



Advancing Nature-related Management and Disclosure in China's Central State-owned Enterprises

A Framework and Implementation Pathway

October 2026



RESEARCH
PAPER

ABOUT EARTH & LIFE SYMBIO

Earth & Life Symbio (E&L) is a Singapore-headquartered organisation working across Asia and partnering globally to advance low-carbon industrial growth, energy transition and nature-positive development. Our mission is to catalyse the transition towards a thriving, climate-resilient world where low-carbon industrial growth, energy transition and nature-positive development advance together. E&L brings together and activates the ecosystem across Asia's manufacturing economies and energy sectors - aligning policy, capital, industry, science and civil society to turn climate and nature ambitions into coordinated action and scalable real-economy impact. Our work spans corporate engagement, investor dialogue, policy-aligned research, and on-the-ground study tours, with a strong emphasis on hard-to-abate industries, biodiversity risk, and nature-positive finance.

PUBLICATION DETAILS

Author: Emily Liu

Editor: Xiaohua Jia

Layout: Shixin Li

Publication date: October 2026

Publisher: Earth & Life Symbio

SUGGESTED CITATION

Liu, Emily. 2026. Advancing Nature-related Management and Disclosure in China's Central State-owned Enterprises. Earth & Life Symbio.

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About This Report

Purpose and scope

This report presents a framework for nature-related management and disclosure tailored to China's central state-owned enterprises (central SOEs). It examines how existing Chinese policy and corporate-management foundations, practical insights from selected central SOEs and relevant international approaches can support a more integrated understanding of dependencies, impacts, risks and opportunities related to nature.

Who the report is for

The report is intended for corporate sustainability and environmental teams, governance and risk-management functions, policymakers, investors and other stakeholders seeking to understand nature-related management and disclosure in the context of China's central SOEs.

How to use the report

The executive summary and key findings introduce the main conclusions. Chapters 1-4 explain the corporate context, existing enterprise practice, domestic policy foundations and relevant international frameworks. Chapter 5 sets out the proposed framework, and Chapter 6 discusses implementation. Annex A provides the indicator framework.

Companion publication

The accompanying Practical Guide to Nature-related Management and Disclosure for China's Central State-owned Enterprises translates the framework into 63 indicators across four modules. It provides detailed application guidance and differentiates between Core, Enhanced and Context-specific Disclosures. These categories do not, by themselves, create statutory disclosure obligations.



Executive summary

Nature-related issues are becoming increasingly relevant to corporate governance, strategy, risk management and disclosure. Businesses depend on freshwater, land, functioning ecosystems and other ecosystem services, while their operations and value chains can also affect biodiversity and ecosystem conditions. These relationships can create operational, financial and strategic implications for companies.

For China's central state-owned enterprises (central SOEs), this agenda is particularly relevant. Many operate in sectors such as energy, power, mining, transport, infrastructure and construction, where business activities interact directly with land, water, natural resources and ecosystems. Yet these enterprises are not starting from zero. Environmental impact assessment, ecological protection and restoration, resource management, environmental monitoring and project-level environmental controls already provide an important foundation for nature-related management.

The principal challenge is one of integration. Relevant information and management practices are often distributed across projects, subsidiaries and specialised functions and are not always brought together at the enterprise level through a consistent understanding of nature-related dependencies, impacts, risks and opportunities (DIROs). Enterprises also face practical questions around data availability, internal coordination, disclosure boundaries and the treatment of sensitive spatial or operational information.

Why a tailored framework is needed

International frameworks and methodologies provide important reference points. TNFD offers a structured approach to dependencies, impacts, risks and opportunities; GRI places greater emphasis on biodiversity impacts; SBTN supports the progression from assessment to action and target setting; and the Kunming-Montreal Global Biodiversity Framework provides an overarching global policy context.

This study does not seek to reproduce any one of these approaches. Nor does it propose a new system detached from existing corporate management.

A framework tailored to central SOEs is needed for three reasons.

First, China already has substantial policy and management foundations relevant to nature. Environmental management, spatial governance, environmental information disclosure, sustainability reporting and project approval systems already generate significant information on resource use, pollution, ecological management and project impacts. The opportunity is to connect these foundations with a broader understanding of dependencies on nature, ecosystem impacts, location-specific exposure and related business risks and opportunities.

Second, the management context of central SOEs is distinctive. Nature-related information may sit across environmental, engineering, investment, risk, finance, procurement, legal and overseas-business functions. For enterprises with large physical assets, relevant controls may already be embedded in project planning, site selection, environmental impact assessment, construction, operations and restoration. A practical framework therefore needs to work through existing corporate and project-management structures rather than assume that an entirely separate nature-management system should be created.

Third, implementation needs to be proportionate. Central SOEs differ in sector, nature-related exposure, geographic footprint, international operations, data availability and management capability. They also need to balance transparency with legitimate restrictions relating to commercially sensitive, spatial or otherwise protected information. These differences make phased and differentiated implementation more appropriate than a single uniform model.

The proposed framework therefore brings together three sources of input:

- China's policy and management foundations
- practical insights from selected central SOEs
- relevant international frameworks and methodologies

Its purpose is to provide a practical approach tailored to the management context of China's central SOEs while supporting international comparability and interoperability.

Key findings

Several findings from the study directly shape the framework.

Existing systems should be the starting point. Nature-related management should make greater use of established environmental, project, risk-management and reporting processes rather than unnecessarily create parallel structures. In many cases, the priority is to improve integration and interpretation of existing information before creating additional datasets.

Location is fundamental. Dependencies and impacts on nature are inherently location-specific. Chinese spatial-management mechanisms, environmental impact assessment and existing project information can provide an important starting point for identifying where operations interact with ecologically sensitive areas. International datasets and methodologies can supplement these sources where appropriate.

Internal management and public disclosure are not the same. Companies may need detailed ecological and spatial information for internal assessment without making the same level of detail publicly available. The framework therefore distinguishes between information suitable for public disclosure, information that can be disclosed in aggregated or anonymised form, information retained for internal or targeted reporting, and information subject to applicable restrictions.

A common framework requires differentiated application. The relevance and depth of disclosure will vary across sectors and enterprises. The framework therefore combines a common structure with different levels of application according to nature-related relevance, business context and management capability.

The proposed framework

The framework is organised around four interconnected core modules:

G — Governance and Accountability

How nature-related oversight, responsibilities, management ownership, cross-functional coordination and organisational capability are established.

S — Strategy, Dependencies and Impacts

How the enterprise identifies where and how it depends on and affects nature, and how significant findings inform strategy and decision-making.

R — Nature-related Risk and Impact Management

How nature-related risks and impacts are identified, assessed and managed through existing enterprise risk, project and operational processes.

M&T — Metrics, Targets and Performance

How enterprises measure relevant aspects of their relationship with nature, monitor management performance and progressively develop and track targets.

The modules are compatible with widely used international approaches but are not intended to replicate the structure or requirements of any single framework. Their detailed content reflects China's domestic policy context, existing corporate-management systems and the implementation considerations identified through the study.

The accompanying Practical Guide translates this architecture into a detailed indicator system. It distinguishes between:

- **Core Disclosures**, which establish a common foundation;
- **Enhanced Disclosures**, which provide greater analytical depth and comparability; and
- **Context-specific Disclosures**, which become relevant because of sector characteristics, overseas operations, high nature-related exposure or other business circumstances.

These categories describe the structure of the framework and do not, by themselves, create statutory disclosure obligations.

Figure 1

Framework at a glance

A tailored nature-related management and disclosure framework for China's central SOEs



From disclosure to implementation

The framework is designed for progressive implementation rather than immediate full coverage.

At an initial stage, enterprises can focus on clarifying governance responsibilities, conducting a first screening of major dependencies and impacts, identifying operations associated with ecologically sensitive areas and organising existing information into a more systematic disclosure structure. Early disclosure can remain largely qualitative where quantitative data or monitoring systems are not yet sufficiently developed.

As capability improves, enterprises can strengthen quantitative data collection, scenario analysis, integration with enterprise risk management, assessment of priority supply-chain exposures and target setting. More mature implementation can include systematic annual tracking, stronger target methodologies, greater integration across group and subsidiary management systems and, where appropriate, independent assurance.

The purpose is not to require every central SOE to reach the same level of disclosure at the same time. It is to establish a common direction while allowing

the depth of implementation to increase as information, systems and capabilities improve.

Ultimately, the framework is intended to support better management rather than more reporting for its own sake. Nature-related information should progressively inform governance, strategy, investment decisions, project development and risk management, while making better use of systems and data that enterprises already have.

For China's central SOEs, the next step is therefore less about constructing an entirely new nature-management architecture than about integrating existing foundations, filling important information gaps and organising relevant information in a form that is both decision-useful domestically and understandable internationally.



Chapter 1

Why Nature-related Management and Disclosure Matter for China's Central SOEs

1.1 Nature is becoming a corporate management and disclosure issue

Businesses are connected with nature in two directions. They depend on freshwater, land, functioning ecosystems and other ecosystem services, while their operations and value chains can also alter ecosystems through land-use change, resource extraction, pollution and other pressures. These relationships can affect business continuity, operating costs, supply chains, asset performance and long-term resilience.

As a result, nature and biodiversity are moving beyond the traditional domain of environmental compliance and into corporate governance, strategy and risk management. The Kunming-Montreal Global Biodiversity Framework (GBF) Target 15 reinforced this shift by calling on Parties to take measures to encourage and enable businesses, in particular, to ensure that large and transnational companies and financial institutions regularly monitor, assess and disclose biodiversity-related risks, dependencies and impacts. TNFD has further developed a structured language for understanding how dependencies and impacts on nature can translate into risks and opportunities for business.

This broader nature-related perspective does not replace environmental management. It changes the questions companies are expected to ask.

Conventional environmental management has often focused on compliance, resource use, pollution control and project-level impacts. A nature-related perspective adds several additional dimensions:

- where business activities interact with ecologically significant locations;
- which ecosystem services the business depends on;
- how operations and value chains affect the condition of nature;
- how those dependencies and impacts may create business risks or opportunities; and
- how the resulting information should influence corporate decisions.

For companies operating in China, this distinction is important. Existing environmental impact assessment, environmental management, ecological

protection, resource management and disclosure systems already address many of the underlying issues. The emerging task is therefore not simply to add another category of environmental reporting, but to connect existing information and management processes through a more integrated nature-related lens.

1.2 Why central SOEs matter

China's central state-owned enterprises (central SOEs) are a particularly relevant group through which to examine the development of corporate nature-related management and disclosure.

Their significance begins with scale. By the end of 2025, central SOEs directly administered by the central government held more than RMB 95 trillion in total assets. They also occupy important positions in sectors with substantial interactions with natural resources and ecosystems, accounting for approximately 80% of domestic crude oil production, 70% of natural gas output and 60% of power supply, according to the official figures used in this study.

Their relevance, however, is not simply a function of economic size.

