

Environmental Risk Management (ERM)

Guidelines *for* **Banks and Financial Institutions** *in* **Bangladesh**

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BANGLADESH BANK

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Message

The financial and economic development of Bangladesh is inextricably linked to our vulnerability to environmental degradation. An increasing awareness of these issues and their impact on financial institutions and business enterprises has driven the creation of a guideline encouraging banks and FIs to integrate Environmental Risk Management(ERM) policies into existing Credit Risk Management procedures. Banks and financial institutions need to adopt ERM practices in a formal and structured manner in line with global norms so as to protect their financing from the risks of a deteriorating environment and ensure sustainable banking practices. With the pioneering of the ERM Guidelines in Bangladesh, we aim to achieve similar standardization of risk management across the financial sector and preserve the competitive edge with client bases in diverse sectors ranging from agri-business to textiles and apparels.

This Guideline aims to work in parallel with the central bank's drive to create conscientious project financing through adoption of a Corporate Social Responsibility framework by the financial sector, as both aspects are critical to the functioning of a sustainable banking system in Bangladesh. While the objective of CSR is to realize and prioritize the financial sector's imprint on the environment and society in which it operates, the ERM Guideline aims to internalize the risk that a deteriorating environment poses on the interests of the financial institution. In this effort, cooperation within the financial sector is of utmost importance. Compliance to environmental risk management standards in conjunction with undertaking CSR initiatives presents a potential for tapping into carbon trading markets for the Bangladesh through incorporating energy efficiency and renewable energy into internal operations and also new business development.

Climate change as a result of human action presents a risk for the financial sector and the Environmental Risk Management Guidelines seeks to provide a framework for addressing this risk to ensure a trajectory of sustainable financial and economic growth.

Dr. Atiur Rahman
Governor



Foreword

Over the last decade, the adoption of Environmental Risk Management(ERM) techniques and procedures has become an important area of activity for Banks/Financial institutions (FIs) across the world. This has been driven by an increasing awareness of environmental issues among all stakeholders, particularly community, customers and shareholders. The need to recognize the credit risks associated with environment have long been apparent and ERM Guidelines from the Bangladesh Bank are a mechanism to ensure that Banks and financial Institutions incorporate Environmental Risk into their credit risk management structure.

The advent of Basel II in Bangladesh will closely link the level of risk associated with facilities and clients with the amount of capital charged and provisions raised. Choices will have to be made in terms of the number and quality of risk that banks choose to underwrite given that a majority of the banks face capital limitations. These guidelines are an attempt to incorporate the environmental impact of a project into the lending process, so that when choices need to be made, the environment gets a due consideration. The structure of the guidelines provide the minimum that needs to be in place and are intended to make available a common platform from which individual banks and financial institutions can launch their own environmental risk assessment framework which will capture a more accurate and developed image of the associated risks. Bangladesh Bank looks forward to guiding the financial sector in implementation of these guidelines and hopes to herald a renewed commitment to environmental sustainability across the financial sector.

These Guidelines were prepared in a consultative manner with several rounds of inputs / discussions from the Banks/FIs. Given the technical nature of this subject, training workshops were conducted for Banks/FIs to sensitize them on environmental risks and to guide them on how to manage these risks. These were conducted prior to introducing these Guidelines in order to make easy and effective their integration with credit risk management.

Md. Nazrul Huda
Deputy Governor

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Abbreviations, Acronyms, Terms & Definitions

Banks	Financial Organizations under the Banking Companies Act
BB	Bangladesh Bank
BDT	Bangladesh Taka
Business activity	All activities that are considered for financing
CAMEL	Capital adequacy, Asset quality, Management, Earnings and Liquidity.
CAMELS	Capital adequacy, Asset quality, Management, Earnings, Liquidity and Sensitivity to Market Risks
DOE	Department of Environment
ECA	Environmental Conservation Act
ECR	Environmental Conservation Rules
EDD	Environmental Risk Due Diligence
EnvRR	Environmental Risk Rating
ETP	Effluent Treatment Plant
FI	Financial Organizations under the Financial Institutions Act. Earlier these were referred as Non-Banking Financial Institutions (NBFIs)
Financing	Denotes equity, loan/lease and/or credit facility (both funded and non-funded)
IFC	International Finance Corporation
MOEF	Ministry of Environment & Forests
NA	Not Applicable
NPL	Non Performing Loans
SEDF	South Asia Enterprise Development Facility
SME	Small and Medium Enterprise
UNEP FI	United Nations Environment Programme Finance Initiative

Part 1: Introduction

1 Introduction

1.1 Global context

Over the last two decades, the adoption of Environmental Risk Management techniques and procedures is increasingly becoming an important area of activity for Banks/Financial Institutions (FIs). This has been driven by an increasing awareness of environmental issues among all stakeholders, particularly community, customers and shareholders. Stricter environmental liability legislation as a result of pressure from society is also contributing towards the wider adoption. Investors and regulators are increasingly asking challenging questions about corporate governance, the social and environmental impacts of operations and investments, and how Banks/FIs support their local communities.

The most notable global development is the establishment of the Equator Principles, which were adopted in June 2003 by ten international FIs. These Equator Principles are a set of standards for determining, assessing and managing environmental risk in project financing. Based on the International Finance Corporation (IFC)'s performance standards and associated World Bank guidelines, the Equator Principles serve as a common baseline and framework for environmental risk considerations. Today, 67 financial institutions from 27 countries operating in over 100 countries have adopted the Equator Principles. Multilateral and bilateral development institutions use similar frameworks as a part of their public and private sector financing.

There is also the United Nations Environment Programme Finance Initiative (UNEP FI), which is a unique global partnership between the UNEP and the global financial sector. UNEP FI works closely with nearly 200 FIs who are Signatories to the UNEP FI Statements, and a range of partner organizations to develop and promote linkages between sustainability and financial performance. Through peer-to-peer networks, research and training, UNEP FI carries out its mission to identify, promote, and realize the adoption of best environmental and sustainability practices at all levels of FI operations.

In addition, the Basel II Capital Accords identify environmental risk as a facilitating element of credit risk that financial institutions should address to meet capital requirements.

1.2 National context

The state of environment in Bangladesh is deteriorating significantly. The key areas of deterioration include land degradation (over-exploitation, unbalanced use of agro-chemicals and improper disposal of hazardous waste), water pollution and scarcity (regional and seasonal availability, and quality of both surface and ground water), air pollution (unprecedented growth in passenger vehicles and continuous industrial development), biodiversity resources (destruction and degradation of land, forest and aquatic resources) and impacts of natural disasters (periodic floods and cyclones / storm surges in coastal areas). Rapid population growth, improper use of land, poor resource management and uncontrolled discharge of pollutants are the major causes.

