



**Research Report on the Current Situation  
of Biodiversity Management and Disclosure  
of Listed Companies in New Energy Industry**



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Chapter 1 Background

In the context of increasingly severe global climate change, the new energy industry, as a key force to achieve carbon emission reduction and alleviate the climate crisis, is developing at an unprecedented speed. The extensive development and utilization of new energy sources such as solar energy, wind energy, and hydropower not only injects strong impetus into the transformation of the energy structure but also serves as the core path for countries around the world to move towards the "dual carbon" goal. However, the impact of new energy projects on biodiversity during construction and operation has gradually attracted high attention from the international community. When selecting sites for wind, solar, and hydroelectric projects, some will be built in areas with rich natural ecosystems, such as grasslands, forests, and oceans. Activities such as land occupation, vegetation destruction, and water body interference during project implementation may disrupt local ecological balance, threaten species survival and reproduction, and thus destroy biodiversity.

The international community has increasingly stringent requirements for corporate biodiversity management and disclosure. The Taskforce on Nature-related Financial Disclosures (TNFD) released a recommended disclosure framework in September 2023, aiming to guide companies to identify, assess, and disclose nature-related risks and opportunities, enabling financial markets to more accurately price natural risks and drive capital flows towards sustainable development areas. The Global Reporting Initiative (GRI) has developed biodiversity disclosure standards that provide comprehensive and standardized guidance for corporate biodiversity information disclosure, covering all key aspects of biodiversity. The International Sustainability Standards Board (ISSB) has also included biodiversity and ecosystems as key research focuses for ESG disclosure standards over the next two years, highlighting the growing importance of biodiversity in the international sustainable development disclosure system.

Biodiversity conservation is also highly valued domestically. The A-share disclosure guidelines have clearly included biodiversity conservation in the scope of disclosure, which means that listed companies need to disclose to investors and the public the company's work on biodiversity conservation, including management measures, target setting and effectiveness information. On January 18, 2024, the Ministry of Ecology and Environment released the "China Biodiversity Conservation Strategy and Action Plan (2023-2030)", which lists "co-governance of biodiversity and climate change" as a priority action, highlighting the indispensable role of biodiversity conservation in the development of new energy and the promotion of the "dual carbon" goal.

Although the importance of biodiversity conservation has been widely recognized, the current situation of biodiversity management and disclosure in the new energy industry is not optimistic. From the perspective of penalty cases, the destruction of biodiversity is common. Shanghai Qingyue often exposes the problems of new energy enterprises destroying forests, wetlands, grasslands, etc. in the regular collection of environmental protection-related penalties. For example, wind and solar power companies illegally occupy the sea, which not only destroys the integrity of the marine ecosystem but also affects the habitat and breeding environment of marine organisms; wind power destroys forests, directly damaging the biodiversity of forest ecosystems and interfering with the living space of many animals and plants. These cases reflect that some new energy enterprises lack sufficient consideration for biodiversity conservation in the process of project construction and operation, and fail to strictly abide by relevant laws and regulations.

In terms of disclosure, companies have mixed performance. Some companies do not disclose enough information related to biodiversity. For example, a domestic power listed company's 2023 ESG report lists biodiversity protection as a low priority in the materiality matrix, and the content of the report is too brief on this issue, without setting appropriate weight, which cannot fully demonstrate the company's work and achievements in biodiversity protection. This cannot meet the needs of stakeholders for corporate biodiversity information, nor is it conducive to the company itself to timely identify and solve problems existing in biodiversity protection work.

In the context of vigorously developing new energy and actively promoting the "double carbon" goal, it is crucial to strengthen biodiversity management and disclosure of new energy enterprises. This is not only an inherent requirement for enterprises to fulfill their social responsibilities and achieve sustainable development, but also a natural choice to adapt to international and domestic regulatory trends and meet the expectations of stakeholders. In-depth research on the current situation of biodiversity management and disclosure of new energy enterprises, finding problems and putting forward targeted suggestions, has far-reaching significance for promoting the coordinated development of new energy industry and biodiversity conservation.



## Chapter 2 Survey List and Methodology

### I. List of Enterprises

A total of 42 listed companies related to the new energy industry were selected for this analysis, including 36 domestic and 6 foreign companies. The selection was mainly based on the type of business and the representativeness of the country and region.