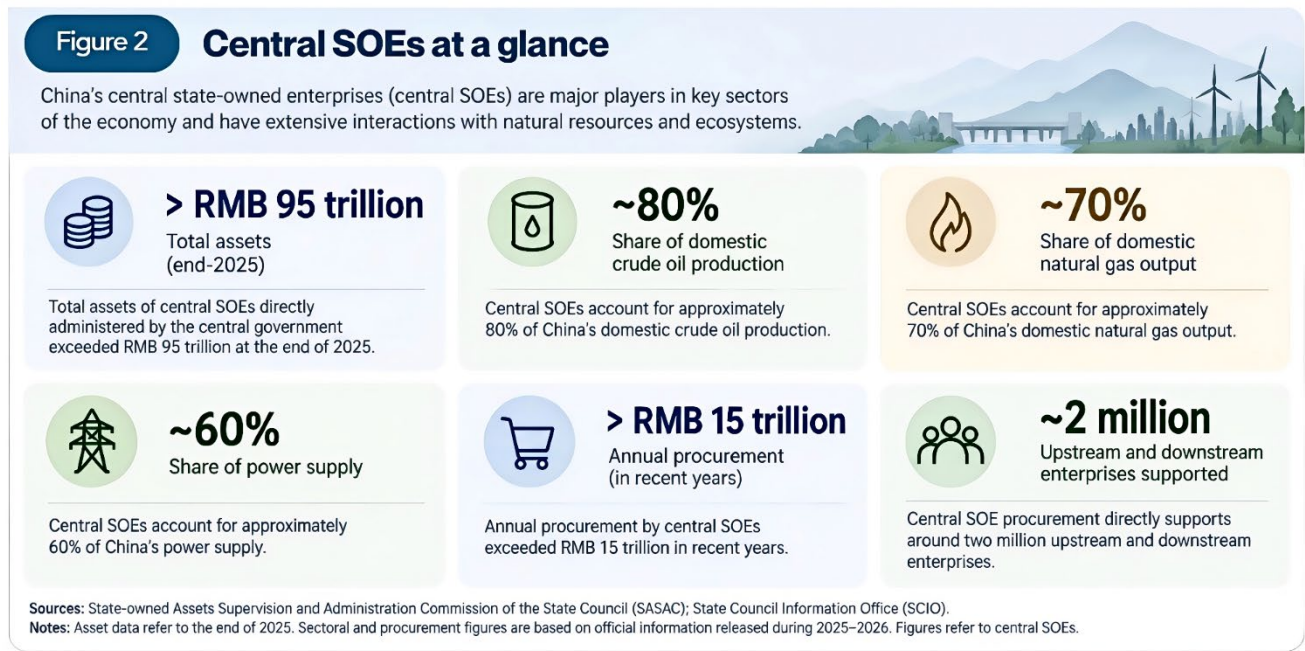
Central SOEs operate extensively across energy, power, mining, transport, infrastructure, construction, water and other sectors in which business activities can have significant dependencies on and impacts on land, freshwater and ecosystems. These relationships differ substantially by sector and location. Hydropower interacts with river systems and aquatic ecosystems; mining involves land disturbance, water use and long-term restoration; energy and transport infrastructure may intersect with ecologically sensitive areas; and overseas projects operate within diverse ecological and regulatory contexts.

Central SOEs also have extensive relationships with other companies through procurement and industrial supply chains. The figures used in this study indicate annual procurement of more than RMB 15 trillion in recent years, directly connecting central SOEs with around two million upstream and downstream enterprises. Changes in project assessment, environmental and nature-related risk management, information requirements or supplier expectations can therefore extend beyond the enterprise itself.

These characteristics make central SOEs a useful starting point for developing and testing a practical corporate approach to nature-related management

and disclosure. This does not mean that all central SOEs face the same nature-related issues, nor that their practices represent Chinese companies as a

whole. Rather, their sectoral footprint, operational scale and extensive business relationships make them a particularly relevant group for this study.



1.3 Why a tailored framework is needed

The growing availability of international nature-related frameworks raises an obvious question: why is a framework tailored to China's central SOEs needed at all?

The answer is not that international approaches are unsuitable for Chinese companies. TNFD, GRI, SBTN and other international frameworks and methodologies provide useful concepts, analytical approaches and a common language for understanding corporate relationships with nature.

The issue is one of application. Nature-related disclosure needs to operate within the policy, management and operational systems that companies actually use. For China's central SOEs, three considerations are particularly important.

China already has relevant policy and management foundations. China has developed environmental, ecological and spatial-management systems that are directly relevant to corporate relationships with nature. These include environmental impact assessment, ecological protection, natural-resource management, spatial governance, environmental information disclosure and corporate sustainability reporting.

Such systems already generate information on resource use, pollution, project impacts, ecological

management and other issues relevant to nature-related assessment. A tailored framework can therefore begin by asking how these existing data and processes can be organised and supplemented, rather than assuming that an entirely new information system must be built.

At the same time, domestic concepts and classifications do not always map directly onto international approaches. Chinese spatial-governance mechanisms, for example, may overlap in purpose with international approaches to location-sensitive assessment without being institutionally or methodologically equivalent.

The objective is therefore to connect domestic foundations with internationally understandable concepts without treating the two as interchangeable.

The management context of central SOEs is distinctive. Nature-related information rarely sits within a single corporate function.

Relevant responsibilities and data may be distributed across environmental management, engineering, investment, procurement, risk, finance, legal, sustainability and overseas-business teams. In asset-intensive sectors, nature-related controls may already be embedded in project planning, site selection, environmental assessment, construction, operations, monitoring and restoration.

This creates an organisational challenge as much as a data challenge. The framework therefore needs to work with existing corporate and project-management structures, strengthen connections between functions, and identify where additional nature-related information or analysis is needed. It should not assume that enterprises need to establish a standalone nature-management system alongside existing processes.

Implementation needs to be proportionate. Central SOEs differ substantially in sector, geographic footprint, nature-related exposure, overseas operations, data availability and management capability.

Disclosure also raises practical questions around information sensitivity. Detailed spatial, infrastructure or natural-resource information may be important for internal assessment without always being appropriate for unrestricted public disclosure.

A workable framework therefore needs to allow for different starting points and levels of application. Enterprises should be able to begin with existing information and qualitative assessment where appropriate, while progressively strengthening location analysis, quantitative data, target setting, supply-chain assessment and integration with enterprise risk management.

Together, these considerations lead to four design requirements:

- Build on existing Chinese management and data systems.
- Reflect differences across sectors and enterprises.
- Balance transparency with appropriate information-management safeguards.
- Support international comparability without losing the domestic policy and management context.

These requirements form the basis for the framework developed later in this report.

1.4 Scope and approach of this study

This report focuses on enterprise-level nature-related management and disclosure for China's central SOEs.

Because central SOEs operate across diverse sectors and locations, the report combines a common management and disclosure structure with differentiated application according to sector, business context and nature-related relevance.

The analysis focuses on four areas:

- governance and accountability;
- strategy, dependencies and impacts;
- nature-related risk and impact management;
- metrics, targets and performance.

The report does not seek to prescribe detailed ecological or biological methodologies for activities such as species monitoring or ecosystem-condition assessment. Such work requires location-specific ecological data, appropriate scientific methods and specialist expertise.

The framework is developed from three complementary sources of evidence:

China's policy and management foundations

The study examines existing nature- and biodiversity-related policies, environmental and spatial-management systems, and corporate disclosure arrangements that can provide a domestic foundation for nature-related management.

Practical insights from selected central SOEs

Selected enterprise practices and cases are used to identify practical implementation considerations, including sector differences, project-level management, data availability and disclosure boundaries.

Relevant international frameworks and methodologies

The study reviews international approaches to identify concepts and methods that can strengthen assessment, management, comparability and communication without requiring central SOEs to replicate any single international framework.

The enterprise cases included in the report are illustrative rather than representative. They demonstrate particular management practices, sector characteristics and implementation issues and should not be interpreted as representing the full range of practice across China's central SOEs.

The resulting framework is intended as a practical reference. It does not replace applicable laws, regulations or sector-specific technical requirements. Its purpose is to help enterprises organise existing and additional information more systematically, strengthen the identification and management of nature-related dependencies, impacts, risks and opportunities, and communicate relevant information in a form that is both decision-useful and internationally understandable.

Chapter 2

Building on Existing Practice: Insights from Selected Central SOEs

The case for a tailored nature-related management and disclosure framework does not rest on the assumption that central SOEs lack relevant environmental or ecological practices.

In many sectors, environmental impact assessment, ecological restoration, resource management, environmental monitoring and project-level environmental controls have long formed part of corporate and project management. The selected enterprises and cases reviewed in this study illustrate how some of these practices already address issues that are now discussed through a broader nature-related lens.

What is less developed is their integration at enterprise level. Relevant information and responsibilities may sit across projects, subsidiaries and specialised functions, while dependencies on nature, impacts on nature and the resulting business risks are not always considered through a common analytical structure.

This chapter therefore does not assess the overall maturity of nature-related management across China's central SOEs. The cases are illustrative rather than representative. Their purpose is to show what existing practice can contribute to a more integrated approach and where important implementation gaps remain.

2.1 Sector and location shape nature-related relevance

Central SOEs operate across sectors with fundamentally different relationships with nature. Energy, power, mining, transport, construction and infrastructure activities can depend on land, freshwater and ecosystem services while also affecting habitats, ecological processes and natural-resource availability.

The significance of these relationships varies not only by sector, but by technology, project stage and location. A common enterprise-level framework is useful, but the underlying assessment cannot be fully standardised.

Oil and gas: the same business can face very different ecological contexts

Oil and gas operations can extend across wetlands, grasslands, deserts and other ecosystem types.

The Chinese study uses PetroChina's operating footprint as an illustration. Operations in areas including Daqing, Tarim, Changqing and North China are located across markedly different ecological settings. The nature-related issues associated with one operating area may therefore be quite different from those associated with another.

The implication is straightforward: group-level governance may be common, but nature-related assessment needs to retain sufficient location specificity.

Practice Snapshot 2.1

PetroChina

– One enterprise, multiple ecological contexts

Context

PetroChina operates across regions with very different environmental and ecological characteristics, ranging from wetland-related environments to arid landscapes.

Existing practice base

Project and environmental-management systems already generate location-specific information relevant to environmental conditions and operational management.

Framework relevance

A common group-level approach needs to be complemented by location-specific assessment. Enterprise-wide averages alone cannot adequately describe nature-related dependencies, impacts and risks.

Hydropower: nature considerations extend across the project lifecycle

Hydropower creates a different set of interactions. River connectivity, hydrological processes, aquatic ecosystems and fish populations can remain relevant throughout the life of an asset.

The study notes that China Three Gorges Corporation has undertaken activities including fish restocking, ecological flow management and watershed ecological monitoring in connection with large hydropower development. The significance of these practices lies not only in the individual

conservation measures, but in the way ecological considerations can extend across planning, construction and operations.

Practice Snapshot 2.2

China Three Gorges

– Ecological management across the hydropower lifecycle

Context

Hydropower projects interact directly with river systems and aquatic ecosystems over long operating periods.

Existing practice

The study identifies practices including fish restocking, ecological flow management and watershed ecological monitoring.

Framework relevance

Nature-related management is most useful when it is connected to the project lifecycle rather than treated as an activity undertaken only after impacts occur.

Renewable energy: climate benefits do not remove nature-related trade-offs

Renewable-energy infrastructure can support decarbonisation while still creating pressures relating to land, habitats or water.

