1: Sub-project Scope & Safeguard Due diligence requirements

Sub-Project Name	Project Scope	Assessment Conducted (Please provide details with dates here)	'National' EPA Safeguards Category	Category as per ADB SPS 2009

II. NDRMF Environmental Guidelines

Brief on the following:

- ✓ Project Screening and Categorization
- ✓ Environmental Assessments (IEE)
- ✓ Environmental Management Plan (EMP)

Table 2: Action required for ensuring compliance with National Environmental Laws

Sub-Project	Sub-Project Specific Clauses (GIA)	Present Status	Issues/Comments

D. ENVIRONMENTAL MANAGEMENT & INSTITUTIONAL ARRANGMENTS

Brief on the project environmental management along with institutional arrangements and also provide organogram for this arrangements

E. IMPLEMENTATION STATUS OF ENVIRONMENTAL MEASURE

I. EMP Compliance Status

Brief on the action taken for compliance like field visits, training sessions conducted, community/stakeholder session conducted, corrective actions taken, air, water and noise quality monitoring, water sprinkling for dust control, signage for communal safety, GRM & PPE use of workers etc.

Table 3: Summary Compliance status

Name of Sub Project/ FIP	DDR Prepared (Yes / No)	Overall Sub-Project Status	Remarks

F. ENVIRONMENTAL SAFEGUARDS MONITORING & EVALUATION

Brief on monitoring and evaluation of overall project environmental safeguard's requirement as per IEE/EMP. Any other monitoring data collected like, air, water and noise etc.

Results of any site specific environmental fact sheet used (if so) please annex such sheets duly signed and date with location details.

G. MAJOR PROJECT ISSUES & PROBLEMS-ENVIRONMENTAL CONTEXT

Brief on the challenges/problems/issues faced during EMP compliance and action taken to overcome/resolve. Also discuss suggestions to avoid such issues.

H. CONSULTATIONS AND RECOMMENDATIONS-ENVIRONMENTAL CONTEXT

Brief on the consultation sessions conducted with the locals and other stakeholders, if so, provide details of the consultation sessions with attendance sheet, pictures and comments.

I. GRIEVANCE REDRESS MECHANISM- ENVIRONMENT CONTEXT

Grievances reported and resolution processes (e.g., nature of grievance, recorded dates and organizations involved, actions taken to resolve grievances, and media or community reactions (if any)

J. WORK PLAN

Provide a brief on the future intervention's work plan

Name and Signature

Name:	Date:
Position:	Phone:
Signature:	E-mail:

ANNEXTURE

1. ENVIRONMENT FACT SHEET/SCREENING CHECKLIST
2. EMP COMPLIANCE MONITORING SHEET
3. AIR, WATER, NOISE MONITORING SHEET

Annexure – XV: Comparison of ADB Safeguard Policies with National Regulations

ADB SPS 2009 w.r.t Environmental Safeguards

15. The ADB's SPS is approved by its Board of Governors and is required to be fully implemented on all ADB funded projects since June 2009. The SPS combines the three safeguard policies comprising the Involuntary Resettlement Policy (1995); the Policy on Indigenous Peoples (1998) and the Environment Policy (2002). The goal of SPS is to promote the sustainability of project outcomes by protecting the environment and people from project's potential adverse impacts. The objectives of ADB's safeguards are to
- Avoid adverse impacts of projects on the environment and affected people, where possible;
 - Minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and
 - Help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.
16. For environmental safeguards, ADB has defined its policy objective as "to ensure the environmental soundness and sustainability of projects and to support the integration of environmental considerations into the project decision-making process." As per Policy, "the environmental safeguards are triggered if a project is likely to have potential environmental risks and impacts". The SPS outlines 11 policy principles for environmental safeguards compliance, which are provided in **Table 1** below. These Policy Principles elaborate the process of environmental assessment and management to be followed by proponents of projects and the Bank borrowers.

Table 01: ADB Policy Principles

	Policy principle	Summary
1	Screening and categorization	Screening process initiated early to determine the appropriate extent and type of environmental assessment.
2	Environmental assessment	Conduct an environmental assessment to identify potential impacts and risks in the context of the project's area of influence.
3	Alternatives	Examine alternatives to the project's location, design, technology, and components and their potential environmental and social impacts, including no project alternative.
4	Impact mitigation	Avoid, and where avoidance is not possible, minimize, mitigate, and/or offset adverse impacts and enhance positive impacts. Prepare an environmental management plan (EMP).
5	Public consultations	Carry out meaningful consultation with affected people and facilitate their informed participation. Involve stakeholders early in the project preparation process and ensure that their views and concerns are made known to and understood by decision makers and taken into account. Continue consultations with stakeholders throughout project implementation. Establish a grievance redress mechanism.
6	Disclosure of environmental assessment	Disclose a draft environmental assessment in a timely manner, in an accessible place and in a form and language(s) understandable to stakeholders. Disclose the final environmental assessment to

	Policy principle	Summary
		stakeholders.
7	Environmental management plan	Implement the EMP and monitor its effectiveness. Document monitoring results, and disclose monitoring reports.
8	Biodiversity	Do not implement project activities in areas of critical habitats.
9	Pollution prevention	Apply pollution prevention and control technologies and practices consistent with international good practices. Adopt cleaner production processes and good energy efficiency practices. Avoid pollution, or, when avoidance is not possible, minimize or control the intensity or load of pollutant emissions and discharges. Avoid the use of hazardous materials subject to international bans or phase outs.
10	Occupational health and safety Community safety.	Provide workers with safe and healthy working conditions and prevent accidents, injuries, and disease. Establish preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks to the health and safety of local communities
11	Physical cultural resources	Conserve physical cultural resources and avoid destroying or damaging them. Provide for the use of “chance find” procedures.

17. All loans and investments are screened for potential environmental and social impacts and risks. With regard to environment, categorization is to be undertaken using Rapid Environmental Assessment (REA) checklists, consisting of questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts. Projects are classified into one of the following environmental categories:

Environment Category A: Project/subproject is likely to have significant adverse environmental impacts that are irreversible, diverse or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works. An environmental impact assessment (EIA) is required.

Under NDRMF, Environment Category ‘A’ proposals will NOT be considered for financing.

Environment Category B: Project/subproject impacts are site-specific, few, irreversible, and in most cases mitigation measures can be designed more readily than for category A projects. An initial environmental examination (IEE) is required.

Environment Category C: Project/subproject is likely to have minimal or no adverse environmental impacts. No environmental assessment is required although environmental implications need to be reviewed.

Environment Category FI: Project/subproject involves investment of ADB funds to or through a financial intermediary (FI).

Comparison between GoP & ADB Safeguard policies

18. Most of the GoP and ADB requirements pertaining to environmental safeguard policies are similar. The environmental related steps for both types of policies i.e. EIA, IEE and Environmental Checklist preparation for Category A, B and C type of projects respectively in ADB terminology are equivalent to Schedule I, II and III type of projects in GoP terminology.
19. The only difference is that while the GoP have categorically issued specific project types along with details regarding capacities and/or capital investments in order to classify projects into Schedule I, II or III, the ADB policies require the REA Checklist to be completed and assessed by ADB staff to officially issue a categorization of the project under consideration.
20. In the case of the NDRMF, as long as any sub-project is placed in Category 'B' as per ADB SPS, it can be conducted, even if it lies in Schedule II as per PEPA rules, which would require an EIA to fulfill national requirements. However, such an instance taking place would be quite rare, if at all possible.

International Standards for Social Safeguards Management and Land Acquisition Act 1894 of Pakistan

21. NDRMF has made a comparison between Land Acquisition Act 1984 of Pakistan and international standards of social safeguards management by using the Safeguard Policy Statement (SPS) 2009 of Asian Development Bank (ADB) as a model of international standards and best practices. The ADB SPS is based on the following objectives: (i) to avoid involuntary resettlement wherever possible; (ii) to minimize involuntary resettlement by exploring project and design alternatives; (iii) to enhance, or at least restore, the livelihoods of all displaced persons in real terms relative to pre-project levels; and (iv) to improve the standards of living of the displaced poor and other vulnerable groups. The following principles are applied to reach the objectives provided in **Table 2** below.

Table 2: SPS Scope Triggers and Policy Principles

Scope and Triggers:	The involuntary resettlement safeguards covers physical displacement (relocation, loss of residential land, or loss of shelter) and economic displacement (loss of land, assets, access to assets, income sources, or means of livelihoods) as a result of (i) involuntary acquisition of land, or (ii) involuntary restrictions on land use or on access to legally designated parks and protected areas. It covers them whether such losses and involuntary restrictions are full or partial, permanent or temporary.
Policy Principles:	
1	Screen the project early on to identify past, present, and future involuntary resettlement impacts and risks. Determine the scope of resettlement planning through a survey and/or census of displaced persons, including a gender analysis, specifically related to resettlement impacts and risks.
2	Carry out meaningful consultations with affected persons, host communities, and concerned nongovernment organizations. Inform all displaced persons of their entitlements and resettlement options. Ensure their participation in planning, implementation, and monitoring and evaluation of resettlement programs. Pay particular attention to the needs of vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children, and Indigenous Peoples, and those without legal title to land, and ensure their participation in consultations.

	Establish a grievance redress mechanism to receive and facilitate resolution of the affected persons' concerns. Support the social and cultural institutions of displaced persons and their host population. Where involuntary resettlement impacts and risks are highly complex and sensitive, compensation and resettlement decisions should be preceded by a social preparation phase.
3	Improve, or at least restore, the livelihoods of all displaced persons through (i) land-based resettlement strategies when affected livelihoods are land based where possible or cash compensation at replacement value for land when the loss of land does not undermine livelihoods, (ii) prompt replacement of assets with access to assets of equal or higher value, (iii) prompt compensation at full replacement cost for assets that cannot be restored, and (iv) additional revenues and services through benefit sharing schemes where possible.
4	Provide physically and economically displaced persons with needed assistance, including the following: (i) if there is relocation, secured tenure to relocation land, better housing at resettlement sites with comparable access to employment and production opportunities, integration of resettled persons economically and socially into their host communities, and extension of project benefits to host communities; (ii) transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities; and (iii) civic infrastructure and community services, as required.
5	Improve the standards of living of the displaced poor and other vulnerable groups, including women, to at least national minimum standards. In rural areas provide them with legal and affordable access to land and resources, and in urban areas provide them with appropriate income sources and legal and affordable access to adequate housing.
6	Develop procedures in a transparent, consistent, and equitable manner if land acquisition is through negotiated settlement to ensure that those people who enter into negotiated settlements will maintain the same or better income and livelihood status.
7	Ensure that displaced persons without titles to land or any recognizable legal rights to land are eligible for resettlement assistance and compensation for loss of nonland assets.
8	Prepare a resettlement plan elaborating on displaced persons' entitlements, the income and livelihood restoration strategy, institutional arrangements, monitoring and reporting framework, budget, and time-bound implementation schedule.
9	Disclose a draft resettlement plan, including documentation of the consultation process in a timely manner, before project appraisal, in an accessible place and a form and language(s) understandable to affected persons and other stakeholders. Disclose the final resettlement plan and its updates to affected persons and other stakeholders.
10	Conceive and execute involuntary resettlement as part of a development project or program. Include the full costs of resettlement in the presentation of project's costs and benefits. For a project with significant involuntary resettlement impacts, consider implementing the involuntary resettlement component of the project as a stand-alone operation.
11	Pay compensation and provide other resettlement entitlements before physical or economic displacement. Implement the resettlement plan under close supervision throughout project implementation.
12	Monitor and assess resettlement outcomes, their impacts on the standards of living of

	displaced persons, and whether the objectives of the resettlement plan have been achieved by taking into account the baseline conditions and the results of resettlement monitoring. Disclose monitoring reports.
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22. According to ADB SPS, the projects/sub-projects are classified into one of the following four categories in terms of IR impacts and risks, but it is important to clarify that provision of ADB IR Category for financial intermediaries (FIs) is compatible with NDRMF mode of operations, and the Fund would not fund any sub-subprojects with heavy social/involuntary resettlement or irreversible environment impacts.or financing.

IR Category A: Project/subproject will have major involuntary resettlement (IR) impacts on 200 or more persons i.e. being physically displaced from housing, or losing 10% or more of their productive assets (income generating). A resettlement plan, including assessment of social and economic impacts is required.

IR Category B: Project/subproject that will have major IR impacts on less than 200 persons. A resettlement plan, including assessment of social and economic impacts is required.

IR Category C: Project/subproject is likely to have no IR impacts whatsoever. No further action is required.

IR Category FI: Project/subproject involves investment of ADB funds to or through a financial intermediary (FI), in this case NDRMF.

Under NDRMF, IR Category A proposals will NOT be considered for financing.

23. In terms of IP impacts and risks, projects/subprojects are classified into one of the following four categories:

IP Category A: Project/subproject is likely to have significant direct and indirect impacts on IPs' dignity, customary rights on use and access of land and natural resources, socioeconomic status, cultural and communal integrity, health, education, livelihood and social security status, recognition of indigenous knowledge and vulnerability. An Indigenous Peoples Plan (IPP), including assessment of social impacts, is required.

IP Category B: Project/subproject that will likely have limited impacts on IPs. An IPP, including assessment of social impacts, is required. Where IPs are the overwhelming majority of direct project/subproject beneficiaries, the elements of the IPP could be integrated into the project/subproject design in lieu of preparing a separate IPP.

IP Category C: Project/subproject is likely to have no impacts on IPs whatsoever. No further action is required.

IP Category FI: Project/subproject involves investment of ADB funds to or through a financial intermediary (FI).

Under NDRMF, IP Category A proposals will NOT be considered for financing.

Comparison of LAA 1894 and ADB's SPS 2009

24. A comparison of Pakistan's LAA and ADB's SPS 2009 (**Table 3.4** below) shows that there exist major differences in the two instruments. The objective of this comparison is to identify if and where the two sets of procedures are in conformity with each other and more importantly where there are differences and gaps. The key ADB Policy Principles are (i) the need to screen the project early on the planning stage (ii) carry out meaningful consultation (iii) at the minimum restore livelihood levels to the pre-project conditions and improve the livelihoods of the affected vulnerable groups (iv) prompt compensation at full replacement cost is to be paid (v) provide displaced men and women with adequate assistance (vi) ensure that displaced men and women who have no statutory rights to the land that they are working are eligible for resettlement assistance and compensation for the loss of no-land assets and (vii) disclose all reports. **Table 3** below presents a gap-analysis between the Pakistan's LAA and ADB's SPS 2009.