Bangladesh is already one of the most climate vulnerable countries. It will become even more vulnerable due to climate change and is expected to be one of the worst affected countries due to climate change impacts. Floods, tropical cyclones, storm surges and droughts are likely to become more frequent and severe in the coming years. These will cause both damage to people and property and hinder economic progress.

Banks/FIs in Bangladesh need to protect their financing from the risks arising out of the deteriorating environmental scenario and the climate change impacts. A baseline study on Banks'/Financial Institutions' exposure to environmental risks in lending revealed that 98% of the Bank's top management believed that environmental risks are being considered but their Business Development Officers did not consider environmental risk in their credit scoring in practice. This is a clear indication that there is a wide gap between perception and practice in the Banks/FIs. The study also revealed the need for a streamlined formal and uniform approach so that all financial institutions in Bangladesh move towards managing environmental risks in their operations. Failing to consider these environmental risks - as a part of financing decisions - will lead to an increase in non-performing loans (NPLs) for Banks/FIs. Not only should the borrower meet regulatory requirements, but also should the borrower assure that these risks are being effectively managed. By managing these risks, these Banks/FIs will also be making a useful and important contribution towards both local and global sustainable development.

1.3 About Environmental risks

1.3.1 Definition

Environmental risk is a facilitating element of credit risk arising from environmental issues. These can be due to environmental impacts caused by and / or due to the prevailing environmental conditions. These increase risks as they bring an element of uncertainty or possibility of loss in the context of a financing transaction.

1.3.2 Different sources

Land location

Borrowers may plan and / or operate on land that is prone to environmental impacts by virtue of its geographical location. Activities on land in the flood plain or along the coastal belt are more vulnerable, and are a source of risk. Being located in a highly polluted area enhances the possibility of closure of all activities even though it may not be a direct individual contributor. Businesses that may displace local inhabitants or that are close to protected habitat areas are at risk of being directed to close or move out. Also, being located in a declared (though degraded) forest area, which is an eco-sensitive area, makes it vulnerable. Closure of such activities is possible when enforcement is tightened.

Regulatory non-compliance

Borrowers may plan and / or operate without technologies (e.g. effluent treatment plants) or management systems that will ensure compliance to the prevailing environmental laws. In such a situation, the borrowers are vulnerable to closure or shutting operations by the Department of Environment (DOE) due to enforcement of environmental compliance. These can also lead to delays and closures.

Labour / social risks

The borrower has to provide a safe and healthy working environment for its labour / employees. If it does not, then there is potential for accidents, injury and death and also exposure to occupational health issues. Apart from occupational health & safety, there are other labour / social issues that tend to get combined to create unrest conditions. These issues include child labour, forced labour, discrimination, disciplinary practices, working hours and wage compensation. All of these issues can lead to closures and hence can lead to NPLs.

Community / public opposition

Borrowers may have inadequate environmental management practices in their operations. This can lead to excessive water abstraction, effluent releases, emissions and improper waste management that affect community living in the vicinity of the borrower's premises. Community protests and public opposition can cause risks.

Changing export market conditions

Borrowers, who are exporters, have to meet importing country's environmental requirements. Some importing country's requirements are stringent and are also constantly tightened with time. Borrowers who do not upgrade their operating practices to meet these stringent and tightened requirements are exposed to the likelihood of their export contracts being cancelled. The changing requirements can lead to the closure of the borrower's export contracts and hence not in a position to repay the Banks/FIs. The risk may also arise through the supply chain, since a borrower who produces as a part of the supply chain is exposed to changes in the market for the end product as well.

Climate change impacts

Climate change is a global physical phenomenon with very drastic and adverse environmental, social and human consequences. Bangladesh is already experiencing climate-induced extreme weather events, e.g. cyclones, floods and droughts, periodically. Due to climate change, these are expected to be more intense and more frequent. Borrowers whose operations are vulnerable to extreme weather events are likely to be affected. Climate change impacts can lead to the borrower not being able to continue the business activity and hence unable to service / repay the financing taken from the Banks/FIs.

1.3.3 Types of risks

Environmental risks can be classified as follows:

Direct Risk

This risk can occur when a Bank/FI exercises operational control over a borrower's business or in some cases where a Bank/FI takes possession of contaminated land held as security. In such cases, the Bank/FI may not only lose its original advance, but may also be forced to meet substantial clean-up costs.

Indirect Risk

This risk incurred by the Bank/FI due to borrower's inability to repay because of environmental or climate change reasons. As Bangladesh strengthens enforcement of environmental regulations and public interest groups grow, pressure increases on business to minimize their environmental impacts. This may increase companies' capital and operating costs in order to comply with environmental regulations. This can have an effect on the borrower's cash flow and consequently in the borrower's ability to repay. Alternatively, climate change induced events, e.g. cyclones, may impact business activities that may result in affecting the borrower's ability to repay.

Reputation Risk

Reputation and image are important for the Bank's/FI's to conduct business. It is important to demonstrate that the Bank/FI acts responsibly at all times and this is particularly important when providing finance for major business activities. Not considering environmental impacts arising from a borrower's operations can result in negative publicity for both the borrower and the Bank/FI. Reputation risk is present in financing transactions particularly where the Bank/FI is considering a large exposure. The Bank/FI's reputation can be damaged if there is a failure of the business activity due to environmental reasons. The Bank/FI will be seen as engaging in irresponsible business practices that do not adequately address the environmental issues. Thus, the more responsibility the Bank/FI demonstrates, the less reputation risk it will face.

Environmental risks can also be classified in the context of principal risk components of credit risks:

Business / industry risk

Changing environmental conditions and/or requirements may impact the borrower's capacity to meet the obligation to repay. This is an indirect risk.

Management risk

Poor management may result in closures and community protests that can adversely impact the business and the borrower's capacity to repay. This is an indirect risk.

Security / collateral risk

Risk that the Bank/FI might be exposed due to poor quality of the security/collateral, e.g. contaminated land or disposal of hazardous chemicals, in case of a default. This is a direct risk.

Legal Risk

This risk can take a number of different forms. Most obviously, banks are at risk if they do not comply with relevant environmental legislation. More specifically, they are at risk of lender liability for clean-up costs or claims for damages if they take possession of property that contaminates or pollutes, as a result of realizing security. This is a direct risk.