The Kubuqi solar example discussed in the study combines renewable-energy development with ecological-restoration measures. At the same time, it illustrates a broader principle: positive climate outcomes do not remove the need to assess land, water and ecosystem implications independently.

A project can contribute to climate goals and still require independent assessment of its relationship with nature.

This is one reason why nature-related management should complement, rather than simply be absorbed into, climate-related reporting.

Mining: restoration provides a foundation, but management needs to begin earlier

Mining interacts directly with land, water and ecosystems over the full life of an asset.

The study refers to restoration and land-reclamation practices in mining areas such as Pingshuo, including vegetation restoration and ecological rehabilitation. These practices demonstrate that

ecological restoration is not new to the sector and can provide an important foundation for broader nature-related management.

An integrated nature-related perspective, however, extends further upstream. It also asks whether significant impacts can be avoided or minimised through project location and design, how operations depend on water and other ecosystem services, and how land-use change may create longer-term ecological and business implications.

Overseas operations: common corporate logic, local application

For central SOEs operating internationally, nature-related management is also shaped by host-country regulation, project financing and local ecological conditions.

The study provides two transmission-project examples. A State Grid project in Brazil applied host-country environmental licensing and measures relating to ecological compensation, species surveys and wildlife protection. The Temane transmission project in Mozambique was also subject to environmental and social requirements associated with international financing.

These examples illustrate why overseas nature-related management cannot be reduced to either Chinese requirements or a single international framework.

Practice Snapshot 2.3

Overseas transmission projects

– Multiple layers of nature-related requirements

Context

Central SOE projects outside China may operate under host-country law while also being subject to lender or project-specific environmental and social requirements.

Illustrative practices

The study identifies environmental licensing, ecological compensation, species surveys, wildlife protection and additional financing-related environmental and social requirements across the Brazil and Mozambique transmission examples.

For a group-level framework, the challenge is therefore to establish a common management logic while retaining sufficient flexibility for different jurisdictions, locations and projects.

2.2 Existing practice provides a meaningful foundation

Taken together, the selected examples point to a broader conclusion: central SOEs are not approaching nature-related management from an absence of relevant systems.

Depending on sector and enterprise, existing practices may already include:

- environmental impact assessment and project approval;
- environmental and resource-management systems;
- ecological protection and restoration;
- water and land management;
- biodiversity and ecological monitoring;
- project-level environmental risk controls; and
- environmental and social management for overseas projects.

These systems can provide both information and management entry points for a broader nature-related approach.

Environmental impact assessments may contain information on location, ecosystems and project impacts. Land- and water-management systems may already provide quantitative data. Ecological surveys and monitoring may contain site-specific information. Restoration programmes can provide information on actions and outcomes. Overseas projects may already operate under additional environmental and social requirements.

The practical question is therefore not simply: What new nature-related information should the enterprise collect?

It is also: What relevant information already exists, where is it held, and how can it be connected?

A broader nature-related lens then introduces questions that may not yet be asked consistently across existing systems:

- Which ecosystem services are important to the business?
- Where are the most significant impacts on nature?
- How do dependencies and impacts vary by location?
- How might ecosystem degradation or regulatory change affect operations or investment?

- How are these issues reflected in enterprise risk and strategic decisions?
- What information can be meaningfully aggregated at corporate level?

This is the point at which existing environmental management begins to evolve into more integrated nature-related management.

2.3 The remaining challenge is integration

The study identifies a meaningful practice base, but it also shows why existing environmental activity does not automatically amount to an enterprise-level nature-related management system.

Four integration gaps are particularly important.

From project-level information to enterprise-level understanding

Much nature-related information is generated at project or asset level. This makes sense because ecological conditions are location-specific. However, companies also need a way to identify which issues are significant across the group and how site-level information should inform enterprise strategy, risk management and disclosure.

The challenge is therefore not to remove location specificity, but to develop a credible route from site-level assessment to enterprise-level interpretation.

From environmental impacts to dependencies and business risk

Existing environmental management often provides a relatively strong basis for identifying pollution, resource use, regulatory compliance and impacts on the environment.

A nature-related approach adds the opposite direction of the relationship: how the business depends on functioning ecosystems. A company may, for example, already understand how its operations affect water quality or water use. It may be less accustomed to asking how deteriorating water availability, watershed condition or ecosystem functioning could affect production, costs, asset performance or future investment.

The analytical shift is therefore: impacts on nature + dependencies on nature → potential risks and opportunities for the enterprise. This is one of the most important areas in which environmental management and enterprise risk management need to become more closely connected.

From dispersed functions to shared corporate ownership

Nature-related information rarely sits in one place. Environmental teams may hold compliance and monitoring information. Engineering and project teams manage site and land-use information. Procurement holds supplier data. Risk teams maintain enterprise risk registers. Finance and strategy teams assess investment and business implications.

The study indicates that relevant activities can already exist across these functions while links between them remain fragmented. More data alone will not resolve this problem.

What is needed is clearer coordination: a way for ecological or operational information to move into project, investment, risk and strategic decision-making where it is relevant.

From available information to appropriate public disclosure

Internal availability of information does not automatically determine what should be disclosed publicly.

The enterprises consulted highlighted uncertainty around information relating to infrastructure, mineral resources, project locations and detailed spatial data. Such information may be useful for internal management while also involving commercial sensitivity, data-security considerations or other restrictions.

A practical framework therefore needs to distinguish between: the information required to identify and manage nature-related issues internally and the level of detail appropriate for external disclosure.

Different enterprises will move at different speeds. Finally, central SOEs do not share a common starting point. Some may already have relatively sophisticated monitoring and project-management systems. Others may have substantial environmental information but less integrated governance. Some operate internationally and face additional financing or disclosure expectations, while others operate primarily within domestic regulatory and market environments. A workable framework therefore needs to provide a common direction without assuming a common level of maturity.

2.4 Implications for framework design

The selected practices and implementation challenges lead to four conclusions for the framework developed in this report.

1. Build on existing systems

Existing environmental, project-management, risk-management and reporting systems should be used wherever they can provide relevant information or decision-making processes.

The framework should supplement these systems where nature-specific gaps exist rather than require enterprises to rebuild their management architecture.

2. Allow for differentiated application

Nature-related relevance varies by sector, location, business model and enterprise capability.

A common framework therefore needs to accommodate context-specific requirements and progressive implementation.

3. Separate management needs from public-disclosure granularity

Companies may need detailed site-level information to manage nature-related issues internally without publishing the same level of detail externally.

Transparency should therefore be strengthened alongside appropriate information-management safeguards.

4. Connect domestic practice with internationally understandable concepts

Chinese environmental and ecological management provides the operational starting point.

International approaches can add concepts and methodologies that help companies organise information around dependencies, impacts, risks and opportunities and communicate that information more consistently across reporting contexts.

Chapter 3

China's Policy and Management Foundations for Nature-related Management and Disclosure

China's corporate nature-related agenda is developing on top of an established environmental and ecological governance system. Environmental protection, natural-resource management, spatial planning, corporate environmental disclosure, sustainability reporting and green finance have developed through different policy channels and for different purposes. Together, they provide many of the institutional, management and information foundations needed for more systematic corporate engagement with nature.

For central SOEs, this domestic context matters because nature-related management does not need to begin with a separate institutional architecture. Existing requirements already influence where projects can be located, how environmental impacts are assessed and managed, what environmental information is collected, and how sustainability-related information is increasingly communicated at enterprise level.

This chapter does not attempt to provide a comprehensive review of China's environmental policy system. Instead, it focuses on the elements most relevant to corporate nature-related management and disclosure, and on how these elements can provide practical entry points for the framework developed later in this report.

3.1 A multi-layered domestic foundation

China does not currently have a single corporate framework specifically dedicated to nature-related management and disclosure. Relevant requirements are instead distributed across several policy, legal and regulatory domains.

At the strategic level, the **China National Biodiversity Conservation Strategy and Action Plan (2023-2030)**

sets out updated national priorities for biodiversity conservation and implementation of the Kunming-Montreal Global Biodiversity Framework. The plan establishes biodiversity conservation targets and identifies 27 priority actions and 75 priority projects across four broad areas: biodiversity mainstreaming, addressing threats to biodiversity loss, sustainable use and benefit-sharing, and modernisation of biodiversity governance capacities.

The legal foundation has also been further consolidated. The **Ecological and Environmental Code** (《中华人民共和国生态环境法典》) was adopted on 12 March 2026 and entered into force on 15 August 2026. The Code consolidates a wide range of ecological and environmental rules and covers pollution control, ecological protection, green and low-carbon development and related legal responsibilities.

Alongside these overarching instruments are more specific mechanisms governing ecological conservation, territorial spatial planning, environmental impact assessment, corporate environmental information, sustainability disclosure and green finance.

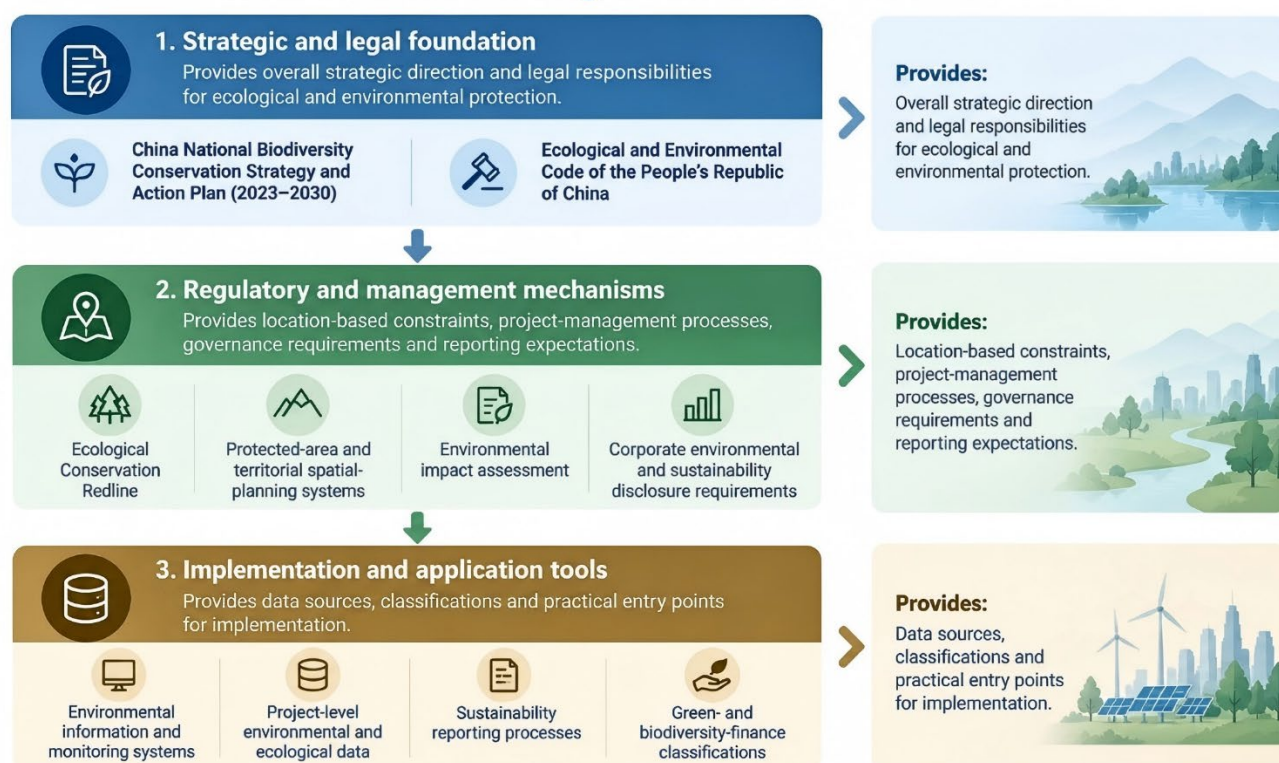
For the purposes of corporate nature-related management and disclosure, these foundations can be understood in three interacting layers.

