BRI International Green Development Coalition
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Green Development Guidance for BRI Projects Phase II Task 1

Application Guide for Enterprises and Financial Institutions

In April 2019, Chinese and international partners officially launched the BRI International Green Development Coalition (BRIGC) at the Second Belt and Road Forums for International Cooperation. BRIGC aims to establish a policy dialogue and communication platform, an environmental knowledge and information platform, and a green technology exchange and transfer platform, so as to advance global consensus, understanding, cooperation, and action of a green Belt and Road Initiative (BRI).

The BRIGC officially launched the Joint Research on Green Development Guidance for BRI Projects (GDG) in 2019. The joint research aims to explore the guidelines on the assessment and classification of BRI projects from the perspective of mitigating and managing the climate and eco-environmental impacts. In December 2020, the Phase I report Green Development Guidance for BRI Projects Baseline Study was officially released. The phase I Baseline Study proposed "1 project classification mechanism" and "9 recommendations" (the "1+9") to accelerate the green development of BRI and reduce the negative impact of BRI projects.

Further to the Phase I recommendations, the Phase II of the GDG project focuses on the implementation. With the report The Application Guide for Enterprises and Financial Institutions (hereinafter referred to as the Application Guide), provides the enterprises in BRI development with the methodologies, processes and necessary aids for conducting project self-evaluation and differentiated management, and supports the financial institutions with an action roadmap to integrate the "1+9" recommendations into practice. The Application Guide aims to help enterprises, financial institutions among other key stakeholders to identify, evaluate, manage and improve the environmental performance of their BRI projects, proactively integrate the sustainability standards and demands into their internal management strategies, policies and organizational structures to facilitate the green BRI development.

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Executive Summary

The Belt and Road Initiative (BRI) has the potential to significantly accelerate the green transition of a large number of countries, from the traditional high-carbon unsustainable growth to a new green development model. By building a green Belt and Road Initiative (BRI) China and the world contribute to achieving shared green development goals, such as the Paris Agreement, the post-2020 biodiversity protection framework and the UN Sustainable Development Goals (SDGs).

There are emerging policies and actions seek to operationalize the green BRI in ways that advance the goal collaboratively. These are communicated broadly across stakeholders and it is recognized widely that accelerating BRI green development places parallel demands on both shifting funds to green projects and reducing "red" projects by strengthening the quality and enforcement of climate and eco-environmental standards.

This particularly spotlights on the BRI project finance, such as infrastructure and manufacturing. These projects and sectors bear markedly environmental and climate impacts and are in focus in delivering the green BRI commitment. It is crucial for financial institutions and project companies to reduce environment-related financial risks through both decisive actions and continuous improvement.

To support this goal, the Belt and Road Initiative Green Development Coalition (BRIGC) launched in December 2019 the Joint Research on Green Development Guidance for BRI Projects (the "Guidance"). Its 2020 publication, the *Green Development Guidance for BRI Projects,* aimed to guide the green solutions for BRI projects and building on international and Chinese best practices, proposed "1 project classification mechanism" and "9 recommendations" (Figure ES-1) to steer and accelerate BRI project finance shifting from brown to green and to reduce environment-related financial risks.

This report further provides an Application Guide for the main actors in BRI construction in setting the Guidance's proposals into action. It specifies implementation measures to the three main BRI stakeholders of enterprises, financial institutions, and regulators (Figure ES-1). The Application Guide further recommends the roadmap and establishes a shared language about environmental risks and risk management across these stakeholders.

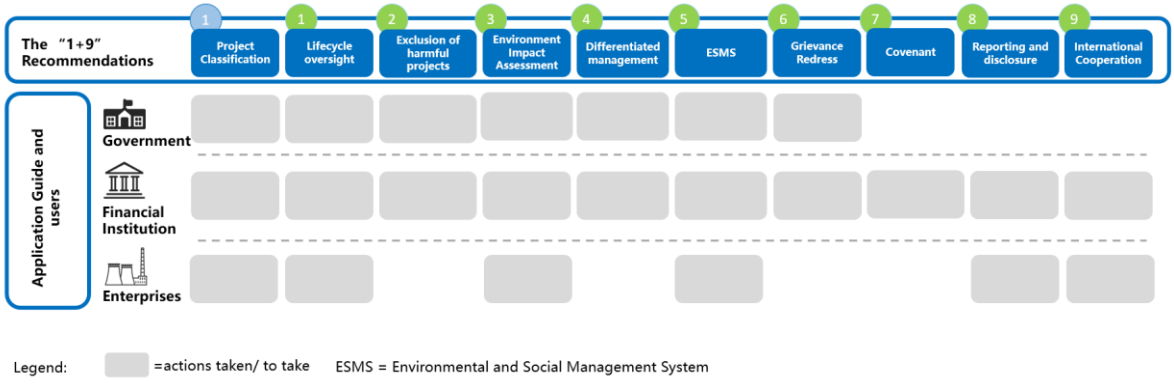


Figure ES-1 Application Guide and Users

Source: Authors.

Enterprises are a key player of BRI investment and project construction. The Application Guide helps enterprises who are planning, implementing and operating BRI projects to identify, evaluate, manage, and improve the project's environmental performance across the aspects of climate, environment, and biodiversity. Specifically, the Application Guide provides frameworks for enterprises in completing the self-evaluation of the environmental impact of their projects and setting out the actions to improve performance and management. The Application Guide further supports enterprises to better communicate with home policymakers, regulators, financial institutions, host countries and other stakeholders, avoid the risks in BRI investment and construction, and contribute to the global effort around topics such as carbon neutrality, biodiversity conservation, and corporate social responsibility:

- **Enterprises follow the proposed classification system and self-evaluate projects** into "red", "yellow" or "green" according to their environmental contribution and negative impact, supported by questionnaires and tools as early as possible in the project development phases. Depending on the implemented environmental risk mitigation measures, enterprises can re-classify projects into a transferred category, such as "red/green" or "red/yellow" to ideally receive better financing conditions.
- **Enterprises are encouraged to establish project lifecycle and standard management.** Developing environmental and social management system (ESMS), ideally supported by independent consultants or experienced lead financial institution, allows enterprises to adjust projects and management as early as possible and routinely manage risks and impacts proactively, particularly for "red" (including "red/yellow" and "red/green") projects of high environmental risks. The ESMS enables enterprises to create awareness of environmental and social risks, set benchmarks and early-warning systems and allows enterprises to mitigate many environmental and social risks before they materialize and risk business operations.
- **Applying the Guidance helps enterprises improve reporting and stakeholder communication.** It enables enterprises to measure and report on the "greenness" and opportunities for further greening on the project level, the portfolio level, and contributes to enterprise ESG reporting. Enterprises are also encouraged to establish and improve the grievance and response mechanism to allow public oversight on their business activities.
- **The Guidance supports enterprises in the sustainability transition and further the environmental risk reduction.** By understanding the rewarding and punitive action options from financial institutions and governments, enterprises can adjust their investment strategies in time, improve profitability, and avoid the risks from future policy trends and changes in the requirements of stakeholders, especially for industries and projects with relatively high environmental impact such as projects labeled "red".

Relevant departments throughout the enterprise must be fully informed and capable to fulfill these responsibilities and duties (Figure ES-2) independent of individual staff over the long lifecycle of many BRI projects. This also requires a deep integration of environmental and social risk management (ESMS) into the core management systems and corporate strategy.

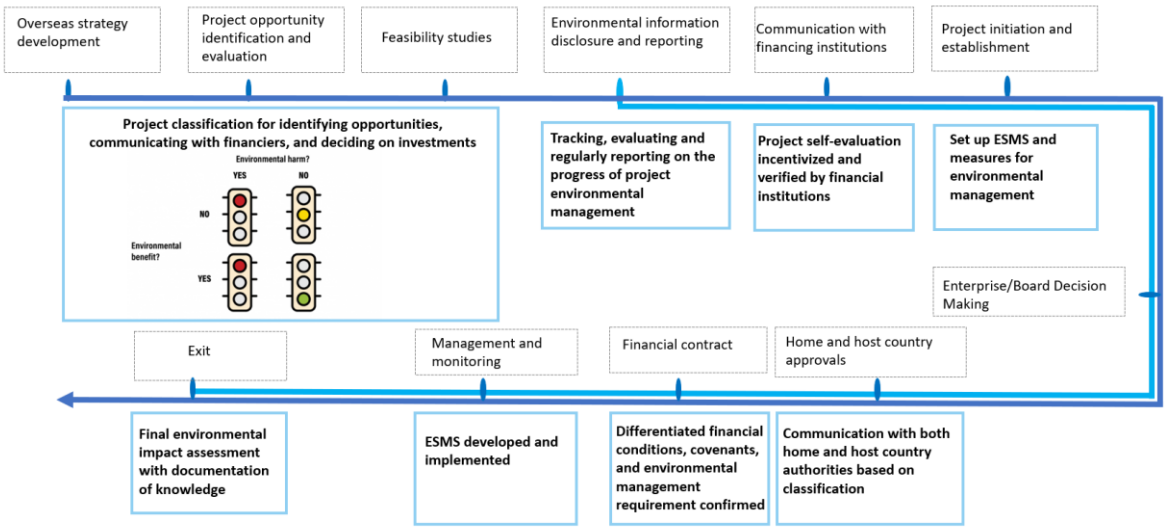


Figure ES-2 Key Application Points along Project Lifecycle as for Enterprises

Source: Authors.

Financial institutions are critical to mobilize financing to BRI at scale and at speed for the transition into green development pathways. This Application Guide provides a systematic approach to shift finance towards green projects. This also benefits the financial institutions in reducing environmental-related financial risks, in accelerating the greening of the portfolio, in overseeing and sharing responsibility of

environmental management with clients, and in more easily working with international investors to buy and sell project securities.

By setting out a detailed roadmap the Guide helps financial institutions embed the "1 project classification mechanism" and "9 recommendations" (Figure ES-3) into the lifecycle management of financed project, to improve environmental performance, reduce the climate and eco-environment related risks, and gaining more traction from a wide range of stakeholders in the pursuit of climate and sustainability goals.

- **Financial institutions should involve themselves as early as possible in the project development**, to closely work with the project owner to better understand the project's environmental risks long before the final project design decisions are made. This allows financial institutions to reduce transaction cost in designing contracts and establishing reporting requirements due to a more common understanding and knowledge of project specific environmental risks. This requires financial institutions to work closely with the client to share the FIs' environmental risk appetite (e.g., specific project types excluded), the requirements for environmental management, and the reporting requirements. As financial institutions' decision-making largely depends on the result of environmental due diligence including the project's classification (i.e., "red", "yellow", "green"), the FI needs to set up standards and procedures to share expectations and evaluate and audit the classification.
- **Financial institutions offer differentiated conditions for projects in different categories.** Accordingly, financial institutions need to internally define and communicate with the client both differentiated terms of financing (e.g. lower interest rates for "green" projects), environmental impact assessment requirements, environmental and social management system requirements, loan covenant that include environmental management considerations, as well as reporting and disclosure requirements where "red", "red/yellow" and "red/green" projects would have higher reporting requirements than other projects.
- **For all categories alike, financial institutions should apply environmental oversight along the participated project lifecycle, including providing a grievance and response mechanism** as a direct communication channel for local affected stakeholders to report environmental grievances directly to the financial institutions. Such grievance mechanism enhances the grievance mechanism of project company, and complements the financial institutions' risk alert system.
- **Chinese financial institutions can tap on their growing experience and footprint in global project finance to take an active role in setting standards.** The Guidance is harmonized across many existing standards and pushes the frontier of global project finance in emerging markets by integrating standards applied successfully within China, a largest emerging economy itself. Drawing on the project classification, the holistic environmental evaluation, and the inclusions of responsibilities and aligned actions across stakeholders, Chinese financial institutions, together with regulatory stakeholders, can contribute to improving global standard setting for financing green overseas projects.

Adopting the recommendations in the Application Guide requires the financial institutions to both build up in-house capacity and mobilize external resources. A functioning set of "1+9" recommendations embedded in financial institutions would rely on the participation across decision makers and functions of due diligence/appraisal, environmental and social management, risks control, legal affairs, compliance, and key business units. Help from independent consultants is desired, e.g., to verify the project's evaluation, environmental due diligence, and grievance cases.

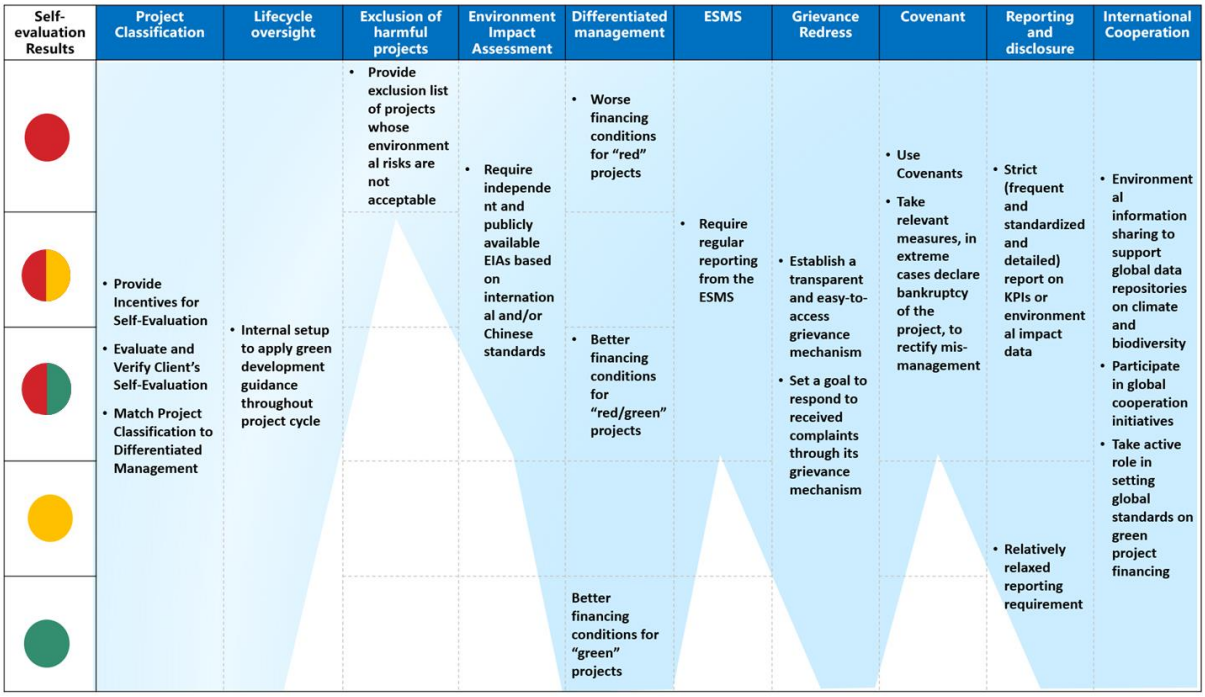


Figure ES-3 Embedding the Guidance into Project Lifecycle by Financial Institutions

Source: Authors.

The application of the guidance is voluntary but with the commitment to accelerate "green" projects and reduce environmental risks of "red" projects in the BRI. Financial institutions and enterprises are encouraged to add no new "red" projects and phase out existing exposure to "red" projects by focusing investments on "green", "yellow" and "transferred category" (e.g., "red/yellow and "red/green") projects in their portfolio with an ambitious timeline.

To achieve this, it demands policy guidance and support, and at the same time, the application itself offers cases and information on environmental performance of the BRI projects that are helpful for policy stipulation and alignment.

Policy synergy from across regulatory and supervisory functions plays a crucial role in maximizing efforts delivering the green BRI development commitment.

1 Building on the consistent rationale provided by the Guidance, more policy collaboration is desired among environmental and financial authorities, and the supervisory bodies of overseas investment and industrial development, to:

- Togethers streamline the processing of "green" projects, increase supervision of "red" "red/yellow" and "red/green" projects, guide the divest in extremely harmful "red" projects, and put a heavier weight on environmental impact mitigation and management considerations based on international best practices.
- Build up sufficient sharing of environmental and investment information among policymakers that continues in investment environmental performance monitoring.
- Provide collaborative support, particularly on the upgrade of "red" projects to better categories and expanding the solution spectrum with green development expertise encompassing regulators.

2 Further research to update the Project List with Sector Guidance can be structured around the project classification mechanism, detailing a transition standard and pathway to upgrade red-flagged projects and ensure green projects comply with the five underlying principles of project classification.

For BRI project host countries, the Green Development Guidance and action trends from investors demonstrate how green BRI is becoming a crucial part of the conversation between investor and host countries. Building on this momentum:

1 BRI project host countries are encouraged to form a greener ask by prioritizing green projects informed by the project classification and providing more conducive conditions.

2 Gaining traction from the mitigation and management measures from BRI investors, BRI host countries can further enhance climatic and eco-environmental standards, to guide the environmental performance of BRI project and benefit from collaborative capacity building programs.

3 Host countries can ensure Guidance application with sufficient information sharing to overcome language barrier, reduce transition cost, and increase the participation of domestic stakeholders that collaboratively builds the green BRI.

List of Abbreviations

Abbreviation	Name
ADB	Asian Development Bank
AFD	Agence française de développement
AfDB	African Development Bank
AIIB	Asian Infrastructure Investment Bank
BOD	Biochemical Oxygen Demand
BRI	Belt and Road Initiative
BRIGC	BRI International Green Development Coalition
CBD	Convention on Biological Diversity
CBI	Climate Bonds Initiative
COD	Chemical Oxygen Demand
CSR	Corporate Social Responsibility
DASH	Do No Significant Harm
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EMP	Environmental Management Plan
EP	Equator Principles
ERA	Environmental Risk Assessment
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment
ESMS	Environmental and Social Management Systems
ESRM	Environmental and Social Risk Management
GHG	Greenhouse Gas
GRI	Global Reporting Initiative
GRM	Grievance Redress Mechanism
IFC	International Finance Corporation

LCA	Life Cycle Assessment
NEA	Nepal Electricity Authority
PM	Particulate Matter
PRI	Principle for Responsible Investment
SPV	Special Purpose Vehicle
TCFD	Task Force on Climate-Related Financial Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGC	United Nations Global Compact
WHO	World Health Organization
WRI	World Resources Institute
WWF	World Wildlife Fund

Note: To avoid confusion, only current names are used to when referring to organizations /entities /governmental agencies that have changed names.