Table 3: Comparison of LAA and ADB's SPS 2009

Pakistan LAA 1894	ADB SPS 2009	Proposed Measures to Address the Gaps
Compensation for land and other assets is based on average values and department unit rates that do not ensure replacement market value of the property acquired. However, LAA requires that a 15% compulsory acquisition surcharge supplement the assessed compensation.	DPs are to be compensated for all their losses at replacement cost, including transaction cost and other related expenses, without deducting for depreciation.	Land valuation is to be based on current replacement (market) value with an additional payment of 15%. The valuation for the acquired housing land and other assets is the full replacement costs keeping in view the fair market values, transaction costs and other applicable payments that may be required.
No provision for resettlement expenses, income/livelihood rehabilitation measures or allowances for displaced poor and vulnerable groups.	Requires support for rehabilitation of income and livelihood, severe losses, and for vulnerable groups.	Provision should be made to pay for resettlement expenses (transportation and transitional allowances), compensate for loss of income, and provide support to vulnerable persons and those severely impacted (considered to be those losing more than 10% of their productive assets).
Lack of formal title or the absence of legally constituted agreements is a bar to compensation/rehabilitation. (Squatters and informal tenants/leaseholders are not entitled to compensation for loss of structures, crops).	Lack of formal title is not a bar to compensation and rehabilitation. All DPs, including non-titled DPs, are eligible for compensation of all non-land assets.	Squatters, informal tenants/leaseholders are entitled to compensation for loss of structures and livelihood and for relocation.
Land acquisition and compensation process is conducted independently by the Land Acquisition Collector following a lengthy prescribed legal and administrative procedure. There are emergency provisions in the procedure that can be leveraged for civil works to proceed before compensation is paid.	Involuntary resettlement is conceived, planned and executed as part of the project. Affected people are supported to re-establish their livelihoods and homes with time-bound action in coordination with the civil works. Civil works cannot	Respective EAs will prepare land acquisition and resettlement plans, as part of project preparation based on an inventory of losses, livelihood restoration measures, Pakistan law and principles enumerated in SPS. Where gaps exist in the interpretation of Pakistan law and resettlement practices, requirements of ADB's

Pakistan LAA 1894	ADB SPS 2009	Proposed Measures to Address the Gaps
	proceed prior to compensation.	involuntary resettlement policy will prevail. Civil works may only proceed after the resettlement plan is implemented and compensation for loss of assets and other allowances (budgeted as part of the project cost) is fully paid.
No convenient grievance redresses mechanism except recourse of appeal to formal administrative jurisdiction or the court of law.	Requires the establishment of accessible grievance redress mechanisms to receive and facilitate the resolution of DPs' concerns about displacement and other impacts, including compensation.	EAs will establish easily accessible grievance redress mechanism available throughout project implementation that will be widely publicized within respective project area and amongst the DPs.

15. ADB's IPS policy principles as international standards on IPs safeguards management are provided below.

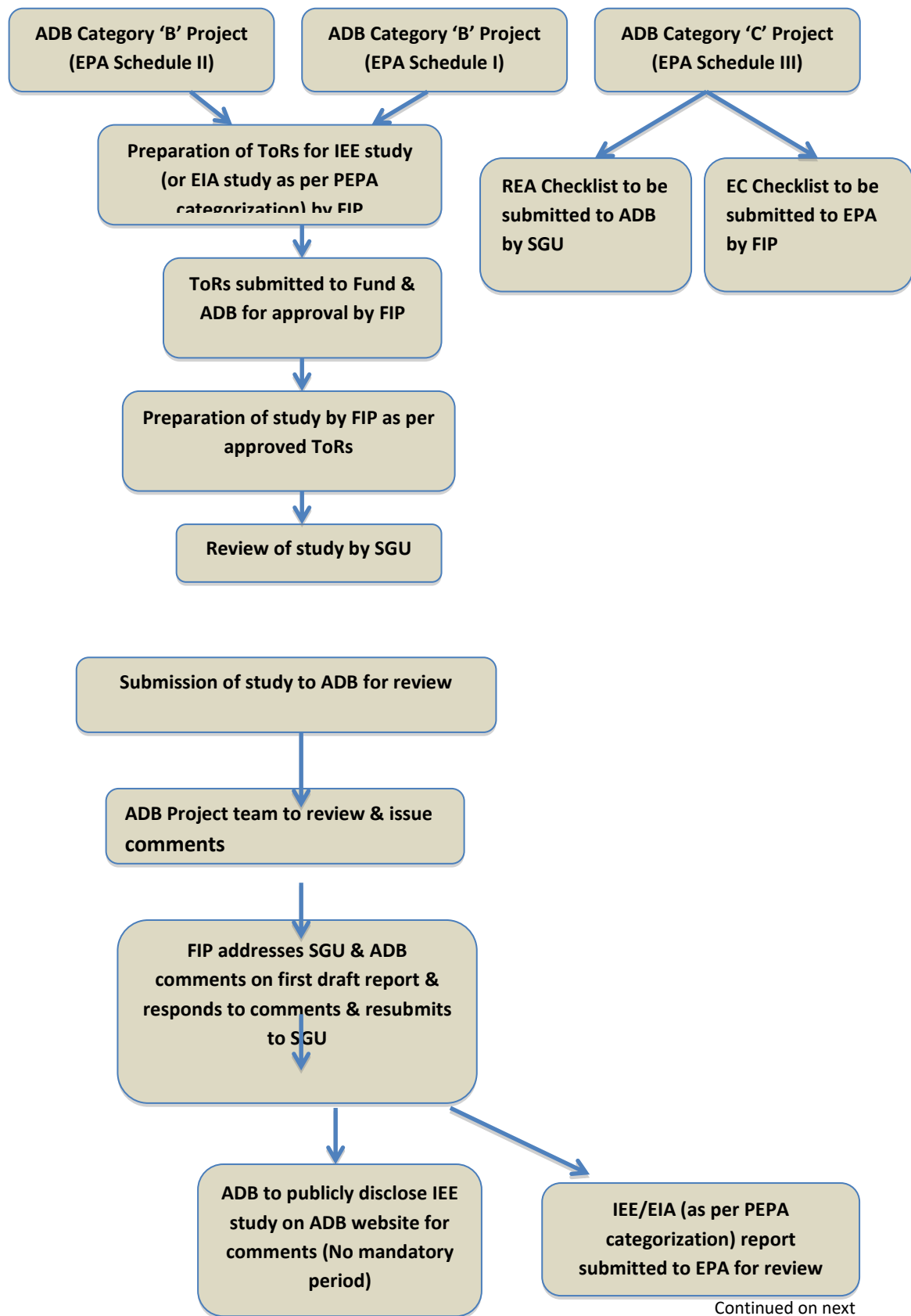
Table 4: ADB's Indigenous Peoples (IP) Policy Principles

S#	Policy principle	Summary
1	Screening and categorization	Screen early on to determine (i) whether Indigenous Peoples are present in, or have collective attachment to, the project area; and (ii) whether project impacts on Indigenous Peoples are likely.
2	Impact assessment	Undertake a culturally appropriate and gender-sensitive social impact assessment or use similar methods to assess potential project impacts, both positive and adverse, on Indigenous Peoples. Give full consideration to options the affected Indigenous Peoples prefer in relation to the provision of project benefits and the design of mitigation measures. Identify social and economic benefits for affected Indigenous Peoples that are culturally appropriate and gender and intergenerationally inclusive and develop measures to avoid, minimize, and/or mitigate adverse impacts on Indigenous Peoples.
3	Meaningful Consultations	Conducted meaningful consultations with affected Indigenous Peoples communities and concerned Indigenous Peoples organizations to solicit their participation (i) in designing, implementing, and monitoring measures to avoid adverse impacts or, when avoidance is not possible, to minimize, mitigate, or compensate for such effects; and (ii) in tailoring project benefits for affected Indigenous Peoples communities in a culturally appropriate manner. To enhance Indigenous Peoples' active participation, projects affecting them will provide for culturally appropriate and gender inclusive capacity development. Establish a culturally appropriate and gender inclusive grievance mechanism to receive and facilitate resolution of the Indigenous Peoples' concerns.

S#	Policy principle	Summary
4	Information disclosure	Ascertain the consent of affected Indigenous Peoples communities to the following project activities: (i) commercial development of the cultural resources and knowledge of Indigenous Peoples; (ii) physical displacement from traditional or customary lands; and (iii) commercial development of natural resources within customary lands under use that would impact the livelihoods or the cultural, ceremonial, or spiritual uses that define the identity and community of Indigenous Peoples. For the purposes of policy application, the consent of affected Indigenous Peoples communities refers to a collective expression by the affected Indigenous Peoples communities, through individuals and/or their recognized representatives, of broad community support for such project activities. Broad community support may exist even if some individuals or groups object to the project activities.
5	Mitigation Measures	Avoid, to the maximum extent possible, any restricted access to and physical displacement from protected areas and natural resources. Where avoidance is not possible, ensure that the affected Indigenous Peoples communities participate in the design, implementation, and monitoring and evaluation of management arrangements for such areas and natural resources and that their benefits are equitably shared.
6	Indigenous Peoples plan	Prepare an Indigenous Peoples plan (IPP) that is based on the social impact assessment with the assistance of qualified and experienced experts and that draw on indigenous knowledge and participation by the affected Indigenous Peoples communities. The IPP includes a framework for continued consultation with the affected Indigenous Peoples communities during project implementation; specifies measures to ensure that Indigenous Peoples receive culturally appropriate benefits; identifies measures to avoid, minimize, mitigate, or compensate for any adverse project impacts; and includes culturally appropriate grievance procedures, monitoring and evaluation arrangements, and a budget and time-bound actions for implementing the planned measures.
7	Disclosure of Disclose a draft IPP	Disclose a draft IPP, including documentation of the consultation process and the results of the social impact assessment in a timely manner, before project appraisal, in an accessible place and in a form and language(s) understandable to affected Indigenous Peoples communities and other stakeholders. The final IPP and its updates will also be disclosed to the affected Indigenous Peoples communities and other stakeholders.
8	An action plan	Prepare an action plan for legal recognition of customary rights to lands and territories or ancestral domains when the project involves (i) activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples have traditionally owned or customarily used or occupied, or (ii) involuntary acquisition of such lands.

S#	Policy principle	Summary
9	Monitoring of Implementation of IPP	Monitor implementation of the IPP using qualified and experienced experts; adopt a participatory monitoring approach, wherever possible; and assess whether the IPP's objective and desired outcome have been achieved, taking into account the baseline conditions and the results of IPP monitoring. Disclose monitoring reports.

Figure 1: Procedure Flow – Project Preparation



Continued on next

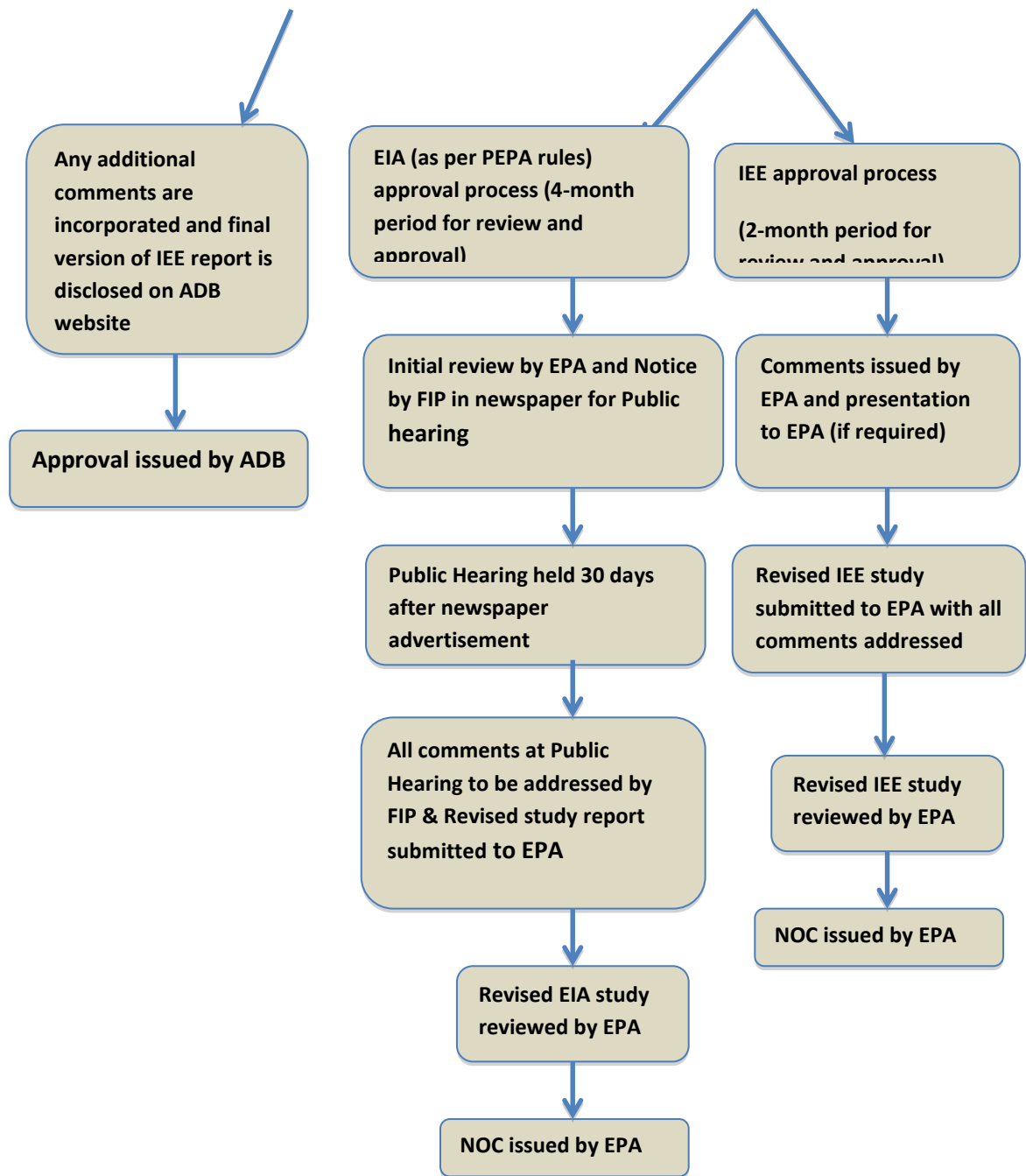
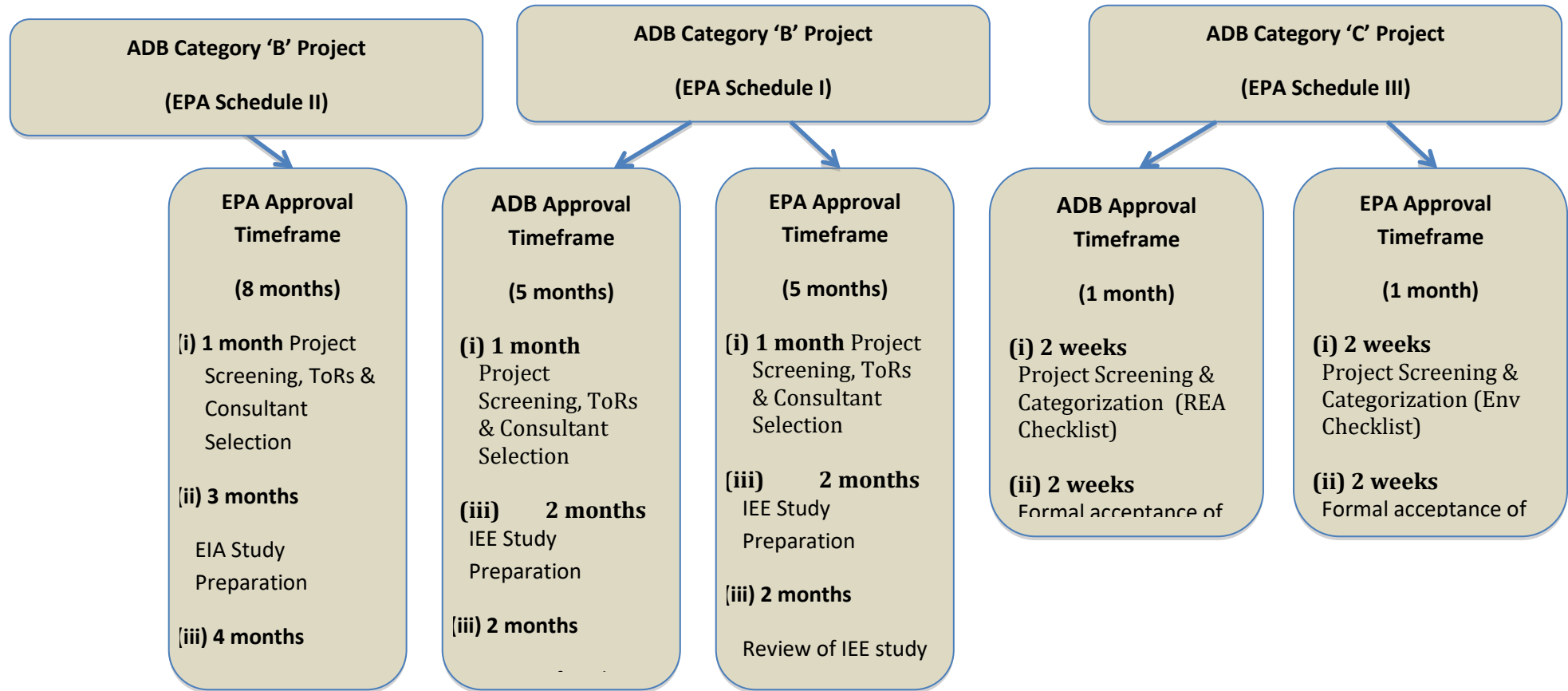


Figure 2: Expected Timelines for Category wise Environmental Approvals



Water, sanitation, hygiene, and waste management for the COVID-19 virus

Interim guidance
19 March 2020

Background

This interim guidance supplements the infection prevention and control (IPC) documents by summarizing WHO guidance on water, sanitation and health care waste relevant to viruses, including coronaviruses. It is intended for water and sanitation practitioners and providers and health care providers who want to know more about water, sanitation and hygiene (WASH) risks and practices.