These layers are interconnected rather than sequential. A company may encounter nature-related considerations through project approval, environmental management, sustainability reporting or financing even where the relevant requirement is not explicitly described as "nature-related".

For central SOEs, the practical opportunity is therefore to connect these existing policy and management channels through a more integrated corporate understanding of dependencies, impacts, risks and opportunities.

Figure 3

China's Policy and Management Foundations for Nature-related Management and Disclosure



3.2 Spatial governance provides a distinctive foundation

Nature-related issues are inherently location-specific. The ecological significance of an activity depends not only on what a company does, but also on where it takes place and on the condition and importance of the surrounding ecosystem.

China's existing spatial-governance arrangements therefore provide a particularly important foundation for corporate nature-related assessment.

One of the most significant domestic mechanisms is the Ecological Conservation Redline (ECRL). The Ministry of Ecology and Environment uses *ecological conservation redline* as the official English term (生态保护红线). The term refers to areas within ecological space that perform particularly important ecological functions and require strict protection.

For companies with large physical assets, this means that the relationship between operating locations and ecologically significant areas is not an entirely new question introduced by international nature-related frameworks. Project planning, environmental impact assessment, land and natural-resource management, and ecological protection requirements already create processes through which location-specific environmental constraints are considered.

This foundation is particularly relevant for central SOEs in sectors such as energy, mining, transport, water and infrastructure, where project location can substantially influence the nature and significance of ecological interactions.

Domestic spatial classifications, however, should not be treated as directly equivalent to international biodiversity classifications. The Ecological Conservation Redline (ECRL), protected areas and Key Biodiversity Areas (KBAs) may overlap geographically, but they differ in institutional basis, purpose and methodology. For central SOEs operating in China, the ECRL and other domestic spatial information can provide the primary basis for identifying ecologically significant locations, while international datasets such as protected-area and KBA databases can provide complementary information where relevant.

The objective is not to replace one classification with another. It is to establish a location-based assessment process that makes appropriate use of domestic and international information according to the management and reporting context concerned.

3.3 Existing environmental management provides an important information base

A second foundation lies in the environmental information and management systems that companies already use.

Corporate environmental management generates information on issues such as water use, pollution, waste, ecological restoration, environmental incidents and project-level environmental performance. Environmental impact assessment and project-approval processes may also contain information on location, ecological conditions, expected impacts and mitigation measures. At some sites and projects, additional ecological or biodiversity monitoring may already be undertaken.

For nature-related management, these existing sources can reduce unnecessary duplication.

The starting question should therefore often be “What relevant information does the enterprise already collect, and how can it be reorganised for nature-related management?” rather than “What entirely new dataset needs to be created?”

Existing environmental information, however, does not automatically constitute a complete nature-related information system.

Much of the current data infrastructure has historically been developed for environmental compliance, pollution control, resource management and project-level impact management. A more integrated nature-related approach adds further questions:

- Which ecosystem services are important to the business?
- Where are significant dependencies and impacts concentrated?
- How do dependencies and impacts vary by location?
- How might ecosystem degradation affect operations, costs or future investment?
- How should site-level information be aggregated and interpreted at enterprise level?
- Which nature-related issues should enter enterprise risk and strategic decision-making?

The distinction is therefore not primarily between “existing” and “new” data. It is between environmental information collected for specific management purposes and information organised to support an enterprise-level understanding of dependencies, impacts, risks and opportunities.

3.4 Nature and biodiversity are increasingly entering corporate sustainability disclosure

Nature-related considerations are also becoming more visible within China’s broader corporate sustainability-disclosure architecture.

In April 2024, the Shanghai Stock Exchange issued the *Guidelines No. 14 of Shanghai Stock Exchange for Self-Regulation of Listed Companies—Sustainability Report (Trial)*, which took effect on 1 May 2024. The Guidelines establish a sustainability-disclosure framework and include ecosystem and biodiversity conservation as a specific environmental topic under Article 32.

This is important because biodiversity and ecosystem considerations are no longer confined to project-level environmental management. They are increasingly being incorporated into enterprise-level sustainability reporting.

China’s national sustainability-disclosure architecture has also developed rapidly.

In November 2024, the Ministry of Finance and other authorities issued the *Corporate Sustainability Disclosure Standards—Basic Standards (Trial)* (企业可持续披露准则——基本准则（试行）). The Basic Standards establish general requirements for corporate sustainability disclosure and organise sustainability-related risk and opportunity information around four core elements: governance, strategy, risk and opportunity management, and metrics and targets. Until the scope of application and implementation requirements are specified, enterprises may implement the Basic Standards voluntarily.

The architecture has continued to develop since the Basic Standards were issued. In September 2025, the Ministry of Finance issued the *Application Guidelines for the Corporate Sustainability Disclosure Standards—Basic Standards (Trial)*, providing further guidance on areas including value chains, reporting entities, materiality assessment, proportionality, financial effects and sustainability impacts.

In December 2025, the *Corporate Sustainability Disclosure Standards No. 1—Climate (Trial)* (企业可持续披露准则第1号——气候（试行）) became the first specific standard issued under the national sustainability-disclosure framework. Like the Basic Standards, it remains voluntary until the applicable scope and implementation requirements are specified.

The Ministry of Finance has identified biodiversity and ecosystems as one of the environmental topics to be addressed through the developing system of specific sustainability-disclosure standards, alongside climate, pollution, water and marine resources, and resource use and the circular economy.

For central SOEs—particularly listed subsidiaries or groups with capital-market exposure—these developments create an increasingly important bridge between existing environmental management and broader enterprise-level sustainability disclosure.

They also reinforce a key principle for this study: nature-related disclosure should not develop as a reporting system isolated from the company's wider sustainability architecture. Governance arrangements, materiality processes, risk-management systems, internal controls and reporting processes can provide existing institutional channels through which nature-related information is progressively integrated.

At the same time, the inclusion of ecosystem and biodiversity topics within broader sustainability requirements does not in itself constitute a complete corporate nature-related management framework.

A more integrated approach is still needed to connect:

impacts on nature + dependencies on nature + resulting risks and opportunities + management response + performance

at enterprise level.

3.5 Nature-related information is beginning to enter financial applications

A further development is the emerging connection between biodiversity-related information and financial decision-making.

China's green-finance framework increasingly includes activities associated with ecological protection, restoration and sustainable use. In 2025, the People's Bank of China led the development of the **Biodiversity Finance Catalogue (Trial Draft)** (《生物多样性金融目录(试用稿)》); English translation used in this report). Official government information describes the Catalogue as providing investment guidance for financial institutions and reports its use in local biodiversity-finance innovation, including financing approaches linked to wetland protection,

vegetation restoration, ecological rights and biodiversity-related performance.

The immediate significance of this development is not that corporate nature-related disclosure has already become a standard component of financial decision-making.

Rather, it demonstrates that biodiversity-related activities are increasingly being translated into classifications and indicators that financial institutions can use to identify and assess relevant projects and develop financial products.

This creates a potential interface between corporate nature-related information and finance.

Information on:

- location and ecological sensitivity;
- significant dependencies and impacts;
- management responses;
- ecological protection and restoration activities;
- quantitative performance and outcomes may become increasingly relevant to environmental and social due diligence, green finance, biodiversity-related financing and other forms of financial assessment.

For the purposes of this report, finance should therefore be understood as an emerging application of better nature-related information, rather than the primary driver of the proposed corporate framework.

3.6 What the domestic foundation means for the proposed framework

Taken together, China's existing policy and management systems already address many of the underlying elements needed for corporate nature-related management:

- ecological and spatial constraints on project location;
- environmental impact assessment and project approval;
- resource use, pollution and environmental compliance;
- ecological protection and restoration;
- environmental monitoring and corporate environmental information;
- sustainability governance and disclosure;
- increasingly, biodiversity-related financial applications.

These elements have developed through different institutional channels and for different purposes.

They therefore do not automatically form a single enterprise-level system for identifying and managing nature-related dependencies, impacts, risks and opportunities.

The design challenge is to connect them.

For central SOEs, this leads to three implications.

First, domestic systems should provide the operational starting point. Where relevant information or management processes already exist, the framework should use them rather than reproduce them through a separate nature-management structure.

Second, existing information needs to be reorganised through a broader nature-related lens. Environmental impact information should be complemented by greater attention to dependencies on ecosystem services, location-specific exposure and the potential business implications of ecosystem change.

Third, international approaches should complement rather than replace domestic foundations. International concepts and methodologies can strengthen assessment, management and comparability, but they need to be applied in a way that recognises the institutional purpose, terminology and management logic of China's existing systems.

The relationship can therefore be expressed simply: Chinese policy and management foundations provide the domestic operating context. International approaches provide complementary concepts, methodologies and a common language for comparability. The proposed framework connects the two.



Chapter 4

International Frameworks: Common Logic and Interoperability

International nature-related frameworks have developed rapidly, but they do not all serve the same purpose. Some establish global policy direction; some support corporate assessment, risk management and disclosure; others focus more specifically on biodiversity impacts, target setting or regulatory sustainability reporting.

For the framework proposed in this report, the value of these international approaches lies less in identifying a single model for central SOEs to adopt than in understanding which concepts, analytical methods and reporting structures can complement China's existing policy and management foundations.

The underlying study considers five particularly relevant international approaches: the Kunming-Montreal Global Biodiversity Framework (GBF), the Recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD Recommendations), GRI 101: Biodiversity 2024, the Science Based Targets Network (SBTN) and ESRS E4 – Biodiversity and Ecosystems. These approaches differ in purpose, scope and degree of prescription and should not be understood as forming a single hierarchy.

This chapter therefore focuses on two questions:

- What common logic is emerging across these approaches?
- Which elements are most relevant to a nature-related management and disclosure framework for China's central SOEs?

4.1 Different approaches serve different purposes

Kunming-Montreal Global Biodiversity Framework

The Kunming-Montreal Global Biodiversity Framework (GBF) provides the overarching global policy context. Adopted in 2022, it contains four goals for 2050 and 23 targets for 2030.

For business, Target 15 is particularly relevant. It calls on Parties to take legal, administrative or policy measures to encourage and enable businesses—and, in particular, to ensure that large and transnational companies and financial institutions—regularly monitor, assess and transparently disclose their biodiversity-related risks, dependencies and

impacts across operations, supply and value chains and portfolios.

The GBF therefore establishes an important global policy direction, but it does not itself provide a detailed enterprise-level assessment or disclosure methodology.

TNFD Recommendations

The Recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD Recommendations) provide an enterprise-level risk-management and disclosure framework for nature-related dependencies, impacts, risks and opportunities.