Chapter 1. Introduction to the Green Development Guidance of BRI Projects

1.1 Research Background

The Belt and Road Initiative (BRI) brings a new development opportunity for the world, as an initiative proposed by developing country to provide finance, engineering, and human capacity to other developing countries at massive scale. At the same time, the BRI has become the new development model as it aims to leapfrog the traditional high-carbon development model with environmental degradation, to a green development model that supports economic development in alignment with the Paris Agreement to minimize the risks of climate change, the Convention on Biological Diversity (CBD) and among others to protect biodiversity and minimize environmental pollution, and the UN Sustainable Development Goals (SDGs).

This goal of building a green BRI has been communicated widely and consolidated into policy and collaborative actions. In China, the green development of BRI was underlined in its 14th Five-Year Plan for National Economic and Social Development (2021~2025) and the 2035 Vision, the spirit of which was again exhibited in "Guidelines for Greening Overseas Investments and Cooperation" in July 2021 where the Ministry of Environment and Ecology and the Ministry of Commerce jointly emphasized increasing green investment and adopting higher environmental standards along the whole lifecycle of BRI projects. At global stage, the call for Green BRI Partnership was signed up by 29 BRI countries including China and disseminated by the UN General Assembly (UNGA) in July 2021. Later in the September UNGA, President Xi announced to the world that China will not build any new coal-fired power projects abroad and will increase financial support for green and low-carbon energy projects in developing countries, a commitment representing a turning point and a strong boost to the global efforts responding to climate challenges.

Project finance, such as infrastructure and manufacturing, are in focus in delivering the green BRI commitment, as they bear particular environmental and climate impacts. Accelerating BRI green development therefore raises parallel requirements of shifting finance to green infrastructure and of strengthening the quality and assurance of ecological standards. To support this ambition, the BRIGC (BRI International Green Development Coalition) has published the "*Green Development Guidance for BRI Projects Baseline Study*" (hereafter the "Guidance") in December 2020. The Guidance proposed 1 project classification mechanism and 9 recommendations ("1+9") to steer and accelerate green transition of BRI project finance.

To solidify the proposals in the Guidance, this Report aims to provide application guide to the key stakeholders in BRI construction. It is specifically targeted at project developers and project owners/companies[1], as well as financial institutions involved as lenders to projects. With how to put the Guidance in action explained, the Report also shed light on the necessary policy measures and desired global cooperation informed by the practice from companies and financial institutions involved in BRI. This is even more important in the world's post-pandemic green recovery where the need for collaboration and shared growth among countries through policy coordination is clear.

1.2 Green Development Guidance: "1+9" recommendations

The "1 + 9" recommendations in the Guidance focus on reducing climate and eco-environmental risks in financing overseas project. The principles of the Guidance set out a clear path to follow to allow different parties involved in overseas project finance to reduce environmental risk, reduce costs of project implementation, accelerate project permission and accelerate international cooperation throughout all project phases. By applying the Guidance, financial institutions and project developers are therefore reducing their risks beyond the often insufficient and dynamic local requirements. The Guidance consists:

[1] After the early feasibility study phases, when no project company has yet been established, the project developer might become a project owner when the project company is established.

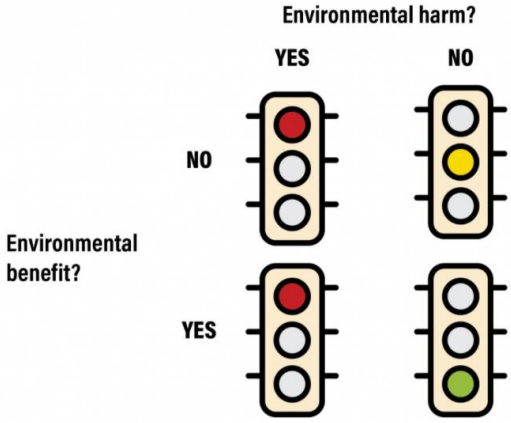
1.2.1 A Color-Coded Project Classification Mechanism

A mechanism to classify BRI projects based on environmental benefits and negative impact evaluation is proposed in the Guidance, with preliminary lists illustrated by sector examples. The classification is aligned with international standards and best practices, such as the Equator Principles (EP) that require signatory banks to differentiate projects by environmental risks as A, B, C, and finds ground in China's emerging efforts, such as the China Banking and Insurance Regulatory Commission (CBIRC) Green Credit Statistics System which encourages banks to differentiate financed projects according to their environmental risks.

The classification of BRI projects investigates three major environmental objectives of pollution prevention, climate change mitigation, and biodiversity conservation. Based on positive and negative impact, projects are divided into "3+1" categories with the first three of (Figure 1-1):

- **Green projects** - encouraged projects: Projects in this "encouraged category" have no significant negative impact on any environmental aspect of climate change mitigation, pollution prevention, and biodiversity protection, and positively contribute to at least one environmental aspect, particularly if they support international environmental agreements and conventions. Projects such as renewable energy development and utilization (solar and wind power plants, etc.) fall into this category.
- **Yellow projects** - environmentally neutral projects with moderate impacts: Projects in this category "Do No Significant Harm" (DNSH) to any environmental aspect, and any residual environmental harm can be mitigated by the project itself through affordable and effective measures within reasonable boundaries. Yellow projects include waste-to-energy projects and urban freight transportation with emission standard above Euro IV/national IV standards (or similar local applicable one).
- **Red projects** - projects requiring stricter supervision and regulation: Projects at risk of causing "significant and irreversible" environmental damage or major negative environmental impacts in one or more aspect of climate change mitigation, pollution prevention, and biodiversity protection. Red projects include coal-fired power, petrochemical, and mining and metal smelting projects.

Figure 1-1 The Color-Coded Classification Mechanism for BRI Projects



Source: Authors.

For project developers and investors to be able to account for varied environmental and climatic conditions of BRI participating countries, the classification process considers two major factors regarding environmental risks:

- **The inherent characteristics** of projects that are similar to each project of a specific type; and
- **The implementation characteristics** specifically the application of mitigation and compensation measures to effectively avoid environmental impacts along project lifecycle.

This color-coded classification also sets a fourth "transferred category" to provide a flexibility, which encourages projects to "upgrade" their category and allows them to consider local considerations in the

respective countries by applying environmental management with measures to mitigate or compensate for potential environmental risks. Projects can be labeled as “red/yellow” or “red/green” with appropriate management.

1.2.2 The 9 Recommendations

The 9 recommendations focus on different aspects of project finance:

- **Recommendation 1:** Green overseas investment practices address all project phases, from project initiation through project evaluation, financing, construction, operation, reporting and transfer/closure
- **Recommendation 2:** Provide exclusion list of projects not available for funding to exclude those of significant and irreversible environmental impact and have no effective measures to mitigate, referencing the practices from finance institutions and supervisory bodies
- **Recommendation 3:** Environmental (and Social) Impact Assessment (EIA/ESIA) depending on the project’s perceived risks, where “red”, “red/yellow”, “red/green”, and high-risk “yellow” projects should obtain an independent EIA assessment based on international best practices
- **Recommendation 4:** Differentiated conditions, for example to reduce financing cost and approval times for “red/green” and “green” projects
- **Recommendation 5:** Environmental and Social Management System for project company required to ensure mitigation measures are implemented and reported
- **Recommendation 6:** Grievance redress mechanism provided to the affected stakeholders for full lifecycle management, enabling direct communication of environmental issues between affected stakeholders and financial institutions and complementing the other communication channels.
- **Recommendation 7:** Integration of covenants related to breach of environmental and social agreements between the financial institution and the project company to exercise remedies to rectify environmental management
- **Recommendation 8:** Public reporting of environmental performance of project
- **Recommendation 9:** International cooperation on improving environmental performances

These recommendations are relevant for different parties in the project financing lifecycle.

1.3 The Application Guide and Users

This Application Guide aims to provide specifications that are adoptable to the key stakeholders in BRI projects. While the Guidance and particularly the project classification mechanism were developed to be easy to use and internationally harmonized, it does not mean that the application of the “1+9” recommendations is easy. Mending this gap, the Application Guide maps out the efforts needed to implement these recommendations, which requires coordinated and aligned actions from a set of key stakeholders.

The Guidance is primarily applicable for Chinese and international partners engaged in financing overseas project in BRI countries. It applies for all types of project finance and operating models in different sector. Project developers and financial institutions incur environmental risks and take responsibility in providing capacity for green infrastructure development. The application of this Guidance helps accelerate green project finance along the whole project lifecycle.

Relevant government authorities in China and BRI countries can benefit from this guidance to focus on choosing and providing support for green projects, while reducing support for red projects flagged by the classification. Table 1-1 further shows the user profile.

Table 1-1 The Users and Recommended Application of the Guide

Who	Why apply the Green Development Guidance	When to apply the Green Development Guidance
Project developers and project owners /companies	• To avoid or reduce environmental risks in project design and lower the cost of environmental damages. • To accelerate project approval and financing • To access lower-cost funding, favorable financing terms, and potential international financing sources • To apply a standardized process for environmental impact evaluation and risk management that allows for long-term success of project, including potentially attracting further investors or selling the project • To reduce environment-related social and reputational risks through coordinated local stakeholder consultation and feedback mechanisms • To inform investment strategy and decision-making by understanding the risks and the trends in the context of carbon neutrality and key international processes	• Throughout all project phases • Early evaluation of projects environmental impacts to understand risks • Early development of environmental management plans to reduce environmental risks throughout project • Reporting to ensure relevant investors and financial institutions are well informed about material and non-material environmental issues • Improving the environmental risk management system through grievance and response mechanism and other measures
Financial institutions	• To reduce environmental risks of loan book, including both environment-related social and legal risks • To accelerate project financing and approval • To increase access to international financial cooperation partners in project finance • To reduce reputational risks and inform investment strategy and decision-making by understanding the risks and the trends in the context of carbon neutrality and key international processes	• Assessment and differentiated management are carried out throughout all project phases • Focus on choosing “green” projects in early evaluation phases • Demand proper environmental impact assessments depending on project classification • Specify environmental risk management requirements of project • Include covenants for environmental risk management violations • Specify reporting requirements, including environmental performance indicators • Require independent validation of environmental reporting

Who	Why apply the Green Development Guidance	When to apply the Green Development Guidance
		• Establish early warning system, such as through grievance mechanism
BRI country authorities	• To inform the initiation and choice of green projects in development path • To help the communication with Chinese and global stakeholders, both governmental and financial of the financing demands • To reduce environmental risks • To increase local stakeholder participation and buy-in for project • To increase access to funding and the lower funding cost through access to more diversified finance • To improve long-term financial sustainability of projects and attract more diverse funding	• Develop projects that are considered "green" or "yellow", while avoid and putting more caution on "red" projects in public tenders • Strengthen the EIA requirements and oversight for "red", "red/yellow" and "red/green" projects
Chinese authorities	• To reduce environmental and financial risks of BRI projects • To accelerate implementation of "green BRI" ambitions with both supportive and restrictive policies • To ascertain positioning of BRI as a global sustainable development initiative	• Throughout all project phases guided, overseen, and regulated by various authorities • Project appraisal for accelerated permissions for "green" and "red/green" projects • Provide better conditions for green projects, particularly guided by financial regulators and with public financing sources • More oversight and stringent regulation for "red", "red/yellow" and "red/green" projects

Source: Authors.

1.4 Structure of the Application Guide

This report provides sufficient details on how to adopt the "1+9" recommendations tailored to each type of stakeholder, with the purpose to facilitate the key stakeholders apply the Green Development Guidance. While laying out a roadmap with action options explained, this Application Guide report also supports the application with illustrative cases and available tools and resources, informed by desktop research, interviews with relevant stakeholders, and feedback mechanisms through workshops and seminars.

The study is structured as follows:

Chapter 2 applies to the enterprises engaged in BRI projects. This includes enterprises who are the investors, implementers, developers, or owners of projects of the BRI. This chapter introduces enterprises to the Guidance with why it is relevant to enterprises and the role they play in setting the Guidance effectively in action. While familiarizing enterprises with the process, particularly giving a step-by-step guide on carrying out the project classification, the chapter also prepares them to integrate the recommendations into their

business with necessary institutional setup and resource. For the user to continue benefiting from adopting the Guidance, this chapter highlights how it is mutual reinforcing to all the other efforts that enterprises contributing to a green BRI, as well as the expected aligned actions from financial institutions.

Chapter 3 gets financial institutions ready for using the Guidance. This chapter starts by laying out a roadmap for financial institutions to embed the “9 recommendations” from the Guide into project lifecycle management, followed by a detailed illustration of the key action points along the roadmap. Then focusing on the “1 project classification mechanism”, the second section is dedicated to guiding financial institutions to set the environmental evaluation and classification into action through mobilizing the action from clients, consolidating the results, and applying the results in their business and management. The last section highlights how the Guidance and Application Guide support Chinese financial institutions taking on an active role in international standard setting. By underlining the novelty of the Guidance, it encourages proactive exploration continuing on this report.

Chapter 4 provides the recommendations for policy support and action areas. Based on the policy needs for further supporting the application of Green Development Guidance and the progress from such application in enterprises and financial institutions, this chapter outlines the implications for actions around policy collaboration, information sharing, and capacity building with suggested timeline.

Chapter 2. Application Guide for Enterprises

Enterprises are a key player of BRI investment and project construction. In 2020, the volume of direct investments from Chinese enterprises within the BRI reached US$ 17.79 billion, 18.3 percent up from that of 2019 (MOFCOM, 2021). Greening the overseas investment and adopting sound environmental management is an important part of making “green” the color of BRI development of high quality, and it is increasingly seen as both a responsibility and a business opportunity. Enterprises have a crucial role to play in both aspects.

This *Green Development Guidance for BRI Projects Application Guide* helps enterprises identify, evaluate, manage, and improve their environmental performance, across the aspects of climate, environment, and biodiversity. By assisting enterprises in completing the self-evaluation of the environmental impact of their projects and setting out the actions to improve performance and management, the Guide supports enterprises to better communicate with home policymakers, regulators, financial institutions, host countries and other stakeholders, avoid and mitigate the risks that are environmental and environment-associated in BRI investment and construction, and contribute to the global effort effectively around topics such as carbon neutrality, biodiversity conservation, and corporate social responsibility.

2.1 Getting Prepared

2.1.1 The Role of Enterprises in the Green Development Guidance

The *Green Development Guidance for BRI Projects* is a set of strategy, management, and action recommendations for projects based on a classification mechanism of their environmental impacts. The Guidance covers the entire lifecycle of BRI investment projects, and provides recommendations to policymakers and regulators, financial institutions and their clients including enterprises, to transition away from projects that cause significant environmental damage that cannot be mitigated to environmentally and economically beneficial projects, to conduct environmental impact assessments, establish the environmental management system, and to publicly disclose and report on environmental performance for projects of different environmental impact categories. Chapter 1 Section 1.2 describes these “1+9” recommendations.

The classification of BRI projects according to their environmental impacts is at the core of the Guidance. Projects are evaluated according to their environmental impact into the “green” encouraged category, the "yellow" neutral impact category, and the "red" category that requires strict supervision and regulation. This color-coded classification system provides a common language across government departments, financial institutions and clients, host countries and other international investors to form an aligned

understanding on the environmental impact assessment of BRI projects and is the basis for other recommended measures across stakeholders.

The Guidance is particularly relevant to enterprises engaging in BRI countries, as enterprises are:

- **The starting point for self-evaluation and project classification.** As the initiator of overseas projects, enterprises benefit by classifying projects to better understand possible environmental impacts, risks and opportunities associated with the proposed project prior to project planning and investment decision. Enterprises will work closely with financial institutions who provide incentives for self-evaluation and classification and verify the classification results to ensure an agreed understanding of the project impacts and mitigation (section 3.2 in Chapter 3).
- **The implementers of environmental impact assessments (EIA) and management.** As the developer or implementer of BRI projects, enterprises' business practices have the most direct positive or negative impact in the project host countries. Based on the project classification, enterprises and financial institutions are encouraged to manage projects throughout their lifecycle, institutionalize independent EIAs, especially for "red" projects, and require project companies and developers to establish environmental and social management systems (ESMS) with transparent grievance redress mechanism. This entails companies to establish robust systems to carry out and report on their work.
- **Affected by the actions from financial institutions and regulators.** The Guidance recommends that financial institutions and regulators provide exclusion lists to reduce or stop investment causing significant environmental harm that cannot be mitigated; provide accelerated approval and favorable conditions for "green" projects whereas more stringent for "red"; exercise remedies, including calling default, when the client failed to rectify a breach of environmental agreement. All these have implications on the terms and costs of financing and the requirements for environmental management, and consequently the enterprises' decision-making and practice.
- **Beneficiaries in using the Guidance in disclosure and in contributing to global climate and environmental processes.** More and more companies are disclosing their environmental information in the forms of sustainability or corporate social responsibility (CSR) reports and at the project level to communicate with external stakeholders and to improve performance. The Guidance facilitates the environmental information disclosure integrable to existing reporting frameworks and mechanisms and provides resources for enterprise' participation in related international initiatives and dialogues.

These roles are illustrated in below Figure 2-1.