The provision of safe water, sanitation, and hygienic conditions is essential to protecting human health during all infectious disease outbreaks, including the COVID-19 outbreak. Ensuring good and consistently applied WASH and waste management practices in communities, homes, schools, marketplaces, and health care facilities will help prevent human-to-human transmission of the COVID-19 virus.

The most important information concerning WASH and the COVID-19 virus is summarized here.

- Frequent and proper hand hygiene is one of the most important measures that can be used to prevent infection with the COVID-19 virus. WASH practitioners should work to enable more frequent and regular hand hygiene by improving facilities and using proven behavior-change techniques.
- WHO guidance on the safe management of drinking-water and sanitation services applies to the COVID-19 outbreak. Extra measures are not needed. Disinfection will facilitate more rapid die-off of the COVID-19 virus.
- Many co-benefits will be realized by safely managing water and sanitation services and applying good hygiene practices.

Currently, there is no evidence about the survival of the COVID-19 virus in drinking-water or sewage. The morphology and chemical structure of the COVID-19 virus are similar to those of other human coronaviruses for which there are data about both survival in the environment and effective inactivation measures. This document draws upon the evidence base and WHO guidance on how to protect against viruses in sewage and drinking-water. This document will be updated as new information becomes available.

1. COVID-19 transmission

There are two main routes of transmission of the COVID-19 virus: respiratory and contact. Respiratory droplets are generated when an infected person coughs or sneezes. Any person who is in close contact with someone who has respiratory symptoms (sneezing, coughing) is at risk of being exposed to potentially infective respiratory droplets.¹ Droplets may also land on surfaces where the virus could remain viable; thus, the immediate environment of an infected individual can serve as a source of transmission (contact transmission).

Approximately 2–10% of cases of confirmed COVID-19 disease present with diarrhoea,^{2,3} and two studies detected COVID-19 viral RNA fragments in the faecal matter of COVID-19 patients.^{5,6} However, only one study has cultured the COVID-19 virus from a single stool specimen.⁷ There have been no reports of faecal–oral transmission of the COVID-19 virus.

2. Persistence of the COVID-19 virus in drinking-water, faeces and sewage and on surfaces.

Although persistence in drinking-water is possible, there is no evidence from surrogate human coronaviruses that they are present in surface or groundwater sources or transmitted through contaminated drinking water. The COVID-19 virus is an enveloped virus, with a fragile outer membrane. Generally, enveloped viruses are less stable in the environment and are more susceptible to oxidants, such as chlorine. While there is no evidence to date about survival of the COVID-19 virus in water or sewage, the virus is likely to become inactivated significantly faster than non-enveloped human enteric viruses with known waterborne transmission (such as adenoviruses, norovirus, rotavirus and hepatitis A). For example, one study found that a surrogate human coronavirus survived only 2 days in dechlorinated tap water and in hospital wastewater at 20°C.⁸ Other studies concur, noting that the human coronaviruses transmissible gastroenteritis coronavirus and mouse hepatitis virus demonstrated a 99.9% die-off in from 2 days⁹ at 23°C to 2 weeks¹⁰ at 25°C. Heat, high or low pH, sunlight, and common disinfectants (such as chlorine) all facilitate die off.

It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems likely to behave like other coronaviruses. A recent review of the survival of human

coronaviruses on surfaces found large variability, ranging from 2 hours to 9 days.¹¹ The survival time depends on a number of factors, including the type of surface, temperature, relative humidity, and specific strain of the virus. The same review also found that effective inactivation could be achieved within 1 minute using common disinfectants, such as 70% ethanol or sodium hypochlorite (for details, see Cleaning practices).

3. Keeping water supplies safe

The COVID-19 virus has not been detected in drinking-water supplies, and based on current evidence, the risk to water supplies is low.¹² Laboratory studies of surrogate coronaviruses that took place in well-controlled environments indicated that the virus could remain infectious in water contaminated with faeces for days to weeks.¹⁰ A number of measures can be taken to improve water safety, starting with protecting the source water; treating water at the point of distribution, collection, or consumption; and ensuring that treated water is safely stored at home in regularly cleaned and covered containers.

Conventional, centralized water treatment methods that use filtration and disinfection should inactivate the COVID-19 virus. Other human coronaviruses have been shown to be sensitive to chlorination and disinfection with ultraviolet (UV) light.¹³ As enveloped viruses are surrounded by a lipid host cell membrane, which is not robust, the COVID-19 virus is likely to be more sensitive to chlorine and other oxidant disinfection processes than many other viruses, such as coxsackieviruses, which have a protein coat. For effective centralized disinfection, there should be a residual concentration of free chlorine of ≥ 0.5 mg/L after at least 30 minutes of contact time at pH < 8.0 .¹² A chlorine residual should be maintained throughout the distribution system.

In places where centralized water treatment and safe piped water supplies are not available, a number of household water treatment technologies are effective in removing or destroying viruses, including boiling or using high-performing ultrafiltration or nanomembrane filters, solar irradiation and, in non-turbid waters, UV irradiation and appropriately dosed free chlorine.

4. Safely managing wastewater and faecal waste

There is no evidence that the COVID-19 virus has been transmitted via sewerage systems with or without wastewater treatment. Further, there is no evidence that sewage or wastewater treatment workers contracted the severe acute respiratory syndrome (SARS), which is caused by another type of coronavirus that caused a large outbreak of acute respiratory illness in 2003. As part of an integrated public health policy, wastewater carried in sewerage systems should be treated in well-designed and well-managed centralized wastewater treatment works. Each stage of treatment (as well as retention time and dilution) results in a further reduction of the potential risk. A waste stabilization pond (an oxidation pond or lagoon) is generally considered a practical and simple wastewater treatment technology particularly well suited to destroying pathogens, as relatively long retention times (20 days or longer) combined with sunlight, elevated pH levels, biological activity, and other factors serve to accelerate pathogen destruction. A final disinfection step may be considered if existing wastewater treatment plants are not optimized to remove viruses. Best practices for protecting the health of workers at sanitation treatment facilities should

be followed. Workers should wear appropriate personal protective equipment (PPE), which includes protective outerwear, gloves, boots, goggles or a face shield, and a mask; they should perform hand hygiene frequently; and they should avoid touching eyes, nose, and mouth with unwashed hands.

WASH in health care settings

Existing recommendations for water, sanitation and hygiene measures in health care settings are important for providing adequate care for patients and protecting patients, staff, and caregivers from infection risks.¹⁴ The following actions are particularly important: (i) managing excreta (faeces and urine) safely, including ensuring that no one comes into contact with it and that it is treated and disposed of correctly; (ii) engaging in frequent hand hygiene using appropriate techniques; (iii) implementing regular cleaning and disinfection practices; and (iv) safely managing health care waste. Other important measures include providing sufficient safe drinking-water to staff, caregivers, and patients; ensuring that personal hygiene can be maintained, including hand hygiene, for patients, staff and caregivers; regularly laundering bedsheets and patients' clothing; providing adequate and accessible toilets (including separate facilities for confirmed and suspected cases of COVID-19 infection); and segregating and safely disposing of health care waste. For details on these recommendations, please refer to Essential environmental health standards in health care.¹⁴

1. Hand hygiene practices

Hand hygiene is extremely important. Cleaning hands with soap and water or an alcohol-based hand rub should be performed according to the instructions known as "My 5 moments for hand hygiene".¹⁵ If hands are not visibly dirty, the preferred method is to perform hand hygiene with an alcohol-based hand rub for 20–30 seconds using the appropriate technique.¹⁶ When hands are visibly dirty, they should be washed with soap and water for 40–60 seconds using the appropriate technique.¹⁷ Hand hygiene should be performed at all five moments, including before putting on PPE and after removing it, when changing gloves, after any contact with a patient with suspected or confirmed COVID-19 infection or their waste, after contact with any respiratory secretions, before eating, and after using the toilet.¹⁸ If an alcohol-based hand rub and soap are not available, then using chlorinated water (0.05%) for handwashing is an option, but it is not ideal because frequent use may lead to dermatitis, which could increase the risk of infection and asthma and because prepared dilutions might be inaccurate.¹⁹ However, if other options are not available or feasible, using chlorinated water for handwashing is an option.

Functional hand hygiene facilities should be present for all health care workers at all points of care and in areas where PPE is put on or taken off. In addition, functional hand hygiene facilities should be available for all patients, family members, and visitors, and should be available within 5 m of toilets, as well as in waiting and dining rooms and other public areas.

2. Sanitation and plumbing

People with suspected or confirmed COVID-19 disease should be provided with their own flush toilet or latrine that has a door that closes to separate it from the patient's room. Flush toilets should operate properly and have functioning drain traps. When possible, the toilet should be flushed with the lid down to prevent droplet splatter and aerosol clouds. If it is not possible to provide separate toilets, the toilet should be cleaned and disinfected at least twice daily by a trained cleaner wearing PPE (gown, gloves, boots, mask, and a face shield or goggles). Further, and consistent with existing guidance, staff and health care workers should have toilet facilities that are separate from those used by all patients.

WHO recommends the use of standard, well-maintained plumbing, such as sealed bathroom drains, and backflow valves on sprayers and faucets to prevent aerosolized faecal matter from entering the plumbing or ventilation system,²⁰ together with standard wastewater treatment.²¹ Faulty plumbing and a poorly designed air ventilation system were implicated as contributing factors to the spread of the aerosolized SARS coronavirus in a high-rise apartment building in Hong Kong in 2003.²² Similar concerns have been raised about the spread of the COVID-19 virus from faulty toilets in high-rise apartment buildings.²³ If health care facilities are connected to sewers, a risk assessment should be conducted to confirm that wastewater is contained within the system (that is, the system does not leak) before its arrival at a functioning treatment or disposal site, or both. Risks pertaining to the adequacy of the collection system or to treatment and disposal methods should be assessed following a safety planning approach,²⁴ with critical control points prioritized for mitigation.

For smaller health care facilities in low-resource settings, if space and local conditions allow, pit latrines may be the preferred option. Standard precautions should be taken to prevent contamination of the environment by excreta. These precautions include ensuring that at least 1.5 m exists between the bottom of the pit and the groundwater table (more space should be allowed in coarse sands, gravels, and fissured formations) and that the latrines are located at least 30 m horizontally from any groundwater source (including both shallow wells and boreholes).²¹ If there is a high groundwater table or a lack of space to dig pits, excreta should be retained in impermeable storage containers and left for as long as feasible to allow for a reduction in virus levels before moving it off-site for additional treatment or safe disposal, or both. A two-tank system with parallel tanks would help facilitate inactivation by maximizing retention times, as one tank could be used until full, then allowed to sit while the next tank is being filled. Particular care should be taken to avoid splashing and the release of droplets while cleaning or emptying tanks.

3. Toilets and the handling of faeces

It is critical to conduct hand hygiene when there is suspected or direct contact with faeces (if hands are dirty, then soap and water are preferred to the use of an alcohol-based hand rub). If the patient is unable to use a latrine, excreta should be collected in either a diaper or a clean bedpan and immediately and carefully disposed of into a separate toilet or latrine used only by suspected or confirmed cases of COVID-19. In all health care settings, including those with suspected or confirmed COVID-19 cases, faeces must be treated as a biohazard and handled as little as possible. Anyone handling

faeces should follow WHO contact and droplet precautions¹⁸ and use PPE to prevent exposure, including long-sleeved gowns, gloves, boots, masks, and goggles or a face shield. If diapers are used, they should be disposed of as infectious waste as they would be in all situations. Workers should be properly trained in how to put on, use, and remove PPE so that these protective barriers are not breached.²⁵ If PPE is not available or the supply is limited, hand hygiene should be regularly practiced, and workers should keep at least 1 m distance from any suspected or confirmed cases.

If a bedpan is used, after disposing of excreta from it, the bedpan should be cleaned with a neutral detergent and water, disinfected with a 0.5% chlorine solution, and then rinsed with clean water; the rinse water should be disposed of in a drain or a toilet or latrine. Other effective disinfectants include commercially available quaternary ammonium compounds, such as cetylpyridinium chloride, used according to manufacturer's instructions, and peracetic or peroxyacetic acid at concentrations of 500–2000 mg/L.²⁶

Chlorine is ineffective for disinfecting media containing large amounts of solid and dissolved organic matter. Therefore, there is limited benefit to adding chlorine solution to fresh excreta and it is possible that this may introduce risks associated with splashing.

4. Emptying latrines and holding tanks, and transporting excreta off-site.

There is no reason to empty latrines and holding tanks of excreta from suspected or confirmed COVID-19 cases unless they are at capacity. In general, the best practices for safely managing excreta should be followed. Latrines or holding tanks should be designed to meet patient demand, considering potential sudden increases in cases, and there should be a regular schedule for emptying them based on the wastewater volumes generated. PPE (long-sleeved gown, gloves, boots, masks, and goggles or a face shield) should be worn at all times when handling or transporting excreta off-site, and great care should be taken to avoid splashing. For crews, this includes pumping out tanks or unloading pumper trucks. After handling the waste and once there is no risk of further exposure, individuals should safely remove their PPE and perform hand hygiene before entering the transport vehicle. Soiled PPE should be put in a sealed bag for later safe laundering (see Cleaning practices). Where there is no off-site treatment, in-situ treatment can be done using lime. Such treatment involves using a 10% lime slurry added at 1-part lime slurry per 10 parts of waste.

5. Cleaning practices

Recommended cleaning and disinfection procedures for health care facilities should be followed consistently and correctly.¹⁹ Laundry should be done and surfaces in all environments in which COVID-19 patients receive care (treatment units, community care centres) should be cleaned at least once a day and when a patient is discharged.²⁷ Many disinfectants are active against enveloped viruses, such as the COVID-19 virus, including commonly used hospital disinfectants. Currently, WHO recommends using:

- 70% ethyl alcohol to disinfect small areas between uses, such as reusable dedicated equipment (for example, thermometers);
- sodium hypochlorite at 0.5% (equivalent to 5000 ppm) for disinfecting surfaces.

All individuals dealing with soiled bedding, towels, and clothes from patients with COVID-19 infection should wear appropriate PPE before touching soiled items, including heavy duty gloves, a mask, eye protection (goggles or a face shield), a long-sleeved gown, an apron if the gown is not fluid resistant, and boots or closed shoes. They should perform hand hygiene after exposure to blood or body fluids and after removing PPE. Soiled linen should be placed in clearly labelled, leak-proof bags or containers, after carefully removing any solid excrement and putting it in a covered bucket to be disposed of in a toilet or latrine. Machine washing with warm water at 60–90°C (140–194°F) with laundry detergent is recommended. The laundry can then be dried according to routine procedures. If machine washing is not possible, linens can be soaked in hot water and soap in a large drum using a stick to stir and being careful to avoid splashing. The drum should then be emptied, and the linens soaked in 0.05% chlorine for approximately 30 minutes. Finally, the laundry should be rinsed with clean water and the linens allowed to dry fully in sunlight.