1.4 About Environmental Risk Management

1.4.1 Purpose

The overall purpose of Environmental Risk Management is to understand and manage risks that arise from environmental concerns. This brings a focus on planning and implementing policies and procedures to mitigate environmental risks.

The specific purposes are to:

- examine the environmental issues and concerns associated with potential business activities proposed for financing,
- identify, evaluate and manage the environmental risks and the associated financial implications arising from these issues and concerns,
- enhance the credit risk appraisal process.

1.4.2 Approach

The following approaches have been used to enhance environmental risk management:

- Banks/FIs should be able to ascertain risks arising out of environmental issues.
- The practice should be directed towards addressing the focused environmental problem that is causing the risks. It should not be used as a tool to solve problems in general.
- The practice needs to be value adding to the borrower and should not be “policing” in nature. Banks/FIs should work with the potential borrowers in a collaborative manner. Together, they should plan the business activity that will adequately address the environmental risks.
- Banks/FIs should use Environmental Risk Management to strengthen the relationship with the borrower and not to create unease.
- Environmental Risk Management should focus on managing risks and not on avoiding risks. This is intended for inculcating responsible financing practices and not for discouraging / reducing financing. However, if there are business activities that are inherently irresponsible and managing these risks are not feasible, the Bank/FI should avoid financing.

1.4.3 Applicability

Environmental Risk Management is applicable across all financing transactions undertaken by Banks/FIs as all of these occur within the context of environmental concerns. Some transactions are inherently more exposed to these risks than others. The main determinants of environmental risk are the nature of a borrower's business activity and the vulnerability of the location of the business activity. With other aspects being the same, environmental risks will vary according to different forms of transactions, e.g. risks associated to a short-term financing is considerably less compared to a long-term financing to support the establishment of a large chemical or power plant.

1.4.4 Stages

There are different stages in Environmental Risk Management as applied to financing transactions: identifying, evaluating / rating, mitigating and monitoring & controlling.

Identifying risks

At the time of identifying the financing, all environmental issues relevant to the proposed business activity needs to be determined. Of these, there may be some issues that can pose environmental risks. These need to be identified.

Rating risks

Once the environmental risks are identified, these need to be evaluated. The evaluating or rating of risks is generally done using simple methods that estimate risk as a product of the likelihood / probability and the impact of the negative consequence.

Mitigating risks

Once the risks are evaluated or rated, mitigation of these environmental risks need to be planned in the design and / or plans of the proposed business activity. It is only after assurance that these risks can be mitigated should the Banks/FIs proceed further with the financing process.

Monitoring & controlling risks

During the implementation, the Banks/FIs should monitor these environmental risks as a part of its credit monitoring. The outcome of this monitoring should feedback to tighten controls of these risks.

1.5 Inter-relationship with credit risk

1.5.1 Environmental risk & credit risk

Environmental risk affects credit risk to a great extent. This is one of the several risks that Banks/FIs must take into account when assessing financing opportunities.

Wherever environmental issues are minor, the risks are also less or minor. In such cases, environmental risk has a marginal or incremental impact. However, when environmental issues are major, the risk can be so large that they become the most prominent credit risk. It is therefore, not to underplay the importance of environmental risks.

1.5.2 Integrating with credit risk management

As environmental risk is a facilitating element of credit risk, Banks/FIs should integrate Environmental Risk Management with credit risk management in all aspects. No separate Environmental Risk Management systems are required. In fact, such separate systems may be counter-productive, as having two parallel systems will hinder effectiveness.

1.6 About these Guidelines

1.6.1 Establishing a minimum standard

These Guidelines establish a minimum standard on what Banks/FIs should be having in terms of Environmental Risk Management. Having such a minimum standard ensures that a level playing field is maintained in the financial sector in Bangladesh. Banks/FIs can go beyond the requirements of these minimum Guidelines.

1.6.2 Applicability

These Guidelines are meant for both Banks/FIs. It is important that all Banks/FIs use these Guidelines in order to maintain a level playing field in the financial sector. Otherwise, Banks/FIs that adopt these Guidelines will be seen by potential borrowers as being more stringent than others, leading to distorting the financial markets and giving a comparative advantage to Banks/FIs that are financing with less responsible practices.

Banks/FIs need to integrate Environmental Risk Management into their credit risk management processes. Developed in line with the Credit Risk Management Guidelines, these Guidelines will help in this regard. It is important to integrate in a manner that will work best for the Banks/FIs. Following these Guidelines verbatim is not necessary but they should be used without compromising the value-addition that will result for the Banks/FIs themselves, and also for borrowers in achieving better environmental performance.

These Guidelines should necessarily be used for all individual customers (corporate, institutional, personal, small and medium enterprise) whose aggregate facilities are above the following financing thresholds:

- For Small and Medium Enterprises (SMEs), financing > BDT 2.5 million
- For Corporate, financing > BDT 10 million. and
- For real estate financing > BDT 10 million.

These Guidelines need not be used for the purpose of arriving at an associated Environmental Risk Rating for financing below this threshold as the environmental impacts are likely to be minor, and hence unlikely to cause risks. This waiver applies only to the calculation of an Environmental Risk Rating and does not apply to other regulatory requirements and due diligence checks (industry, client or location specific, as the case may be) as may be required.

These Guidelines should be used for both financing required for new, green field projects as well as those pertaining to existing facilities, e.g. renovation and expansion.

1.6.3 Benefits

The following are the benefits that Banks/FIs will derive from adopting these Guidelines:

- Awareness on environmental issues within the staff of Banks/FIs will grow substantively.
- Ability and capacity to address environmental risks in a structured and systematic manner will be established. And, this will lead to reducing NPLs arising directly or indirectly due to environmental issues.
- Borrowers will be encouraged to adopt better management practices that will lead to an overall better environmental performance and preparedness for climate change induced events. This will be a particularly useful contribution in the context of the country's deteriorating environmental conditions and its particular vulnerability to climate change.
- Last but not the least, these Guidelines will help Banks/FIs demonstrate to the Bangladesh Bank, a higher commitment to addressing environmental issues and a focus on the environmental / sustainability sector.

1.6.4 Recommendations for the future

By implementing these Guidelines, Banks/FIs will consider environmental risk as a part of their credit risk management. As more implementation experience is obtained, the following initiatives will be required to further support Banks/FIs in general and / or to establish these approaches across the financial sector in Bangladesh:

Updating these Guidelines

These Guidelines require to be constantly updated. Any significant change to the environmental conditions, laws and practices may necessitate updating. These Guidelines are dynamic documents, which will be revised as and when required, and at least once in every 3 years.