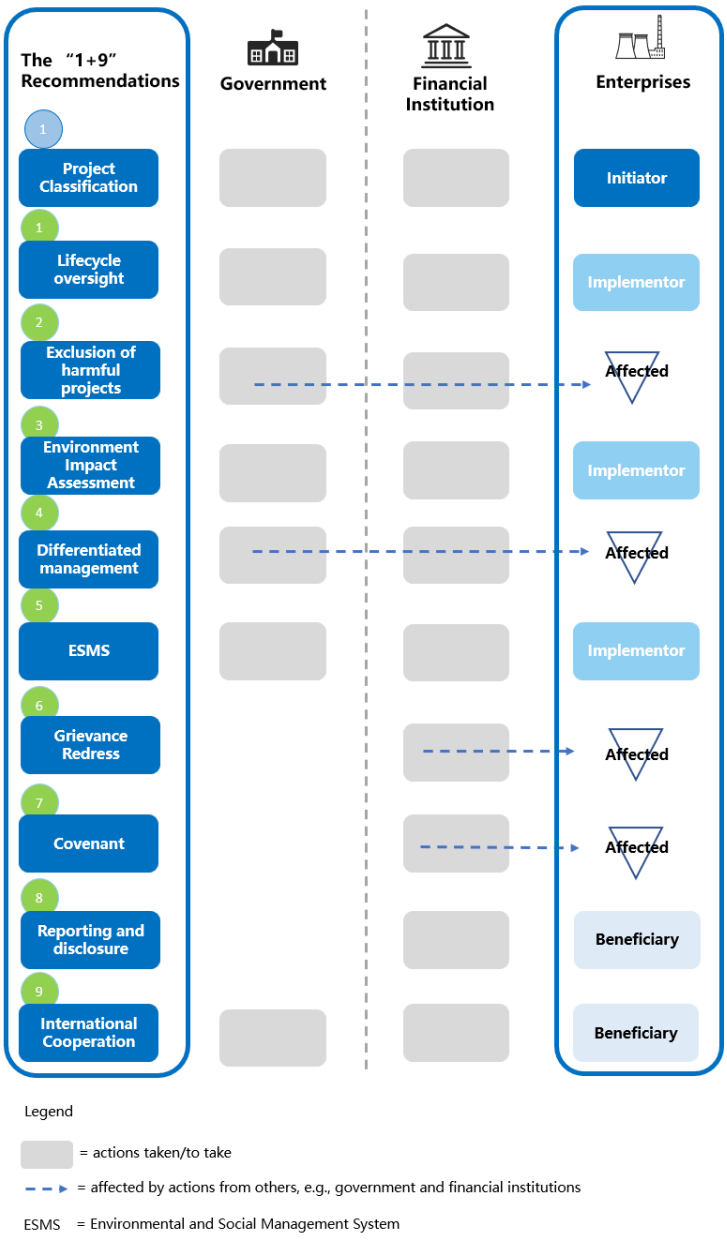


Figure 2-1 Relationship Between Enterprises and the Green Development Guidance

Source: Authors.

2.1.2 When shall the Enterprise Start Project Classification?

While classification is applicable to projects in pre-investment phase, at financing negotiation, or in construction or operation, it should start at project initiation for all new projects. Enterprises are encouraged to launch the self-evaluation for existing projects and start managing projects differently based on the classification results to improve environmental performance and thus reduce environmental risk.

- **Pre-investment phase**: The planning and assessment of project opportunity is the first and foremost to limiting and reducing projects with significant negative environmental impact at source. The Guide offers a process that enables enterprises to identify and evaluate such impacts as early as during the project opportunity identification, pre-feasibility study, project decision and approval, as well as the communication with stakeholders including the project host country and communities, and the government and regulatory authorities in China that advise and supervise the BRI investment.

- **Financing negotiation phase**: With the aid of the color-coded classification, enterprises can facilitate communication with financial institutions during the negotiation on financing proposals. The classification result helps financial institutions to fully understand the project and its associated environmental risks and align actions with other international investors and financial institutions particularly those have specific environmental policies and requirements.
- **Construction and operation phase**: Companies should continuously focus on and manage the environmental impacts and risks of projects through the color-coded classification, to facilitate communication with stakeholders such as project host countries and communities.

The flexibility in applying the self-evaluation allows enterprises to adapt it to their needs. In addition to scheduling the self-evaluation for project classification according to the individual project, enterprises can also synchronize the evaluation with their specific timetable, such as the cycle of strategy development or stakeholder communication, and regularly review and update the projects as overseas business develops or alters.

2.1.3 Relevant Departments and Personnel

A diversified group of functions are needed in the self-evaluation. Depending on the stages and processes of BRI project and investment, the personnel involved in the application of the Guidance may include the strategy and decision makers, the project developers, the project managers, the administrative personnel, the CSR team, and persons engaged in international cooperation (**Table 2-1**). The extent to which these functions engage in self-evaluation and the classification falls into three categories:

- **Aware of the subject matters of the project classification** that is sufficient to understand the link between the results of the project classification and the associated work area of the enterprise, as well as the possible roles the company can play.
- **Familiar with the technical aspects** well enough to carry out the project classification, including information gathering and analysis, impact evaluation, and production of classification results.
- **Able to interpret the evaluation results and their implications** to inform and improve decision making and management, such as enhance the policy and practice on environmental management, direct the transition to greener investments, and catch on the business and policy opportunities emerging from major activities in sustainability.

Enterprises are encouraged to work with independent consultants and liaise as early as possible with relevant financial institutions to understand requirements for environmental due diligence and environmental risk management, and to integrate relevant due diligence mechanisms in the project evaluation.

Table 2-1 Relevant Departments and Personnel of Enterprises

Project Phase		Action Point	Expected Outcome of Application	Enterprise		Third Party
				Domestic	Host Country	
Pre-investment	Overseas strategy development	Project screening and scoping	• Helping core corporate decision makers, staff involved in project development, design, and management to understand project environmental management requirements. • Identification of potential project impacts and risks in the early stages of project design and planning	Strategy and decision makers.	⊗	⊗
	Project opportunity identification and evaluation			• Strategy and decision makers. • Project development and design staff	⊗	⊗
	Feasibility studies (including country and environmental risk studies, resource use and environmental assessment, etc.)	Environmental Impact Assessment or Environmental / Social Impact Assessment (EIA / ESIA)	• Projects classified according to their environmental impact(green/yellow/red) • Environmental/social risks and impacts of the project identified • Informed internal decision making, and external approval of the project supported by the above	• Project development and design personnel • Project management personnel • Corporate environmental and social responsibility managers	Project support and administrative staff	Professional evaluation agencies and experts
	Project initiation and establishment			• Project development and design staff • Project management personnel	Project support and administrative staff	⊗
	Enterprise/Board Decision Making	Enterprise internal decision making	Easier and more efficient information communication to domestic and host country authorities and various stakeholders	Strategy and decision makers	⊗	⊗
	Domestic Approval	Domestic Approval		Project support and administrative staff	⊗	⊗

	Host country approval	Host country approval		⊗	Project support and administrative staff	⊗
Financing negotiation	Communication with financing institutions (including relevant financial institutions) Contracting	Project self-evaluation verified by financial institutions	Project evaluation well communicated to financiers (including relevant financial institutions) and stakeholders during the financing proposal negotiation process to help them fully understand the potential impacts and risks of the project	• Project development and design personnel • Corporate environmental and social responsibility managers	Project support and administrative staff	Professional evaluation agencies and experts
Construction and Operation	Social and environmental management (including environmental recovery in project exit)	Development of project environmental management plan (EMP)	• Project environmental management plan developed based on the project's category (e.g., green, yellow, red) • Performance measurement and benchmarks designed • Management priorities, requirements, targets established • Information disclosure mechanisms set up for periodic reporting	Corporate environmental and social responsibility managers	Project managerial staff	Professional evaluation agencies and experts
	Monitoring	Monitoring and Auditing	• Tracking, evaluating and regularly reporting on the progress of project environmental management (e.g., targeted disclosure and reporting on project environmental performance based on different project categories and requirements from financial institutions)	Corporate environmental and social responsibility managers	Project managerial staff	Professional evaluation agencies and experts

			• Conduct effective information disclosure			
Project Termination	Project termination (decommissioning or shutdown)	Project final environmental impact assessment	• Final environmental impact assessment of the project executed and completed • Project documentation and knowledge management competed	⊗	Project managerial staff	Professional evaluation agencies and experts

Source: Authors.

2.2 The Self-Evaluation for Project Classification

2.2.1 The Principles of the Classification Mechanism

The BRI project classification mechanism proposed in the Guidance adopts the following overarching principles: **(1) multidimensional**: the evaluation takes on a holistic approach that covers a project's impact and contribution in regard to climate emissions, environmental pollution and biodiversity; **(2) holistic:** the evaluation focuses on the impact across project lifecycle that are cumulative on both temporal and special spread. It also counts in the entailed impacts a project when it directly contributes to a sector with significant environmental harm; **(3) align with international targets**: stay consistent with international conventions and global targets related to climate, environment and biodiversity; and **(4) require dynamic assessment**: monitors project lifecycle environmental impacts and the mitigation measures taken. Projects are classified into "green", "yellow" and "red" categories guided by the above principles, as articulated in 0.

The classification mechanism is designed to be practical and easy-to-use for assessing potential environmental impacts. It cannot substitute the specific and required activities that ensures the initiation and operation of project. For instance, it does not guarantee the approval or access to government and financial support, nor it is equivalent to the EIA, construction permits or the necessary permissions, such as forest or water use permits that is indispensable in project approval, implementation, and operation.

2.2.2 How to do the classification

2.2.2.1 Collect information

Table 2-2 provides the information needed for enterprises to assign projects into one of the categories. Given the differences how information is registered and handled in each enterprise, a brief description of required information and the purpose for usage is provided to help locate such information in enterprise' own capacity. Some of the information is obtainable in project documents particularly in cases where the evaluation is applied to initiated and commenced projects.

Table 2-2 Required Information Table for Project Classification

Type	Description	Purpose
Project Information	Industry and sector	● To match the project in the Projects and Categories provided for 6 key industries (available in Annex 2) ● To serve as the basis for impact determination if the project is in a sector other than the 6 key industries. The project industry and sector info help referencing to the inherent characteristics in environmental, biodiversity and climate impacts to the interest of classification
	Project location and affected geography	● To preliminary identify the potential impact of the project on the ecological environment and biodiversity, such as whether the project trespasses or borders on any biodiversity hotspots, protected areas, or core habitats
	The current project phase and the phases the enterprise has been engaged in or will possibly engage in	● To determine the scope of project's potential impacts based on the project's life cycle ● To identify the scope of project impact, including the cumulative impact
	Technical information	● To identify the potential impact of the project referencing to the inherent characteristics of the project and the

Type	Description	Purpose
	including but not limited to those on raw materials, fuel, process, pollutant emission, and pollution control facilities.	technical choices, such as greenhouse gas emission, discharge, etc. ● To identify the demonstrated effective mitigation measures responding to the impact generated from concerned technical aspects
	Supply and value chain of the project	● To identify the enabling effect of the project associated with the upper- and down-stream industries along the project's supply and value chain
Environmental and resource consumption information	Potential environmental risks	● To detect the possibility of environmental incidents, such as the incidents arising from the transportation, utilization, and discharge of harmful substance, the possibility of explosion or leakage of harmful substance
	Resource consumption	● To identify the consumption on natural resources, such as water, forest, land, etc. ● To match with the highest environmental standards of home country, host country or international standards. This could be comparable to the required information in applying for environmental permission in project host country and home country
Internal management, information disclosure and external communication with stakeholders	Information on corporate strategy and governance	● To assess the mitigation measures that are appliable through strategy setting and governance structure ● To identify the relevant functions and personnel that are relevant to the self-evaluation and project classification
	The environmental and social management system (ESMS)	● To assess the mitigation measures that are available or appliable through strategy setting and governance structure ● To identify the relevant functions and personnel that are relevant to the self-evaluation and project classification
	Corporate sustainability/social responsibility and other environment-related information disclosure practices, and publicity, media, public relations and other channels of communication with stakeholders	● To access information on project impact and the mitigation measures via various channels ● To identify the relevant functions and personnel that are relevant to the self-evaluation and project classification

Source: Authors.

Note that as far as possible, quantitative and detailed information facilitates assessment of the environmental impact, such as the quantity of emission in gCO2e/tkm and the distance in km from key

biodiversity area for railway projects. It is the basis for understanding the impact and taking countermeasures. In addition to environmental impact mapping, some of the information above also contributes to the broader mapping also includes of feasible technologies, engineering processes, project management experience among others, which are helpful in exploring possible alternatives and improved management for impact mitigation.

2.2.2.2 Classify Projects Referencing to the By-Category List

The Guidance first selected 6 industries in preliminary screening with the aim to provide reference for the key industries of BRI investment with the most eco-environmental and climatic impact. These include energy infrastructure, transportation infrastructure, manufacturing, mining, agriculture, and land use. While Table 2-3 shows some examples, enterprises can refer to Annex 2 to assign projects from the above six industries into corresponding categories.

Table 2-3 The By-Category Examples in Guidance

Category	Examples
Green light projects (encouraged)	Solar photovoltaic, wind power, geothermal energy, mini/micro-grid (for transmission of clean energy), electric transportation infrastructure, construction of green ports and their supporting facilities, forestation, etc.
Yellow light projects (projects with moderate impacts)	Waste-to-energy projects, urban freight transportation with emission standards above Euro IV/national IV standards (or similar local applicable one).
Red light projects (projects requiring stricter supervision and regulation)	Coal-fired power generation (including new coal-fired power plants and upgrading of existing coal-fired power plants), gas-fired power generation, railway construction (long-distance, passenger, or freight), urban freight transportation with emission standards below Euro IV/national IV standards (or similar local applicable one), construction of ports and their supporting facilities involving the use of fossil fuels for storage or transportation, large livestock and poultry breeding plants, mining, petrochemicals, industrial park construction, etc.

Source: (BRIGC, 2020)

The by-category list is a dynamic tool. Like China's green finance taxonomies and sectoral policies, it will be updated and revised periodically to keep pace with developments in science and technology, market dynamics and policy needs.

2.2.2.3 Classify Projects by a Two-Step Process

Enterprises can complete their own classification following the classification process for industries and projects not covered by the by-category lists. The project classification process has two-steps which first assesses potential environmental impacts of the project type and then investigates the mitigation and compensation measures for the specific project (Figure 2-2).

In the first step, projects are evaluated regarding the project characteristics, that is, the significant environmental risk and positive contribution potential in regard to pollution, climate, and biodiversity[2]. If a project has no significant harm potential, and positive environmental contribution[3], it is considered “green”, while a project without significant harm potential and without positive environmental contribution is classified as “yellow”. Projects with significant environmental harm potential in any of the three dimensions (pollution, climate, biodiversity) are considered “red”, even if they have an environmental contribution potential in another environmental dimension. The definition of “significance” is available in Annex 1.

[2] The "risks" refer to a significant increase in pollution relative to the absence of the project; significant greenhouse gas emissions that renders meeting the Paris Agreement targets difficult; and a significant deterioration in biodiversity.

[3] These contributions include: a significant improvement in pollution compared to the absence of the project; a significant contribution to the achievement of the Paris Agreement targets, and a significant improvement in biodiversity.

The second step evaluates a project's specific environmental management and safeguard process. This allows projects to "upgrade" their category: If a project has been identified as "red" in the first evaluation stage, mitigation and compensation measures along the mitigation hierarchy[4] to avoid, minimize, or compensate the project's environmental harm. Demonstrated effective mitigation and management can result in project moving from "red" to "red/yellow" and even to "red/green" depending on the project's potential to improve environmental outcomes.

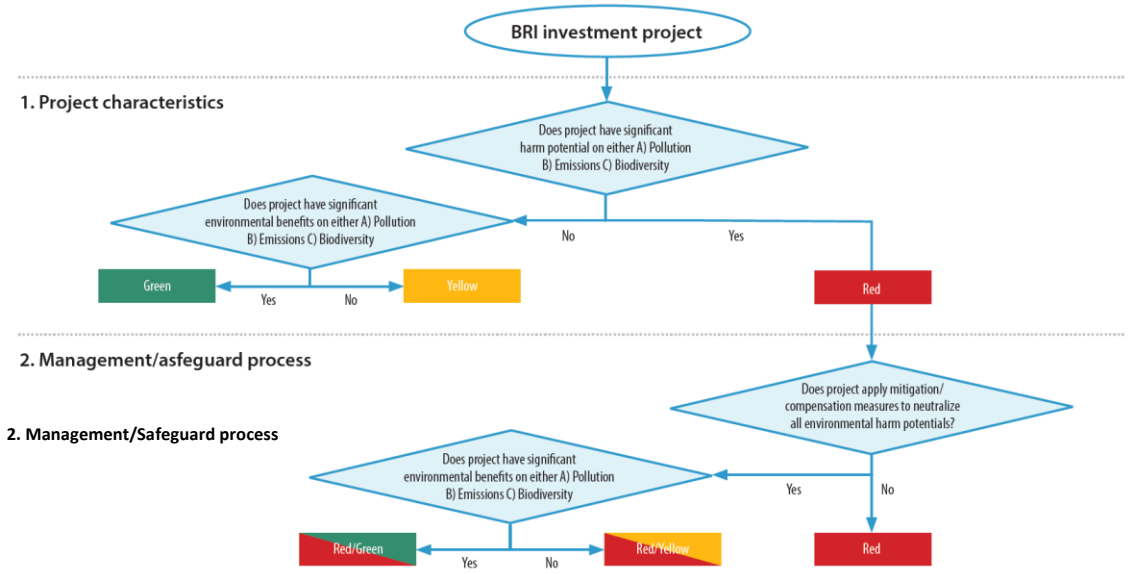


Figure 2-2 The Project Classification Process

Source: (BRIGC, 2020)

2.2.2.4 Evaluation and Thresholds

The "two-step classification process" involves the collection and analysis of information on project environmental contribution, impact and mitigation measures. This section provides the necessary tool and resources for completing the classification process. Figure 2-3 shows how the four aids from this Guide can be used in the Figure 2-2 project classification process.