If excreta are on surfaces (such as linens or the floor), the excreta should be carefully removed with towels and immediately safely disposed of in a toilet or latrine. If the towels are single use, they should be treated as infectious waste; if they are reusable, they should be treated as soiled linens. The area should then be cleaned and disinfected (with, for example, 0.5% free chlorine solution), following published guidance on cleaning and disinfection procedures for spilled body fluids.²⁷

6. Safely disposing of greywater or water from washing PPE, surfaces and floors.

Current WHO recommendations are to clean utility gloves or heavy duty, reusable plastic aprons with soap and water and then decontaminate them with 0.5% sodium hypochlorite solution after each use. Single-use gloves (nitrile or latex) and gowns should be discarded after each use and not reused; hand hygiene should be performed after PPE is removed. If greywater includes disinfectant used in prior cleaning, it does not need to be chlorinated or treated again. However, it is important that such water is disposed of in drains connected to a septic system or sewer or in a soakaway pit. If greywater is disposed of in a soakaway pit, the pit should be fenced off within the health facility grounds to prevent tampering and to avoid possible exposure in the case of overflow.

7. Safe management of health care waste

Best practices for safely managing health care waste should be followed, including assigning responsibility and sufficient human and material resources to dispose of such waste safely. There is no evidence that direct, unprotected human contact during the handling of health care waste has resulted in the transmission of the COVID-19 virus. All health care waste produced during the care of COVID-19 patients should be collected safely in designated containers and bags, treated, and then safely disposed of or treated, or both, preferably on-site. If waste is moved off-site, it is critical to understand where and how it will be treated and destroyed. All who handle health care waste should wear appropriate PPE (boots, apron, long-sleeved gown, thick gloves, mask, and goggles or a face shield) and perform hand hygiene after removing it. For more information refer to the WHO guidance, Safe management of wastes from health-care activities.²⁸

Considerations for WASH practices in homes and communities.

Upholding best WASH practices in the home and community is also important for preventing the spread of COVID-19 and when caring for patients at home. Regular and correct hand hygiene is of particular importance.

1. Hand hygiene

Hand hygiene in non-health care settings is one of the most important measures that can prevent COVID-19 infection. In homes, schools and crowded public spaces – such as markets, places of worship, and train or bus stations – regular handwashing should occur before preparing food, before and after eating, after using the toilet or changing a child's diaper, and after touching animals. Functioning handwashing facilities with water and soap should be available within 5 m of toilets.

2. Treatment and handling requirements for excreta.

Best WASH practices, particularly handwashing with soap and clean water, should be strictly applied and maintained because these provide an important additional barrier to COVID-19 transmission and to the transmission of infectious diseases in general.¹⁷ Consideration should be given to safely managing human excreta throughout the entire sanitation chain, starting with ensuring access to regularly cleaned, accessible, and functioning toilets or latrines and to the safe containment, conveyance, treatment, and eventual disposal of sewage.

When there are suspected or confirmed cases of COVID-19 in the home setting, immediate action must be taken to protect caregivers and other family members from the risk of contact with respiratory secretions and excreta that may contain the COVID-19 virus. Frequently touched surfaces throughout the patient's care area should be cleaned regularly, such as bedside tables, bed frames and other bedroom furniture. Bathrooms should be cleaned and disinfected at least once a day. Regular household soap or detergent should be used for cleaning first and then, after rinsing, regular household disinfectant containing 0.5% sodium hypochlorite (that is, equivalent to 5000 ppm or 1-part household bleach with 5% sodium hypochlorite to 9 parts water) should be applied. PPE should be worn while cleaning, including mask, goggles, a fluid-resistant apron, and gloves,²⁹ and hand hygiene with an alcohol-based hand rub or soap and water should be performed after removing PPE.

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Advice on the use of masks in the context of COVID-19

Interim guidance

6 April 2020



Background

This document provides advice on the use of masks in communities, during home care, and in health care settings in areas that have reported cases of COVID-19. It is intended for individuals in the community, public health and infection prevention and control (IPC) professionals, health care managers, health care workers (HCWs), and community health workers. It will be revised as more data become available.

Current information suggests that the two main routes of transmission of the COVID-19 virus are respiratory droplets and contact. Respiratory droplets are generated when an infected person coughs or sneezes. Any person who is in close contact (within 1 m) with someone who has respiratory symptoms (coughing, sneezing) is at risk of being exposed to potentially infective respiratory droplets. Droplets may also land on surfaces where the virus could remain viable; thus, the immediate environment of an infected individual can serve as a source of transmission (contact transmission).¹

WHO has recently summarized reports of transmission of the COVID-19 virus and provided a brief overview of current evidence on transmission from symptomatic, pre-symptomatic, and asymptomatic "people infected with COVID-19 (full details are provided in WHO COVID-19 Sitrep 79).²

Current evidence suggests that most disease is transmitted by symptomatic laboratory confirmed cases. The incubation period for COVID-19, which is the time between exposure to the virus and symptom onset, is on average 5-6 days, but can be as long as 14 days. During this period, also known as the "pre-symptomatic" period, some infected persons can be contagious and therefore transmit the virus to others.³⁻⁵ In a small number of reports, pre-symptomatic transmission has been documented through contact tracing efforts and enhanced investigation of clusters of confirmed cases.³⁻⁸ This is supported by data suggesting that some people can test positive for COVID-19 from 1-3 days before they develop symptoms.^{9,10}

Thus, it is possible that people infected with COVID-19 could transmit the virus before symptoms develop. It is important to recognize that pre-symptomatic transmission still requires the virus to be spread via infectious droplets or through

touching contaminated surfaces. WHO regularly monitors all emerging evidence about this critical topic and will provide updates as more information becomes available.

In this document medical masks are defined as surgical or procedure masks that are flat or pleated (some are shaped like cups); they are affixed to the head with straps. They are tested according to a set of standardized test methods (ASTM F2100, EN 14683, or equivalent) that aim to balance high filtration, adequate breathability and optionally, fluid penetration resistance. This document does not focus on respirators; for guidance on use of respirators see IPC guidance during health care when COVID-19 infection is suspected.¹¹

Wearing a medical mask is one of the prevention measures that can limit the spread of certain respiratory viral diseases, including COVID-19. **However, the use of a mask alone is insufficient to provide an adequate level of protection, and other measures should also be adopted.** Whether or not masks are used, maximum compliance with hand hygiene and other IPC measures is critical to prevent human-to-human transmission of COVID-19. WHO has developed guidance on IPC strategies for home care¹² and health care settings¹¹ for use when COVID-19 is suspected.

Community settings

Studies of influenza, influenza-like illness, and human coronaviruses provide evidence that the use of a medical mask can prevent the spread of infectious droplets from an infected person to someone else and potential contamination of the environment by these droplets.¹³ There is limited evidence that wearing a medical mask by healthy individuals in the households or among contacts of a sick patient, or among attendees of mass gatherings may be beneficial as a preventive measure.¹⁴⁻²⁵ However, there is currently no evidence that wearing a mask (whether medical or other types) by healthy persons in the wider community setting, including universal community masking, can prevent them from infection with respiratory viruses, including COVID-19.

Medical masks should be reserved for health care workers. The use of medical masks in the community may create a false sense of security, with neglect of other essential measures, such as hand hygiene practices and physical distancing, and may lead to touching the face under the masks and under the eyes, result in unnecessary costs, and take

masks away from those in health care who need them most, especially when masks are in short supply.

Persons with symptoms should:

- wear a medical mask, self-isolate, and seek medical advice as soon as they start to feel unwell. Symptoms can include fever, fatigue, cough, sore throat, and difficulty breathing. It is important to note that early symptoms for some people infected with COVID-19 may be very mild;
- follow instructions on how to put on, take off, and dispose of medical masks;
- follow all additional preventive measures, in particular, hand hygiene and maintaining physical distance from other persons.

All persons should:

- avoid groups of people and enclosed, crowded spaces;
- maintain physical distance of at least 1 m from other persons, in particular from those with respiratory symptoms (e.g., coughing, sneezing);
- perform hand hygiene frequently, using an alcohol-based hand rub if hands are not visibly dirty or soap and water when hands are visibly dirty;
- cover their nose and mouth with a bent elbow or paper tissue when coughing or sneezing, dispose of the tissue immediately after use, and perform hand hygiene;
- refrain from touching their mouth, nose, and eyes.

In some countries masks are worn in accordance with local customs or in accordance with advice by national authorities in the context of COVID-19. In these situations, best practices should be followed about how to wear, remove, and dispose of them, and for hand hygiene after removal.

Advice to decision makers on the use of masks for healthy people in community settings

As described above, the wide use of masks by healthy people in the community setting is not supported by current evidence and carries uncertainties and critical risks. WHO offers the following advice to decision makers so they apply a risk-based approach.

Decision makers should consider the following:

1. **Purpose** of mask use: the rationale and reason for mask use should be clear – whether it is to be used for source control (used by infected persons) or prevention of COVID-19 (used by healthy persons)
2. Risk of **exposure** to the COVID-19 virus in the local context:
 - The population: current epidemiology about how widely the virus is circulating (e.g., clusters of cases versus community transmission), as well as local surveillance and testing capacity (e.g., contact tracing and follow up, ability to carry out testing).
 - The individual: working in close contact with public (e.g., community health worker, cashier)
3. **Vulnerability** of the person/population to develop severe disease or be at higher risk of death, e.g. people with comorbidities, such as cardiovascular disease or diabetes mellitus, and older people

4. **Setting** in which the population lives in terms of population density, the ability to carry out physical distancing (e.g. on a crowded bus), and risk of rapid spread (e.g. closed settings, slums, camps/camp-like settings).
5. **Feasibility**: availability and costs of the mask, and tolerability by individuals
6. **Type** of mask: medical mask versus nonmedical mask (see below)

In addition to these factors, potential advantages of the use of mask by healthy people in the community setting include reducing potential exposure risk from infected person during the “pre-symptomatic” period and stigmatization of individuals wearing mask for source control.

However, the following potential risks should be carefully taken into account in any decision-making process:

- self-contamination that can occur by touching and reusing contaminated mask
- depending on type of mask used, potential breathing difficulties
- false sense of security, leading to potentially less adherence to other preventive measures such as physical distancing and hand hygiene
- diversion of mask supplies and consequent shortage of mask for health care workers
- diversion of resources from effective public health measures, such as hand hygiene.

Whatever approach is taken, it is important to develop a strong communication strategy to explain to the population the circumstances, criteria, and reasons for decisions. The population should receive clear instructions on what masks to wear, when and how (see mask management section), and on the importance of continuing to strictly follow all other IPC measures (e.g., hand hygiene, physical distancing, and others).

Type of Mask

WHO stresses that it is critical that medical masks and respirators be prioritized for health care workers.

The use of masks made of other materials (e.g., cotton fabric), also known as nonmedical masks, in the community setting has not been well evaluated. There is no current evidence to make a recommendation for or against their use in this setting.

WHO is collaborating with research and development partners to better understand the effectiveness and efficiency of nonmedical masks. WHO is also strongly encouraging countries that issue recommendations for the use of masks in healthy people in the community to conduct research on this critical topic. WHO will update its guidance when new evidence becomes available.

In the interim, decision makers may be moving ahead with advising the use of nonmedical masks. Where this is the case, the following features related to nonmedical masks should be taken into consideration:

- Numbers of layers of fabric/tissue
- Breathability of material used
- Water repellence/hydrophobic qualities
- Shape of mask
- Fit of mask

Home care

For COVID-19 patients with mild illness, hospitalization may not be required. All patients cared for outside hospital (i.e. at home or non-traditional settings) should be instructed to follow local/regional public health protocols for home isolation and return to designated COVID-19 hospital if they develop any worsening of illness.⁷

Home care may also be considered when inpatient care is unavailable or unsafe (e.g. capacity is limited, and resources are unable to meet the demand for health care services). Specific IPC guidance for home care should be followed.²

Persons with suspected COVID-19 or mild symptoms should:

- Self-isolate if isolation in a medical facility is not indicated or not possible
- Perform hand hygiene frequently, using an alcohol-based hand rub if hands are not visibly dirty or soap and water when hands are visibly dirty;
- Keep a distance of at least 1 m from other people;
- Wear a medical mask as much as possible; the mask should be changed at least once daily. Persons who cannot tolerate a medical mask should rigorously apply respiratory hygiene (i.e. cover mouth and nose with a disposable paper tissue when coughing or sneezing and dispose of it immediately after use or use a bent elbow procedure and then perform hand hygiene.)
- Avoid contaminating surfaces with saliva, phlegm, or respiratory secretions.
- Improve airflow and ventilation in their living space by opening windows and doors as much as possible.

Caregivers or those sharing living space with persons suspected of COVID-19 or with mild symptoms should:

- Perform hand hygiene frequently, using an alcohol-based hand rub if hands are not visibly dirty or soap and water when hands are visibly dirty;
- Keep a distance of at least 1 meter from the affected person when possible;
- Wear a medical mask when in the same room as the affected person;
- Dispose of any material contaminated with respiratory secretions (disposable tissues) immediately after use and then perform hand hygiene.
- Improve airflow and ventilation in the living space by opening windows as much as possible.

Health care settings

WHO provides guidance for the use of PPE, including masks, by health care workers in the guidance document: Rational use of PPE in the context of COVID-19.²⁴ Here we provide advice for people visiting a health care setting:

Symptomatic people visiting a health care setting should:

- Wear a medical mask while waiting in triage or other areas and during transportation within the facility;
- Not wear a medical mask when isolated in a single room, but cover their mouth and nose when coughing or sneezing with disposable paper tissues. Tissues must be disposed of appropriately, and hand hygiene should be performed immediately afterwards.

Health care workers should:

- Wear a medical mask when entering a room where patients with suspected or confirmed COVID-19 are admitted.
- Use a particulate respirator at least as protective as a US National Institute for Occupational Safety and Health-certified N95, European Union standard FFP2, or equivalent, when performing or working in settings where aerosol-generating procedures, such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy are performed.
- Full infection prevention and control guidance for health care workers is provided [here](#).

One study that evaluated the use of cloth masks in a health care facility found that health care workers using cotton cloth masks were at increased risk of infection compared with those who wore medical masks.²⁵ Therefore, cotton cloth masks are not considered appropriate for health care workers. As for other PPE items, if production of cloth masks for use in health care settings is proposed locally in situations of shortage or stock out, a local authority should assess the proposed PPE according to specific minimum standards and technical specifications.

Mask management

For any type of mask, appropriate use and disposal are essential to ensure that they are effective and to avoid any increase in transmission.

The following information on the correct use of masks is derived from practices in health care settings:

- Place the mask carefully, ensuring it covers the mouth and nose, and tie it securely to minimize any gaps between the face and the mask.
- Avoid touching the mask while wearing it.
- Remove the mask using the appropriate technique: do not touch the front of the mask but untie it from behind.
- After removal or whenever a used mask is inadvertently touched, clean hands using an alcohol-based hand rub or soap and water if hands are visibly dirty.
- Replace masks as soon as they become damp with a new clean, dry mask.
- Do not re-use single-use masks.
- Discard single-use masks after each use and dispose of them immediately upon removal.

WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance document will expire 2 years after the date of publication.