Further integration with Credit Risk Management

The structure of these Guidelines is in line with the Credit Risk Management Guidelines. As and when the Banks update their Credit Risk Management Guidelines, Environmental Risk Management are to be fully integrated within the text of those Guidelines.

Environmental risk rating

In this first version of these Guidelines, a qualitative approach to risk rating has been adopted with a view to keeping it simple and easy-to-use. In subsequent revisions, numerical risk rating methods will be used to strengthen the objectivity of the rating being provided.

Database of external consultants

Banks/FIs may require the services of external consultants to address technical issues pertaining to the management of environmental risks. For this purpose, Banks/FIs need to have access to a database of external consultants along with their technical expertise so that these consultants can be called upon to provide the necessary support. Such a database may be developed once

implementation experience is obtained in the introductory phase of the Guidelines.

Environmental insurance

Environmental insurance is a specialist form of insurance providing cover against losses that could be incurred as a result of action arising due to environmental conditions, environmental / pollution impacts and climate change impacts. Insurance products are an effective mechanism to transfer risks associated with financing transactions and can be developed and used by Banks/FIs.

Part 2: Organizational Requirements

2 Organizational Requirements

2.1 Policies

2.1.1 Principles

All Banks and FIs should make an “in principle” commitment to Environmental Risk Management in general and to the following in specific:

- Integration of Environmental Risk Management in their credit policies and procedures.
- Building awareness and providing Constant training and capacity building of their staff relevant to Environmental Risk Management.
- Adoption of a value adding approach to Environmental Risk Management with their potential borrower and aim to facilitate the borrower in addressing environmental issues that could lead to risks.

2.1.2 Requirements

All Banks and FIs should pass a Resolution of the Board or appropriate top & senior management committee on the adoption of these Guidelines and acceptance of the above principles. On an annual basis, all Banks/FIs should undertake a top management review to determine whether Environmental Risk Management is being effectively practiced in its operations.

2.2 Roles, responsibilities and authorities

2.2.1 Organizational structure

As environmental risk management is a part of the credit risk management, the same organizational structure is to be used. There is no need for a separate organizational structure.

2.2.2 Key responsibilities in different functions

Relationship banking / marketing function

The responsibilities of this function are (i) to be aware of environmental issues confronting the various sectors, (ii) to communicate to the potential borrower that environmental information is sought with a view to avoiding unexpected situations in the future, (iii) to assess the potential borrower and the proposed business activity using a due-diligence checklist and provide an Environmental Risk Rating (EnvRR), and (iv) to provide environmental information to the credit risk management function.

Credit risk management function

The responsibilities of this function are (i) to be aware of environmental issues confronting the various sectors, (ii) to review the completed due-diligence checklist and the EnvRR, (iii) to integrate environmental risk considerations into the credit risk assessment and (iv) to specify financing conditions / covenants, if any, are required.

Credit processing and approval function

The Environmental Risk Management responsibility of this function is to ensure that the additional financing conditions / covenants, if any, are included in the agreements.

Credit administration function

The Environmental Risk Management responsibility of this function is to ensure that additional financing conditions / covenants, if any, in the financing agreements are met prior to initiating disbursement.

Credit monitoring function

This function is to ensure that environmental risk monitoring should also be undertaken as a part of monitoring credit risks.

Overall responsibility

The Chief Executive of the Banks/FIs will be responsible for ensuring the integration of Environmental Risk Management into Credit Risk Management.

The operational responsibility will be with the Head of Credit or any of the senior management team member nominated by the Chief Executive.

2.3 Procedures

2.3.1 Relationship banking / marketing: Identifying and planning for Environmental risks

Banks/FIs have to identify environmental risks whenever a potential borrower approaches for financing. Banks/FIs are recommended to take a holistic approach towards assessing environmental risk and look at the inherent risks posed by the overall activities of the client as opposed to constraining themselves to the specific project seeking financing.

Banks/FIs providing credit to the same client, in a consortium or discretely, need to ensure that all the parties involved have shared information and risk ratings of the client so that the parties involved have identified and evaluated all the environmental risks involved and arrived at the same conclusion regarding the level of risk associated with the finance.

As part of the Relationship Banking function, the Environmental Due-Diligence (EDD) checklist given in the Technical Annex and the Environmental Risk Rating (EnvRR) given in the Technical Manual are to be completed prior to forwarding the proposed financing to the credit risk management for consideration.

2.3.2 Credit risk management: Integrating Environmental risks

Banks/FIs have credit risk management procedures that need to be modified to integrate Environmental Risk Management considerations.

Financing business activities

In this credit risk management function, it is required to verify whether the EnvRR has been correctly done. If not, the Relationship Banking function should be asked to redo the EDD checklist.

Wherever the EnvRR is “High”, the credit risk management function will ensure that additional conditions / covenants are included. Examples of Environmental risk-related financing conditions / covenants are as follows:

- The borrower will conduct business and maintain property in compliance with all environmental laws
- The borrower will provide environmental clearance certificates as and when obtained or renewed
- The borrower will have emergency response procedures in place
- The borrower will take immediate and necessary remedial action in the event of a hazardous spill or release.
- The borrower will not use the property for disposing of, producing, treating, storing or using contaminants, pollutants, toxic substances or hazardous materials or wastes.
- The borrower will employ a separate environmental manager with required background and skills to address environmental problems.
- The borrower will ensure adequate preparedness to climate change induced extreme events such as floods and cyclones.

Portfolio management

On an ongoing basis, Banks/FIs should also estimate the environmental risks on their financing portfolio and consider approaches to managing them annually.

At a portfolio level, Banks/FIs should classify their financing of business activities across the Department of Environment (DOE)’s Categories of Red, Orange A, Orange B and Green (Schedule 1 of the ECR 1997). Banks/FIs should estimate the number and financial exposure to each of these categories.

In addition, Banks/FIs should classify their financing of business activities based on their environmental risks, i.e. “High”, “Moderate” or “Low” (Refer Part 3 Technical Manual), and estimate the number and financial exposure to each.

Based on these risk estimates, Banks/FIs should review their asset composition and the environmental risk in their portfolio. Such a review can lead to an accurate prioritization of risks and appropriate risk management efforts. With the background of such a portfolio analysis, Banks/FIs will be able to undertake subsequent environmental risk reviews in a more efficient and effective manner. Using the outcomes, Banks/FIs can re-balance and take counter-balancing approaches, e.g. adopt more green and low environmental risk business activities if their portfolio is more oriented to the red and high environmental risk.