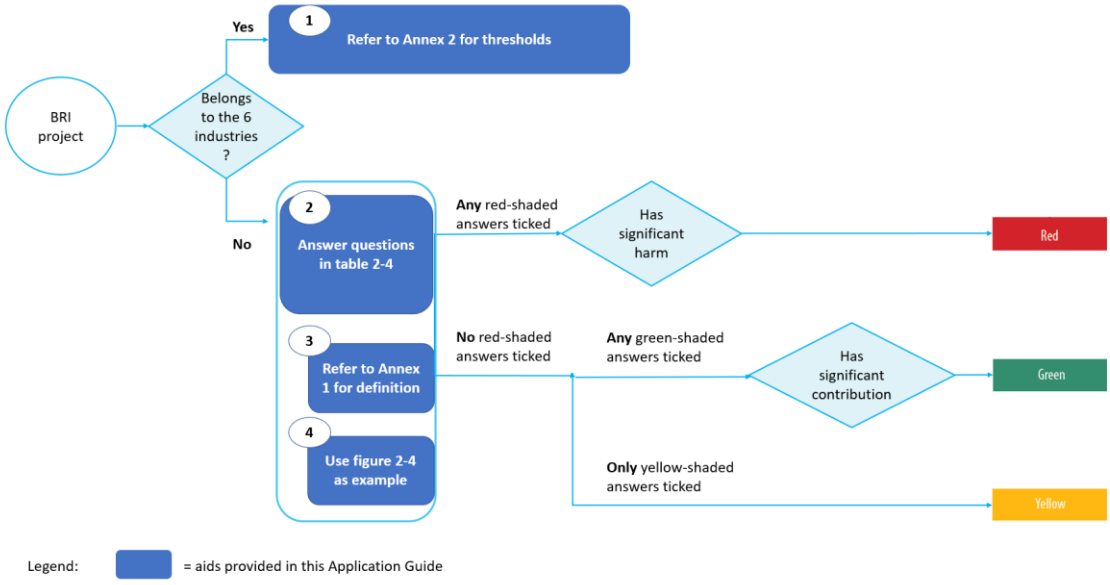


Figure 2-3 The Four Aids in Application Guide

[4] Concept emerged from biodiversity protection, refers to a sequence of measures to avoid, mitigate, restore, or rehabilitate, and finally offset or, failing that, compensate, to achieve no overall negative impact on biodiversity or on balance a net gain.

Source: Authors.

More specifically:

1. For the lists of projects in 6 industries, the Guidance specified the corresponding information and thresholds used (Annex 2).

2. A question list is proposed in Table 2-4 for the inquiry into project's potential harm and contribution, particularly for projects not belonging to the 6 industries and for projects that require their own classification. The aim is to help enterprises identify the impacts and classify projects in a structured and systematic manner. This classification can also be applied when specific (sub)sectors and more quantitative and standardized assessment criteria are missing (but these cases should be minimized).

The "*Yes/No Answer*" column guides assigning projects to color-coded categories. Tick checking any red-shaded answers would mean the project has significant environmental harm and should be categorized as "red". Tick checking all the yellow-shaded answer indicates the project has neither significant harm nor contribution to the environment and therefore is "yellow". This puts the remaining cases automatically to the "green" category: they tick check at least one of the green-shaded answers which confirms a project's positive contribution.

In addition to the "*Reference*" column in the table below, enterprises can also refer to Annex 3 for additional the environmental impact identification and management tools by industry or by theme. It provides the environmental impact and threshold criteria related to specific industries and environmental issues.

Table 2-4 A Checklist to Identify Contribution and Impact of Three Environmental Aspects

Question	Yes/No Answer			Reference
Dimension 1: Climate				
Does the construction and operation of the project make a significant contribution to the climate resilience and adaptability?	○ **Yes**	For example: climate-resilient cities, levees, climate-resilient agriculture	○ **No**	MDB-IDFC Common Principles for Climate Change Adaptation Finance Tracking Climate Resilience Principles
Does the project accelerate the pathway to a net-zero emission carbon economy in line with the Paris Agreement?	○ **Yes**		○ **No**	United Nations Framework Convention on Climate Change (UNFCCC) Climate Bond Taxonomy Science-based Carbon Target Initiative (SBTI) China Green Bond Endorsed
Will the project result in significant greenhouse gas emissions and/or exacerbate climate change?	○ **Yes**	That is, the project has the potential to pose a significant threat to the achievement of the Paris Agreement For example, the construction and operation of the project will require large amounts of electricity, fossil fuels such as coal/natural gas/diesel, etc.	○ **No**	
Does the project contribute significantly to other projects (such as expanding the lifecycle) of industries that undermine the Paris Agreement?	○ **Yes**	That is, the project has the potential to make a significant contribution to other projects in industries that are not in line with the Paris Agreement (e.g., extending their life cycle)	○ **No**	

				Project Catalogue EU taxonomy for sustainable activities
Dimension 2: Pollution control				
Will the project contribute to an absolute reduction of pollution?	○ **Yes**		○ **No**	IFC Environmental and Social Management Implementation Manual Host Country Laws and Regulations China Environmental Laws and Regulations
Will the project result in significant environment impact by a release of local pollutants due to routine or non-routine circumstances?	○ **Yes**	For example: boilers, diesel generators, incinerators, grinders, etc.	○ **No**	
Will the project generate significant amount of non-hazardous waste? ● Will the construction and operation of the project generate significant (or substantial) amounts of stationary waste? ● Will the solid waste be discharged into landfills during the construction and operation of the project?	○ **Yes**	For example: waste from equipment maintenance, fly ash and bottom ash from coal-fired boilers For example: soil, groundwater, and/or surface water contamination due to inappropriate discharge of stationary waste	○ **No**	
Will the project involve the manufacture, trade, release, and/or use of hazardous chemicals and/or materials? ● Will the wastewater generated during the construction and operation of the project be discharged into nearby rivers, lakes, or other water bodies?	○ **Yes**	For example: boiler discharge, waste oil For example: contamination of soil, groundwater (due to seepage) and/or groundwater (due to runoff); Contamination of the water body and aquatic life into which the wastewater is injected; Eutrophication of water bodies due to high BOD or COD leading to biodiversity damage	○ **No**	

• Will the treated wastewater fail to be reused (in part) during the construction and operation of the project?			
Will the project involve the manufacture, trade, release and/or use of hazardous chemicals and/or materials? • Will the construction and operation of the project generates hazardous or toxic solid or liquid wastes, such as chemical residues and sludge from the company's wastewater treatment sites? • Will any chemicals/materials that are banned or restricted be used in the construction and operation of the project?	○ **Yes**	For example: chemicals or materials that are internationally banned or phased out, and pesticides that may have a negative impact on the environment or human health For example: improper discharge of hazardous wastes (e.g., used oil, oil-soaked filters, rags, etc.) that can cause contamination of soil, groundwater and/or surface water (due to runoff), which risks biodiversity damage For example: failure to comply with regulatory requirements for such materials, use of chemicals/materials that cause air, soil or water contamination, or that put workers or consumers at increased risk of exposure	○ **No**
Will the construction and operation process of the project generate significant noise?	○ **Yes**		○ **No**
Dimension 3: Biodiversity			
Does the project contribute to the Convention on Biological Diversity, and/or to a higher biological diversity?	○ **Yes**		○ **No**
Will the project activities pose a risk to endangered species?	○ **Yes**		○ **No**
Will the project involve activities within or adjacent to critical habitats and/or environmentally sensitive areas?	○ **Yes**	For Example: Railway projects located within 10 km of key biodiversity areas, or with supply chain affecting key biodiversity areas	○ **No**

Will the project pose a direct risk of introducing invasive alien species?	○ **Yes**		○ **No**	IUCN Red List of Threatened Species Integrated Biodiversity Assessment Tool
Will the project involve the production or harvesting of natural resources?	○ **Yes**	For example: natural forests, development of plantation, or reforestation of livestock or aquatic species	○ **No**	
Will the project include activities that require significant consumption of raw materials, energy and/or water? ● Will the construction and operation of the project require significant amounts of fresh water? ● Will the construction and operation of the project require the occupation of a significant amount of land or the conversion of a significant amount of land use?	○ **Yes**	For example: risk of soil degradation and/or biodiversity loss	○ **No**	
Will the project cause transboundary or global environmental problems?	○ **Yes**		○ **No**	

Source: (UNDP, 2016) and authors.

3. the Annex 1 provides the detailed definition of concerned concepts. It is necessary to consider the contributions and impacts compared to the status quo or no-project scenario and determine whether these absolute impacts are "significant", i.e., “significant” and/or “irreversible”. Note that when ticking the “No” answers assessing the negative impact of the project, all **6 dimensions** of:

- Extend and spread magnitude of the impact, including the Indirect impact through transfer to associated projects and activities,
- Duration of projects,
- Sensitivity of the affected area,
- Manageability,
- Risk of accidents, and
- Reversibility should be considered.

4. The following example of a power transmission line project walks the user through how to reach a “Yes” or “No” answer in Table 2-4 considering the 6 dimensions. The case is extracted from a Power System Expansion Project in Nepal, the finance contract of which was signed in 2015 with the European Investment Bank (EIB), Asian Development Bank (ADB) and others. The borrower is the Federal Democratic Republic of Nepal, represented by the Ministry of Finance, while the final beneficiary and project-implementing agency is the Nepal Electricity Authority (NEA), a fully state-owned power utility. Below Figure 2-4 shows how the Question “Will the project result in significant greenhouse gas emissions and/or exacerbate climate change?” in Table 2-4 is checked as “No” in this instance.

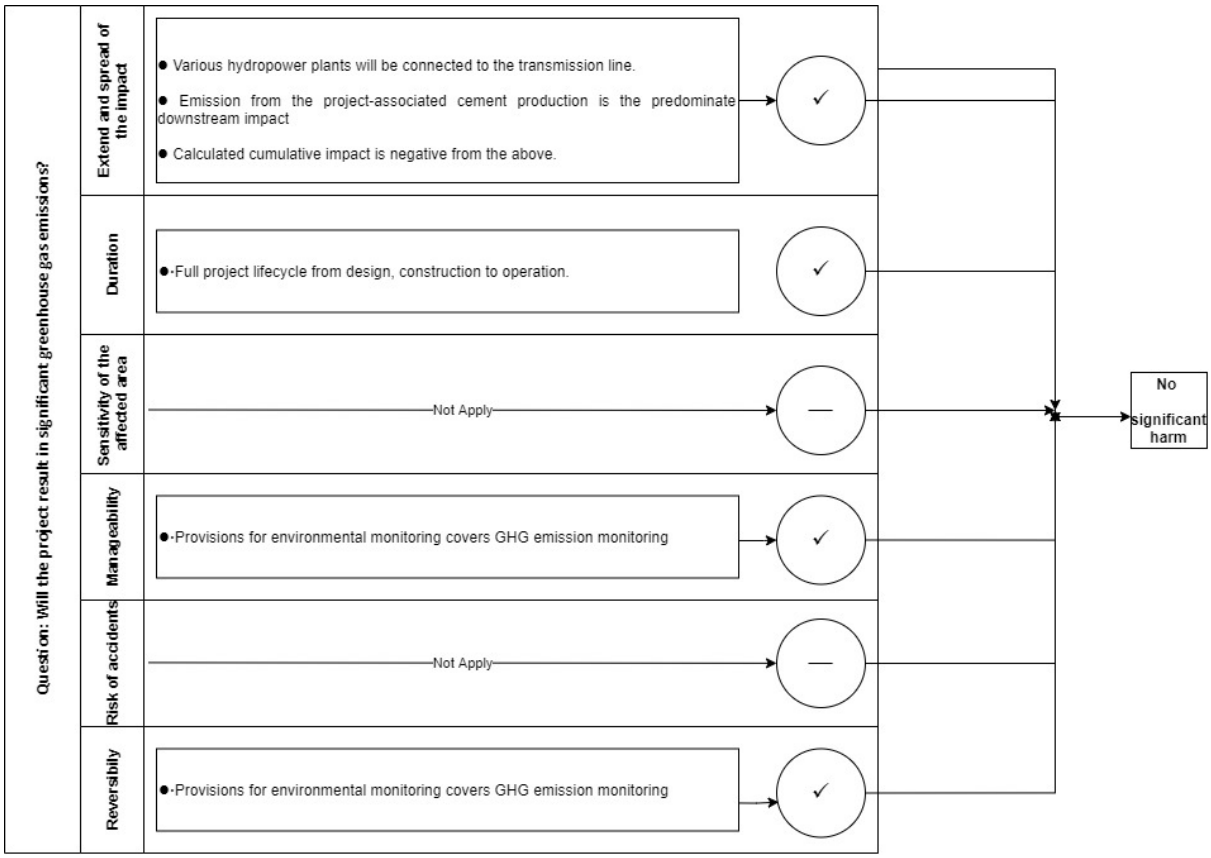


Figure 2-4 An Example of Decision on Project has “No” Significant Impact

Source: (EIB, 2021), (ADB, 2014) and the authors.

2.2.2.5 Assess the Mitigation Measures

The project classification emphasizes environmental management and continuous improvement. The project categories can either upgrade or downgrade to the transferred categories, such as “red/yellow” and

"red/green", depending on the agreed and applied adaptation and mitigation to neutralize negative impacts along project lifecycle process, as shown in Figure 2-2.

The enterprises are encouraged to adopt the "mitigation hierarchy" to manage and mitigate impacts on all three environmental aspects of climate, environment, and biodiversity. For projects fall into the 6 key industries, the effective and economically viable measures of mitigation measures are showcased in Annex 2. Further, enterprises can achieve improved environmental performance through project planning, technology selection, engineering process design, project management, and safeguards. Taking hydropower projects as an example, the below Figure 2-5 shows the possible measures the enterprise can take to mitigate impacts and improve performance, in a favored order of avoidance, mitigation, restoration, and offset and compensation.

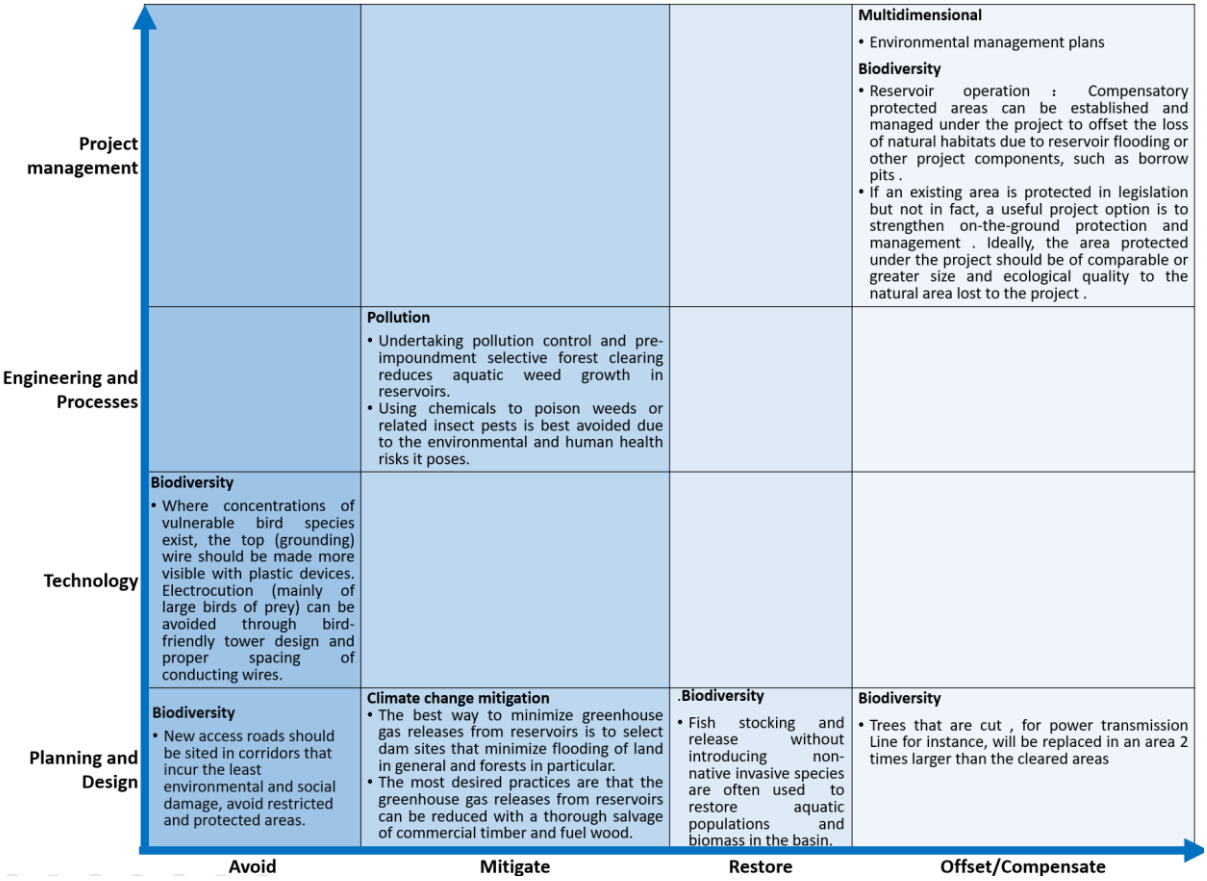


Figure 2-5 Example of Environmental Impact Mitigation Measures for Hydropower Projects

Source: (IFC, 2015) and authors.

For "red" projects whose impacts cannot be fully offset and to upgrade the project into higher categories, enterprises can still minimize the negative impacts of the project through continuous innovation and application of technology, improving project environmental management, and improving safeguards and compensation measures.