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Coronavirus disease (COVID-19) outbreak: rights, roles and responsibilities of health workers, including key considerations for occupational safety and health

Interim guidance
19 March 2020



Background

Health workers are at the front line of the COVID-19 outbreak response and as such are exposed to hazards that put them at risk of infection. Hazards include pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, stigma, and physical and psychological violence. This document highlights the rights and responsibilities of health workers, including the specific measures needed to protect occupational safety and health.

Health work rights, roles and responsibilities

Health worker rights include the expectation that employers and managers in health facilities:

- assume overall responsibility to ensure that all necessary preventive and protective measures are taken to minimize occupational safety and health risks;¹
- provide information, instruction, and training on occupational safety and health, including;
- refresher training on infection prevention and control (IPC);
- use, putting on, taking off and disposal of personal protective equipment (PPE);
- provide adequate IPC and PPE supplies (masks, gloves, goggles, gowns, hand sanitizer, soap and water, cleaning supplies) in sufficient quantity to those caring for suspected or confirmed COVID-19 patients, such that workers do not incur expenses for occupational safety and health requirements;
- familiarize personnel with technical updates on COVID-19 and provide appropriate tools to assess, triage, test, and treat patients, and to share IPC information with patients and the public;
- provide appropriate security measures as needed for personal safety;
- provide a blame-free environment in which health workers can report on incidents, such as exposures to blood or bodily fluids from the respiratory system, or cases of violence, and adopt measures for immediate follow up, including support to victims;
- advise health workers on self-assessment, symptom reporting, and staying home when ill;

- maintain appropriate working hours with breaks;
- consult with health workers on occupational safety and health aspects of their work, and notify the labour inspectorate of cases of occupational diseases;
- allow health workers to exercise the right to remove themselves from a work situation that they have reasonable justification to believe presents an imminent and serious danger to their life or health, and protect health workers exercising this right from any undue consequences;
- not require health workers to return to a work situation where there has been a serious danger to life or health until any necessary remedial action has been taken;
- honour the right to compensation, rehabilitation, and curative services for health workers infected with COVID-19 following exposure in the workplace – considered as an occupational disease arising from occupational exposure;
- provide access to mental health and counselling resources; and
- enable cooperation between management and health workers and their representatives.

Health workers should:

- follow established occupational safety and health procedures, avoid exposing others to health and safety risks, and participate in employer-provided occupational safety and health training;
- use provided protocols to assess, triage, and treat patients;
- treat patients with respect, compassion, and dignity;
- maintain patient confidentiality;
- swiftly follow established public health reporting procedures of suspected and confirmed cases;
- provide or reinforce accurate IPC and public health information, including to concerned people who have neither symptoms nor risk;
- put on, use, take off, and dispose of PPE properly;
- self-monitor for signs of illness and self-isolate and report illness to managers, if it occurs;
- advise management if they are experiencing signs of undue stress or mental health challenges that require supportive interventions; and

- report to their immediate supervisor any situation which they have reasonable justification to believe presents an imminent and serious danger to life or health.

Additional resources

[Emerging respiratory viruses, including COVID-19: methods for detection, prevention, response and control.](#)

[WHO COVID-19 technical guidance](#)

WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance document will expire 2 years after the date of publication.

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Laboratory biosafety guidance related to coronavirus disease 2019 (COVID-19)

Interim guidance
12 February 2020



1. Introduction

The purpose of this document is to provide interim guidance on laboratory biosafety related to the testing of clinical specimens of patients that meet the case definition of the novel pathogen identified in Wuhan, China, that is, 2019 novel coronavirus (2019-nCoV), now known as the virus responsible for coronavirus disease 2019 (COVID-19).

As our understanding of COVID-19 is limited but rapidly growing, the World Health Organization (WHO) continues to monitor developments and will revise these recommendations as necessary.

Highlights of COVID-19 laboratory biosafety

- All procedures must be performed based on risk assessment and only by personnel with demonstrated capability, in strict observance of any relevant protocols at all times.
- Initial processing (before inactivation) of all specimens should take place in a validated biological safety cabinet (BSC) or primary containment device.
- Non-propagative diagnostic laboratory work (for example, sequencing, nucleic acid amplification test [NAAT]) should be conducted at a facility using procedures equivalent to Biosafety Level 2 (BSL-2).
- Propagative work (for example, virus culture, isolation or neutralization assays) should be conducted at a containment laboratory with inward directional airflow (BSL-3).
- Appropriate disinfectants with proven activity against enveloped viruses should be used (for example, hypochlorite [bleach], alcohol, hydrogen peroxide, quaternary ammonium compounds and phenolic compounds).
- Patient specimens from suspected or confirmed cases should be transported as UN3373, "Biological Substance Category B". Viral cultures or isolates should be transported as Category A, UN2814, "infectious substance, affecting humans".

2. Laboratory biosafety

It is essential to ensure that health laboratories adhere to appropriate biosafety practices. Any testing for the presence of the virus responsible for COVID-19 or of clinical specimens from patients meeting the suspected case definition (1) should be performed in appropriately equipped laboratories, by staff trained in the relevant technical and safety procedures. National guidelines on the laboratory biosafety should be followed in all circumstances. For general information on laboratory biosafety guidelines, see the WHO *Laboratory biosafety manual*, 3rd edition (2) in the interim before the 4th edition is released.

Key points

- Each laboratory should conduct a local (that is, institutional) risk assessment to ensure it is competent to safely perform the intended testing with appropriate risk control measures in place.
- When handling and processing specimens, including blood for serological testing, laboratory practices and procedures that are basic to good microbiological practices and procedures (GMPP) should be followed.
- The handling and processing of specimens from cases with suspected or confirmed COVID-19 infection that are intended for additional laboratory tests, such as haematology or blood gas analysis, should follow local guidelines for processing potentially infectious material.
- Non-propagative diagnostic laboratory work, including sequencing and NAAT, on clinical specimens from patients who are suspected or confirmed to be infected with COVID-19, should be conducted adopting the practices and procedures of "core requirements",¹ as detailed in Annex 1, and an appropriate selection of "heightened control measures",² as informed by the local risk assessment. In the interim, BSL-2 in the WHO *Laboratory biosafety manual*, 3rd edition (2) remains appropriate until the 4th edition replaces it.
- Handling of material with high concentrations of live virus (such as when performing virus propagation, virus isolation or neutralization assays) or large volumes of infectious materials should be performed **only by**

¹ **Core requirements:** A set of minimum requirements defined in the 4th edition of the WHO *Laboratory biosafety manual* to describe a combination of risk control measures that are both the foundation for, and an integral

² **Heightened control measures:** A set of risk control measures that may need to be applied in a laboratory facility because the outcome of a risk assessment indicates that the biological agents being handled and/or the

properly trained and competent personnel in laboratories capable of meeting additional essential containment requirements and practices, that is, BSL-3.

- Initial processing (before inactivation) of all specimens, including those for sequencing and NAAT, should take place in an appropriately maintained and validated BSC or primary containment device.
- Appropriate disinfectants with proven activity against enveloped viruses should be used for the recommended contact time, at the correct dilution and within the expiry date after the working solution is prepared.
- All technical procedures should be performed in a way that minimizes the generation of aerosols and droplets.
- Appropriate personal protective equipment (PPE), as determined by a detailed risk assessment, should be worn by all laboratory personnel handling these specimens.
- Patient specimens from suspected or confirmed cases should be transported as UN3373, "Biological Substance Category B". Viral cultures or isolates should be transported as Category A UN2814, "infectious substance, affecting humans" (3).

3. Recommendations addressing minimal/essential working conditions associated with specific manipulations in laboratory settings

The additional recommendations provided in this section address the minimal/essential working conditions associated with specific manipulations in laboratory settings.

a. Risk assessment

Risk assessment is a systematic process of gathering information and evaluating the likelihood and consequences of exposure to or release of workplace hazard(s) and determining the appropriate risk control measures to reduce the risk to an acceptable level. It is important to note that hazards alone do not pose a risk to humans or animals. Consideration therefore must also be given to the types of equipment used and the procedure(s) that will be performed with the biological agent.

It is highly recommended to start with performing a local risk assessment for each process step, that is, from sample collection, sample reception, clinical testing, polymerase chain reaction (PCR) to virus isolation (only when and where applicable). Certain hazards will then be considered for each process step, such as aerosol

sample processing; infectious culture material spill; and leaking sample (in the case of sample reception), with an assessed grade of risk. For each identified risk, appropriate risk control measures, including but not limited to the following recommendations, should be selected and implemented, in order to mitigate the residual risks to an acceptable level.

A risk assessment template is provided in **Annex 2**; this is intended to serve as an example and to facilitate the process.

b. Routine laboratory procedures, including non-propagative diagnostic work and PCR analysis

Non-culture-based diagnostic laboratory work, and PCR analysis on clinical specimens from patients who are suspected or confirmed to be infected with the virus responsible for COVID-19, should be conducted adopting practices and procedures described for conventional clinical and microbiology laboratories as described in the "core requirements" (see **Annex 1**).

However, all manipulations of potentially infectious materials, including those that may cause splashes, droplets or aerosols of infectious materials (for example, loading and unloading of sealed centrifuge cups, grinding, blending, vigorous shaking or mixing, sonic disruption, opening of containers of infectious materials whose internal pressure may be different from the ambient pressure), should be performed in appropriately maintained and validated BSCs or primary containment devices, by personnel with demonstrated capability.

Examples of routine laboratory procedures include:

- diagnostic testing of serum; blood (including haematology and clinical chemistry); respiratory specimens such as nasopharyngeal and oropharyngeal swabs, sputum and/or endotracheal aspirate or bronchoalveolar lavage; stool; or other specimens;
- routine examination of mycotic and bacterial cultures developed from respiratory tract specimens. When handling and processing specimens, "core requirements" (see **Annex 1**), including GMPP, should be followed at all times, including but not limited to those under the following subheadings. More details are explained and demonstrated in the WHO [Biosafety video series](#) (4).

c. Use of appropriate disinfectants

- While little is known about this novel virus, the comparable genetic characteristics between the virus responsible for COVID-19 and MERS-CoV suggest that the COVID-19 virus may be susceptible to disinfectants with proven activity against enveloped viruses, including sodium hypochlorite (bleach; for example, 1000 parts per million [ppm] (0.1%) for general surface disinfection

62–71% ethanol; 0.5% hydrogen peroxide; quaternary ammonium compounds; and phenolic compounds, if used according to the manufacturer's recommendations. Other biocidal agents such as 0.05–0.2% benzalkonium chloride or 0.02% chlorhexidine digluconate can be less effective.

- Particular attention should be paid not only to the selection of the disinfectant but also the contact time (for example, 10 minutes), dilution (that is, concentration of the active ingredient) and expiry date after the working solution is prepared.

- Human coronaviruses in general are known to persist on inanimate surfaces such as metal, glass or plastic for up to 9 days (5).

d. Viral isolation

Unless a country decides otherwise, considering the newly acquired knowledge and effective preventive measures described above, viral isolation on clinical specimens from patients who are suspected or confirmed to be infected with the virus responsible for COVID-19 should be performed only in laboratories capable of meeting the following additional containment criteria:

- a controlled ventilation system maintains inward directional airflow into the laboratory room;
- exhaust air from the laboratory room is not recirculated to other areas within the building. Air must be HEPA (high-efficiency particulate air) filtered, if reconditioned and recirculated within the laboratory. When exhaust air from the laboratory is discharged to the outdoors, it must be dispersed away from occupied buildings and air intakes. This air should be discharged through HEPA filters;
- a dedicated hand-wash sink is available in the laboratory;
- all manipulations of infectious or potentially infectious materials must be performed in appropriately maintained and validated BSCs;
- laboratory workers should wear protective equipment, including disposable gloves; solid-front or wrap-around gowns, scrub suits, or coveralls with sleeves that fully cover the forearms; head coverings; shoe covers or dedicated shoes; and eye protection (goggles or face shield). Risk assessment should inform the use of respiratory protection (fit-tested particulate respirator, for example, EU FFP2, US 6 NIOSH-certified N95 or equivalent, or higher protection);
- centrifugation of specimens should be performed using sealed centrifuge rotors or sample cups. These rotors or cups should be loaded and unloaded in a BSC.

e. Additional risks associated with virus isolation studies

Certain experimental procedures may carry additional risks of virus mutations with possible increased pathogenicity and/or transmissibility, or viruses with altered antigenicity or drug susceptibility. Specific risk assessments should be conducted, and specific risk-reduction measures adopted, before any of the following procedures are conducted:

- coinfection of cell cultures with different coronaviruses, or any procedures that may result in a coinfection;
- culture of viruses in the presence of antiviral drugs;
- deliberate genetic modification of viruses.

f. Work with animals infected with the virus responsible for COVID-19

The following activities require an animal facility – BSL-3 facilities and work practices, as detailed in the WHO *Laboratory biosafety manual*, 3rd edition (2):

- inoculation of animals for potential recovery of the agent from specimens of the virus responsible for COVID-19;
- any protocol involving animal inoculation for confirmation and/or characterization of putative agents of the COVID-19 virus.

g. Referral of specimens to laboratories with appropriate containment measures in place

Laboratories that are not able to meet the above biosafety recommendations should consider transferring specimens to national, regional or international referral laboratories with COVID-19-detection capacity that can meet the biosafety requirements.

4. Packaging and shipment

All materials transported within and between laboratories should be placed in a secondary container, to minimize the potential for breakage or a spill. An example includes transfer of materials from the BSC to an incubator and vice versa. Specimens leaving the BSC should be surface decontaminated. Detailed guidance is provided in the WHO *Biosafety video series* (4), in particular *Good microbiological practices and procedures (GMPP) 7: transport*.

Transport of specimens within national borders should comply with applicable national regulations. Cross-boundary transport of specimens of the virus responsible for COVID-19 should follow the United Nations model regulations. *Technical instructions for the safe transport of*

dangerous goods by air (Doc 9284) of the International Civil Aviation Organization (6), for airlifted transport, and any other applicable regulations depending on the mode of transport being used. More information may be found in the WHO *Guidance on regulations for the transport of infectious substances 2019-2020* (applicable as from 1 January 2019) (3). A summary on transport of infectious substances can also be found in Tool box 4 of the WHO handbook, *Managing epidemics: key facts about deadly diseases* (7).

Patient specimens from suspected or confirmed cases should be transported as UN3373, "Biological Substance Category B", when they are transported for diagnostic or investigational purposes. Viral cultures or isolates should be transported as Category A UN2814, "infectious substance, affecting humans" (3). All specimens being transported (whether UN3373 or UN2814) should have appropriate packaging, labelling and documentation, as described in the documents mentioned earlier.

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Infection prevention and control during health care when COVID-19 is suspected

Interim guidance
19 March 2020



World Health
Organization

Background

This is the first edition of guidance on infection prevention and control (IPC) strategies for use when COVID-19 is suspected. It has been adapted from WHO's Infection prevention and control during health care for probable or confirmed cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection,¹ based on current knowledge of the situation and experience with severe acute respiratory syndrome (SARS) and MERS.²

WHO will update these recommendations as new information becomes available.

This guidance is intended for health care workers (HCWs), health care managers, and IPC teams at the facility level but it is also relevant for national and district/provincial levels. Full guidelines are available from WHO.²

Principles of IPC strategies associated with health care for suspected COVID-19

To achieve the highest level of effectiveness in the response to the COVID-19 outbreak using the strategies and practices recommended in this document, an IPC programme with a dedicated and trained team or at least an IPC focal point should be in place and supported by the national and facility senior management.³ In countries where IPC is limited or inexistent, it is critical to start by ensuring that at least minimum requirements for IPC are in place as soon as possible, both at the national and facility level, and to gradually progress to the full achievement of all requirements of the IPC core components according to local priorities.⁴

IPC strategies to prevent or limit transmission in health care settings include the following:

1. ensuring triage, early recognition, and source control (isolating patients with suspected COVID-19);
2. applying standard precautions for all patients;
3. implementing empiric additional precautions (droplet and contact and, whenever applicable, airborne precautions) for suspected cases of COVID-19;
4. implementing administrative controls;
5. using environmental and engineering controls.