2.3.3 Credit processing and approval process: Incorporating Environmental risk covenants

Banks/FIs need to modify credit processing and approval processes to include Environmental Risk Management considerations.

Wherever the EnvRR is “High”, the credit approval decision should be taken by the Executive Committee / Board. For all other ratings of the EnvRR, there is no separate requirement for approval decision.

All credit agreements should include the standard condition / covenant about meeting the regulatory requirements.

At the time of approving the financing, it needs to be ensured that the appropriate, additional condition / covenant has been included wherever EnvRR is “High”.

2.3.4 Credit Administration: Verifying Environmental risk considerations

Prior to the disbursement where EnvRR is “High”, Banks/FIs have to verify that the conditions / covenants (e.g. obtaining environmental clearance certificate) is met prior to disbursement. Documented evidence of adhering to the conditions / covenants should be provided.

2.3.5 Credit Monitoring: Carrying out Environmental risk monitoring

To minimize credit losses, Banks/FIs have monitoring procedures in systems already in place. These systems need to be modified to include environmental risk considerations wherever EnvRR is rated as high in the following manner:

- Banks/FIs should carry out periodic inspections to ensure that proper environmental management is being adopted. EDD checklists should be used as guidance for these inspections as well. Whenever the monitoring requires more than the usual management expertise, e.g. specific technical expertise, Banks/FIs should use external consultants. Evidence of the periodic monitoring should be maintained.
- Banks/FIs should follow-up with the borrower on the findings of the inspections. Borrower should send written documentation on the action taken. Banks/FIs should maintain record of the same. Banks/FIs should take cognizance of the commitment to follow-up on these findings in taking decisions to deal with the borrower.

During the annual audit/inspection, the Bangladesh Bank will verify whether the Banks/FIs have considered environmental risk as a part of their credit risk management.

2.3.6 Credit recovery

No new procedures are required in relation to environmental risk management.

2.3.7 Database on Non-Performing Loans (NPLs) due to Environmental risks

Banks/FIs should establish and maintain a database of NPLs that are due to environmental reasons, either in partial or full. If the borrower has indicated environmental factors as one of the reasons for delays in making repayments, then this should be noted in the database. The purpose of this database is to ensure that the Banks/FIs streamline their own institutional knowledge for better decision-making in their future financing.

2.3.8 Reporting system

Banks/FIs are required to have a reporting system, with a view to intimating management, shareholders, and other stakeholders on the use of these Guidelines. This reporting should be done on an annual basis and should form a part of their Annual Report.

Part 3: Technical Manual

3 Technical Manual

3.1 Environmental regulations

3.1.1 Overview

There are a number of laws that contain provisions regarding conservation of environment, improvement of standards and control of environmental pollution from various sources. Of these, the Bangladesh Environmental Conservation Act (ECA) 1995 is the umbrella Act. This Act established the Department of Environment (DOE), and empowers its Director General to take measures as he considers necessary which includes conducting inquiries, preventing probable accidents, advising the Government, coordinating with other authorities or agencies, and collecting & publishing information about environmental pollution. To make operational the ECA 1995 and in exercise of the power conferred under it, the Environment Conservation Rules (ECR) 1997 were issued by the Government of Bangladesh. Together – ECA 1995 and ECR 1997 – provide the framework of environmental regulations relevant to industries.

3.1.2 Procedural requirements

All activities need to adhere to the provisions of this Act and associated Rules. In procedural terms, no business activity (i.e. industrial unit or project) shall be established or undertaken without obtaining, in a manner prescribed by the accompanying Rules, an Environmental Clearance Certificate from the Director General. This procedural requirement needs to be followed.

For the purpose of issuing the Environmental Clearance Certificate, the industrial unit and projects shall in consideration of their location and impact on the environment be classified into the following 4 categories: (i) Green, (ii) Orange-A, (iii) Orange-B and (iv) Red. This categorization indicate that green is least polluting and red is most polluting, with the two orange categories regarded as having medium-scale impacts. In its Schedule I, ECR 1997 includes a list of 22 industrial units or projects under Green, 26 types under Orange A, 69 types under Orange B and 69 types under Red.

For the each category of industries, there are different levels of documents to be provided at the time of seeking the Environmental Clearance Certificate.

3.1.3 Standards requirements

ECR 1997 prescribes various performance standards requirements that are both general and industry specific. The following are the prescribed standards: Water (Schedule 3), Sound (Schedule 4), Sewage discharge (Schedule 9), Waste from industries (Schedule 10), gaseous emissions from industries (Schedule 11) and sector-wise industrial effluent or emissions (Schedule 12). When operating the industries, these performance standards have to be met in order to ensure that there is no legal non-compliance.

3.2 Preliminary Environmental Risk Review

3.2.1 Introduction

On receiving the proposal for financing, Banks/FIs should conduct a preliminary environmental risk review using Environmental Due Diligence (EDD) checklists. There is one General EDD checklist (Technical Annex 4.1), ten Sector EDD checklists (Technical Annex 0 to 0) and a Guidance Matrix (Technical Annex 4.11).

Potential borrowers will have to submit various documents to the DOE for obtaining the Environmental Clearance Certificate. This is required for both new and expansion of existing business activities. Banks/FIs need to obtain copies of these documents as the background for completing the EDD checklists. However, discussions with the potential borrower should form the basis for administering the EDD checklists.

All of these checklists are easy-to-use and developed so that the relationship banker can complete following a discussion with the potential borrower.

3.2.2 Cross-cutting aspects

There are environmental issues that tend cut-across all sectors.

The cross-cutting aspects include the possible sources of risks - legal compliance or compliance to environmental laws, appropriateness of land for the intended purpose, climate change impacts if any – and also the management systems of the potential borrower to manage these risks.

These aspects are covered in the General EDD checklist (Technical Annex 4.1). To determine whether these will become environmental risks, the General EDD checklist should be used.

Administering of the General EDD checklist concludes with determining the Environmental Risk Rating (EnvRR) of the proposal for financing.

3.2.3 Sector-specific aspects

Proposals for financing in different sectors are prone to different kind of environmental risks.

Sector EDD checklists (Technical Annex 0 to 0) should additionally be used if the proposal for financing is in any of the ten sectors.