Among the 36 domestic enterprises, only one enterprise, Topray Solar, has not released its ESG report for 2023. It is counted as "not disclosed". The reports of domestic new energy listed enterprises come from the reports publicly released by each exchange, which can be seen in the Qingyue ESG Report Database (<https://esg.epmap.org/reports>). The reports of foreign new energy listed enterprises come from their official website disclosure.

The detailed list is as follows (in no particular order):

Company Name	Stock Code	Exchange	Main Business/Power Type
China Longyuan Power Co., Ltd.	{001289}	SZSE	Wind (main,77.98%), photovoltaic power
LONGi Green Energy Technology Co., Ltd.	{601012}	SHSE	Photoelectric
TBEA Co., Ltd.	{600089}	SHSE	Wind, Photovoltaic
Jinko Solar Co., Ltd.	{688223}	SHSE	Photoelectric
Trina Solar Co., Ltd.	{688599}	SHSE	Wind, Photovoltaic
Tongwei Co., Ltd.	{600438}	SHSE	Photoelectric
China Three Gorges Renewables (Group) Co.,Ltd.	{600905}	SHSE	Wind (main), Photovoltaic
Xinjiang Goldwind Science And Technology Co., Ltd.	{002202}	SZSE	Wind
Huaneng Power International, Inc.	{600011}	SHSE	Wind, Photovoltaic
Datang Huayin Electric Power Co.,Ltd.	{600744}	SHSE	photovoltaic, Wind, and hydropower
Shenenergy Company Limited	{600642}	SHSE	Wind, Photovoltaic
Datang International Power Generation Co., Ltd.	{601991}	SHSE	Wind, Photovoltaic
Guangdong Electric Power Development Co.,Ltd.	{000539}	SZSE	Wind, hydropower, and Photovoltaic (16.12% in total)
CHN ENERGY CHANGYUAN ELECTRIC POWER CO., LTD.	{000966}	SZSE	Hydropower, Photovoltaic, and Wind
SHANGHAI ELECTRIC POWER CO.,LTD	{600021}	SHSE	photovoltaic and Wind
Guangzhou Development Group Incorporated	{600098}	SHSE	Wind, Photovoltaic
GD POWER DEVELOPMENT CO., LTD.	{600795}	SHSE	Hydropower, Wind, and Photovoltaic
Power Assets Holdings Limited	{00006}	HKEX	photovoltaic and Wind
BEIJING JINGNENG POWER CO.,LTD.	{600578}	SHSE	Photoelectric

Company Name	Stock Code	Exchange	Main Business/Power Type
Beijing Jingneng Clean Energy Co., Limited	{00579}	HKEX	Wind, Photovoltaic
Fujian Funeng Co.,Ltd.	{600483}	SHSE	Wind (main), Photovoltaic
China Resources Power Holdings Company Limited	{00836}	HKEX	Wind, Photovoltaic, and hydropower (less)
CK Infrastructure Holdings Limited	{01038}	HKEX	Wind (main), Photovoltaic
CHINA ENERGY ENGINEERING CORPORATION LIMITED	{601868}	SHSE	Wind, Photovoltaic
Power Construction Corporation of China, Ltd (POWERCHINA Ltd)	{601669}	SHSE	photovoltaic, hydroelectric and Wind
Sungrow Power Supply Co., Ltd.	{300274}	SZSE	photovoltaic and Wind
Zhejiang Chint Electrics Co., Ltd.	{601877}	SHSE	Photoelectric
Guangxi Guiguan Electric Power Co.,Ltd.	{600236}	SHSE	Hydropower (74%), Wind (6.5%), Photovoltaic (2%)
Gepic Energy Development Co., Ltd.	{000791}	SZSE	Hydropower (48%), Wind (31%), Photovoltaic (20.8%)
CGN New Energy Holdings Co., Ltd.	{01811}	HKEX	Wind, Photovoltaic, and hydropower
Yunnan Energy Investment Co.,Ltd.	{002053}	SZSE	Wind, Photovoltaic
China Suntien Green Energy Corporation Limited	{600956}	SHSE	Wind, Photovoltaic
CECEP Wind-Power Corporation	{601016}	SHSE	Wind
Zhejiang Provincial New Energy Investment Group Co., Ltd.	{600032}	SHSE	photovoltaic, Wind, and hydropower
Jiangsu New Energy Development Co., Ltd.	{603693}	SHSE	Wind (main), Photovoltaic
Risen Energy Co., Ltd.	{300118}	SZSE	Photoelectric
Shenzhen Topraysolar Co., Ltd.	{002218}	SZSE	Photoelectric