1. Ensuring triage, early recognition, and source control

Clinical triage includes a system for assessing all patients at admission, allowing for early recognition of possible COVID-19 and immediate isolation of patients with suspected disease in an area separate from other patients (source control). To facilitate the early identification of cases of suspected COVID-19, health care facilities should:

- encourage HCWs to have a high level of clinical suspicion;
- establish a well-equipped triage station at the entrance to the facility, supported by trained staff;
- institute the use of screening questionnaires according to the updated case definition. Please refer to the [Global Surveillance for human infection with coronavirus disease \(COVID-19\)](#) for case definitions, and
- post signs in public areas reminding symptomatic patients to alert HCWs.

Hand hygiene and respiratory hygiene are essential preventive measures.

2. Applying standard precautions for all patients

Standard precautions include hand and respiratory hygiene, the use of appropriate personal protective equipment (PPE) according to a risk assessment, injection safety practices, safe waste management, proper linens, environmental cleaning, and sterilization of patient-care equipment.

Ensure that the following respiratory hygiene measures are used:

- ensure that all patients cover their nose and mouth with a tissue or elbow when coughing or sneezing;
- offer a medical mask to patients with suspected COVID-19 while they are in waiting/public areas or in cohorting rooms;
- perform hand hygiene after contact with respiratory secretions.

HCWs should apply WHO's My 5 Moments for Hand Hygiene approach before touching a patient, before any clean or aseptic procedure is performed, after exposure to body fluid, after touching a patient, and after touching a patient's surroundings.⁵

- hand hygiene includes either cleansing hands with an alcohol-based hand rub or with soap and water;
- alcohol-based hand rubs are preferred if hands are not visibly soiled;

- wash hands with soap and water when they are visibly soiled.

The rational, correct, and consistent use of PPE also helps reduce the spread of pathogens. PPE effectiveness depends strongly on adequate and regular supplies, adequate staff training, appropriate hand hygiene, and appropriate human behaviour.^{1,5,6,7}

It is important to ensure that environmental cleaning and disinfection procedures are followed consistently and correctly. Thoroughly cleaning environmental surfaces with water and detergent and applying commonly used hospital-level disinfectants (such as sodium hypochlorite) are effective and sufficient procedures.⁸ Medical devices and equipment, laundry, food service utensils, and medical waste should be managed in accordance with safe routine procedures.^{1,9}

3. Implementing empiric additional precautions

3.1 Contact and droplet precautions

- in addition to using standard precautions, all individuals, including family members, visitors and HCWs, should use contact and droplet precautions before entering the room of suspected or confirmed COVID-19 patients;
- patients should be placed in adequately ventilated single rooms. For general ward rooms with natural ventilation, adequate ventilation is considered to be 60 L/s per patient;¹⁰
- when single rooms are not available, patients suspected of having COVID-19 should be grouped together;
- all patients' beds should be placed at least 1 metre apart regardless of whether they are suspected to have COVID-19;
- where possible, a team of HCWs should be designated to care exclusively for suspected or confirmed cases to reduce the risk of transmission;
- HCWs should use a medical mask^a (for specifications, see reference 2);
- HCWs should wear eye protection (goggles) or facial protection (face shield) to avoid contamination of mucous membranes;
- HCWs should wear a clean, non-sterile, long-sleeved gown;
- HCWs should also use gloves;
- the use of boots, coverall, and apron is not required during routine care;
- after patient care, appropriate doffing and disposal of all PPE and hand hygiene should be carried out.^{2,6} A new set of PPE is needed when care is given to a different patient;
- equipment should be either single-use and disposable or dedicated equipment (e.g. stethoscopes, blood pressure cuffs and thermometers). If equipment needs to be shared among patients, clean and disinfect it between use for each individual patient (e.g. by using ethyl alcohol 70%).⁹

- HCWs should refrain from touching eyes, nose, or mouth with potentially contaminated gloved or bare hands;
- avoid moving and transporting patients out of their room or area unless medically necessary. Use designated portable X-ray equipment or other designated diagnostic equipment. If transport is required, use predetermined transport routes to minimize exposure for staff, other patients and visitors, and have the patient wear a medical mask;
- ensure that HCWs who are transporting patients perform hand hygiene and wear appropriate PPE as described in this section;
- notify the area receiving the patient of any necessary precautions as early as possible before the patient's arrival;
- routinely clean and disinfect surfaces with which the patient is in contact;
- limit the number of HCWs, family members, and visitors who are in contact with suspected or confirmed COVID-19 patients;
- maintain a record of all persons entering a patient's room, including all staff and visitors.

3.2 Airborne precautions for aerosol-generating procedures.

Some aerosol-generating procedures, such as tracheal intubation, non-invasive ventilation, tracheotomy, cardiopulmonary resuscitation, manual ventilation before intubation, and bronchoscopy, have been associated with an increased risk of transmission of coronaviruses.^{12,13}

Ensure that HCWs performing aerosol-generating procedures:

- perform procedures in an adequately ventilated room – that is, natural ventilation with air flow of at least 160 L/s per patient or in negative-pressure rooms with at least 12 air changes per hour and controlled direction of air flow when using mechanical ventilation;¹⁰
- use a particulate respirator at least as protective as a US National Institute for Occupational Safety and Health (NIOSH)-certified N95, European Union (EU) standard FFP2, or equivalent.^{2,13} When HCWs put on a disposable particulate respirator, they must always perform the seal check.¹³ Note that facial hair (e.g. a beard) may prevent a proper respirator fit;¹³
- use eye protection (i.e. goggles or a face shield);
- wear a clean, non-sterile, long-sleeved gown and gloves. If gowns are not fluid-resistant, HCWs should use a waterproof apron for procedures expected to create high volumes of fluid that might penetrate the gown;²
- limit the number of persons present in the room to the absolute minimum required for the patient's care and support.

^a Medical masks are surgical or procedure masks that are flat or pleated (some are like cups); they are affixed to the head with straps.²

4. Implementing administrative controls

Administrative controls² and policies for the prevention and control of transmission of COVID-19 within the health care setting include, but may not be limited to: establishing sustainable IPC infrastructures and activities; educating patients' caregivers; developing policies on the early recognition of acute respiratory infection potentially caused by COVID-19 virus; ensuring access to prompt laboratory testing for identification of the etiologic agent; preventing overcrowding, especially in emergency departments; providing dedicated waiting areas for symptomatic patients; appropriately isolating hospitalized patients; ensuring adequate supplies of PPE; and ensuring adherence to IPC policies and procedures for all aspects of health care.

4.1 Administrative measures related to health care workers.

- provision of adequate training for HCWs;
- ensuring an adequate patient-to-staff ratio;
- establishing a surveillance process for acute respiratory infections potentially caused by COVID-19 virus among HCWs;
- ensuring that HCWs and the public understand the importance of promptly seeking medical care;
- monitoring HCW compliance with standard precautions and providing mechanisms for improvement as needed.

5. Using environmental and engineering controls

These controls address the basic infrastructure of the health care facility¹⁴ and aim to ensure adequate ventilation¹⁰ in all areas in the health care facility, as well as adequate environmental cleaning.

Additionally, separation of at least 1 metre should be maintained between all patients. Both spatial separation and adequate ventilation can help reduce the spread of many pathogens in the health care setting.¹⁵

Ensure that cleaning and disinfection procedures are followed consistently and correctly.³ Cleaning environmental surfaces with water and detergent and applying commonly used hospital disinfectants (such as sodium hypochlorite) is effective and sufficient.⁸ Manage laundry, food service utensils and medical waste in accordance with safe routine procedures.

Duration of contact and droplet precautions for patients with COVID-19.

Standard precautions should be applied at all times. Additional contact and droplet precautions should continue until the patient is asymptomatic. More comprehensive information about the mode of virus transmission is required to define the duration of additional precautions.

Collecting and handling laboratory specimens from patients with suspected COVID-19.

All specimens collected for laboratory investigations should be regarded as potentially infectious. HCWs who collect, handle, or transport clinical specimens should adhere rigorously to the following standard precaution measures and biosafety practices to minimize the possibility of exposure to pathogens.^{16,17,18}

- ensure that HCWs who collect specimens use appropriate PPE (i.e. eye protection, a medical mask, a long-sleeved gown, and gloves). If the specimen is collected during an aerosol-generating procedure, personnel should wear a particulate respirator at least as protective as a NIOSH-certified N95, an EU standard FFP2, or the equivalent;
- ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures;⁸
- place specimens for transport in leak-proof specimen bags (secondary containers) that have a separate sealable pocket for the specimen (a plastic biohazard specimen bag), with the patient's label on the specimen container (the primary container), and a clearly written laboratory request form;
- ensure that laboratories in health care facilities adhere to appropriate biosafety practices and transport requirements, according to the type of organism being handled;
- deliver all specimens by hand whenever possible. DO NOT use pneumatic-tube systems to transport specimens;
- document clearly each patient's full name, date of birth and "suspected COVID-19" on the laboratory request form. Notify the laboratory as soon as possible that the specimen is being transported.

Recommendation for outpatient care

The basic principles of IPC and standard precautions should be applied in all health care facilities, including outpatient care and primary care. For COVID-19, the following measures should be adopted:

- triage and early recognition;
- emphasis on hand hygiene, respiratory hygiene, and medical masks to be used by patients with respiratory symptoms;
- appropriate use of contact and droplet precautions for all suspected cases;
- prioritization of care of symptomatic patients;
- when symptomatic patients are required to wait, ensure they have a separate waiting area;
- educate patients and families about the early recognition of symptoms, basic precautions to be used, and which health care facility they should go to.

Annexure XXI: Statagic Options under consideration in Pakistan for disposal of Infectious Waste from COVID-19

COVID 19 – MANAGING INFECTIOUS MEDICAL WASTE IN PAKISTAN

Pakistan reached its 3000th case of COVID 19 on the 5th April⁵⁰. Whilst still in the early stages of the outbreak Pakistan is showing a linear growth in new cases instead of the more usual exponential growth exhibited in other countries⁵¹.

Based on learning from the People's Republic of China (PRC) and Italy, Pakistan could see up to 600% increase in infectious medical waste in an unmitigated outbreak. Whilst the hospitals are capable of properly bagging and disinfecting the infectious medical waste a country's ability to dispose of this sudden increase in waste is quickly overwhelmed. Based on the current distribution of COVID cases initial management consideration needs to focus on Urban Hospitals with rural solutions following closely behind. From a total population of 220 million the 100 largest cities account for 60 million people. These cities could account for an additional 71,000 tonnes of infectious medical waste during the pandemic. It is unlikely that all cities will peak at the same time however peak incineration demand is difficult to predict.

Urban Hospitals may have their own existing disposal systems for Infectious Medical Waste. It is important to determine the medical infectious waste generating locations (hospitals, laboratories and quarantine facilities). Many of the locations will have some treatment capacity as may some municipalities. Determining the current capacity and also the locations/capacity of secure intermediate storage locations is critical in determining the mix of infrastructure.

⁵⁰ <http://covid.gov.pk/stats/pakistan>

⁵¹ <http://covid.gov.pk/stats/pakistan>

The loss of control of medical infectious waste is a major risk, especially as co-mingling with municipal solid waste.

Onsite / Offsite Disposal




On-site disposal eliminates the risks and challenges associated with the transport of untreated infectious medical waste however the location of most large hospitals within or close to large population centres poses the additional risk of infection through pest vectors and direct contact or health issues associated with emissions from the disposal process (incineration).

Options for On-Site Disposal

Modern disposal systems such as infrared, autoclave and radiation based systems may be installed. These units are extremely capable of processing infectious medical waste but have limited ability to increase capacity in an emergency. The existing capacity of any system is unlikely to be insufficient during a COVID 19 management campaign.

Decision makers should consider how to quickly (2-3 weeks⁵²) increase the ability of the infectious medical waste system to cope with the projected increases.

⁵² Based on current rate of case increase

Options for Emergency On-site Infectious Medical Waste Disposal Capacity Increase (Urban Medical Facilities)			
	Emergency Incinerator	Autoclave	Infra-red/Microwave
Description	Thermal oxidative destruction with initial energy provided by starter fuel (gasoline/diesel)	Use of thermal energy to destroy pathogens and render materials sterile. Usually electrically powered.	Use of radiation to heat materials and destroy pathogens. Can be combined with shredding to make material safe for cement kilns without modification.
Photograph			
Cost	\$15,000 - \$25,000 ⁵³	\$30,000 - \$100,000 ⁵⁴	\$200,000 - \$1,000,000 ⁵⁵
Capacity	100 kg/day – 1000kg/day	100 kg/day – 1000 kg/day	100 kg/day – 6000 kg/day
Availability	Emergency Suppliers have	Limited stock as most equipment	Limited stock as most equipment built

⁵³ Addfield and Inciner8

⁵⁴ Online Research Anecdotal

⁵⁵ AMB Ecostrey

	stock	built to order	to order
Order lead time	1-2 weeks (3-5 once existing stocks are depleted)	5-8 weeks	5-8 weeks
Pollution Risk	Chlorine in plastics and textiles can combine to make dioxins. Lower with reputable suppliers	Low Limited option for non-specialist suppliers	Low Limited option for non-specialist suppliers
Volume Reduction	90%	50%	60-80%
Infrastructure Requirements	Basic weather protection Source of Diesel	Indoor with solid floor Electricity + Gas/Diesel Supply	Indoor with solid floor Large Electricity Supply
Sample Manufacturer List	www.addfield.com www.inciner8.com www.hitech1999.com	Various	www.kurinasolutions.com http://ecosteryl.com/

Options for Off-site Disposal

This option increases the logistics challenge to safely transport the infectious medical waste away from the Hospital and ensure that it is, in fact, properly disposed of. This can be controlled by the use of “duty of care⁵⁶” systems for the recording and tracking of material from source to disposal and the correct selection of transport vehicles and routes.

Identifying temporary storage sites with adequate security may be challenging in urban areas. Consideration should be given to collocating these temporary facilities with temporary morgues. Securing the waste is most important.

The key benefit to off-site treatment is the immediate removal of the waste from centres of urban population but also the scale of disposal solutions which become available. For cities above 250,000 population size, emergency incinerators and other temporary onsite solutions are likely not have the peak capacity to dispose of the waste in a timely manner⁵⁷.

Cement Kiln Option

A 3 million tonnes per year cement kiln could process up to 100 tonnes of infectious medical waste per day⁵⁸ through co-firing. Other industrial furnaces can similarly be used for the emergency disposal of waste. There may be modifications required to the fuel feed-in systems or additional plant to microwave/infrared pre-treat waste.

Pakistan has a large cement industry distributed around the country. Some of these cement kilns may have been modified to receive refuse derived fuel. Other kilns may require modification to receive medical infectious waste.

Cement Companies in Pakistan

<http://www.dgcement.com/> Lahore

<http://pioneeracement.com/> Khusshab, Punjab

<http://www.kohatcement.com/Home.aspx> KP

Landfilling

Landfilling of the infectious medical waste in existing licensed and managed landfills is a temporary measure.

⁵⁶ WHO – Transport, Storage and Record Keeping – Medical Waste

⁵⁷ Author Calculation

⁵⁸ PRC Building Material Federation - Code of practice for emergency co-processing of COVID-19 medical waste in cement kiln – CBMF/Z-XX02

Attention must be paid to the segregation of the COVID waste and its management during the landfilling and covering process. This is particularly important with regards to informal recyclers and pest vectors to avoid inadvertent re-infection.

Pakistan has limited capacity in this regard so this option should only be used where there is direct line of control from generation of medical infectious waste to the controlled landfill.