Administering of the Sector EDD checklist concludes with determining the overall Environmental Risk Rating (EnvRR) of the proposal for financing. This overall EnvRR combines both the outcomes of the General and Sector-specific EDD checklists and should be applied as per the table below:

General EDD	Sector-specific EDD	
Low	Low	Low
Moderate/Low	Low/Moderate	Moderate
If any one or both the General and Sector-specific EDD checklists is indicated as “High”		High

3.2.4 Deciding next steps based on EnvRR

Based on administering the General EDD checklist and the sector-specific EDD checklist, if applicable, the EnvRR for the proposal for financing is known.

The following three possibilities need to be ensured:

- If the EnvRR is high, then the proposal for financing will have to be approved by the Board or its Executive Committee. Banks/FIs not governed by a Board are instead, required to obtain approval from a Credit Risk Specialist ranking above the Country Chief Executive Officer, typically, a regional credit risk head.
- If the EnvRR is low or moderate, then the financing decision can be undertaken on the basis of the usual credit risk management guidelines.
- If the EnvRR is unclear, then it is required for the Bank/FI to collect more information from the borrower so as to gain an understanding of the inherent risks and arrive at a high/moderate/low decision. Should a risk factor not be applicable, it may be excluded from the total number of questions used in calculating

3.3 Detailed Risk Review

The detailed environmental risk review will be required for all business activities, which are identified in the Red Category under the ECR 1997 being implemented by the DOE.

Banks/FIs should engage external consultants to do a detailed Environmental Risk Review on the basis of the Environmental Impact Assessment and associated environmental management plans prepared.

The detailed Environmental Risk Review should consider all sources of environmental risk, the likelihood of their occurrence and assess the implications for the Banks/FIs. Based on this detailed review, the external consultant should advise whether the overall EnvRR will be “High”, “Moderate” or “Low”.

3.4 Linking EnvRR with the Credit Risk Rating

When presenting the credit risk rating of the proposal for financing, the EnvRR should also be provided.

The EnvRR should be provided along with the overall credit risk rating.

Part 4: Technical Annexes

4 Technical Annexes

4.1 General Environmental Due-Diligence Checklist

This checklist is to be used for all proposals for financing being considered by the Banks/FIs. If there are no specific checklists for the particular sector under consideration, the General EDD checklist alone, is to be used to determine the EnvRR rating.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR. If a question does not apply to the sector under consideration, it should be excluded by deducting from the total number of questions used to calculate the percentages in determining the EnvRR. The justification for any exclusion is to be documented separately and retained on file with the EnvRR checklists.

Particulars	Yes / No / NA
Possible sources of environmental risk	
1. Environmental clearances: <i>* In the proposal for financing, have all the applicable compliances to environmental laws, i.e. site clearance certificate and environmental clearance certificate, been obtained from the Department of Environment (DOE)?</i>	
<i>* Have these clearances been obtained after submitting the appropriate documents for the different pollution category of industries (Green, Orange-A, Orange-B and Red)?</i>	
2. Land location / site: <i>Is the land location / site free from vulnerability from an environmental perspective? Vulnerability can arise due to the issues such as the location being on the river bank (floods) and on national parks / forests (non-compliance)?</i>	
3. Climate change: <i>Is the proposal for financing protected against climate change related impacts such as cyclones, storm surges, floods and droughts if relevant?</i>	
Borrower's Environmental Management Systems	
4. Commitment: Is the potential borrower's top management committed to environmental management?	
5. Manpower: Has the potential borrower planned for manpower resources to address environmental issues?	
6. Skills: If so, is the manpower skilled to address environmental issues?	
7. Labour / social issues: <i>Does the management adopt good practices vis-à-vis occupational health & safety and associated issues such as child labour, forced labour, wage compensation, discrimination and working hours?</i>	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is "No"	"High"
If answers to all italicized questions is "yes" but 50% or more of the non italicized questions is "No"	"High"
If answers to all italicized questions is "yes" and if answers to more than 25% and less than 50% of the remaining questions is "No"	"Moderate"
If answers to all italicized questions is "yes" and if answers to less than 25% of the remaining questions is "No"	"Low"

Sector Environmental Due-Diligence Checklist: Agri-business (Poultry & Dairy)

Poultry

This checklist should be used for all proposals for financing in the poultry sub-sector of the agri-business.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Orange A category up to 250 birds in urban areas and up to 1000 in rural areas. And, this is Orange B category for above 250 birds in urban area and above 1000 in rural areas.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Avian influenza: <i>Does the business activity take adequate management measures to protect from animal diseases / pathogens such as Avian influenza (strain HN51)?</i>	
2. Solid waste: * Is there provision for appropriate management of solid waste including waste feed, animal waste, carcasses, sediments and sludge from wastewater treatment facilities? * Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?	
3. Wastewater / ETP: * Is there an Effluent Treatment Plant (ETP) or appropriate wastewater management processes to treat the wastewater discharges?	
* Does the design ensure that there is no bypass arrangement for the ETP or wastewater management processes?	
4. Hazardous materials: Are there adequate systems for the handling, storage and transport of hazardous materials? And, is there adequate check to ensure only permissible hazardous materials are in use?	
5. Monitoring: <i>Has environmental monitoring, particularly protection from disease causing pathogens, been planned?</i>	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

Dairy

This checklist should be used for all proposals for financing in the dairy sub-sector of the agri-business.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, for dairy farm, this is Orange A category for 10 cattle or below in urban areas and 25 or below in rural areas. And, this is Orange B category for above 10 in urban areas and above 25 numbers in rural areas. And, for dairy processing, this is Orange B category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Wastewater / ETP: <i>* Is there an Effluent Treatment Plant (ETP) to treat the wastewater discharges in the design?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
2. Solid waste: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i>	
<i>* Have proper provisions been made for the management of organic solid waste in dairy processing facilities?</i>	
3. Air emissions: Are air emission prevention and control measures systems installed from the combustion of fuel in turbines, boilers, compressors and other engines for power and heat generation?	
4. Monitoring: Has environmental monitoring, particularly effluent characteristics, been planned?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.2 Sector Environmental Due-Diligence Checklist: Cement

This checklist should be used for all proposals for financing in the cement sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Air emissions: <i>Are air emission prevention and control measures systems installed in all point sources of emissions in operational processes and also in the handling and storage of intermediate & final goods?</i>	
2. Wastewater / ETP: * Is there an Effluent Treatment Plant (ETP) to treat the wastewater discharges?	
* Does the ETP design ensure that there is no bypass arrangement?	
3. Solid waste: * Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?	
* Have proper provisions been made for the management of solid waste - including clinker production waste and kiln dust?	
4. Noise: Have noise control measures been put in place in grinding, handling and transportation?	
5. Monitoring: <i>Does environmental monitoring for continuous monitoring equipment on all dust emission lines?</i>	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.3 Sector Environmental Due-Diligence Checklist: Chemicals (Fertilizers, Pesticides and Pharmaceuticals)