The TNFD Recommendations are structured around four pillars:

- Governance
- Strategy
- Risk and impact management
- Metrics and targets

They are supported by additional guidance, including the LEAP approach, which helps organisations identify and assess nature-related issues through four phases: Locate, Evaluate, Assess and Prepare.

For this study, TNFD is particularly relevant because it provides a common analytical language for connecting a company's interactions with nature to potential business implications and corporate decision-making.

GRI 101: Biodiversity 2024

GRI 101: Biodiversity 2024 is the GRI Topic Standard for biodiversity. It focuses on an organisation's impacts on biodiversity and places particular emphasis on location-specific information, the direct drivers of biodiversity loss and impacts across the supply chain. It superseded GRI 304: Biodiversity 2016 and became effective for reporting from 1 January 2026.

Its contribution to this study lies primarily in the depth it provides on biodiversity impacts and the importance it gives to understanding where significant impacts occur.

Science Based Targets Network

The Science Based Targets Network (SBTN) focuses on helping companies move from assessment and prioritisation towards science-based targets and action.

Of particular relevance is SBTN's Action Framework (AR3T):

Avoid → Reduce → Regenerate → Restore → Transform

The framework places avoidance and reduction of pressures before regeneration and restoration, while transformation is intended to support broader systemic change throughout the process rather than function simply as a final step.

For this report, SBTN is therefore most useful as a reference for how nature-related assessment can progressively lead to management action and measurable targets.

ESRS E4 - Biodiversity and Ecosystems

ESRS E4 - Biodiversity and Ecosystems provides a regulatory sustainability-reporting perspective

within the European Sustainability Reporting Standards.

The revised ESRS published in Commission Delegated Regulation (EU) 2026/1563 retain ESRS E4 - Biodiversity and Ecosystems and operate within the broader ESRS principle of double materiality, comprising impact materiality and financial materiality. The revised delegated regulation was published in September 2026 and is due to apply from 1 January 2027. The revised ESRS E4 addresses areas including biodiversity and ecosystems transition planning, policies, actions and resources, targets and metrics.

For this study, its principal value lies in illustrating how biodiversity and ecosystems can be incorporated into a broader regulatory sustainability-reporting architecture based on double materiality.

Table 1. Key international nature and biodiversity frameworks and their relevance to this study

Framework / approach	Primary function	Main contribution relevant to this study
Kunming-Montreal Global Biodiversity Framework - Target 15	Global policy direction	Establishes a global expectation for businesses to assess and disclose biodiversity-related risks, dependencies and impacts
TNFD Recommendations	Nature-related assessment, management and disclosure	Provides DIRO language, the LEAP approach and a governance and risk-management structure
GRI 101: Biodiversity 2024	Biodiversity impact reporting	Provides greater depth on impacts, location-specific information and supply-chain biodiversity impacts
SBTN	Science-based target setting and action	Provides prioritisation, the AR3T Action Framework and a pathway from assessment towards targets and action
ESRS E4 - Biodiversity and Ecosystems	Regulatory sustainability reporting	Provides a double-materiality perspective and integrates biodiversity and ecosystems into a broader sustainability-reporting architecture

These approaches therefore perform different but potentially complementary functions. TNFD is not a substitute for GRI; SBTN is not primarily a disclosure standard; and the GBF does not prescribe a company-level reporting methodology.

4.2 A common logic is emerging

Despite their different purposes, the international approaches reviewed in this study show increasing convergence around several underlying principles.

Dependencies and impacts need to be considered together

A central feature of the emerging nature-related agenda is recognition that the relationship between business and nature operates in two directions.

Companies can affect nature through land-use change, resource extraction, pollution and other pressures. At the same time, business activities can depend on freshwater, soil functions, ecosystem regulation and other ecosystem services.

TNFD makes this relationship explicit by linking dependencies and impacts to resulting risks and opportunities, while GBF Target 15 similarly brings together business risks, dependencies and impacts.

For central SOEs, this two-way perspective is particularly useful because existing environmental-management systems may provide substantial information on corporate impacts while dependencies on ecosystem services are often less systematically organised. The implication is therefore to complement existing impact information with a more systematic understanding of dependencies, rather than replace existing environmental-management processes.

Location is fundamental

Nature-related issues cannot be understood fully through enterprise-wide averages.

The significance of land use, water extraction, habitat disturbance or other pressures depends strongly on where an activity occurs and on the condition and ecological importance of the surrounding area.

TNFD's LEAP approach begins with Locate, reflecting the importance of identifying interfaces with nature across geographies, sectors and value chains. GRI 101 similarly strengthens location-specific reporting on biodiversity impacts.

For central SOEs, this principle connects directly with the domestic spatial-management foundations discussed in Chapter 3. Information relating to the Ecological Conservation Redline, protected areas, territorial spatial planning, environmental impact assessment and project-level ecological conditions can provide important domestic inputs into location-based assessment.

Domestic and international spatial information should therefore be treated as complementary rather than interchangeable.

Nature-related issues extend beyond direct operations

International approaches are also increasingly extending analysis beyond an organisation's own operating sites.

GBF Target 15 explicitly covers operations, supply and value chains and portfolios. TNFD considers nature-related issues across value chains, while GRI 101 strengthens reporting on significant biodiversity impacts associated with supply chains.

This is particularly relevant for central SOEs because their procurement activities and industrial relationships can extend nature-related dependencies and impacts beyond assets directly controlled by the enterprise.

However, value-chain assessment should be proportionate.

Rather than attempting to assess every supplier and activity at the outset, enterprises can prioritise areas where nature-related relevance is likely to be greater, for example:

- significant raw materials;
- sectors with high dependencies on or impacts on nature;
- strategically important supplier categories;
- activities located in ecologically sensitive areas.

Assessment can then expand as information and management capabilities develop.

Disclosure needs to connect with management action

A further point of convergence is the movement from identification and disclosure towards management response and measurable performance.

Disclosure alone does not reduce impacts on nature or manage business dependencies and risks.

Once significant nature-related issues have been identified, companies need to determine how they should respond, which actions should be prioritised, and how progress should be monitored.

SBTN's AR3T Action Framework is particularly relevant in this respect because it reinforces the importance of Avoid and Reduce before relying on Regenerate and Restore, alongside broader Transform actions.

For central SOEs, this provides a useful complement to existing ecological-restoration practices. Restoration remains important, but it should sit within a wider management logic that also considers whether impacts can first be avoided or reduced.

Target setting should nevertheless be progressive. Meaningful quantitative targets generally require sufficient baseline information, appropriate metrics and an understanding of significant dependencies and impacts.

Figure 4 Common Logic Across International Nature-related Approaches



4.3 What each international approach contributes to the proposed framework

The proposed framework does not reproduce any of the international approaches reviewed above. Instead, it draws selectively on concepts and methods that can strengthen nature-related management within the central SOE context.

TNFD: a common language for dependencies, impacts, risks and opportunities

TNFD provides a particularly useful analytical structure for connecting a company's relationship with nature to corporate management.

Three elements are especially relevant.

First, the relationship between dependencies, impacts, risks and opportunities (DIROs) provides a coherent language for understanding both directions of the business-nature relationship.

Second, the LEAP approach provides a structured assessment sequence that begins with location and moves through evaluation of dependencies and impacts, assessment of risks and opportunities, and preparation for response and disclosure.

Third, TNFD's four-pillar structure helps connect nature-related issues with governance, strategy, risk management and performance measurement rather than leaving them solely within environmental-management functions.

The proposed framework draws on these concepts where relevant, but does not treat TNFD as its regulatory or institutional foundation. For example, location assessment within China can make use of domestic spatial information and existing project-management systems, while TNFD contributes a broader analytical structure through which that information can be interpreted.

GRI 101: greater depth on impacts and location-specific biodiversity information

GRI 101 contributes greater analytical depth on the impact side of the business-nature relationship.

Its focus on significant biodiversity impacts, location-specific reporting, direct drivers of biodiversity loss and supply-chain impacts can help strengthen the way enterprises understand and communicate their effects on biodiversity.

This has implications for metrics and monitoring. Existing environmental indicators—such as water consumption, pollution emissions or land occupation—may provide important information about pressures on nature, but they do not

necessarily describe the condition of ecosystems or biodiversity outcomes.

Where biodiversity-related impacts are significant, more advanced management and disclosure may therefore require progressively stronger site-level ecological information and monitoring.

SBTN: connecting assessment with response and targets

SBTN contributes a stronger action-oriented perspective. Its relevance to the proposed framework is not based on an expectation that every central SOE should immediately set science-based targets for nature.

Rather, it provides a useful direction of travel: identify and prioritise significant issues → take appropriate action → progressively establish measurable targets → track performance.

The AR3T Action Framework is particularly relevant for project-intensive sectors because it emphasises avoidance and reduction of pressures before regeneration and restoration.

This complements existing ecological-restoration practices in China by placing restoration within a wider preventive and adaptive management sequence.

ESRS E4: double materiality and integration into corporate reporting

ESRS contributes a different perspective because it sits within a regulatory sustainability-reporting architecture.

Under the revised ESRS, double materiality continues to encompass two dimensions:

- impact materiality;
- financial materiality.

The framework requires consideration of how these two perspectives interact.

For the proposed framework, this is useful because a central SOE may need to consider both: How does the enterprise affect nature? And how could dependencies on nature and nature-related change affect the enterprise?

ESRS E4 also demonstrates how biodiversity and ecosystems can be integrated within a broader sustainability-reporting architecture rather than treated as a standalone environmental topic.

Its direct regulatory applicability to a particular central SOE will depend on that enterprise's

jurisdictional and reporting circumstances. It should therefore be treated as a relevant reference point rather than a general compliance requirement for central SOEs.

GBF: overarching global policy direction

The GBF contributes primarily at the level of international policy direction.

Target 15 signals a clear expectation that large companies and financial institutions should increasingly assess and disclose biodiversity-related risks, dependencies and impacts and take action to reduce negative impacts and biodiversity-related risks.

For the proposed framework, the GBF therefore provides the broader international policy context within which corporate nature-related management and disclosure are developing.

4.4 Interoperability rather than replication

The comparison above leads to an important design principle for this report:

The objective is interoperability, not replication.

A framework for central SOEs does not need to reproduce TNFD, GRI, SBTN or ESRS requirement by requirement. Such an approach would overlook both the different functions of these international approaches and the domestic policy, management and information systems discussed in Chapter 3.

Instead, the underlying management and information architecture should allow relevant information to be used across different reporting and decision-making contexts.

For example:

- information on dependencies, impacts, risks and opportunities can support TNFD-related assessment and communication;
- information on significant biodiversity impacts and locations can support GRI-related reporting;
- information on management actions, baselines and targets can provide a foundation for future application of SBTN approaches; and
- information developed through impact and financial perspectives can support reporting in jurisdictions where ESRS or comparable double-materiality requirements are relevant.

This does not mean that disclosures under the proposed framework are equivalent to compliance with any of these international frameworks or standards.

Each framework has its own scope, definitions, methodologies and reporting requirements. Enterprises remain responsible for determining which requirements apply to their specific regulatory, financing and reporting circumstances.

For central SOEs, interoperability instead means that the enterprise should not need to create a separate nature-management system every time it encounters a different external reporting framework.