Recommendations

The following recommendations should be considered when responding to the medical infectious waste challenges posed by the Covid-19 Pandemic.

1. Prepare map of existing medical waste facilities for:
 - i. Destruction on site at hospitals and laboratories (both Civilian and Military),
 - ii. Medical waste temporary storage facilities with capacity and security assessment,
 - iii. Destruction off site by licenced medical waste providers with capacity and fuel source,
 - iv. Temporary quarantine centres and any emergency waste infrastructure
 - v. Temporary Morgues
2. Seek information from the Pakistan Cement Manufacturers Association on
 - i. Operational status of cement kilns, capacity and location
 - ii. Status of each kilns for the receipt of medical infectious waste
3. Seek clarity on availability of medical waste transport vehicles and vehicles which can be repurposed to transport medical infectious waste.
4. Determine the capacity of local enterprises to manufacture medical infectious waste incinerators.
5. Assess the information available and determine the temporary storage capacity and transportation capacity. Determine the likely peak waste generation and identify the under-capacity. Respond with infrastructure support based on following guidelines:
 - i. Support medium term development of cement kilns to process medical infectious waste until such time as the backlog is cleared. The cement kilns should then replace medical infectious waste with refuse derived fuels from municipalities. This capacity can be used in the event of another medical infectious waste bubble.
 - ii. Identify those local enterprises who can manufacture medical waste incinerators to an acceptable standard.
 - iii. Procure emergency incinerators and microwave/infrared units internationally based on availability.
6. Determine the level of training needs for municipal officials, engineers, collectors and operators to meet this challenge. Training for waste collectors is a critical activity.
7. Identify policy and regulatory hurdles to rapidly implement this strategy. Specifically, identify who would be exempted from any lockdown provisions to provide this essential service.
8. Immediately cease all recycling activities where there is less than a 5 day no contact period for waste handling from households.

Annexure XXII: Social & Gender Safeguard Risks associated with COVID-19 Outbreak

The social risks are also considered substantial. One major social risk is that marginalized and vulnerable social groups (e.g. women, elderly, differently-abled, indigenous people (IPs) of Kalash and other areas of Pakistan, religious minorities, communities in remote locations etc.) are unable to access and benefit from facilities and services which could undermine the objectives of the project.

Reaching all populations including women and girls, illiterate populations, the Kalash, and communities in remote and lagging areas and educating them on the disease is crucial to containing its spread. There is a potential risk of social tension and conflict within communities due to the adverse impacts on containment strategies on people's livelihoods, and in quarantine/isolation facilities servicing marginalized groups such as religious minorities.

Global evidence suggests that the incidence of gender-based violence (GBV) increases in crisis situations and it may expose women to higher risk of domestic violence due to heightened tensions in households, including when families are quarantined. This has also been highlighted in the ongoing COVID-19 emergency in the PRC. Targeted training for health care professionals will be required to sensitize them to a host of GBV (i.e. sexual harassment, sexual exploitation and abuse, domestic violence) and trauma issues, to enable them to connect survivors with existing referral mechanisms in the country. Data related to COVID-19 outbreak and the implementation of the emergency response must be disaggregated by sex, age, and disability to understand the differences in exposure and treatment and to develop differential preventive measures accordingly.⁶⁰

NDRMF will ensure to comply with ISAC Guidelines ***"Identifying and Mitigating Gender-based Violence Risks within the COVID-19 Response"***.

For reference: Gender Analysis\ISAC\Interagency-GBV-risk-mitigation-and-Covid-tipsheet.pdf

⁶⁰ Health, Nutrition and Population Global Practice Team, Project Appraisal Document on Pandemic Response Effective in Pakistan, The World Bank, April 2020.

Annexure XXIII: ADB Safeguard requirements in Disaster/Emergency Situations

ADB Safeguards in Emergency Situations

ADB's Emergency Assistance Lending highlights that in emergency situations the completion of standard environmental and social assessments, environmental management plans, resettlement plans, and Indigenous Peoples plans may not be possible before Board of Directors approval. In such cases, the Safeguard Policy Statement (SPS) provides that in lieu of such assessments, safeguard frameworks may be prepared.⁶¹

The purpose of a safeguard framework is to ensure that the subprojects or project components implemented under the framework comply with ADB safeguard objectives, principles and requirements. Safeguard frameworks (including environmental assessment and review frameworks, resettlement frameworks, and Indigenous Peoples planning frameworks) need to be in place prior to project approval and provide necessary details on the screening and categorization, assessment, planning, institutional arrangements, and processes to be followed for subprojects or components after Board approval. Impact assessments and safeguard plans are also prepared during subproject or component preparation in conformity with the safeguard frameworks agreed to by ADB and the client.

To determine whether the application of safeguard frameworks is appropriate, ADB assesses the client's capacity to manage environmental and social impacts and risks and to implement national laws and ADB's requirements. If gaps exist between ADB's requirements and countries' laws, or where gaps in borrowers' capacity are apparent, the safeguard frameworks include the details of the specific gap-filling requirements to ensure that policy principles and safeguard requirements are achieved.

For program lending, a matrix of potential impacts of each policy action, together with appropriate mitigation measures, will be prepared, with a qualitative indication of the likely order of magnitude of each impact, and brief reasons for the judgment.

For projects involving investment of ADB funds to or through financial intermediaries (FI), ADB conducts safeguard due diligence to assess the potential environmental and social impacts and risks associated with the FI's existing and likely future portfolio, and its commitment and capacity in social and environmental management. All FIs will ensure that their investments are in compliance with applicable national laws and regulations and will apply ADB's prohibited investment activities list (SPS, Appendix 5) to subprojects financed by ADB. Where the FI's investments have minimal or no adverse environmental or social risks, the FI project will be treated as category C project and need not apply any other specific requirements. All other FIs will be required to have in place or establish an appropriate environmental and social management system (ESMS) commensurate with the nature and risks of the FI's likely future portfolio.

In addition, the Disaster and Emergency Assistance Policy (DEAP) allow additional flexibility to facilitate expeditious processing. For the environmental safeguards, management can waive the 120-day rule for disclosure of the environmental impact assessment and the two-step public consultation requirement for category-A projects (those with a potentially significant environmental impact) on a project-by-project basis.

⁶¹ ADB. 2009. Safeguards Policy Statement. Manila. See requirements 1-3.

In the case of safeguards on involuntary resettlement and Indigenous Peoples, even if the initial poverty and social assessment identifies likely adverse effects, standard surveys and consultation requirements based on the feasibility study may not be possible before Board circulation. In such cases, provisions for such surveys, assessments and consultations will be made through safeguard frameworks. The RRP will identify policy, procedures, and requirements to be applied during loan implementation and any departure from standard procedures with reference to the specific circumstances of the project and the EAL processing schedule.

Additional details

Safeguard frameworks will be prepared for each safeguard area and will:

- (i) reflect fully the policy objectives and relevant policy principles and safeguard requirements governing preparation and implementation of subprojects and/or components;
- (ii) explain the general anticipated impacts of the subprojects and/or components to be financed under the proposed project;
- (iii) specify the requirements that will be followed for subproject screening and categorization, assessment, and planning, including arrangements for information disclosure, meaningful consultation with measures to involve vulnerable groups including women, grievance redress mechanism, and where applicable, safeguard criteria that are to be used in selecting subprojects and/or components;
- (iv) describe implementation procedures, including budgets, institutional arrangements, and capacity development requirements;
- (v) specify monitoring and reporting requirements; and
- (vi) specify the responsibilities and authorities of the borrower/client, ADB, and relevant government agencies in relation to the preparation, submission, review, and clearance of subproject safeguard documents, and monitoring and supervision of safeguard plan implementation.

Annex XXIV: Voluntary Land Donation Framework

Background

95. The Government of the Islamic Republic of Pakistan (GOP) has established National Disaster Risk Management Fund (NDRMF) to institutionalize a mechanism to enhance Pakistan's resilience to disasters by strengthening the government's ability to quickly respond to future disasters triggered by natural hazards. The Fund focuses on: (i) disaster risk reduction; (ii) design, development and seeding of disaster risk financing strategies and instruments; and (iii) partnerships with other organizations to provide relief and recovery support, including livelihood restoration initiatives and reconstruction and rehabilitation of key public infrastructure.

96. NDRMF supports existing government entities and civil society organizations, involved in disaster risk management, including the National Disaster Management Authority (NDMA), Provincial Disaster Management Authorities (PDMA), District Disaster Management Authorities (DDMA), etc. The Fund is in line with existing policies and strategies of the GOP to address disasters, including (i) the Disaster Risk Reduction Policy (2013); (ii) Climate Change Policy (2013); (iii) Vision 2025; (iv) National Disaster Management Plan 2013-2022 (NDMP); (v) the draft National Flood Protection Plan IV (NFPP) (2016-2025); and (vi) Post-2015 Sendai Framework for Disaster Risk Reduction, 2015-2030.

97. The Fund environment and social policy and principles adheres to the requirements of national legal and regulatory, and international ratified conventions and agreements. In addition to this, the Fund shall also comply with environment and social policies of the respective Financing Source(s). In order to comply the safeguards policies of the donors NDRMF has established its Environment Social Management System (ESMS).

98. ESMS is compatible with international standards and international best practices such as ADB requirements for financial intermediaries (FI) that entail: (i) collation of relevant national legal and regulatory requirements, and international ratified conventions and agreements. ESMS defines policies, principles, procedures, institutional arrangements and its financing operations for managing adverse environmental and social risks and impacts that would be caused by the sub-projects, which are to be financed by the NDRMF. In first phase project cycle, NDRMF is financing only Category "C" Projects.

99. The ESMS principles in respect of land acquisition and resettlement is to (i) avoid involuntary land acquisition and resettlement impacts; and (ii) minimize land requirements and if needed, to use when possible, government land or obtain other land through voluntary means or negotiated agreements.

100. As NDRMF is dealing with disaster resilient projects like flood management and drought management and there is dire demand from the communities for flood protection interventions on particular location for their lives and assets savings. On the other hand non availability of government or state land is a great limitation in financing these projects and barred the government and non public FIPs from execution of such projects.

2. Scope of the Voluntary Land Donation Framework

101. NDRMF is undertaking community-driven schemes with no resettlement or involuntary land acquisition. These schemes are categorized as "C" for the IR safeguard. For community driven schemes, the subproject selection criteria requires that the scheme is desired and demanded by the community.

3. Land Regulations in Pakistan

102. Revenue Departments of respective provinces in Pakistan are the custodian of land and land ownership/title rights according to Pakistan Land Revenue Act of 1967. Land demarcation, cadastral maps and revenue record was prepared only for settled areas where the canal command system was developed and land was distributed with property rights in colonial age. In Baluchistan and KPK where agriculture was not possible or grazing land was available it was left unsettled areas and declared as tribal or state property. Many lands in Pakistan are customarily or occupied by tribes since centuries and on the other hand many lands, mostly in Baluchistan and KPK areas are declared as state land or communal lands.

4. Land Acquisition Act-1894

103. LAA-1894 is the regulatory legislator Act, which regulate the land acquisition process. The process of land acquisition starts from section-4 of the LAA1894 and is completed in section-18 of LAA1894. Ideally it takes 14 to 16 month in completion of the land acquisition process before start of civil work.

5. Need for Voluntary Land Donation

104. To take up the disaster related sub projects of small scale schemes on the demand of community is not possible by the relevant government departments or nonpublic organization due to non availability of state land. On the other hand, to mitigate the disasters on priority and to save the communities from the threat of immediate future floods and droughts is inevitable and necessary. In such situation the land may be used on the demand of the community through Voluntary land donation.

105. Many communities or tribes have expressed their willingness to provide voluntarily a part of their communal land for project activities. Landowner communities/groups are expected to waive compensation claims in consideration of benefits of project to their community members and the fact that landownership will still remain with them.

106. This policy framework is drafted to update the ESMS for land use through VLD. It covers the policy framework and modalities to use land through voluntary donation. Voluntary Land Donation Framework will ensure that due diligence will be conducted on each scheme of a subproject to assess the social safeguards status of a proposed subproject and confirm that selection criteria have been met. The scheme would be dropped if the voluntary land donation-related criteria (detailed below) are not met.

6. Due Diligence

107. It is necessary that demands for execution of subproject must arise from the respective communities. The stakeholder community must submit applications for execution of the sub project and will be directly beneficial from the project. It should clearly mention in the application that community will voluntarily donate any necessary small parcels of land for building water storage structures or flood protection structures. The selection criteria for schemes further requires that communities demonstrate their willingness to carry out protection measures.

The voluntary land donation due diligence will be documented in the scheme's feasibility assessment report and provide the evidence of meeting the follow key criteria:

- (i) Verification and documentation that land required for the small-scaled project is given voluntarily and the land to be donated is free from any dispute on ownership or any other encumbrances. Verification must be obtained from each person donating land.

For community or collective land, donation can only occur with the consent of all individuals using or occupying the land.

- (ii) No physical displacement should occur. Furthermore, donation should not result in more than 10% of total productive agricultural land holding donated by any individual household, or more than 10% loss of any other productive or income generating asset. Verification that no individual household will be impoverished by the land donation will require that community development groups negotiate livelihood restitution measures for affected households such as reduction in operation and maintenance fees or sharing of cultivable land of other beneficiary community members, or other measures.
- (iii) In case of barren land or culturable waste or land underwater or in riverbed, an individual may donate more than 10% of his/her total land holding, if condition (ii) above is met.
- (iv) Verification that land donation will not displace tenants or bonded labor, if any, from the land and that no other vulnerable households/affected persons are to be affected.
- (v) Verification that land donated is not land used by indigenous peoples either traditionally or customarily.
- (vi) Meaningful consultation has been conducted in good faith with all potential land donors. Documented verification that land donors are in agreement with the scheme and scheme benefits. Separate discussions to be held with women and minority groups as required to facilitate meaningful participation; and
- (vii) Assurance that a community mechanism for scheme implementation is operational and has a fair system of grievance redress, as well as a system for project monitoring and reporting.
- (viii) Verification that the subproject for which land donation is needed is not site-specific and that such sub-project can be shifted to a different location should community member refuse to donate their land.

7. Fact Finding Field Report/ Documentation

108. Field technical teams involved in execution of the project will document the voluntary land donation due diligence in each subproject preparation report that requires donation of private land. They will ensure completion of the written consent form for land donation (see sample in Annex 1). The donation will be verified by two witnesses who are community leaders but not beneficiaries of the subproject, to ensure that the land was voluntarily donated without any form of duress. The voluntary land donation due diligence information will be verified during scheme detailed design and updated as necessary.

8. Voluntary Land-Use Agreement

109. For interventions where local landowner communities are willing to provide voluntarily part of their communal or private land for project activities, in consideration of benefits of the Project to their community members, the land (user right) will be obtained through a voluntary land use agreement for construction or other activities. An agreement will be carried out with every individual owner in case of private land and with the tribal head commette in case of

communal or tribal land. An agreement for VLD on Judicial Stamp paper of nominal minimal legal value will be obtained from every landowner. Stamp Paper draft is annexed as “A” and “B”

9. Monitoring of Voluntary Land Donation

110. The voluntary land donation issues will be monitored by NDRMF Social safeguards and M&E team. Simultaneously ADB social safeguards team or team appointed for annual audit of ESMS may also monitor and check the records of VLD documents. These monitoring bodies may also thoroughly review the land donation agreement forms and randomly interviewing the land donors. During review missions, ADB will verify that land donation due diligence has been conducted in accordance with the above procedures.

10. Grievance Redress Mechanism

111. Anticipated grievances may relate to coercion for land donation or donation of more than 10% of one's agricultural land holding, leading to impoverishment.