2.2.3 A Template to Present the Self-Evaluation

To facilitate the self-evaluation, this section provides a template form (Table 2-5) which enterprises can fill in by following the instructions in this chapter.

To help enterprises better prepare project environmental information and understand its subsequent use, Chapter 3 Section 3.2 further describes how financial institutions, such as banks and financial leasing companies, can use the self-evaluation information in their internal credit approval decisions and project risk management.

Table 2-5 Self-evaluation and Project Classification Form

<table>
<tr><td>Project name</td><td colspan="3"></td></tr>
<tr><td rowspan="2">Company name (in the host country)</td><td>Name:</td><td colspan="2">Legal representative:</td></tr>
<tr><td></td><td colspan="2">Contact person and contact details:</td></tr>
<tr><td rowspan="2">Company name (in China)</td><td>Name:</td><td colspan="2">Legal representative:</td></tr>
<tr><td>Address:</td><td colspan="2">Contact person and contact details:</td></tr>
<tr><td>Supervising authority/authorities</td><td colspan="3"></td></tr>
<tr><td>Registered Capital</td><td colspan="3">_____Million USD, with _____ % of the shares held by the Chinese party and _____ % by the foreign party</td></tr>
<tr><td rowspan="2">Shareholding structure</td><td colspan="3">Name of Chinese shareholder Share ratio: _____%</td></tr>
<tr><td colspan="3">Name and shareholding of foreign shareholders: _____%</td></tr>
<tr><td>Place of registration</td><td colspan="3">Country: _____ Province (State): _____ City: _____</td></tr>
<tr><td>Method of establishment</td><td colspan="3">Newly established ○ Mergers and acquisitions ○</td></tr>
<tr><td>Business Scope</td><td colspan="3"></td></tr>
<tr><td>Industry/sector</td><td colspan="3"></td></tr>
<tr><td>Investment size</td><td colspan="3">Total investment _____ million USD
Amount of investment by the Chinese side _____ million USD</td></tr>
<tr><td>Is green development included in the corporate strategy?</td><td colspan="3">○ Yes ○ No</td></tr>
<tr><td>Is a negative list based on environmental performance of the project established for the project screening?</td><td colspan="3">○ Yes ○ No</td></tr>
<tr><td>Is a regular environmental risk monitoring mechanism for invested projects established and applied to asset portfolio management?</td><td colspan="3">○ Yes ○ No</td></tr>
<tr><td rowspan="2">Does the project cause or potentially cause a significant harm to one or more environmental objectives listed in the right-hand column?</td><td colspan="2">Pollution prevention and control
○ Yes ○ No</td><td rowspan="2">Comment:</td></tr>
<tr><td colspan="2">Climate change mitigation/adaptation
○ Yes ○ No</td></tr>
</table>

	Biodiversity protection ○ Yes ○ No	
Does the project make a **significant contribution to one or more** environmental objectives listed in the right-hand column?	Pollution prevention and control ○ Yes ○ No	Comment:
	Climate change mitigation/adaptation ○ Yes ○ No	
	Biodiversity protection ○ Yes ○ No	
Does the project employ sufficient and **adequate mitigation and/or compensation measures** to manage the potential negative impacts that the project may cause on the environmental objectives listed in the right-hand column?	Pollution prevention and control ○ Yes ○ No	Comment:
	Climate change mitigation/adaptation ○ Yes ○ No	
	Biodiversity protection ○ Yes ○ No	
Result of Self-Assessment	The project is classified as: □**Green Project** (encouraged category) □**Yellow Project** (environmentally neutral projects with moderate impacts) □ **Red Project** (strictly regulated category) □ **Transferred Category** □Red/Yellow □Red/Green □Yellow/Green	Comment/Justification:

Additional Notes:			
Document number of approval or filing by the relevant national authority (where relevant)		Name and number of qualification document (if required)	
The Company guarantees the authenticity of the information provided in this form and undertakes to carry out overseas investments in accordance with the relevant environmental laws and regulations of China and the host country. (Stamp) Date			
Initial check		Review	

Source: authors.

2.3 From Self-Evaluation to Improved Environmental Performance

Starting and apart from the project classification, enterprises can continue improve their environmental performance following and making use of the Guidance.

2.3.1 Enhance Informed Decision-Making and Transition to Sustainability

The Green Development Guidance for the Belt and Road Projects is a "dictionary" tool that gives a clearer definition of what constitutes an environmentally sustainable activity and project, and under what circumstances. It gives enterprises clear guidance and provides the necessary confidence to the market and the public.

Through the project classification via self-evaluation, enterprises can understand the environmental impact of their engaged projects and the industry to which it belongs. By drawing more attention to the consideration of environmental factors in policy and strategy formulation and investment decision, and by laying out the action options from financial institutions and governments both rewarding and punitive (details in Chapter 3 and Chapter 4), the Guidance helps enterprises adjust their investment strategies (Figure 2-6) in time and avoid the risks by understanding future policy trends and changes in the requirements of stakeholders such as financial institutions, especially for industries and projects with relatively high environmental impact such as projects labeled “red”.

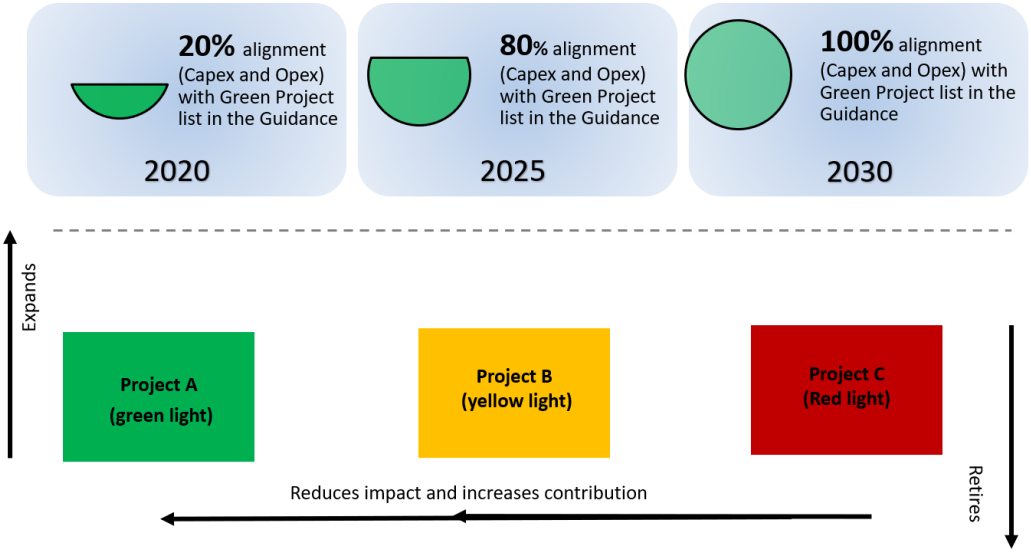


Figure 2-6 Example of Goal and Strategy Setting

Source: Authors.

In addition, the Project Classification and Self-Evaluation Form sets sustainable development goals and pathways for different industries. It helps companies and investors in different sectors to plan accordingly and to measure and report on the implementation of sustainable strategies. Specific implementation guidelines can be found in international practices, such as the EU Taxonomy guidelines (Usability) section.

2.3.2 Establish Project Lifecycle and Standard Management

The Guidance builds the foundation for enterprises to establish lifecycle management of project’s environmental impact. While the project classification process maps out the necessary information useful in environmental management, the mitigation measure spanning all environmental aspects and the overall management plans also offer a starting point for enterprises to institutionalize and strengthen their environmental management comparable to the best practices and requirements/expectations form multi-stakeholders.

Enterprises are encouraged to establish the environmental (and social) management system (ESMS). Such system will help companies integrate environmental and social management-related rules and objectives into their core business operations[5] through a set of clearly articulated and repeatable processes. This allows enterprises to:

- **Effectively address the emerging requirements from financial institutions** as advised by the Guidance (Chapter 3).
- **Manage environmental and social performance routinely and proactively**, particularly for "red" projects that have high environmental risks.
- **Develop measurable company/project objectives and targets**, which are regularly reviewed and updated.
- **Ensure in-house capacity is sustained**. With environmental risk management being complex and spanning the whole project lifecycle (which can be several decades), relevant departments throughout the enterprise must be fully informed and capable to fulfill these responsibilities and duties also when personnel changes. This requires a deep integration of ESMS into the core management systems and corporate strategy.

2.3.3 Improve Reporting and Stakeholder Communication

The Guidance and the project classification self-evaluation can be used to help enterprises measure the "greenness" of a specific project, a portfolio and the enterprise as a whole, and on this basis conduct effective, consistent and comparable project and corporate environmental disclosures and enhance the grievance redress mechanism to allow public oversight. Beyond the environmental accidents and violations of environmental agreements, the reporting and disclosure of environmental performance, ideally based on independent audit, helps enterprises identify performance gap and prioritize improvement actions, reduce transaction cost when liaising with financial institutions and working with investors in later project phases[6], and adjust projects and their management in the early phases.

From applying the Guidance, the enterprises can also more proactively participate and lead in climate and eco-environmental processes and initiatives. This familiarizes or further helps enterprises in engaging with the key environmental actions happening domestic and globally, regarding but not limited to activities in BRI. Exploring these opportunities, enterprises can actively delivery on social responsibilities to enact positive change and provide business solutions to the achievement of sustainable goals. Table 2-6 demonstrates how some of such initiatives is closely relevant to applying the Guidance and how it would be mutual reinforcing for enterprises.

Table 2-6 Examples of Global and China Domestic Initiatives Relevant to the Guidance

Environmental Aspects	Initiative	Requirements	How the Guidance helps
Climate change mitigation	• The Science-Based Target Initiative by United Nations Global Compact (UNGC), World Resources Institute (WRI), World Wildlife Fund (WWF) and CDP	• Enterprises set carbon emission goals that is at least aligned with the Paris Agreement and implement with a clear roadmap	The project classification requires GHG emission evaluation and alignment with Paris Agreement, with classification mechanism, thresholds

[5] Can be employed by the project company to support the implementation of Life Cycle Assessment (LCA) and Environmental Risk Assessment (ERA)

[6] For example, these investors will require a full account of the project's performance for their due diligence, which would otherwise have to be prepared retrospectively.

Environmental Aspects	Initiative	Requirements	How the Guidance helps
	• The 2030 Carbon Peaking and 2060 Carbon Neutrality targets of China • The Renewable Energy Buyers Alliance	• Calls for purchasing of electricity from renewable sources	and mitigation measures provided
Environmental protection	The CEO Water Mandate by United Nations Global Compact (UNGC)	Enterprises identify and reduce critical water risks to their businesses, seize water-related opportunities, and contribute to water security and the Sustainable Development Goals (SDGs)	The report classification and mitigation measures guide the avoidance, mitigation, restoration, and offset and compensation for potential pollution impact throughout project lifecycle
Biodiversity	The Business Engagement Programme and The Global Partnership for Business and Biodiversity by Convention on Biological Diversity (CBD)	Enterprises measure, report, and build the business case for biodiversity and integrate biodiversity into their practice and strategies	The classification and mitigation measures guide the avoidance, mitigation, restoration, and offset and compensation of biodiversity impact throughout project lifecycle
Multi-dimensional	• The Global Reporting Initiative (GRI) • The CASS-CSR Reporting Guidelines	Enterprises disclose the strategy, progress, key performance indicators (including accidents) and governance for climate and eco-environmental performances	The information collection and impact evaluation process of the Guidance facilitates the reporting on related items

Source: Authors.

Chapter 3. Application Guide for Financial Institutions

Financial institutions are critical to mobilize financing to BRI at scale and at speed for the transition into green development pathways. There is a growing need from financial institutions to reassess their investments in industries that impacts climate change and other environmental goals. Currently Over 150 financial institutions have restrained their coal policy by mid-2021 and opted away from coal financing (IEEFA, 2021). The disclosure principles and frameworks continue to be refined and harmonized with a growing number of financial institutions start prioritizing the ESG (Environmental, Social and Governance) investment, putting more stringent requirements on clients' environmental risks management.

Recognizing this need, the *Green Development Guidance for BRI Projects Application Guide* provides financial institutions with a systematic approach to shift finance towards green projects. By setting out a detailed action plan that covers major activities along a financed-project's lifecycle, the Guide helps financial institutions improve environmental performance, reduce the climate and eco-environment

related risks, and gaining more traction from a wide range of stakeholders in the pursuit of climate and sustainability goals. The Guide develops on the "1+9" recommendation from the Green Development Guidance and proposes actions that aim to be ambitious but also practical for immediate and near-term adoption.

3.1 A Roadmap for Financial Institutions

3.1.1 Overview of Embedding the Guidance into Project Lifecycle

The "1 project classification mechanism" and "9 recommendations" of the Guidance recommends an integration of relevant standards and processes at different investment stages and within different departments. The Guidance emphasizes the environmental impact evaluation and risk management throughout the project finance lifecycle. Financial institutions are guided to reduce and mitigate environmental risks as much as possible, while making the remaining risks manageable from the project initiation, to the project evaluation, project implementation and reporting. Table 3-1 presents an overview of the actions, resources needed, desired outcomes and benefits for a financial institution to embed the recommendations into the lifecycle of its financed project.

Table 3-1 The Resource and Action to Integrate Green Development Guidance into Project Cycle

Project phase	Human Resources [7]	Goal	Actions	Outcome
Project initiation	• Due Diligence • Credit Management Department	Ensure developer understand ESG requirements of financial institution	Share relevant documentation and reporting requirements For financial institutions with relevant sector/environmental expertise, directly work with project owner; otherwise encourage use of relevant experts	Reduced transaction costs when moving from project initiation to project evaluation
Project evaluation and design	• Due Diligence • Credit Management Department • E&S, ESG or CSR Department	Identify and evaluate all relevant environmental risks	Application of relevant environmental and social impact assessments (ESIA): • Sector specific ESIAs • Maximum stringency between local, Chinese, and international ESIA standards, particularly for red, red/yellow and red/green projects Define whether ESIA needs to be done by • Project owner • Third-party • Independent third party Consultations with local stakeholders throughout project evaluation and design about environmental concerns	Understanding of environmental risks from the early phases

[7] Depending on the specific bank's structure

Project phase	Human Resources [7]	Goal	Actions	Outcome
	• Due Diligence • Credit Management Department • E&S, ESG or CSR Department	Identify implementation alternatives	Expert evaluations of different technologies, and different project sites etc.	• Discovery of lower risk alternatives • Reduction of social risk (e.g., as better alternatives were not evaluated)
	• Due Diligence • Credit Management Department • E&S, ESG or CSR Department • Risk Management Department	Identify and define environmental risk mitigation measures to be implemented in construction and operation	International sector guidance, such as that provided by IFC, CBI among others (see also Annex 2)	Decide on risk mitigation measures
	• Due Diligence • Credit Management Department • E&S, ESG or CSR Department • Risk Management Department	Define environmental risk reporting metrics (including third party measurement, reporting and verification of environmental reporting)	metrics could include either specific key performance indicators (KPIs) or general information on status and details of: • GHG emissions • Environmental pollution • Waste • Water usage/water quality upstream/downstream • Environmental accidents • Air quality • Soil quality • Biodiversity indicators • Others	Maximize understanding of environmental risks and define expectations on reporting, which is ideally aligned with other projects of the financial institution
	• Due Diligence • Credit Management Department • E&S, ESG or CSR Department • Risk Management Department • Legal Department	Define and agree on covenants for environmental underperformance / define performance-based benefits	Environmental risk reporting Covenants and performance-based benefits should depend on reported KPIs	Clear management of remaining environmental risks
	• Due Diligence	Document all relevant	Environmental and social risk management system	Ensure legal compliance,

Project phase	Human Resources [7]	Goal	Actions	Outcome
	• Credit Management Department • Legal Department	procedures for future reference		ensure international financing standard compliance
Project implementation & construction	• Compliance Department • Credit Management Department • Procurement Department	Ensure environmental risk mitigation measures are implemented during construction phase	Send independent consultants/auditors to evaluate construction site with clear environmental criteria	Application of environmental risk management
	• Compliance Department • Credit Management Department	Implement early warning system for environmental risks	Implement public grievance mechanism Deal with public complaints early and in a transparent manner	Reduce social risks, directly understand grievances from the project (rather than through project reporting)
Project management & reporting	• Compliance Department • Credit Management Department • E&S, ESG or CSR Department	Receive regular reports on environmental performance	Depending on project's environmental category, reporting should be • Quarterly (red, red/yellow, red/green) • Bi-annually (yellow, green)	Ensure knowledge of project performance to reduce environmental risk exposure
	• Compliance Department • Credit Management Department • E&S, ESG or CSR Department	Ensure environmental risk mitigation measures are implemented during operation phase	Send independent consultants/auditors to evaluate construction site with clear environmental criteria	Application of environmental risk management
	• Compliance Department • Credit Management Department • E&S Department • Legal Department	Adjust environmental risk measurement and apply covenants if needed	Negotiations with project owners and bank syndicate if performance does not meet agreements and requirements	Most drastic step to reduce environmental risks

Project phase	Human Resources [7]	Goal	Actions	Outcome
De-commissioning/ sale/ transfer	• Credit Management Department • Legal Department	Reduce transaction cost in offloading asset Reduce environmentally related legal risks	Keep all relevant environmental documents up-to-date and securely stored Share relevant information with future owner of asset	Faster offloading of asset Lower transaction cost

Source: Authors.

Financial institutions need to include themselves early in project design, to understand environmental and social (and governance) (ESG) risks, to communicate the requirements of the financial institution to the project developer and project company and to set up mechanisms to evaluate and receive reports on the project's environmental performance.

The Guide shall be implemented voluntarily with the commitment to accelerate "green" projects and reduce environmental risks of "red" projects in the BRI. Financial institutions and enterprises are encouraged to add no new "red" projects and phase out existing exposure to "red" projects by focusing investments on "green", "yellow" and "transferred category" (e.g., "red/yellow and "red/green") projects in their portfolio with an ambitious timeline.