The relationship can therefore be summarised as follows: Chinese policy and management foundations provide the domestic operating context. International approaches provide complementary concepts, methodologies and a common language for interoperability and comparability. The proposed framework connects the two.



Chapter 5

A Nature-related Management and Disclosure Framework for China's Central SOEs

The preceding chapters point to a consistent conclusion. China's central SOEs already operate within a substantial environmental and ecological policy and management environment, and many enterprises have accumulated relevant practices through project development, environmental management, ecological restoration, resource management and monitoring. At the same time, these existing systems do not always bring nature-related dependencies, impacts, risks and opportunities together within a coherent enterprise-level management and disclosure structure.

The framework proposed in this chapter responds to this gap. It is designed to help central SOEs organise existing and additional nature-related information more systematically, connect that information with corporate management and decision-making, and progressively strengthen the identification and management of nature-related dependencies, impacts, risks and opportunities.

The framework is not intended to create a parallel management system or reproduce any single international framework. Instead, it brings together three sources of input: China's existing policy and management foundations, practical insights from selected central SOEs, and relevant international frameworks and methodologies. The objective is to combine domestic applicability and implementation feasibility with international interoperability and comparability.

5.1 Framework design and principles

The proposed framework starts from a simple premise: nature-related management and disclosure should, as far as possible, be embedded within systems that enterprises already use.

For many central SOEs, relevant information is already generated through environmental management, environmental impact assessment, project approval, land and water management, ecological restoration, risk management and sustainability reporting. The challenge is therefore not simply to collect more information, but to determine how existing data and processes can be connected to a broader understanding of the enterprise's relationship with nature.

This shifts the starting question from "What additional nature-reporting system should the company build?" to "What does the company already manage and know, what important gaps remain, and how can the two be organised into a coherent management and disclosure structure?"

Existing environmental systems alone, however, are not sufficient. A more integrated nature-related approach requires enterprises to progressively extend their analysis beyond conventional environmental impacts and compliance to include dependencies on ecosystem services, location-specific ecological conditions, nature-related risks and opportunities, links to strategy and investment decisions, relevant supply-chain and overseas considerations, and measurable performance where appropriate.

The framework is guided by five principles.

- 1. Build on China's existing policy and management foundations.** Domestic laws, policies, environmental-management systems and corporate disclosure practices provide the starting point. Existing processes and information should be reused and connected wherever possible, while international concepts and methodologies should be introduced selectively where they add analytical or communication value.
- 2. Apply a double-materiality lens.** Nature-related issues can be significant in two directions: changes in nature can affect the enterprise, while the enterprise can also affect nature through its operations and value chain. The framework therefore considers both financial materiality and impact materiality, helping avoid an approach that is limited either to environmental-impact reporting or to financial-risk reporting.
- 3. Enable differentiated and proportionate application.** Central SOEs vary substantially in sector, location, business model, nature exposure, international presence, reporting context and existing management capability. The framework therefore combines a common structure with different levels of application rather than requiring every enterprise to apply every disclosure element in the same way.
- 4. Prioritise practicality and data availability.** Enterprises should be able to begin with information and management processes that already exist and progressively increase analytical depth. Qualitative screening, existing

project information and available environmental data can provide a credible starting point where more advanced ecological, geospatial or biodiversity information is not yet available.

5. Support progressive improvement over time.

The framework does not assume that all enterprises can immediately undertake comprehensive location-level assessment, quantitative biodiversity measurement or advanced target setting. Enterprises can begin by establishing governance, identifying significant dependencies and impacts and organising existing information, and then progressively strengthen quantitative data, risk analysis, target setting, value-chain assessment and assurance.

These principles are translated into four interconnected modules:

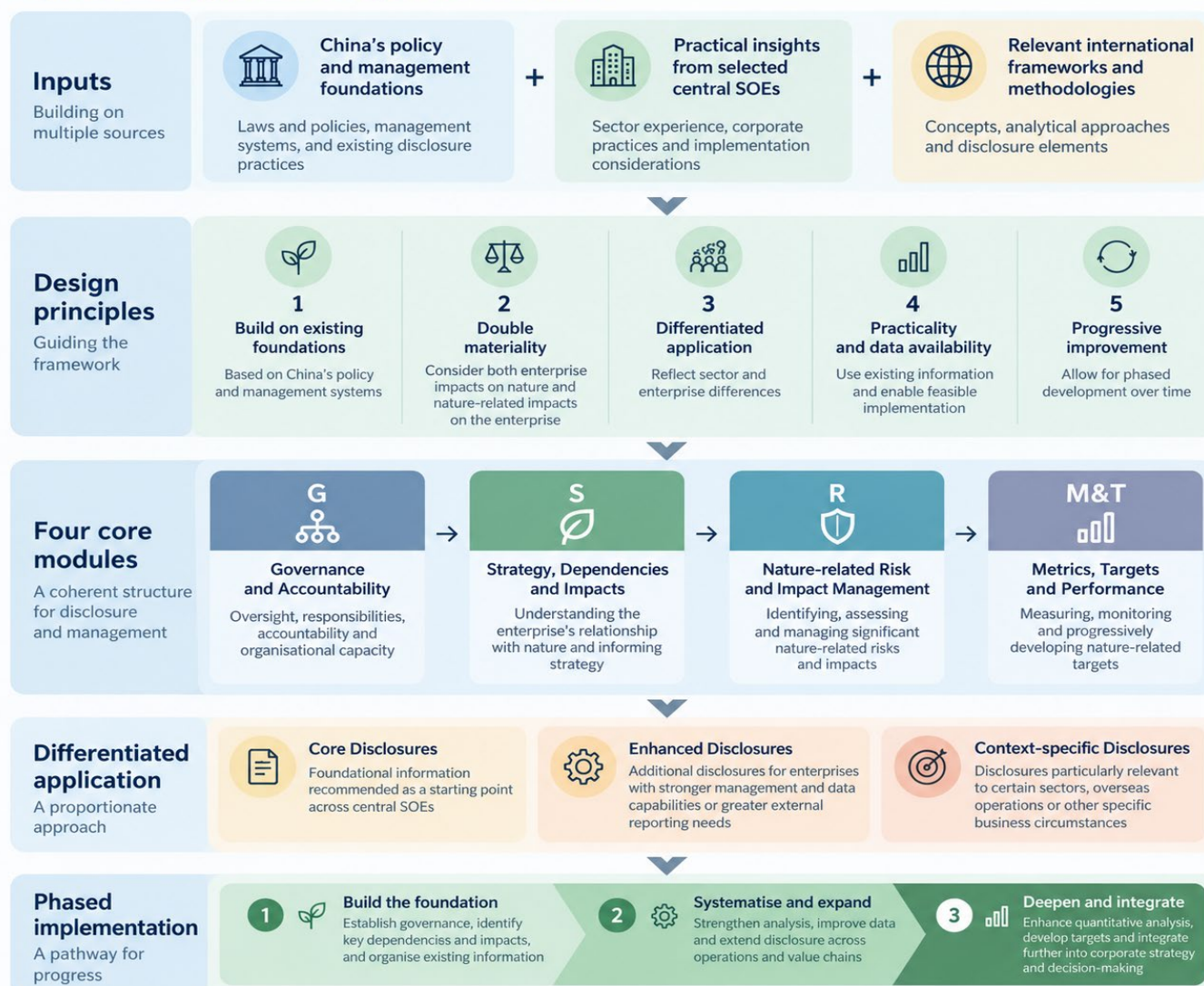
G	Governance and Accountability
S	Strategy, Dependencies and Impacts
R	Nature-related Risk and Impact Management
M&T	Metrics, Targets and Performance

Together, they form a simple management logic:

Governance establishes who is responsible. Strategy, Dependencies and Impacts identifies what matters and where. Risk and Impact Management determines how the enterprise responds. Metrics, Targets and Performance establishes how progress is measured and tracked.

This structure uses terminology that is internationally recognisable while remaining grounded in the policy, management and operational context of China's central SOEs.

Figure 5 Design of the Proposed Framework



5.2 The four core modules

The four modules are intended to operate as a connected management structure rather than four independent reporting categories. Enterprises may begin with relatively qualitative information and progressively develop more quantitative and decision-useful analysis as their data and management capabilities improve.

G – Governance and Accountability

Effective nature-related management begins with clear responsibility.

The Governance and Accountability module focuses on how nature-related issues are overseen, coordinated and integrated into existing corporate structures. It does not assume that every enterprise requires a dedicated nature committee or standalone nature function. The more important question is whether responsibility is clearly assigned and whether significant nature-related issues can enter established governance and decision-making processes.

At board or committee level, enterprises should be able to explain where oversight responsibility sits and what types of nature-related matters may require attention. At management level, a lead function should be identifiable, together with mechanisms for coordination across environmental, engineering, investment, procurement, risk, finance, legal, sustainability and overseas-business functions.

This cross-functional dimension is particularly important because relevant information rarely sits within a single department. Project and location information may be held by engineering teams, environmental data by environmental functions, supplier information by procurement, and enterprise-level risk or financial information elsewhere.

For enterprises in nature-sensitive sectors, governance also needs to connect with the project lifecycle. Nature-related review can be incorporated at relevant stages such as project initiation, feasibility assessment, site selection, design, construction, operations and closure. Training, specialist support, data systems, monitoring capability and, where appropriate, assurance can progressively strengthen the quality of both management and disclosure.

The purpose is not to establish governance structures for disclosure alone. It is to ensure that

nature-related information has a clear route into corporate management and decision-making.

S – Strategy, Dependencies and Impacts

The Strategy, Dependencies and Impacts module forms the analytical core of the framework. It asks two basic questions: what does the enterprise depend on from nature, and how does the enterprise affect nature?

Answering these questions requires enterprises to move beyond company-wide environmental totals and consider the relationship between business activities, ecosystem services and specific locations.

Assessment should begin with location. For domestic operations, enterprises can draw on information generated through territorial spatial planning, environmental impact assessment, natural-resource approval and other project-management processes. Particular attention can be given to activities associated with areas within the Ecological Conservation Redline (ECRL), protected areas, important wetlands and other ecologically sensitive or important areas designated under applicable Chinese laws, policies and spatial-planning systems. For overseas operations, host-country protected-area systems and other relevant ecological information should be considered, while international datasets such as Key Biodiversity Areas can provide complementary information where appropriate.

The objective is not necessarily to disclose detailed location coordinates publicly. It is to understand location internally with sufficient precision to identify where dependencies, impacts and related risks may be more significant.

Enterprises should then identify the ecosystem services on which important business activities depend. These may include provisioning services such as freshwater and regulating and maintenance services such as water regulation, erosion control and flood regulation. Initial screening may be qualitative, with more advanced assessment incorporating geospatial information and quantitative or semi-quantitative methods as capability improves.

The impact side of the analysis considers how operations and, progressively, relevant parts of the value chain affect nature. Depending on sector, significant impacts may arise through land-use change, habitat disturbance, freshwater or marine use, resource extraction, pollution and other

pressures. Existing environmental information provides an important starting point, but the nature-related lens helps enterprises connect individual environmental impacts and assess their broader ecological significance.

Positive actions such as ecological restoration or habitat improvement can also be reported, but they should be distinguished from negative impacts rather than automatically treated as offsets.