112. The project Director/ Executive Engineer or Officer responsible at site will establish and notify the GRM office before start of VLD process, so for if any person have any grievance during the VLD process he/she can contact to GRM at site. Project Director shall appoint a person to accept complaints of affected persons (AP). The APs will register their grievances with either GRM at site or Project Director or NDRMF through email, or by post, if not resolved at site or not satisfy with the initial resolution of the complains. The appointed person at the site office will document the complaint in “grievance register book”.

113. The Project Director will prepare a formal, written assessment that describes the complaint and confirms whether the grievance is genuine. A response on the matter will be provided to the AP within 7 days by the Project office in consultation with necessary parties. The Project office will use the register to book to list (i) date of grievance registered, (ii) name / address of complainant, (iii) nature of grievance, and (iv) response. In case the site office is unable to resolve the issue in 7 days, the matter will be forwarded to the Project Director Office who will investigate, assess and resolve the issue within 30 days of receiving the grievance. The corrective action will be carried out as agreed and documented in the grievance register book. The outcome shall also form part of the progress reports to ADB. The details and information on use of this grievance redress mechanism will be communicated to the local communities and beneficiaries by the FIP working in the subproject area.

11. Process Flow for Land Use through VLD

- I. If suitable state land is not available for the proposed Project and the non-state land is the only available suitable option, such land will be obtained through voluntary land use agreement or negotiated purchase. It will be ensured that the failure of the negotiation for VLD will not result in compulsory acquisition.
- II. Community should apply to the concern department with a demand for execution of the proposed project.
- III. The Project will organize a public consultation meeting in the respective sites to verify the information. The project team will prepare minutes of the meetings, which will be kept in the project office and their copies will be attached to the land assessment/screening report.
- IV. Local communities/landowners/APs will be consulted meaningfully on the purpose of the Project, the selection of sites and options to avoid or minimize impacts. Terms and conditions of voluntary land use agreement will be discussed. It will be ensured that it is, in fact, voluntary and no one will be forced to provide their land or assets.
- V. Preparation of a location map identifying the proposed land and it's RoW.
- VI. Coordination with the Revenue Department for verification of the land ownership record.

- VII. An agreement for VLD on Judicial Stamp paper of nominal minimal legal value will be obtained from every landowner. Stamp Paper draft is annexed as "A"
- VIII. It is to validate that landowners or any other users/occupants will not experience physical displacement and/or major adverse impacts from land use and not surrounding the land more than 10% of his/her total land or other productive, income generating asset.
- IX. Validate that the landowner representatives signing the agreement duly represent the landowners.
- X. Validate that any minor impacts have been identified, sufficiently addressed and documented by the Project.
- XI. Validate that the agreement is in compliance with safeguard requirements stipulated in this framework.
- XII. Consultations with local administration offices (e.g. Revenue, Agriculture, Forest or District Administration, etc.) about any ongoing disputes or litigation.
- XIII. Consultations with local residents to assess if the proposed works will adversely affect any person(s) or communities.
- XIV. Proposed site should be free of any private residential structures or major sources of livelihoods to affected persons.
- XV. Particular attention will be paid to women, women-headed households, elderly and other vulnerable people. It will be taken care that no adverse negative impact may be occurred on them.
- XVI. A land assessment screening report will be prepared and submitted to ADB for clearance before start-up of civil works involving use of non-state land. The assessment report will document the process and outcome achieved for respective interventions according to its requirements and appropriate land arrangement.
- XVII. The project will monitor implementation of land aspects, submit semi-annual reports to ADB and address any unforeseen impacts that may occur during implementation in line with the framework and ADB SPS.

Preparation of land assessment screening report by covering the following aspects

- (i). brief description of the proposed site including a location map
- (ii) Description of intervention and types of works
- (iii) Description of proposed land, status of ownership and use;
- (iv) Findings of the ground Realities and observations
- (v) Process and outcome of consultations with communities and stakeholders (records of meetings, etc

Annexure – XXV: A SAMPLE VOLUNTARY DONATION OF LAND AGREEMENT

The following agreement has been made on day of between Mr./Ms., aged, resident of zone, district (the Owner) and (the Recipient/Subproject Proponent).

1. That the land with certificate no..... is a part of, is surrounded from eastern side by....., western side by....., northern side by, and southern side by.....
2. That the Owner holds the transferable rights of land (area in square meters), with plot no..... at the above location (include a copy of the certified map, if available)
3. That the Owner testifies that the land/structure is free of squatters or encroachers and not subject to any other claims.

3.1 That the Owner hereby grants to the..... (name of the Recipient) this asset for the construction and development of the for the benefit of the community.

3.2 That the Owner will not claim any compensation against the grant of this asset nor obstruct the construction process on the land in case of which he/she would be subject to sanctions according to law and regulations.

3.3 That the (name of the Project Proponent) agrees to accept this grant of asset for the purposes mentioned.

Name and Signature of the Owner

Signature of Subproject

Proponent/Representative

(Signature, name and address)

.....

Witnesses:

Agreement for Communal or Tribal Land

1.....

2.....

.....

ANNEX XXVI: MEMORANDUM OF AGREEMENT

This **Memorandum of Agreement (MOA)** entered into by and between;
The FIP/Department -----as represented by the Office of -----;
---AND---

The community of _____ (Name of Ward), _____
(District), in the Province of _____ represented by its wards leaders, tribal
head, leaders of clans and sub-clans, the names of which are enumerated at the end of this
document;
---WITNESSETH---

Whereas, the Department/ FIP -----is implementing the -----(the Project) in
order to support achieving the objective of (Scheme purpose) ----- , with the
financial assistance from NDRMF and other development partners;

Whereas, _____ (the subproject site) has been selected by the Community-----
which requires the use of non-state/customary land as there are no suitable state lands
available in the sub Projectpilot area;

Whereas, the clans and communities who jointly own the land identified for the subproject
intervention are fully (i) aware of the subproject benefits for their communities, mainly improved
resilience to disaster management (ii) supportive of the proposed intervention; and (iii) are
willing to provide voluntarily the use of identified land for subproject activities.

NOW, THEREFORE, for and in consideration of the foregoing premises and covenants
hereinafter stipulated, FIP (Department Name) -----and the clans and
communities who jointly own the customary land that is required for the subproject intervention
have entered into this agreement:

1.0 Identification and Location of the intervention

1.1 (FIP)-----has considered the subproject intervention _____ under the
NDRMF financing. This site has an area of _____square metres.

1.2 We certify that we, as individuals and representatives of our communities and clans, are the
exclusive customary owners of the subproject location. The particulars of our customary land
are described below;

Location (name): _____

Ward: _____

District: _____

Province: _____

Name and Signature of the Owners

Signature of Subproject

Proponent/Representative

Witness (1)

Witness (2)

ANNEX XXVII: ToRs for Medical Waste Management Expert

Academic Qualification

The potential consultant must at least have an advanced degree in science or engineering related to medical waste management, health care, or an advanced degree in waste management.

Years of Experience

- A minimum of 10 years previous related professional experience with preference given to candidates with professional experience in medical waste management;
- Five years' experience working with hospitals, health institutions, and health-related governmental and non-governmental organizations.

Competence

- Demonstrated professional experience and expertise in hospital waste management approaches, including experience in the design and implementation of sustainable, hospital specific waste minimization and management programs in one or more countries;
- Knowledge of existing medical waste management system and challenges in the region;
- Good writing and reporting skills;
- Experience in data gathering and research especially in a medical environment;
- Familiarity with chemicals management and the linkage between exposure to chemicals and health.
- Demonstrated professional experience and expertise in hospital waste management approaches, including experience in the design and implementation of sustainable, hospital-specific waste minimization and management programs in one or more countries;
- Ability to analyse policy documents, tools, and other resources related to health-care waste management;

Scope of Work

In collaboration with the Fund staff and public sector focal points from the health sector, the Consultant will:

- Develop an action plan with clearly laid out steps and use this plan to provide guidance and support to health care facilities across the country to ensure implementation of best environmental practices in health care waste management as per WHO Guidelines for COVID-19 pandemic.
- Conduct trainings of health care staff across the country on implementation of WHO guidelines for hospital wastes to manage COVID-19 pandemic;
- Conduct spot visits and checks of health care facilities across the country to assess level of compliance of WHO guidelines for hospital waste management and develop corrective action plans based on any lapses identified during these spot visits.
- Conduct proactive monitoring of the corrective action plans to ensure the identified gaps are being filled and the non-compliances from WHO guidelines are not being repeated.
- Attend and support meetings of coordination groups and meetings, as required to manage and respond to COVID-19 pandemic;
- Collaborate with and assist other experts/consultants that will be engaged during project implementation;
- Conduct any other tasks, as felt necessary to manage and respond to effective management and disposal of waste being generated from health care facilities treating COVID-19 patients.

ANNEX XXVIII: ToRs for Incinerator Design & Installation Firm

Qualification Requirements:

The firm should have competent and committed staff to deliver this service and with the following minimum qualification and expertise:

- a. Experience in design, construction and installation of incinerators.
- b. Experience in training and facilitation on the use of incinerators.
- c. Experience: The firm should have at least 10 years of experience and show that it has already been providing related services.
- d. The firm must be a manufacturing company with an in country representation and/or provide evidence of being a manufacturing company representative for the equipment being solicited for.

Scope of Work:

The detailed scope of work covers the provision of the following:

- i. Designing and Construction of a purposely designed incinerator as per required specifications to ensure it meets national EPA and IFC guidelines for 'Air emission levels for Hospital Waste Incineration Facilities'.⁶²
- ii. Installation of the incinerator and ready to use.
- iii. Provide training on the equipment at each installation site.
- iv. Provision of maintenance plan for the equipment for at least one year.

Expected Deliverables:

1. Brand New incinerator as per design specifications and agreed upon BOQ.
2. The incinerator installed in the incinerator house and test run for one month – four (4) hours daily with training of personnel.
3. Construction of an ash pit based on agreed upon dimensions.

⁶² <https://www.ifc.org/wps/wcm/connect/960ef524-1fa5-4696-8db3-82c60edf5367/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&CVID=jqeCW2Q&id=1323161961169>

4. Training of at least two health department staff on the use and preventive maintenance of the incinerator during the one month testing/commissioning until they are certified.
5. Provision of warranty document for the incinerator and maintenance plan for at least one year.

ANNEX XXIX: ToRs for Air Quality Monitoring & Emission Monitoring for Incinerators

An EPA approved laboratory must be engaged to conduct the ambient air quality and emission monitoring to assess the air quality impacts from incinerator operation at the health care facilities across the country. The laboratory to be engaged must conduct:

Ambient air quality monitoring of parameters as per national standards

Emission level monitoring as per IFC guidelines for 'Air emission levels for Hospital Waste Incineration Facilities'.⁶³

Ambient Air Quality Monitoring

The sampling procedures are based on the methods of United State Environmental Protection Agency USEPA.

- The air quality monitoring must be carried out at reference points with the help of sensors fitted in a Mobile Air Quality Data Monitoring Station. The sensors must comply with the requirement of USEPA and EPA Pakistan as mentioned in the NEQS for ambient air.
- The exact sampling site would be finalized during the site visit with mutual consent between laboratory staff and the Fund/FIP staff.
- The ambient air quality would be monitored by online analyzers continuously for 8 -24 hours at individual sampling point depending upon security conditions at monitoring location.
- Average of data gathered during one hour interval will be reported. Method Following methods would be utilized for the ambient air quality monitoring and hourly data will be reported:

Ambient Air Quality Monitoring

S/No.	Air Pollutant	Monitoring Technique	Method	Measurement Range	Lowest Detection Limit
1	Carbon Monoxide (CO)	Gas Filter Correlation CO Analyzer	US EPA Designated Method RFCA-0981-	0 - 100	0.01 ppm

⁶³ <https://www.ifc.org/wps/wcm/connect/960ef524-1fa5-4696-8db3-82c60edf5367/Final%2B-%2BHealth%2BCare%2BFacilities.pdf?MOD=AJPERES&CVID=jqeCW2Q&id=1323161961169>

			054		
2	Sulfur Dioxide (SO ₂)	Pulsed Fluorescent Analyzer	US EPA Designated Method EQSA-0486-060	0 - 50 ppb 0 - 100 ppm	1 ppb
3	Nitrogen Dioxide (NO)	Chemiluminescent Analyzer	US EPA Designated Method RFNA-1289-074	0 - 50 ppb 0 - 100 ppm	1 ppb
4	Nitrogen Dioxide (NO ₂)	Chemiluminescent Analyzer	US EPA Designated Method RFNA-1289-074	0 - 50 ppb 0 - 100 ppm	1 ppb
5	Suspended Particulate Matter (SPM)	High Volume Sampler / Fine Dust Sampler	JIS B 9921:2010 / ISO 21501-4:2007	1 - 1000 µg/m ³	1 µg/m ³
6	Particulate Matter (PM _{2.5})	High Volume Sampler / Fine Dust Sampler	JIS B 9921:2010 / ISO 21501-4:2007	1 - 1000 µg/m ³	1 µg/m ³
7	Particulate Matter (PM ₁₀)	High Volume Sampler / Fine Dust Sampler	JIS B 9921:2010 / ISO 21501-4:2007	1 - 1000 µg/m ³	1 µg/m ³
8	Lead (Pb)	High Volume Sampler / Fine Dust Sampler	JIS B 9921:2010 / ISO 21501-4:2007	-	-
9	Ozone (O ₃)	EN 50270:1999	Electro-Chemical	0 - 0.5 ppm	0.001ppm

Emission Level Monitoring

International protocol for emission monitoring must be followed while ensuring that all parameters as per IFC emission guidelines as mentioned above are monitored to assess level of compliance of incinerator operation at health care facilities across the country.

ANNEX XXX: Additional IR Screening Checklist for EAL

Additional Screening Checklist for EAL (Simplified Due Diligence Report)

Name and Location of Existing Facility:
Describe the full scope of works to be undertaken on project site around existing facility, including any works related to utilities like water supply, sanitation, electricity and access roads:
Describe land needs associated with the refurbishment of the existing facility. Specify if there is a need to allocate/expand ROW for access roads, communications, utilities like water supply, sanitation, electricity. Clarify if there is a need to expand the boundaries of the facility's ROW (e.g., clear and fence a larger area) or expand the structure itself (e.g., provide additional access points to facility or add any physical extensions).

Describe physical characteristics of the land (type, area, coordinates, including photos and google earth image, if available)
Describe ownership/cadastral status of the land (project (full or partial), government (full or partial) local government/municipality (full or partial); physical/legal person (full or partial)). Indicate the starting month/year of land tenure. Describe the ownership/cadastral status of any additional land needed.
Take note of any contested titles or existing incumbrances associated with the project site (e.g., acquisition by government agency was initiated but not completed; existence of claims by any other parties).
Describe current use of land including the use of any additional land needed:

	Yes	No	Comment/Clarification
Are there any formal or informal leaseholders on the existing parcel/needed parcel?			
Are there any non-registered users on the existing parcel/needed parcel?			
Will there be permanent and/or temporary physical displacement, for example, relocation, loss of residential land, or loss of shelter by any person or legal entity?			
Will there be permanent and/or temporary economic displacement, for example, loss of land, assets, access to assets, income sources or means of livelihood (agricultural, businesses)?			
Will there be any person affected by permanent and/or temporary restriction of access to any economic activity earlier performed on the parcel?			
Will there be any person affected by permanent and/or temporary restriction of access to any natural resource as a result of the project construction/enclosure of the parcel?			
Will there be loss of crops, trees, structures fences and other fixed assets due to project construction?			
Will there be restriction of access to assets, access to natural resources, communal facilities and/or services?			
If land use is changed, will it have adverse impact on social and economic activities (for example, of nearby communities, groups etc.)			

Will the project facility establish a buffer zone which will be outside of the facility's current ROW? If yes, please describe any adverse impacts on social or economic activities (for example, on nearby communities, private persons or legal entities, etc.)			