Fertilizers

This checklist should be used for all proposals for financing in the fertilizer sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Hazardous chemicals: Does the design provide for handling, storage and transportation of hazardous chemicals in the manufacture of fertilizers?	
2. Wastewater / ETP: <i>* Is there an Effluent Treatment Plant (ETP) to treat the wastewater discharges in the design?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
3. Solid waste: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i>	
<i>* Does the business activity include an approach towards handling and disposal of spent catalyst / toxic metals, if any? Have provisions been made for the management of these hazardous wastes?</i>	
4. Air emissions: <i>Are air emission prevention and control measures in place for ammonia, nitric oxides and nitrous oxides in nitrogenous fertilizer manufacturing, and in utilities such as boilers?</i>	
5. Noise: Are noise control measures in place for the large-sized rotating machines?	
6. Monitoring: <i>Does environmental monitoring include continuous monitoring systems of storm water for pH, fluoride & ammonia?</i>	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

Pesticides

This checklist should be used for all proposals for financing in pesticide sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Guidelines: <i>Is the pesticide manufacturing been carried out in line with the WHO Guidelines, Stockholm Convention and Rotterdam Convention?</i>	
2. Hazardous chemicals: Does the design provide for handling, storage and transportation of hazardous chemicals in the manufacture of pesticides?	
3. Wastewater / ETP: <i>* Is there an Effluent Treatment Plant (ETP) to treat the wastewater discharges in the design?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
4. Solid waste: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i>	
<i>* Has provision been made for the proper management of solid waste (e.g. chemical residues and filtrates) and liquid waste (e.g. spent solvents)?</i>	
5. Air emissions: Are proper air pollution control devices included to tackle emissions during pesticide manufacturing, formulating and packaging?	
6. Fire / explosions: <i>Have proper design provisions been made to prevent fire and explosion hazards that may arise from solvent use, handling and storage?</i>	
7. Monitoring: Is environmental monitoring, particularly the effluent characteristics, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

Pharmaceuticals

This checklist should be used for all proposals for financing in the pharmaceutical sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Orange B category. This is classified as life saving drugs.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Hazardous chemicals: <i>Have methods been included for the safe storage and use of hazardous chemicals?</i>	
2. Wastewater / ETP: <i>* Is there an Effluent Treatment Plant (ETP) to treat the wastewater discharges in the design?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
3. Solid waste: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i>	
<i>* Are there responsible methods to dispose off-specification drugs / damaged medicines?</i>	
4. Air emissions: <i>Have methods to manage the hazardous air pollutants (e.g. benzene and carbon tetrachloride and toluene) and odorous compounds (e.g. mercaptans)?</i>	
5. Genetic resources: Have proper procedures been followed if there is the use of particular genetic resources that have threats to biodiversity?	
6. Bioethics: Are good bioethics management approaches been adopted if genetically modified foods or related new areas of work are involved?	
7. Monitoring: Is environmental monitoring, particularly of the air emissions (stack and fugitive), proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.4 Sector Environmental Due-Diligence Checklist: Engineering and basic metal

This checklist should be used for all proposals for financing in the engineering and basic metal sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Orange B category for engineering works up to BD Tk 10,00,000 and re-rolling. And, this is Red category for engineering works above BD Tk 10,00,000.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Air emissions: <i>Have appropriate air pollution control equipment at the emissions points and also exhaust provisions in the various metal manufacturing processes?</i>	
2. Wastewater / ETP: * Has an ETP for the cleaning and rinsing streams included in the design? * Does the ETP design ensure that there is no bypass arrangement?	
3. Solid wastes: * Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design? * Is proper management of the different types of solid wastes been undertaken?	
4. Noise: Are measures to control noise from the mechanical equipment and physical activities?	
5. Fire / explosions: <i>Have proper design provisions been made to prevent fire and explosion hazards that may arise from operations?</i>	
6. Monitoring: Is environmental monitoring, particularly of the air emissions (stack and fugitive), proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.5 Sector Environmental Due-Diligence Checklist: Housing

This checklist should be used for all proposals for financing in the housing sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is not classified.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Sewage: <i>* Has a sewage treatment plant (STP) of a size appropriate to the requirements been included in the design? Is there a justification for the chosen size?</i>	
<i>* Does the STP design ensure that there is no bypass arrangement?</i>	
2. Dust: Does the proposed business activity have appropriate measures to control the dust pollution during construction?	
3. Noise: Are measures to control noise from the large construction activities?	
4. Debris: Are there measures to manage the construction debris?	
5. Monitoring: Is environmental monitoring, particularly of the air emissions and effluent discharges, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.6 Sector Environmental Due-Diligence Checklist: Pulp & paper

This checklist should be used for all proposals for financing in the pulp & paper sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Wastewater / ETP: <i>* Has an ETP of a size appropriate to the requirements been included in the design? Is there a justification for the chosen size?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
2. Air emissions: Does the proposed business activity have appropriate air pollution control equipment at the emissions points, particularly the pulp processing and utilities?	
3. Solid waste: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i> <i>* Are there measures to manage the large quantities of solid waste (though non-hazardous)?</i>	
4. Odour: <i>Are measures for preventing and controlling odour been planned?</i>	
5. Noise: Are measures to control noise from the large mechanical equipment and physical activities?	
6. Monitoring: Is environmental monitoring, particularly of the effluent's characteristics, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is "No"	"High"
If answers to all italicized questions is "yes" but 50% or more of the non italicized questions is "No"	"High"
If answers to all italicized questions is "yes" and if answers to more than 25% and less than 50% of the remaining questions is "No"	"Moderate"
If answers to all italicized questions is "yes" and if answers to less than 25% of the remaining questions is "No"	"Low"

4.7 Sector Environmental Due-Diligence Checklist: Sugar & distilleries

This checklist should be used for all proposals for financing in the sugar and distilleries sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Wastewater / ETP: <i>* Has an ETP of a size appropriate to the requirements been included in the design? Is there a justification for the chosen size of the ETP?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
2. Solid wastes: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i>	
<i>* Have methods to store and dispose solid wastes (generated from the treatment of raw material) been planned in the design?</i>	
3. Water: <i>Are water consumption reduction approaches been adopted to reduce the overall water intake?</i>	
4. Air emissions: Does the proposed business activity have appropriate air pollution control equipment at the emissions points, particularly the steam boilers?	
5. Odour: Are measures for preventing and controlling odour been planned?	
6. Monitoring: Is environmental monitoring, particularly of the effluent's characteristics, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is "No"	"High"
If answers to all italicized questions is "yes" but 50% or more of the non italicized questions is "No"	"High"
If answers to all italicized questions is "yes" and if answers to more than 25% and less than 50% of the remaining questions is "No"	"Moderate"
If answers to all italicized questions is "yes" and if answers to less than 25% of the remaining questions is "No"	"Low"