Where significant dependencies or impacts are identified, enterprises should progressively consider their implications for strategy, investment and long-term resilience. Scenario analysis can support this process, although the framework does not assume that sophisticated quantitative modelling is necessary at the outset. Qualitative analysis of factors such as ecological regulation, water stress or ecosystem degradation can provide a practical starting point before more advanced approaches are introduced.

R – Nature-related Risk and Impact Management

The Risk and Impact Management module translates the findings from the previous module into management action.

Nature-related risks should, wherever possible, be integrated into existing enterprise risk management rather than managed through a parallel risk architecture. The objective is to establish a consistent route from identified dependencies and impacts into existing processes for risk identification, assessment, ownership, response, monitoring and review.

Relevant risks may include physical risks arising from changes in ecosystems or ecosystem services; transition risks associated with changes in policy, regulation, financing conditions, markets or stakeholder expectations; and systemic risks associated with wider ecosystem degradation and its transmission through economic, social or supply-chain systems.

Not every dependency or impact will result in a material enterprise-level risk. The purpose is therefore not to convert every environmental issue into a corporate risk, but to identify which nature-related relationships have implications significant enough to require management attention.

Risk and impact management should also reflect an appropriate hierarchy of action. Drawing on the SBTN Action Framework, the framework uses the

logic of Avoid, Reduce, Regenerate, Restore and Transform (AR3T). For project-intensive enterprises, avoidance should be considered as early as possible in project planning and site selection. Where impacts cannot reasonably be avoided, reduction should generally be prioritised before regeneration and restoration measures are considered. Transformative action may involve wider changes in technology, sourcing, business models or operating practices.

This is particularly relevant for central SOEs that already undertake ecological restoration. Restoration remains an important management tool, but it should sit within a broader sequence that also considers opportunities to avoid or reduce impacts earlier in the decision process.

Risk management should progressively extend beyond direct operations. For supply chains, enterprises can begin with raw materials, supplier categories or locations associated with potentially significant dependencies on or impacts on nature rather than attempting comprehensive value-chain assessment immediately. For overseas operations, host-country laws and project-specific requirements remain the legal baseline, with lender standards, contractual environmental and social requirements and other relevant international requirements considered where applicable.

M&T – Metrics, Targets and Performance

The Metrics, Targets and Performance module provides the information needed to understand whether management is producing measurable progress.

Nature is multidimensional, and the framework does not assume that every aspect of corporate interaction with nature can be reduced immediately to a single quantitative metric. Quantitative information can instead be developed around areas such as land and habitats, water, pollution and waste, and ecosystem or biodiversity condition where relevant.

These areas deliberately connect nature-related disclosure with data that many enterprises already collect through environmental and project-management systems. Depending on sector and data availability, information may include land occupation and restoration, freshwater withdrawal, waste and pollution, interaction with ecologically sensitive locations and, where capability allows, indicators of ecosystem or biodiversity condition.

Two considerations are particularly important. First, quantitative information should be traceable to an identifiable data source or assessment method, whether direct monitoring, third-party measurement, remote sensing, modelling or another appropriate approach. Second, increasingly sophisticated biodiversity metrics should be supported by correspondingly robust monitoring systems. Where such monitoring does not yet exist, transparent identification of the data gap and a pathway for improvement is preferable to unsupported precision.

Target setting should follow understanding rather than precede it. Enterprises should not be encouraged to adopt quantitative nature targets without an adequate baseline or understanding of their significant dependencies and impacts. At an earlier stage, an enterprise may disclose existing commitments, explain whether quantitative targets have been established and describe how its information base is being strengthened. As management and monitoring improve, targets can become more quantitative, more closely linked to priority dependencies and impacts, and progressively informed by relevant scientific methodologies.

Figure 6 The Four Modules of the Nature-related Management and Disclosure Framework



5.3 From indicators to disclosure

The detailed indicator framework is provided in the accompanying Practical Guide rather than

reproduced in full in this report. To support proportionate application, the indicators are organised into three categories.

Category	Purpose	Typical application
Core Disclosure	Establish a common foundation for nature-related management and disclosure.	Governance, initial identification of dependencies and impacts, key location information, basic risk management and existing environmental metrics.
Enhanced Disclosure	Increase analytical depth, comparability and decision-usefulness.	More detailed dependency assessment, scenario analysis, financial effects, value-chain information, advanced metrics and target methodologies.
Context-specific Disclosure	Address additional relevance arising from sector or business circumstances.	Nature-sensitive activities, overseas operations, particular project or financing requirements.

Core Disclosure means foundational within this framework; it does not imply a statutory disclosure obligation unless the relevant information is separately required under applicable law or regulation.

This structure allows enterprises to begin with a common foundation while increasing the depth of disclosure in response to nature relevance, business context, external expectations and management capability. It also allows the Practical Guide to remain

useful as domestic regulation and international practice continue to evolve.

5.4 Differentiated application

The depth of application should reflect the enterprise's actual circumstances rather than a fixed institutional category.

For all central SOEs, the domestic policy and management context described in Chapter 3 provides the starting point. Governance, initial identification of dependencies and impacts, location-based screening, integration with existing risk processes and use of available environmental metrics can establish a common foundation.

Enterprises with significant capital-market exposure, international investor engagement or financing requirements may require greater analytical depth and international comparability. This can include more developed scenario analysis, assessment of financial effects, broader value-chain coverage, quantitative targets and stronger interoperability with external reporting frameworks.

Enterprises with substantial overseas operations face an additional location- and jurisdiction-specific dimension. Applicable host-country laws remain the primary legal baseline, while lender standards, contractual environmental and social requirements and market-specific disclosure rules may introduce additional expectations. A group-level framework can provide a common logic for identifying and organising nature-related issues, but it cannot replace jurisdiction-specific compliance.

Nature exposure remains cross-cutting across all of these contexts. A domestically focused mining, hydropower or infrastructure enterprise may require deeper nature-related management than an internationally active enterprise whose activities have relatively limited direct interaction with ecosystems.

The appropriate depth of application should therefore reflect a combination of nature relevance, business context, external reporting requirements and management maturity.

5.5 A phased implementation pathway

The framework is intended to support progressive implementation rather than immediate completeness. Enterprises may move through three broad stages, with the pace and depth determined by their starting point, nature exposure and available management capability.

Stage 1 – Build the Foundation focuses on establishing governance, identifying significant dependencies and impacts, screening important locations and organising existing information. Initial disclosure may remain largely qualitative. The objective is to understand the enterprise's starting point, establish responsibilities and identify important information gaps.

Stage 2 – Systematise and Expand strengthens consistency and analytical depth. Enterprises can develop more systematic quantitative datasets, integrate nature-related risks more clearly into enterprise risk management, begin assessing priority value-chain exposures, undertake qualitative or semi-quantitative scenario analysis, and establish an initial set of measurable targets where sufficient baselines exist.

Stage 3 – Deepen and Integrate embeds nature-related information more fully into recurring corporate-management processes. Enterprises can strengthen quantitative assessment, improve target methodologies, track relevant metrics systematically, connect nature considerations more directly with strategy and investment decisions, and introduce independent assurance where appropriate.

The three stages are indicative rather than prescriptive. Enterprises may progress at different speeds depending on their nature-related exposure, existing management systems, data availability and reporting context.

5.6 What the framework is intended to achieve

The framework is intended to make nature-related disclosure useful as a management process, rather than simply increase the volume of sustainability reporting.

It begins with systems and information that already exist, introduces a more systematic understanding of dependencies and impacts, connects significant findings to enterprise risk and decision-making, and progressively strengthens metrics, targets and performance tracking.

The intended progression is therefore:

Understand what already exists → identify where and how the enterprise interacts with and depends on nature → determine which issues require attention → integrate them into management and decision-making → measure and improve performance → communicate relevant information in an internationally understandable way.

This also defines the relationship between the main report and the accompanying Practical Guide. The report establishes the management logic and overall framework architecture; the Practical Guide provides the detailed indicators, application guidance and data considerations required to put the framework into practice.



Chapter 6

From Framework to Implementation

A framework is only useful if it can be translated into existing corporate processes. For central SOEs, implementation is unlikely to depend on creating an entirely new set of institutions or information systems. As the preceding chapters have shown, much of the underlying infrastructure already exists across environmental management, project development, risk management, sustainability reporting and specialist functions.

The implementation challenge is therefore one of integration: connecting existing systems, establishing clearer ownership of nature-related information, determining appropriate disclosure boundaries, and progressively improving the consistency and usability of the resulting information.

This chapter focuses on five practical conditions that can support implementation of the proposed framework: making use of existing systems and data; managing sensitive information appropriately; building interoperability across reporting contexts; strengthening the potential use of nature-related information in financial decision-making; and developing more sector-specific applications over time.

6.1 Start with existing systems and data

The most practical route to implementation is to begin with systems that enterprises already use.

Nature-related management frequently draws on information generated for other purposes. Environmental impact assessments may contain information on location, ecological sensitivity, affected habitats and mitigation measures. Environmental-management systems collect data on water, pollution, waste, incidents and compliance. Project-development processes contain information on site selection, land use and ecological requirements. Restoration programmes may provide information on affected areas, management actions and monitoring. Enterprise risk-management systems already provide established processes for identifying, escalating and reviewing significant risks.

Rather than creating a separate nature-related database from the outset, enterprises can first map where relevant information already sits, assess its quality and granularity, and identify the gaps that prevent it from being used for more integrated nature-related assessment.

This approach can reduce unnecessary duplication while also moving nature-related information closer to business decision-making. If reliable water, land or project information already exists, the priority should be to make better use of those systems rather than establish another parallel collection process.

An early implementation step can therefore be an internal information-mapping exercise that establishes what information already exists, where it is held, who is responsible for it, at what geographic and organisational level it is available, and what additional information is needed to understand significant dependencies, impacts and risks.

The objective is to make disclosure the output of an underlying management process, rather than an isolated reporting exercise.

6.2 Manage disclosure boundaries and sensitive information

Nature-related assessment can require highly location-specific information. Detailed data may relate to infrastructure, strategic resources, operating sites or ecologically sensitive locations. Some information may also be commercially sensitive or subject to applicable data-security, confidentiality or other legal requirements.

This creates an important distinction between the information required for effective internal management and the level of detail appropriate for public disclosure.

A practical disclosure process can distinguish among four types of information.

Public disclosure can be used where information is not sensitive and provides clear decision-useful insight. This may include enterprise-level or appropriately aggregated information on land use, water use, ecological restoration, biodiversity-related activities and environmental performance.

Aggregated or anonymised disclosure can be used where underlying asset-level or spatial information is sensitive but broader information remains useful. Companies may, for example, report information by region, watershed or business segment, or disclose the number of facilities interacting with designated ecologically sensitive areas without publishing individual coordinates.

Targeted reporting or internal management may be appropriate where detailed information is necessary for internal assessment but unsuitable for unrestricted publication. Such information can

remain within corporate systems or, where applicable, be provided to regulators, lenders or other authorised parties through appropriate channels.

Information subject to legal, confidentiality or other applicable restrictions should not be publicly disclosed solely because it is relevant to nature-related assessment.

The central principle is that non-public information should not become unmanaged information. A company may require detailed spatial or ecological data internally in order to identify and manage nature-related issues even where the same level of detail is not appropriate for external disclosure.