3.1.2 Key Action Points to Apply the Guidance

3.1.2.1 Establish the Exclusion List

Financial institutions provide exclusion list of projects whose environmental risks are not acceptable to the financial institution. For example, many developing finance institutions, such as the Asian Infrastructure Investment Bank (AIIB), have developed an exclusion list that excludes environmental harmful projects to be considered by the bank. Similarly, many commercial financial institutions have excluded various projects, such as for high carbon emissions including coal mining and coal-fired power plants from their project finance.

Financial institutions are encouraged to develop their exclusion list of projects based on environmental considerations, depending on the risk appetite of the bank, and the global goal of achieving both climate and biodiversity protection. The exclusion list should be registered to the financial institution's policy as part of its high-level commitment and reflected in sector, country, and business strategies with clear cutoff lines to ensure the exclusion is decision useful.

The exclusion listing of coal-financing is one of the most urgently evolving actions. China is rapidly moving across the tipping point exiting overseas coal projects and financing. President Xi announced during the UN General Assembly in September 2021 that China will increase financial support for green and low-carbon energy projects in developing countries and will not build any new coal-fired power projects abroad. The Bank of China (BOC) has pledged to exclude financing for new overseas coal mining and coal power projects from the 4th quarter of 2021.

In practice, financial institutions need to adopt a structured framework both guiding and monitoring the exclusion of coal-related financed projects and clients (Figure 3-1), to concretely carry out the commitment to putting an end to coal financing.

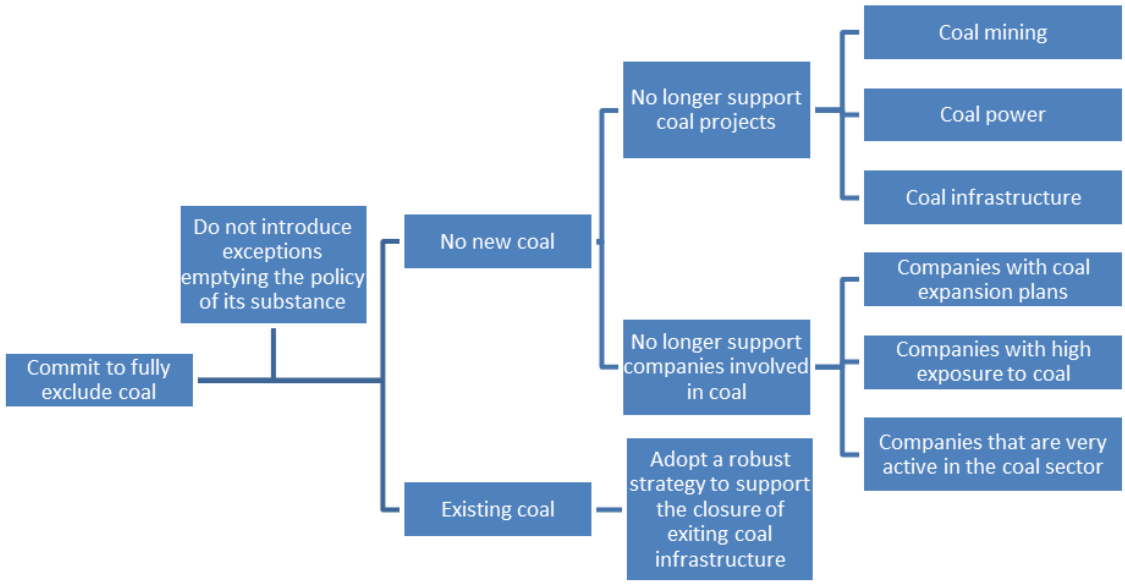


Figure 3-1 A Framework of Exclusion Listing Coal by Financial Institutions

Source: (ReclaimFinance, 2021) and authors.

3.1.2.2 Require Environmental Impact Assessment

While many countries require EIAs, in cases where the quality and relevance are not sufficient, financial institutions can reference the guidance from home country regulators or the standards from the International Finance Corporation (IFC) Performance Standards and the Equator Principle for Financial Institutions, to protect themselves against risks by adopting the higher standard .

The financial institutions should require the project developer to conduct EIAs through independent consultants based on international and/or Chinese standards, particularly for “red”, “red/yellow” and “red/green” projects (see Chapter 1 section 1.2.1 for concepts and definition). For high risk “yellow” projects, particularly those adjacent to key biodiversity areas, financial institutions are encouraged to define the threshold and consider putting down requirements on EIA based on Chinese and/or international standards.

To ensure public access and acceptance of the EIA, the financial institution requires the EIA to be publicly available before construction starts to receive final feedback and integrate relevant improvements into the project design. This is especially important for “red”, “red/yellow” and “red/green” projects that insufficient public communication on environmental impact could easily raise public discontent leading to a higher risk of project failure.

3.1.2.3 Apply Differentiated Conditions

Financial institutions encourage project developers to focus on green projects by improving financing conditions for “green” and “red/green”, projects and worsening financing conditions for “red” projects. As an example, the Asian Development Bank (ADB) together with the KfW, the Agence française de développement (AFD) as well as other financial institutions in the Shandong Fund in China, has provide better financing conditions for transformative green projects that contribute the most to the net-zero emission, including larger funding share, longer tenor and discounted interest rate in debt financing (ADB, 2021) .

This mechanism allows financial institutions to accelerate the green transition of their own loan portfolio to reduce environmental risks, which requires both a di-vestment from non-green projects and an accelerated investment into green projects, as it attracts more project developers with green projects compared to brown projects.

3.1.2.4 Environmental and Social Management System (ESMS)

While it is important to evaluate risks early, environmental and social risks will be part of any larger project. Particularly in infrastructure projects, whose lifetime can be expected to exceed 20 years, project companies need to continuously manage environmental and social risks. The earlier an ESMS is set up, the better the project's environmental and social risks will be reduced and managed.

A financial institution has three important incentives to require the project company to implement a rigorous ESMS from the outset of the project to construction phase:

- **To share the environmental management risks with clients and take on environment-related social responsibility**. For the project company to be more aware of risks and be able to identify, report and manage risks accordingly.
- **To reduce financial risks** for the financial institution while it is a stakeholder in the project.
- **To more easily sell the asset** when the financial institution wants to offload the project from its balance sheet. Other financial institutions most likely want to evaluate the environmental and social risks that the project had experienced and need certainty that these risks will be managed properly in the future.

The financial institution should accordingly require regular reporting from the ESMS, particularly for "red", "red/yellow" and "red/green" projects. Ideally, the financial institution can standardize its environmental reporting requirements across its portfolio to minimize transaction cost within the financial institution.

3.1.2.5 Establish Grievance and Response Mechanism

Financial institutions can increase their early warning system of social and environmental risks by setting up a transparent and easy-to-access grievance and response mechanism. This mechanism complements the grievance measures taken by clients and allows stakeholders affected by violations of environmental or social standards by the project to share their grievance with the financial institution. The grievance mechanism helps avoid risks from information imbalance and asymmetry therefore enhances the financial institutions' environmental and social risk warning system.

It is difficult for financial institutions to conduct field research for all projects they provide services for even for large projects where due diligence EIA have been conducted. Environmental and social controversies may inevitably arise during the implementation process especially for overseas projects (Figure 3-2), where the financial institutions often have less knowledge on local contexts. A grievance mechanism helps financial institutions:

- **Reduce losses by avoiding escalated conflicts and resolving project risks as early as possible**. By allowing affected stakeholders to solve potential problems through commercial channels, rather than through public channels including media, it allows financial institutions to better engage with relevant stakeholders, including locally relevant NGOs to understand and address environmental and other concerns.
- **Urge their clients to improve their ability** to manage the environmental and social risks of their projects, implement compliance policies, and resolve negative project impacts and related risks in a timely manner.
- **Optimize their internal systems and processes for managing risks**, including improving project screening, evaluation, and implementation, information disclosure, and the overall risk management capabilities and governance of financial institutions.

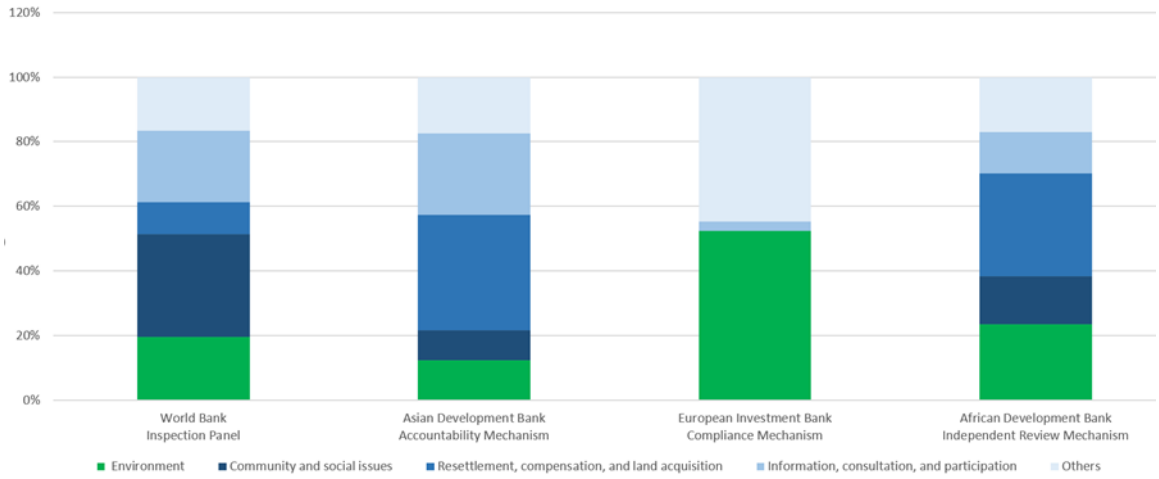


Figure 3-2 Thematic Distribution of the Grievance Cases from Major Multilateral Development Banks

Source: **(World Bank, 2020) (Asian Development Bank, 2021) (European Investment Bank, 2021) (African Development Bank, 2021)** and authors[8].

The financial institution should set itself a goal to respond and feedback to received complaints through its grievance mechanism, and this could include the policies and measures on dispute resolution, compliance investigation, remediation of the harm and improvement on management. Clear process setup can increase trust in the project, and thus reduce social risks for the project. For example, the World Bank's road project in Andra Pradesh, India, has a benchmark to first answer to complaints within 10 working days, and provide a detailed answer within 30 days[9]. A financial institution should communicate this process publicly. Figure 3-3 shows the building blocks and an example of how to set up a grievance redress mechanism.

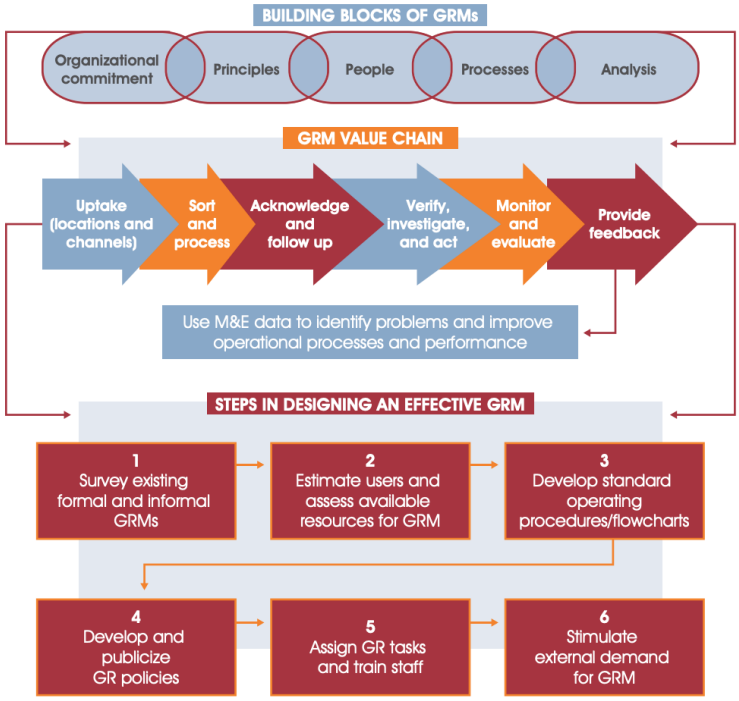


Figure 3-3: Grievance Redress Mechanism: A Framework

GRM=Grievance Redress Mechanism

Source: (World Bank, 2016)

[8] Environment-related issues ones pertaining to pollution prevention and abatement, biodiversity conservation, sustainable management of natural resources, climate, occupational and community health and safety, and conservation of physical cultural resources. The cases are accumulated along different period due to reporting variance: World Bank 1995 - 30 June 2020, ADB 2004 - 31 March 2021, EIB 2016 – 2020 and AfDB 2006 – 2020.

[9]https://documents1.worldbank.org/curated/en/658351468316439488/pdf/639100v20BRI0F00Box0361531B0PUBLIC0.pdf

3.1.2.6 Use Covenants

Covenants are an important tool for financial institutions, particularly lenders, in project finance to manage the high financial exposure. The covenants usually provide financial lenders the possibility of:

- Mortgage interest and assignment pledge over physical project assets, contracts and insurance policies
- Assignment of Special Purpose Vehicle (SPV) shares
- Control over project revenues and cash flows via the account agreement
- Step-in rights to remedy and cure potential defaults. This also allows the lender to replace project counterparties and assign contracts to third parties.

Financial institution can take relevant measures, in extreme cases declare bankruptcy of the project, to rectify environmental mismanagement in case the financial institution discovers that environmental and social safeguards agreed to with the project company are violated.

3.1.2.7 Require Public Environmental Reporting

Financial institutions should report on their project portfolio's environmental performance to increase transparency of their environmental performance, this should include the information on overseas project finance. This not only allows the financial institution to benchmark itself against its peers, but also helps financial institutions reduce their own environmental risk exposure, while improving access to finance for the financial institution

Ideally, the reporting should be standardized for relevant comparison. Such environmental and related information could include the share, number and volume of different types of projects ("red", "red/yellow", "red/green", "yellow", "green"), relevant emission data, relevant biodiversity data, relevant risk evaluations.

3.1.2.8 Enhance International Cooperation

Financial institutions can share environmental data with relevant global authorities to support global data repositories on climate and biodiversity. For example, the Equator Banks share both climate and biodiversity data of their investments.

It is also beneficial for financial institutions to participate in the global environmental cooperation initiatives where thematic, peer-to-peer or multistakeholder conversation and learning are taking place.

3.2 Putting Project Classification in Action

3.2.1 Provide Incentives for Self-Evaluation

Financial institutions play an inevitable role in the coordinated action to apply the project classification mechanism for BRI projects. The major responsibility to conduct environmental risk evaluation of a project lies with the project company or developer[10]. However, as financial institutions carry the majority of financial risks of the project, they have an inherent interest to reduce environmental risks of projects and thus guide and verify the environmental risk evaluation.

The Guidance proposed project classification mechanism facilitates the delegation of impact evaluation to client companies by creating an aligned understanding of environmental risks. Supported by the classification mechanism, financial institutions can encourage project companies to self-evaluate and report on project risks (including environmental risks) according to the common standard and work closely with project owners to evaluate and reduce environmental risks as early as possible, and if need be to conduct an independent environmental risk evaluation at different project stages, e.g., during project initiation, during construction, during operation.

[10] Depending on whether the project company has been set up already

Incentivizing clients to conduct self-evaluation helps financial institutions improve their environmental performance in an efficient manner. While independent project evaluations are an important tool to reduce environmental risks, they are also expensive. Accordingly, financial institutions should encourage project companies to evaluate, manage and report on environmental risks as diligently as possible from within the project to give the project company the opportunity to be incentivized to include environmental risk considerations. The financial institution can design and apply several incentives, such as:

- **Transparency and consistency** - Providing clear guidelines and performance standards in regard to environmental risk management requirements. These standards and requirements should be clearly communicated as early as possible, desirably during early project evaluation phase. This increases the understanding of the financial institutions' requirements for the project early on and allows interests and responsibilities to be aligned and shared accordingly.
- **Financial incentives** - This includes the environmental performance-adjusted financing conditions, such as the case of sustainability-linked loans, where higher environmental performance lowers financing rates.
- **Administrative incentives** - Higher reporting requirements for underachieving projects is an example to increase the administrative cost for projects of low environmental performance and risk management.
- **Threat of covenants** - By developing and inserting the necessary clauses on environmental matters into financial agreements, the financial institutions can resolve to legal recourse, such as taking-over relevant assets, in the case of non-compliance. The covenants could also include the possibility of independent review of environmental performance with relevant financial consequences should the independent review deviate materially from self-reporting by project company.

3.2.2 Evaluate and Verify Client's Self-Evaluation

Apart from motivating client companies to classify their BRI projects, financial institutions need to verify the client's evaluation result, and sufficiently understand the classification mechanism in order to arrange and manage independent evaluations.

A financial institution needs to evaluate and verify a project's self-evaluation to minimize its own risks associated with the project. As project finance is characterized by non-recursiveness, the financial institutions, rather than owners of the project company, predominately bear the consequences in case of default that could be triggered by environmental issues. Therefore, financial institutions must understand and manage their project finance risks for each project accordingly, which could be done by:

- **Understanding specific risks and mitigation measures in various sectors**. The section 2.2 in Chapter 2 and Annex 2 in this Guide provide relevant standards for different sectors, showcasing both potential environmental risks along the project lifecycle, as well as relevant measures to reduce, mitigate or adapt to the risk.
- **Employing both internal teams and independent third parties to audit the project early on.** Financial institutions also rely on external experts, where internationally a number of environmental audit companies exist to provide due diligence for different industries and jurisdictions. While delegating the project classification guided evaluation to client companies, the "red", "red/yellow" and "red/green", projects need always be independently evaluated due to their high environmental risk.
- **Assigning a lead financial institution in case of syndicated finance.** The assigned financial institution can take more responsibility for evaluating and verifying environmental risk evaluation and reporting for the whole syndicate (usually for a fee). This, however, should not stop individual banks to take responsibility of managing their own environmental risks in their project finance portfolios.