4.8 Sector Environmental Due-Diligence Checklist: Tannery

This checklist should be used for all proposals for financing in the tannery sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Red category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Hazardous chemicals: <i>Does the business activity include appropriate hazardous chemicals management methods in pretreatment, dyeing and other processes?</i>	
2. Wastewater / ETP: <i>* Does the proposed business activity have its own ETP?</i>	
<i>* Does the ETP design ensure that there is no bypass arrangement?</i>	
<i>* If it is to a Common ETP, is this in working order?</i>	
<i>* Does the proposed business activity include a chrome recovery unit in its design?</i>	
<i>* Is the post-ETP treated wastewater discharged into a water body from where water is drawn for other applications?</i>	
3. Solid Wastes: <i>* Are there responsible methods to dispose the solid waste / sludge from the ETP been included in the design?</i> <i>* Is the management of solid wastes properly planned and methods of disposal identified?</i>	
4. Odour: Are there methods to control the odour from leather tanning as these constitute a nuisance to the surrounding community?	
5. Monitoring: Is environmental monitoring, particularly Chromium VI, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.9 Sector Environmental Due-Diligence Checklist: Textile and apparels

This checklist should be used for all proposals for financing in the textile sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Orange B category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Hazardous Chemicals: <i>Does the business activity include appropriate hazardous chemicals management methods in pretreatment, dyeing and other processes?</i>	
2. Wastewater / ETP: <i>* Does the proposed business activity have an ETP?</i>	
<i>* If business activity uses specific dyes (e.g. chrome dyes, sulphur dyes or phenolic compounds) in dyeing process, is there a method to check the limits of particular compounds in the effluent discharged?</i>	
<i>* Has the ETP design ensured that there is no bypass arrangement?</i>	
3. Solid Wastes: Is the management of solid wastes properly planned and methods of disposal identified? The wastes include trials, trimmings, cuttings of fabrics, spent dyes, pigments, and printing pastes; and ETP sludge containing mainly fibres and grease.	
4. Air emissions: Are air pollution control devices planned in the finishing processes such as coating and dyeing to manage air emissions that may contain toxic compounds?	
5. Fire and explosions: <i>Have proper design provisions been made to prevent fire and explosion hazards that may arise from operations?</i>	
6. Monitoring: Is environmental monitoring, particularly effluent characteristics, proposed on a periodic basis?	
7. Export requirements: If it is an export-oriented business or part of the supply chain, have all the buyer environmental requirements been met ?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.10 Sector Environmental Due-Diligence Checklist: Ship breaking

This checklist should be used for all proposals for financing in the ship breaking sector.

Please complete a response to each of these questions as Yes or No or Not Applicable (NA), and determine the EnvRR.

Legal classification

As per ECR 1997, this is Orange B category.

Key issues and proposed technologies / approaches

Particulars	Yes / No / NA
1. Certificate: <i>Do the management methods include obtaining a certificate from the exporting country?</i>	
2. Hazardous Chemicals: <i>Does the business activity include appropriate hazardous chemicals management methods during sorting, storage and reuse?</i>	
3. Wastewater / ETP: * Does the proposed business activity have an ETP in its design?	
* Has the ETP design ensured that there is no bypass arrangement?	
4. Solid Wastes: Is the management of solid wastes properly planned and methods of disposal identified?	
5. Monitoring: Is environmental monitoring, particularly effluent characteristics, proposed on a periodic / regular basis?	

Determining overall EnvRR

The italicized questions are the more important / critical ones.

The EnvRR is determined as follows:

Criteria	EnvRR
If answers to any one of the italicized questions is “No”	“High”
If answers to all italicized questions is “yes” but 50% or more of the non italicized questions is “No”	“High”
If answers to all italicized questions is “yes” and if answers to more than 25% and less than 50% of the remaining questions is “No”	“Moderate”
If answers to all italicized questions is “yes” and if answers to less than 25% of the remaining questions is “No”	“Low”

4.11 Matrix for quick guidance on potential Environmental risks¹

A. Overall Risk based on Project Location

Sl. No.	Description	Env. Clear	Land / Site	Clim Chge	Remarks, if any
A1	On the coast	Yes	Yes	Yes	
A2	Inland – Flood plain	Yes	Yes	Yes	
A3	Inland – outside flood plain	Yes	No	No	

B. Sector Specific Risk

Sl. No.	Description	Env. Clear	Effl	Haz. Chem	Wste	Air Em.	Others	Remarks, if any
B1	Agri-Poultry	Yes	Yes	Yes	Yes		Yes	Avian Flu
B2	Agri-Dairy	Yes	Yes	No	Yes	Yes	No	
B3	Cement	Yes	Yes	No	Yes	Yes	Yes	Noise
B4	Chemicals-Fertilizers	Yes	Yes	Yes	Yes	Yes	Yes	Noise
B5	Chemicals-Pesticides	Yes	Yes	Yes	Yes	Yes	Yes	WHO Guidelines, Fire / Explosions
B6	Chemicals-Pharmaceuticals	Yes	Yes	Yes	Yes	Yes	Yes	Genetics, Bioethics, Labour
B7	Engg. and basic metal	Yes	Yes	No	Yes	Yes	Yes	Noise, Fire/ explosions
B8	Housing	Yes	Yes	No		Yes	Yes	Noise, debris
B9	Pulp & paper	Yes	Yes	No	Yes	Yes	Yes	Noise, odour
B10	Sugar & distilleries	Yes	Yes	No	Yes	Yes	Yes	Water avail., odour
B11	Tannery	Yes	Yes	Yes	Yes		Yes	Odour
B12	Textile and apparels	Yes	Yes	Yes	Yes	Yes	Yes	Labour, Fire / Expl & Export Reqts.
B13	Ship breaking	Yes	Yes	Yes	Yes	No	Yes	Labour

Yes: Source of Risk must be considered.

No: Source of Risk not applicable.

¹ This matrix should be seen as indicative. This is based on the feedback received from Banks / FIs in Bangladesh.