The review should consider the purpose of the information, its source, sensitivity, level of aggregation, applicable restrictions and intended audience before publication.

This approach helps avoid two opposite outcomes: disclosing unnecessarily sensitive information, or using sensitivity concerns as a reason to provide no meaningful information at all.

6.3 Build interoperability across reporting contexts

Central SOEs may need to communicate nature-related information to a range of audiences, including domestic regulators, investors, lenders, business partners and stakeholders in overseas markets. These audiences may use different terminology, methodologies and disclosure frameworks.

Maintaining entirely separate nature-management systems for each external framework would create unnecessary complexity. A more practical approach is to develop a common internal information base and progressively map relevant information into different reporting structures.

Domestic information on ecological sensitivity, environmental impact assessment and restoration can, for example, contribute to internationally understandable information on location, impacts and management response. Information on corporate dependencies and related business risks can be expressed through internationally recognisable dependencies, impacts, risks and opportunities terminology where this improves communication.

The purpose is mapping rather than replacement. In practice, this means interpreting information

generated through existing Chinese management systems through a nature-related lens and, where useful, presenting it in terminology that can be understood across different reporting contexts. For example, spatial controls and environmental impact assessment can inform disclosures on location, impacts and management response, while existing risk-management processes can provide a basis for communicating nature-related risks and their transmission pathways.

Interoperability should not be confused with equivalence. Areas within the ECRL are not equivalent to Key Biodiversity Areas; Chinese environmental disclosure does not automatically constitute TNFD reporting; and use of the proposed framework does not in itself demonstrate compliance with another standard or regulatory regime.

Interoperability instead means that information generated through domestic management systems can be organised and communicated in ways that are understandable and reusable across different contexts, reducing unnecessary duplication while preserving the purpose and meaning of the underlying domestic systems.

This is particularly relevant for central SOEs with overseas operations, international financing or global supply-chain relationships.

6.4 Strengthen the link with financial decision-making

Nature-related information can have uses beyond sustainability reporting.

Information on dependencies, impacts, ecologically sensitive locations, management responses and performance may increasingly support environmental and social due diligence, risk assessment and financing decisions. The underlying study identifies a gap between project-based green or biodiversity finance classifications and enterprise-level information on nature-related dependencies, impacts and management quality. More consistent corporate information could help narrow this gap over time.

The relationship should nevertheless develop progressively. At an earlier stage, nature-related information may primarily support qualitative risk identification and due diligence. As data quality, traceability and comparability improve, quantitative indicators and targets may become more useful in financing discussions, performance-linked

arrangements or biodiversity-related financial applications.

The framework is therefore not designed around financing requirements. The relationship is more fundamental: stronger management can generate better information, and better information can broaden the range of decisions in which nature-related considerations can be used.

This provides an additional reason to strengthen data quality and traceability even where an enterprise has no immediate nature-related financing application.

6.5 Develop sector-specific applications

A common enterprise-level framework provides consistency, but it cannot capture every sector-specific relationship with nature.

Central SOEs operate across sectors with substantially different dependencies, impacts and management requirements. Mining may place particular emphasis on land disturbance, water, closure and restoration. Hydropower may require greater attention to river systems, aquatic ecosystems and ecological flows. Infrastructure projects may place greater emphasis on site selection, habitat fragmentation and linear-project impacts. Manufacturing may face significant resource and supply-chain dependencies, while financial institutions may have relatively limited direct operational impacts but greater exposure through financing and investment activities.

A useful longer-term structure is therefore:

one common framework + sector-specific application guidance

The common framework establishes a consistent management language and overall architecture. Sector-specific guidance can then provide greater detail on priority dependencies and impacts, location considerations, relevant indicators, data sources, project or value-chain issues and appropriate management responses.

This approach can improve relevance without abandoning comparability. It also allows sector guidance to develop progressively as enterprise experience, scientific methodologies and data availability improve.

6.6 Implementation as a process of integration

The framework proposed in this report is not intended to increase disclosure for its own sake. Its value lies in helping enterprises connect information that is often dispersed across environmental management, project development, risk systems and sustainability reporting, and use that information more systematically in corporate decision-making.

In practice, implementation depends on a small number of connected conditions. Existing systems and data provide the starting point. Appropriate disclosure boundaries allow enterprises to manage sensitive information responsibly. Interoperability enables domestic practices to be communicated across different reporting contexts. Better data can support wider applications, including financial decision-making, while sector-specific guidance can improve practical relevance.

Together, these elements support a gradual shift from fragmented environmental information towards more integrated nature-related management.

The intended direction is not to create a separate nature function operating alongside the rest of the enterprise. It is to progressively embed relevant nature considerations into governance, strategy, investment, project development, risk management and operational decision-making.

As policies, methodologies and corporate practices continue to evolve, the framework and accompanying Practical Guide will also need to develop. The objective is therefore not a fixed endpoint, but a practical structure that enables central SOEs to build on existing foundations, strengthen management over time and communicate nature-related information in a more consistent and internationally understandable way.

Annex A. Nature-related Disclosure Indicator Framework

Module	Code	Indicator	Disclosure Category
G – Governance and Accountability	G-01	Formal basis for board or committee oversight of nature-related issues	Core Disclosure
	G-02	Triggers and frequency for board consideration of nature-related issues	Core Disclosure
	G-03	Nature- or ecology-related expertise among board members	Enhanced Disclosure
	G-04	Significant nature-related matters considered by the board during the reporting period	Enhanced Disclosure
	G-05	Nature-related performance metrics and weightings linked to executive remuneration	Enhanced Disclosure
	G-06	Nature- or ecology-related indicators included in executive performance assessment	Core Disclosure
	G-07	Lead function for nature-related issues and its responsibilities	Core Disclosure
	G-08	Cross-functional coordination mechanism for nature-related information	Enhanced Disclosure
	G-09	Integration of nature-related review requirements across the project lifecycle	Context-specific Disclosure
	G-10	Coverage of nature-related training, including target groups, content and frequency	Enhanced Disclosure
	G-11	Use of external specialist support for nature-related management	Enhanced Disclosure
	G-12	Progress in developing systems for nature-related data collection	Enhanced Disclosure
	G-13	Independent verification or assurance of nature-related disclosures	Context-specific Disclosure
	G-14	Annual progress and forward plan for nature-related governance capability	Core Disclosure
	G-15	Current status and development plan for nature-related monitoring systems	Core Disclosure

Module	Code	Indicator	Disclosure Category
S – Strategy, Dependencies and Impacts	S-01	Identification of operations involving ecologically sensitive or important areas	Core Disclosure
	S-02	Spatial relationship between overseas operations, protected areas and Key Biodiversity Areas (KBAs)	Context-specific Disclosure
	S-03	Identification of ecosystem services on which major business activities depend	Core Disclosure
	S-04	Assessment of the degree of dependency on ecosystem services	Enhanced Disclosure
	S-05	Identification of significant negative impacts of major business activities on nature	Core Disclosure
	S-06	Identification of positive contributions to nature associated with major business activities	Enhanced Disclosure
	S-07	Geographic distribution and scale of significant impacts on nature	Enhanced Disclosure
	S-08	Management of operations involving ecologically sensitive or important areas	Core Disclosure
	S-09	Overview of nature-related dependencies and impacts at priority points in the supply chain	Enhanced Disclosure
	S-10	Scenario-analysis methodology and key findings	Enhanced Disclosure
	S-11	Implications of significant nature-related dependencies, impacts, risks and opportunities for business strategy and financial planning	Enhanced Disclosure
	S-12	Frequency of dependency and impact assessments and significant changes during the reporting period	Core Disclosure
	S-13	Community relations and stakeholder engagement associated with overseas projects	Context-specific Disclosure
	S-14	Access and benefit-sharing (ABS) relating to genetic resources and associated traditional knowledge	Context-specific Disclosure

Module	Code	Indicator	Disclosure Category
R – Nature-related Risk and Impact Management	R-01	Methodology for identifying nature-related risks and key risk types identified during the reporting period	Core Disclosure
	R-02	Description of significant physical risks, including risk drivers, transmission pathways and affected business areas	Core Disclosure
	R-03	Description of significant transition risks, including policy, market and reputational dimensions	Core Disclosure
	R-04	Integration of nature-related risks into the enterprise risk management (ERM) framework	Core Disclosure
	R-05	Assessment of the financial effects of significant nature-related risks and opportunities	Enhanced Disclosure
	R-06	Description of management actions across the SBTN Action Framework (AR3T)	Core Disclosure
	R-07	Scale, location and effectiveness of ecological restoration and compensation projects	Core Disclosure
	R-08	Identification of areas of high nature-related risk among major supplier categories	Enhanced Disclosure
	R-09	Integration of nature-related requirements into supplier assessment processes	Enhanced Disclosure
	R-10	Nature-related management standards and implementation for overseas projects	Context-specific Disclosure
	R-11	Response, remediation and management improvements following significant nature-related incidents during the reporting period	Enhanced Disclosure
	R-12	Annual review of the nature-related risk-management mechanism	Enhanced Disclosure

Module	Code	Indicator	Disclosure Category
M&T – Metrics, Targets and Performance	M-01	Total land area occupied by direct operations (ha), by land-use type	Core Disclosure
	M-02	Additional land area occupied during the reporting period (ha)	Core Disclosure
	M-03	Land area subject to completed ecological restoration or reclamation during the reporting period (ha)	Core Disclosure
	M-04	Operational land area involving ecologically sensitive or important areas	Core Disclosure
	M-05	Operational land area within or involving protected areas or Key Biodiversity Areas (KBAs) outside China	Context-specific Disclosure
	M-06	Area of habitat conversion resulting from operational activities	Enhanced Disclosure
	M-07	Total freshwater withdrawal during the reporting period, by source	Core Disclosure
	M-08	Total wastewater discharge and concentrations of key pollutants during the reporting period	Core Disclosure
	M-09	Water withdrawal by operations located in areas with high water stress	Enhanced Disclosure
	M-10	Wastewater reuse rate	Enhanced Disclosure
	M-11	Releases of key hazardous pollutants and their spatial relationship with ecologically sensitive or important areas	Core Disclosure
	M-12	Solid waste generated, treatment or disposal methods, and proportion subject to safe treatment or disposal	Core Disclosure
	M-13	Number and key consequences of significant nature-related incidents during the reporting period	Core Disclosure
	M-14	Assessment of ecosystem condition and priority species status in key operating areas	Enhanced Disclosure
	M-15	Overall assessment of biodiversity conservation and nature-related management effectiveness	Enhanced Disclosure

Module	Code	Indicator	Disclosure Category
	M-16	Procurement volume, sources and sustainable management of raw materials or commodities associated with high nature-related risk	Enhanced Disclosure
	T-01	Sources and collection methods for monitoring data used in disclosed indicators	Core Disclosure
	T-02	List of quantitative nature-related targets, including target description, baseline year and target year	Core Disclosure
	T-03	Methodology and scientific basis used to set nature-related targets	Enhanced Disclosure
	T-04	Progress against nature-related targets during the reporting period	Core Disclosure
	T-05	Analysis of reasons for unmet targets and explanation of any adjustments	Core Disclosure
	T-06	Relationship and synergies between nature-related and climate targets	Enhanced Disclosure

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