3.2.3 Match Project Classification to Differentiated Management

Upon receiving and completing the verification of self-evaluation, the financial institution brings the classification results into its environmental and social risk management system (ESMS). This includes the project category, compiled all environmental risks, agreed risk mitigation measures and key performance

indicators. The purpose is to track and compare performance both across a project's lifecycle against the negotiated terms, as well as across projects of a financial institution for benchmarking purposes.

This is particularly important for projects that are categorized as "red/yellow" and "red/green". For such project environmental risk management through application of environmental safeguards is the basis for providing favorable terms such as better financing conditions. Should a material deviation materialize between agreed and de-facto environmental performance of a project, the bank can react accordingly, such as through covenants.

The financial institutions should apply differentiated management to projects in each category. A core consideration to accelerate greening a financial institution's portfolio, is to provide incentives for project developers to develop projects that are either green in the first stage of evaluation due to the project's sector characteristic, and/or in the second stage of evaluation due to the project's specific environmental safeguards and environmental management. Section 2.2.2.3 in Chapter 2 gives more detail on the two-step classification.

Further to section 3.1.2.3 in this chapter, the following Table 3-2 specifies all the differentiated management conditions adoptable for different project categories**.** Among these, **(1) "green" projects** are encouraged by having the best financing conditions and best evaluation requirements; **(2) "red/green" projects** are incentivized by best financing conditions, while they require strict evaluation, environmental risk management and environmental impact reporting; **(3) "red" projects** similarly require such stringent risk evaluation, risk management and reporting, however, would be dis-incentivized by the worst financing conditions.

Table 3-2 Differentiated Management Measures for Each Project Category

	Red	Yellow	Green	Red/Yellow	Red/Green
Financing terms (e.g., interest rate, repayment holidays, tenor)	**Worst**	**Medium**	**Best**	**Medium**	**Best**
Evaluation requirements	**Strict** Example: based on international best practice criteria, such as IFC performance standards	**Medium** Example: based on Chinese or international best practice criteria	**Best** Example: at least according to local laws	**Strict** Example: based on international best practice criteria, such as IFC performance standards	**Strict** Example: based on international best practice criteria, such as IFC performance standards
Environmental risk management requirements	**Strict** Example: based on international best practice criteria, such as IFC performance standards	**Medium** Example: based on Chinese or international best practice criteria	**Best** Example: at least according to local laws	**Strict** Example: based on international best practice criteria, such as IFC performance standards	**Strict** Example: based on international best practice criteria, such as IFC performance standards
Environmental reporting requirements	**Very strict** Example: every 1-3 months, detailed KPIs	**Medium** Example: every 6 months based on	**Best** Example: every 6 months based on	**Strict** Example: every 3-6 months	**Very strict** Example: every 1-3 months, detailed KPIs or

	or environmental impact data	environmental impact data	environmental impact data or KPIs		environmental impact data

Source: Authors

All these requirements would be negotiated and transparently communicated with the project company during the early initiation phase of a project, before any term sheets are signed. Accordingly, financial institutions can take an important role for project developers to evaluate greener alternatives to less green projects in order to improve the overall financing conditions.

3.3 Overseas Project Standard Setting

Globally, financial institutions are working to reduce their environmental risks through several different measures. While some of these measures are government driven (e.g., Sustainable Finance Disclosure Regulation of the European Union), particularly those related to overseas finance and portfolio management are driven by sectoral or thematic associations (e.g., Equator Principles, Task Force on Climate-Related Financial Disclosures(TCFD), Taskforce on Nature-related Financial Disclosures(TNFD), Principle for Responsible Investment (PRI), etc.), or even directly by financial institutions (e.g., biodiversity frameworks of BNP Paribas, ASN Bank).

Chinese financial institutions can take an active role in setting relevant standards of green practice and environmental risk management. Currently, Chinese financial institutions are often under-represented in many of these initiatives. However, as a major provider for project finance in emerging countries, particularly through the Belt and Road Initiative (BRI), Chinese financial institutions can tap on their growing experience and footprint in global project finance, to contribute and benefit from two important aspects in BRI financing:

1. **Reduced environmental risks** within their own portfolios through a stringent risk management framework
2. **Accelerated co-financing** with international financial institutions adhering to a common standard, which reduces transaction costs of financing and risks.

Chinese institutions should aim to build on existing frameworks, while they innovate and expand those for the relevant context. Many standards have been already developed with a particular focus on emerging markets finance: The Equator Principles and most of the environmental safeguards and performance standards (e.g., IFC, World Bank) are addressing commercial and development finance institutions in their goal to reduce environmental risks particularly in emerging countries with weaker environmental laws and weaker environmental law enforcement. Therefore, the efforts should focus on:

1. **Enhancing current standards** — Any ambition to contribute to international project standard setting should improve current standards, rather than undermine these.
2. **Balancing adaptation and standardization** — Any new standard needs to be applicable for financial institutions in their specific context, while providing a relevant level of standardization.

The *Green Development Guidance for BRI Projects* facilitates the setting standard of overseas project financing. The Guidance was designed based on global environmental project finance and green finance best practices and is a harmonized standard across many existing standards. At the same time, it pushes the frontier of global project finance in emerging markets by integrating relevant standards applied successfully within China, a largest emerging economy itself (e.g., stipulations of the Green Credit Guidelines and the project catalogue logic of the Green Bond Catalogue). Specifically, the Guidance highlights:

- **A list of "green" and encouraged projects** for overseas investments
- **A list of "red"** and discouraged projects for overseas investments
- **A two-stage evaluation** of projects based on project characteristics and project implementation to allow for localization and adaptation

- **Holistic environmental evaluation along three environmental dimensions** of climate, pollution, and biodiversity
- **Harmonization** of global green finance and green project finance standards
- **Inclusion** of the regulators', financial institutions' and project developers' responsibilities

Applying and further developing the Guidance, Chinese financial institutions together with Chinese regulatory stakeholders can take a leadership role and improve global standard setting for green overseas project finance. This will contribute to the call to "diversify financing channels, reduce financing costs, and welcome the participation of multilateral and foreign financial institutions in investment and financing cooperation[11]" in BRI construction.

Chapter 4. Policy Support and Action Recommendations

The *Green Development Guidance for BRI Projects* provides a framework for both China and BRI project host countries to enhance green BRI development: the application of the "1+9" recommendations in enterprises and financial institutions demands policy guidance and support. To facilitate the application and further improve the Green Development Guidance, and better serve for the project green development and international cooperation needs from BRI countries, this report provides the following four recommendations for government and related departments.

4.1 Promote the Application of Green Development Guidance

Building upon the shared language created by the Guidance, further strengthen the policy collaboration among environmental and financial authorities, and the supervisory bodies of overseas investment and industrial development. The policy synergy from across regulatory and supervisory functions plays a crucial role in maximizing efforts delivering the green BRI development commitment. This needs actions on:

A synergistic policy framework relies on the **sufficient sharing** of environmental and investment information among policymakers and continues in investment monitoring. While investors engaged in BRI projects are supervised and regulated by various authorities, only when environmental performance, investment behavior, and risk assessment are timely communicated can individual policies be optimized.

The classification mechanism color-codes project and provides a **consistent rationale** in project monitoring and risks management of potential environmental impacts across policy and supervisory bodies. This will help optimize the project approval process, including measures such as the shortened approval time for "green" projects, increased supervision of "red" "red/yellow" and "red/green" projects, further guidance to effectively divest in extremely harmful "red" projects without substantial mitigation, and a heavier weight on environmental impact mitigation and management considerations before an investment is landed.

The search for and scaling of green solutions requires **collaborative support.** Particularly, the upgrade of "red" projects to better categories depends largely on the promotion of environmental and sectorial technologies, the incentive structure, and exploration of green finance offerings. Synergy across policies largely accelerates expanding the solution spectrum and needs to encompass the green development expertise among regulators.

4.2 Enrich the Green Development Guidance Content

While the Green Development Guidance and Application Guide first prioritize the structural and methodological aspects, further development of sector-detailed technical reports informed by application

[11] Remarks by H.E. Xi Jinping President of the People's Republic of China at the Press Conference of The Second Belt and Road Forum for International Cooperation, 2019. http://www.beltandroadforum.org/english/n100/2019/0429/c22-1397.html

would essential the provision of tools for improving environmental performance of BRI investment and project, and enhancing the environmental management capacity among investors. This includes actions to:

Upgrade the transferable projects. This upgrade and transition to green is dual-tasked. Currently, the lists and mitigation measures for "red" projects and "transferred category" concentrate on broad sectors o fthe economy and could be expanded over time to granular sector breakdown. Meanwhile, getting the "green" projects right and ensure the compliance with the five underlying principles of project classification (section 2.2.1 in Chapter 2) is crucial in time of green project financing uptake. Redlining for malpractice could be drawn to alert possible down-grading of "green" projects (e.g., solar thermal power generation, wind power generation) if their environmental management fails to comply with the principles.

Pool out application cases and establish best practices of GDG adoption. Application cases from specific investors (e.g., developmental and policy banks, commercial, financial institutions), sectors, geographies could be encouraged, documented and shared. This will support extended demonstration and the accumulation of knowledge and partnerships to scale up actions. Such information pool could also serve as a valuable source for mutual learning among BRI countries and the design of capacity building programs.

4.3 Support Green Development in BRI Project Host Countries

The inclusion of impact mitigation and management is a novel feature isi ns the Guidance and could provide reference for host countries to further improve regulation stringency with updated project regulatory and evaluation frameworks. Particularly for the BRI participating countries relatively weak in environmental governance, improving environmental standards and management on foreign investment is complex and capacity-intensive. The necessary requirements and implementation spread to cover many forms of investor activities where convergence and openness is needed, and requires the integration of local culture, customs, and policy requirements into the whole life cycle of project construction, operation, and management. Facilitated by the Guidance, host countries could work together with international investors and regulatory counterparts, to exchange expertise and strengthen the environmental and technological capacity building.

Local partners in host countries can also benefit from the Green Development Guidance and the Application Guide, to develop capacity and together with international investors, provide diversified finance with reduced cost to fuel up local green development. The Green Development Guidance and action trends from investors demonstrate how green BRI is becoming a crucial part of the conversation between investors and host sides. While many investors are on the way accelerating the shift away from "red" projects, **BRI project host countries could test the classification approach proposed by the GDG and prioritize and communicate the evolving demand for green projects** (e.g., Green projects and Red/Green projects), which could be more closely linked to their own climate and eco-environmental targets, transition paths and sector reforms. **Apart from forming a greener ask, BRI host countries are also encouraged to prioritize green projects with more conducive conditions.** Better financing conditions, such as streamlined administrative process and encouraging regulatory environment, will accelerate the growth of "green" project investment. Such enhanced financing mandate could also include improved commitment and sustainable practice in domestic financial institution and enterprises, which are important local partners to attract and deliver BRI investment. **Enhance Collaboration at both International and Local Level**

Both this Green Development Guidance (GDG) and the Green Investment Principles (GIP) are platforms enabling multilateral cooperation. Working closely together, the two can jointly raise the awareness and management capacity of climate and environmental risks in BRI countries, share resources, and bring in key investors, such as the China Development Bank, the AIIB and the Silk Road Fund among others, to set up BRI green development project and green cooperation pilots.

Host countries play a crucial role in accommodating investments in local context. BRI countries can enhance the green project investment and development of local partnerships by leading the setup of information platforms where "green" investment opportunities, requirements and progress are shared to support BRI investors' decision making. Such information sharing could also feature the one-stop service that integrates multiple regulatory, administrative, and environmental resources and local partners often housed in local languages. With these platforms, host countries can also play an active role to ensure local culture, customs and policy requirements are reflected and expressed across project lifecycle, providing

helpful references for investors to deliver social responsibilities. These platforms are also valuable for better communication among investors, local authorities and the communities to ensure project-affected stakeholders' participation in addressing environmental issues associated with BRI investment projects.

Annex

Annex 1. Concepts and Definitions

Pollution is defined in accordance the United Nations 2019 resolution that includes air, water, land/soil, marine and coastal pollution, and the crosscutting issues of chemicals and waste.[12] It is caused by the introduction of harmful materials into the environment.[13] Air pollution, for example, is understood in line with the World Health Organization (WHO), which sees that particulate matter (PM), ozone (O_3), nitrogen dioxide (NO_2), and Sulphur dioxide (SO_2) contribute to pollution with adverse health effects.[14]

Climate change shall be defined in accordance with the United Nations Framework Convention on Climate Change (UNFCCC) and Intergovernmental Panel on Climate Change (IPCC) frameworks, where by 2020, human activities are estimated to have caused approximately 1.1 degrees Celsius of global warming above preindustrial levels through economic activity that produces various GHG gases.[15] GHG emissions are risking further global temperature increases with negative impacts for livelihoods, the environment, and ecosystems. Seven greenhouse gases are covered by UNFCCC currently—carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), Sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

Biodiversity shall be defined in accordance with the Convention on Biological Diversity (CBD). Accordingly, biodiversity means 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 a part.[16] The CBD focuses on the three core objectives: (1) conservation of biological diversity, (2) sustainable use of its components, and (3) fair and equitable sharing of benefits arising out of the use of genetic resources, [17] which were formalized through the Aichi Targets of the Convention on Biological Diversity and are negotiated in the Post-2020 Global Biodiversity Framework. Accordingly, "conserving biodiversity, maintaining ecosystem services, and sustainably managing living natural resources" [18] are fundamental to BRI investments.

Significant negative environmental risk potential means a large-scale alteration in environmental conditions—one that imposes permanent, or nearly permanent, changes in those conditions. Significance encompasses the following dimensions:[19]

- **Extend and spread magnitude of the impact**: for example, does the project have a direct spatial impact on more than the micro-environment directly surrounding the project, or indirect impact through transfer to associated projects and activities, such as up- and down-stream activities?
- **Duration**: for example, are the project's consequences to the environment during all project phases (construction, operation, decommissioning) reversible within a reasonable time?
- **Sensitivity of the affected area**: for example, does the project encroach a protected or non-fragmented area, and/or can the affected habitat be fully reconstituted or sustainably moved elsewhere?

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[12] United Nations Environment Assembly of the United Nations Environment Programme, "Implementation Plan 'Towards a Pollution-Free Planet.'"

[13] National Geographic Society, "Pollution."

[14] WHO, "WHO | Ambient Air Pollution : Polluants."

[15] IPCC, "Climate Change Widespread, Rapid, and Intensifying – IPCC — IPCC," August 9, 2021, https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/.

[16] Convention on Biological Diversity, "Convention Text," Convention on Biological Diversity (Secretariat of the Convention on Biological Diversity, November 2, 2006), https://www.cbd.int/convention/articles/?a=cbd-02.

[17] Brooks et al., *Best Policy Guidance for the Integration of Biodiversity and Ecosystem Services in Standards*.

[18] IFC, "Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources."

[19] Based on study of various Environmental and Social Risk Management (ESRM) frameworks of financial institutions as well as UNDP, "Social and Environmental Screening Procedure."

- **Manageability**: for example, will affordable and effective measures avoid or mitigate potential impacts?
- **Accidents**: for example, does the project have a high risk of environmental consequences (no matter the risk of occurrence), for example, through breakwater, explosion, etc.?
- **Irreversible** means the risk of permanent destruction of wildlife, risk of extinction of species, or risk of permanently altering a pristine environment, particularly when restoration to the status quo is impossible or at best extremely difficult, at least on a relevant timescale.[20] While the concept of "irreversibility is difficult to operationalize,"[21] the Precautionary Principle adopted in 1992 by the United Nations shall apply: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."[22]

The concepts for positive contribution and significant environmental risk for the three environmental dimensions are shown in below table.

Table Concepts of Positive Environmental Impact and Significant Harm

	Pollution	**Climate Change**	**Biodiversity**
Positive contribution	The project contributes to a significant and absolute reduction of pollution compared to the current environment.	The project accelerates the pathway to a net-zero emissions carbon economy in line with the Paris Agreement, while The project does not expand the life cycle of industries or projects that undermine the Paris Agreement. The project does not directly support industries that undermine the Paris Agreement ("enabling technology).	The project contributes to the Convention on Biological Diversity Framework, and/or The project contributes to a higher biological diversity compared to the status quo.
Significant harm	The project risks significantly worsening the status quo of pollution, where pollution becomes significantly worse with the project compared to the no project scenario.	The project undermines the spirit of the Paris Agreement Directly by having high GHG emissions; or Indirectly by contributing to other projects that significantly undermine the achievement of the Paris Agreement; or By undermining climate change mitigation measures.	The project risks significantly worsening the status quo of biodiversity.

Source: Authors.

[20] Cass Sunstein, "Two Concepts of Irreversible Environmental Harm," Working Paper (Chicago: University of Chicago Law School, 2008), https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1362&context=public_law_and_legal_theory.
[21] Sunstein, "Two Concepts of Irreversible Environmental Harm."
[22] United Nations General Assembly, "Rio Declaration on Environment and Development."

Annex 2. Projects and Categories Provided for 6 Key Industries

The list of BRI projects is separated into different *sectors* (e.g., energy, transport, manufacturing). Within each sector, different *project types* are evaluated, such as solar photovoltaic power generation as a project type in the energy sector. For each project type, a specification is provided to delineate the project type (e.g., project type "green rail passenger transport [interurban]" is electrified transport, whereas "passenger rail transport [interurban]" is nonelectrified). Each project type is classified in a ***category*** based on project characteristics (green, yellow, red). Yellow and red projects can apply mitigation and compensation (M/C) measures, as described in the ***specification*** to improve their ***category with M/C***. The ***References*** provides further guidance and the sources of the specifications.

For example, the project category "green rail passenger transport (interurban)" is a red project category, due to the risk of linear infrastructure construction on biodiversity. However, with sufficient environmental management, for example, through the application of IFC Performance Standard 6, this project will be red/green due to the positive contribution to a low-carbon transport system. Meanwhile, "rail passenger transport (interurban)" is a red project category, also due to the risk to biodiversity. Through mitigation and/or compensation, this project will "only" become red/yellow, as it does no significant harm, but does not contribute to a low-carbon transport system (due to the nonelectrified nature of the rail).

Sector	Project Type	Specification	Category	Category with M/C	References
Infrastructure – Energy					
Renewable energies	Construction and operation of solar photovoltaic (PV) power generation	Solar power facilities: Construction and operation of facilities using solar power to generate electricity, which includes solar photovoltaic power generation and solar thermal power generation facilities. Among them, component products selected for solar photovoltaic power generation facilities should meet the following requirements: The minimum photoelectric conversion efficiency of polycrystalline silicon cells and monocrystalline silicon cells shall not be less than 19% and 21%, respectively; The minimum photoelectric conversion efficiency of polycrystalline silicon cell modules and single crystal silicon battery modules shall not be less than 17% and 17.8%, respectively; The minimum photoelectric conversion efficiency of silicon-based, CIGS, cadmium telluride photovoltaics (CdTe), and other thin-film battery modules shall not be less than 12%, 14%, 14%, and 12%, respectively; The decay rates of polycrystalline silicon battery modules and monocrystalline silicon battery modules shall not be higher than 2.5% and 3.0%, respectively, in the first year, and not higher than 0.7% per year, and not higher than 20% within the period of 25 years; the attenuation rate of thin-film battery module shall not be more than 5% in the first year, no more than 0.4% per year in the following year, no more than 15% within the period of 25 years.			i.a. CBI, PBOC, EU, SASB
	Construction and operation of hydroelectric power generation facilities	Specify carbon emission due to flooding (e.g., based on CBI: power density >5W/M2, estimated reservoir emission intensity <100g CO_2e/kWh). **Mitigation measure:** Application of internationally relevant hydroelectric power EHS standards for mitigation hierarchy of environmental damage (e.g., IFC 2015 Hydroelectric Power Standard).			i.a. CBI, PBOC, EU, SASB
	Construction and operation of wind power generation	Specify bird migratory areas, design standards, GB/ISO, or other local relevant standards.			i.a. CBI, PBOC, EU, SASB
	Construction and operation of geothermal power generation	Specific to engineering construction, operation, and maintenance: no fugitive emissions of GHG (e.g., EU standards); facilities of geothermal energy exploitation: construction and operation of building heating and cooling facilities using heat pumps and other technologies to extract shallow geothermal energy (including rock and soil heat sources, groundwater heat sources, surface water heat sources, etc.); use of medium and high temperature geothermal heat, medium and low temperature geothermal heat, dry heat rock, and other geothermal resources; construction and operation of power generation facilities.			i.a. CBI, PBOC, EU, SASB
Fossil fuels	Construction and operation of coal-fired power production				i.a. CBI, PBOC, EU, SASB
	Retrofitting of existing coal-fired power plants	Technology enabling life extension of coal-fired power plant			i.a. CBI, PBOC, EU, SASB
	Construction and operation of gas-fired power plant and associated facilities, such as transmission and storage	Gas-fired energy can only be seen as a transition technology if no other forms of baseline energy supply is available due to its relatively high carbon emissions. **Mitigation measure:** Application of CCUS to reach less than 100g CO_2/kWh.			i.a. CBI, PBOC, EU, SASB

Sector	Project Type	Specification	Category	Category with M/C	References
Neutral	Construction and operation of mini-and micro-grids	If enabling technology is connected to green energy sources as specified in the catalogue and not connected to fossil-fuel generation backups, the comprehensive energy efficiency of the equipment should be greater than or equal to 70%. The construction and operation of multi-energy complementary system increases the capacity of the regional power grid to accept intermittent renewable energy such as wind and solar. The system waste rate of wind power should be controlled within 5%, and of solar power, within 3%.			i.a. CBI, PBOC, EU, SASB
Infrastructure – Energy					
Waste-to-energy	Construction and operation of waste-to-energy infrastructure	Including pollution control			i.a. CBI, PBOC, EU, SASB
Infrastructure – Transportation					
Passenger transport	Construction and maintenance of **green passenger rail transport (interurban)**	Electrified or existing plan to implement electrification within 5 years, then green **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, ISO14040 and ISO140 44
	Construction and maintenance of **passenger rail transport (interurban)**	Nonelectric and with emission above 50g CO_2/passenger km (average) **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, ISO14040 and 44
	Construction and maintenance of **public (urban) transport**	E.g., subways, MRT, BRT, dedicated bus lanes			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, ISO14040 and 44
Land-based freight transport	Construction and maintenance of **freight rail** transport infrastructure	Not used for transportation of fossil fuels, electrified or existing plan to implement electrification within 5 years. **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, ISO14040 and 44
	Construction and operation freight rail for fossil fuels	Only as replacement of already existing transport of fossil fuels by road, only for facilities existing prior to 2020. **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP
	Urban freight transport services by road	If transport vehicle fuel standard is lower than EUR/CHINA IV (or similar local applicable one)			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP
	Good practice urban freight transport services by road	If transport vehicle fuel standard higher than EUR/CHINA IV (or similar local applicable one)			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP
	Green urban freight transport services by road	If transport vehicle fuel standard higher than EUR/China VI or electric vehicles			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP
	Construction and operation of infrastructure and systems for electrification of passenger road transport, both public and private transport	More than 50% of electricity for electrification of passenger transport must come from green electricity sources, with a clear timeline for 100% green electricity.			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP

Sector	Project Type	Specification	Category	Category with M/C	References
Ports and water-based freight transport	Ports and adjoining facilities with services dedicated for fossil fuel transport, storage				i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP
	Ports and adjoining facilities without services dedicated for fossil fuel transport, storage	Ports with clean fuels, control pollution and minimize harm to marine and coastal life, appropriate accident risk management, etc. **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6), strict pollution control by minimizing polluting emissions (e.g., In line with International Maritime Organization [IMO]), emission control areas with sulphur content of fuel not exceeding 1% in line with Annex VI of the International Convention for the Prevention of Pollution from Ships); and prevention and emergency measure implementation for oil spills as well as ballast water treatment (MARPOL 73/78 Annexes I-VI).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, IMO, MARPOL
	"Green" port and full port upgrades	"Green" according to international standards in regard to biodiversity conservation, pollution, and emission control as well as environmental risk management (e.g., MARPOL, IMO, UNCLOS; provision of LNG for fueling, onshore-based power supply, mitigation of noise impact). **Mitigation measure:** Strict protection of biodiversity and minimization of impacts on biodiversity (e.g., IFC PS6), strict pollution control by minimizing polluting emissions (e.g., in line with International Maritime Organization [IMO] emission control areas with sulphur content of fuel not exceeding 1% in line with Annex VI of the International Convention for the Prevention of Pollution from Ships); and prevention and emergency measure implementation for oil spills as well as ballast water treatment (MARPOL 73/78 Annexes I-VI).			i.a. CBI, PBOC, EU, SASB, IFC, GIZ, UNDP, IMO, MARPOL
Agriculture and land use – Forestry					
Forestry	Rehabilitation, reforestation, afforestation, forest management	Planned and stepwise cessation of cultivation in the cultivated land with serious soil erosion; desertification, salinization, and rocky desertification to protect the ecological environment; grassland and forestry restoration according to local conditions; restoring vegetation and inhibiting the deterioration of the ecological environment; and sustainably managing non-monocultures with focus on local species.			i.a. PBOC, CBIRC, EU
	Tree planting and grass, tree seedlings, and flowers for nonindustrial but recreational use	Planned and stepwise cessation of cultivation in the cultivated land with serious soil erosion; desertification, salinization, and rocky desertification to protect the ecological environment; grassland and forestry restoration according to local conditions; restoring vegetation and inhibiting the deterioration of the ecological environment; and sustainably managing non-monocultures with focus on local species.			i.a. PBOC, CBIRC, EU

Sector	Project Type	Specification	Category	Category with M/C	References
Agriculture and land use – Livestock					
Livestock	Large-scale livestock production and animal husbandry	Risk of liquid waste from livestock (e.g., fecal and urinary waste) and nutrients containing antibiotics, hormones, and pesticides leading to environmental pollution; risk of deforestation and desertification due to clearing for pastures; high water needs; risk or direct emissions from livestock. **Mitigation measure:** Integrated in wider land use concept to increase environmental beneficial interaction; limits for animal manure per square meter; no tolerance for point source pollutions and no discharge of manure into surface waters; nutrient management plans, etc.			i.a. FAO, UN, IFC
	Green animal husbandry	No conversion of high-carbon stock land to crop production used to feed livestock; Avoid or reduce GHG emissions (incl. from inputs) through appropriate management practices (e.g., enteric fermentation, management of agricultural soils, manure management); Reduction in GHG emissions over a period, compared to emissions at the start of that period; Total recycling of waste; Strict management of species invasion; Application of FAO Animal Husbandry Standards, for example, 8378 and related standards.			i.a. FAO, EU
Agriculture and land use – Nature-based solution					
Infrastructure	Planting and management of nature-based solutions, nature climate solutions (e.g., mangroves)	Nature-based solutions (e.g., mangroves) as alternative to grey infrastructure and/or to lower energy use, to protect coastlines, to improve water quality, etc.			i.a. FAO, UN, Paulson Center
Mining and industry – Mining					
Mining	Construction and operation of coal mines	With coal mostly supporting coal-fired power plants, coal mining is considered to extend the life span of coal-fired power plants.			i.a. EU
	Construction and operation of ore mines	Risks include accidents with explosives as well as gases and dust for mineworkers and surrounding environment; heavy metals, acids, and other pollutants that contaminate water resources; land use change and long-term effects of erosion or chemical contamination and leaking containment ponds. **Mitigation measure:** Application of international best practice sustainable mining standards, for example, IFC EHS Guidelines for Mining.			i.a. EU, IFC
Mining and industry – Manufacturing					
Chemicals and pharmaceuticals	Construction and operation of chemical and pharmaceutical industry facilities and equipment	Wastewater and liquid waste may contain toxic substances presenting a risk to water and surrounding environment; disaster risks in chemical plants include fires, explosions, and accidental release of toxic chemicals into the environment. **Mitigation measure:** Application of international best practices (e.g., IFC, GB, ISO), for example, IFC EHS for Pharmaceuticals and Biotechnology Manufacturing.			i.a. IFC, SASB, EU
Petrochemicals	Construction and operation of petrochemical industry facilities and equipment	Risk of toxic and nontoxic waste during extraction, refinement, and transportation; risk of harmful industry by-products, such as volatile organic compounds, nitrogen/sulphur compounds; risk of oil spills harming air, water, and soil; high energy use. **Mitigation measure:** Application of best practices, for example, IFC EHS Guidelines for Large Volume Petroleum-Based Organic Chemicals Manufacturing; Petroleum Refining and EU Road Map Document for a Sustainable Chemical Industry, in addition to GB.			i.a. IFC, EU, SASB

Sector	Project Type	Specification	Category	Category with M/C	References
Paper and pulp	Construction and operation of paper and pulp production facilities and equipment	Risk of high energy consumption for pulping and bleaching; effluents from paper mills may contain toxic and nontoxic substances with negative impacts on water quality; emissions to air can impact surrounding areas. **Mitigation measure:** Application of best practices, for example, IFC EHS Guidelines for Pulp and Paper Mills.			i.a. IFC; SASB,
Iron and steel	Construction and operation of iron and steel production infrastructure and equipment	High energy needs, wastewater may contain heavy metals and oils, waste from metal production includes furnace slag—possibly in huge quantities; exhaust gases from furnaces and smelters may risk long-term contamination and poisoning. **Mitigation measure:** Application of best practices, for example, IFC EHS Guidelines for Integrated Steel Mills and offsets for emissions.			i.a. SASB, IFC
Cement	Construction and operation of cement production infrastructure and equipment	High energy needs and heat emission from production in addition to dusts and fumes from combustion, in addition to environmental risks from extraction of raw materials. **Mitigation measure:** Application of best practices IFC EHS Guidelines for Cement and Lime Manufacturing and offsets for emissions.			i.a. IFC, SASB, EU
Textile	Construction and operation of textile production infrastructure and equipment	Wastewater and liquid waste may contain toxic substances presenting a risk to water and surrounding environment; high amounts of water essential with risks to air-borne emissions. **Mitigation measure:** Application of best practices, for example, IFC EHS on Textiles Manufacturing or IFC EHS on Tanning and Leather Finishing.			i.a. IFC
Automotive	Construction and operation of automotive and car parts production facilities	High resource use; high energy use in production; high chemical use in conventional lacquering. **Mitigation measure:** Application of sustainable practices including water-based lacquers; high percentage of recycling and careful disposal of hazardous waste; offset of emissions.			i.a. VDA
Electronics	Construction and operation of electronics production facilities	Wastewater and liquid waste may contain toxic substances presenting a risk to water and surrounding environment. **Mitigation measure:** Application of IFC ESH guidelines for semiconductors/other electronics manufacturing including recycling of waste combined with well-managed hazardous waste disposal, including oil and greases, solvents, and degreasing fluids, sludges from electroplating and wastewater treatment, insulating oil containing PCBs to improve efficiency and minimize environmental impacts.			i.a. IFC, SASB
Industrial parks	Construction and operation of good practice industrial park	**Mitigation measure:** Strict management of waste, energy efficiency in accordance with local best practices.			i.a. UNIDO
	Construction and operation of green or eco-industrial park (EIP)	Majority of electricity is green with a clear pathway for 100% renewable and full carbon offset for non-green energy; recycling of waste, wastewater, etc.			i.a. UNDIO, ADB, GEIPP

Note: CIGS = copper indium gallium selenide; EHS = Environmental, Health, and Safety; GB = Guobiao Standards of China; ISO = International Organization for Standardization; CCUS = carbon capture, utilization and storage; BRT = bus rapid transit; UNDP = United Nations Development Programme; UNCLOS = United Nations Convention for the Law of the Sea; MARPOL = the International Convention for Prevention of Marine Pollution For Ships; FAO = Food and Agriculture Organization of the United Nations; PCB = polychlorinated biphenyls

Source: Authors.

Annex 3. Sectoral and Thematic Tools for Impact Evaluation

Category	Issuer/Source
Cross-cutting	WRI: Resource watch Swiss Development Corporation: Climate, Environment and Disaster Risk Reduction Integration Guidance SASB: SASB Good practice standards CCAFS: Global Circulation Model GCM) Downscaled Data Portal International Association for Impact Assessment: Social Impact Assessment Guidelines GIIN: IRIS (impact reporting metrics) GIZ: Climate Finance Training for Sector Experts (CliFiT4SE) World Bank Safeguard Policies / New Environmental and Social Framework World Bank Group Environmental, Health and Safety Guidelines (EHS Guidelines)
Climate mitigation/adaptation	Climate Bonds Initiative: Climate Bonds Taxonomy and Certification Portfolio Transition Initiative (PTI): Paris Agreement Capital Transition Assessment World Bank Climate Change Knowledge Portal USAID Climate Risk Screening and Management Tools EU Climate Adapt: GRaBS Assessment Tool African Development Bank Climate screening and adaptation review and evaluation procedures IRI Climate Data Library Climate Action in Megacities: C40 Cities Baseline and Opportunities WRI/WBCSD: Greenhouse Gas Protocol Cross Sector Tools, Sector Specific Tools, Additional Guidance Documents and Customized Calculation Tools CDP: Company disclosure tracker
Infrastructure	Harvard University: Envision rating system, Global Infrastructure Basel Foundation (GIB): SuRe - Standard for Sustainable and Resilient Infrastructure Sustainable Infrastructure Foundation (SIF) SOURCE IISD: Sustainable Asset Valuation (SAVi) tool China International Contractors Association: Guidelines for Chinese enterprises on overseas sustainable infrastructure projects
Agriculture, Forestry, biodiversity and land-use	FAO: Climate risk assessment and management in agriculture FAO: GAEZ Agri tool data portal FAO: FAOSTAT UNFI: Natural Capital Protocol Toolkit/ Finance Sector Supplement ITC: ITC Standards Map ISEAL Alliance Climate and Community & Biodiversity Alliance:

	Forest Stewardship Council (FSC): Programme for the Endorsement of Forest Certification Sustainable Forestry Initiative IPBES: The Nature Value Explorer Forest Information System for Europe World Bank Terrestrial Biodiversity Database Natural Capital Finance Alliance (NCFA): ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) EU REDD Facility/CPI: Land-use Finance Toolbox CBI: Climate Bonds Agriculture Standard CBI: Climate Bonds Forestry Standard
Energy	UNEP FI: Energy Efficiency Finance Platform WRI: Energy Access Explorer WCD: World Commission on Dams Report (2000) Hydropower Sustainability Assessment Protocol (HSAP) RSAT (Rapid Basin-wide Hydropower Sustainability Assessment Tool) IFC Hydroelectric Power: A Guide for Developers and Investors World Bank Hydro resilience tool World Bank Global Wind Atlas World Bank Global Solar Atlas International Renewable Energy Agency (IRENA): Sustainable Energy Market Place International Renewable Energy Agency (IRENA): Global Atlas 3.0 for Renewable Energy CBI: Climate Bonds Hydropower Standard CBI: Climate Bonds Wind, Solar and Geothermal Standard
Water and water infrastructure	WWF Water risk filter WRI Aqueduct atlas WBCSD Water tool CBI: Climate Bonds Water Infrastructure Standard

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