Country	Company Abbreviation	Stock Code	Exchange	Main Business
United States	NextEra Energy, Inc.	{NEE}	NYSE	Photovoltaic, Wind
Brazil	Companhia Energética de Minas Gerais - CEMIG	{CIG}	NYSE	Hydropower,Wind,and Photovoltaic
United States	Duke Energy Corporation	{DUK}	NYSE	Wind, Photovoltaic
France	ELECTRICITÉ DE FRANCE	{EDF}	Paris Bourse	Wind, Photovoltaic
United States	GE Vernova Inc.	{GEV}	NYSE	Wind
Italy	Enel Chile S.A.	{ENEL}	MIL	Wind,Photovoltaic,and Hydropower

## II. Research indicators

The report observes the disclosure of biodiversity management and protection-related indicators in the ESG reports of domestic and foreign new energy listed companies in 2023 from three indicators: MSCI rating results, biodiversity conservation issue disclosure, and case disclosure. Among them, issue disclosure is divided into governance, strategy, risk management, indicators, and targets.

The main tool used is the Qingyue ESG Report AI Data Extraction Platform (<https://esg.epmap.org/dig>) to extract and analyze data from the ESG reports of companies on the list, combined with manual verification and proofreading.

### (1) MSCI rating results

Check the latest results of related companies in MSCI ratings, especially their performance on biodiversity conservation issues.

### (2) Disclosure of biodiversity conservation issues

1. Governance: Require companies to clearly disclose the ESG management structure, and observe whether it mentions the establishment of biodiversity protection teams/departments, etc.

2. Strategy: Evaluation from the two dimensions of issue identification and management.

Topic identification requires companies to clearly disclose the topic of "biodiversity conservation" or "ecological conservation", and observe the level of this topic.

Topic management, from the three perspectives of policy, identification and measures, to judge the disclosure situation of enterprises. "Policy" requires enterprises to clearly disclose the laws and regulations that need to be followed or the management methods established for carrying out biodiversity conservation work; "Identification" requires enterprises to clearly disclose the possible damage to biodiversity in the early, middle and late stages of project construction; "Measures" require enterprises to clearly disclose specific actions for preventing or repairing the risk of biodiversity destruction.

3. Risk Management: The company is required to clearly disclose the risk management process system, and observe whether it mentions the topic of biodiversity risk identification and management.

4. Indicators and targets: Companies are required to clearly disclose the indicators and targets for managing biodiversity conservation work, especially quantitative indicators.

### (3) Case disclosure

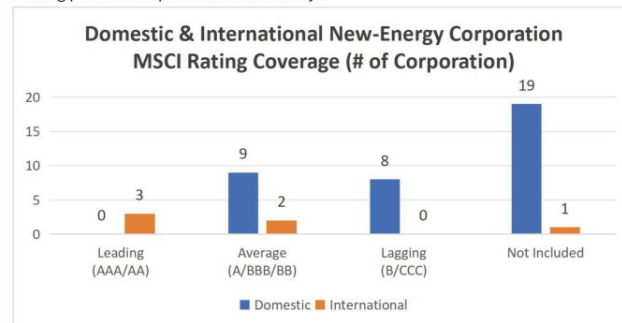
It requires enterprises to clearly disclose the specific work and cases of biodiversity conservation in this year.

## Chapter 3: Current Status of Biodiversity Management and Disclosure

### I. MSCI rating results

There are 9 domestic companies with average ratings (A/BBB/BB), 8 with poor ratings (B/CCC) and 19 not included in the rating. Overall, among the 36 domestic companies, most of them were not included in the rating; those included in the rating had low ratings, and their overall performance was average.

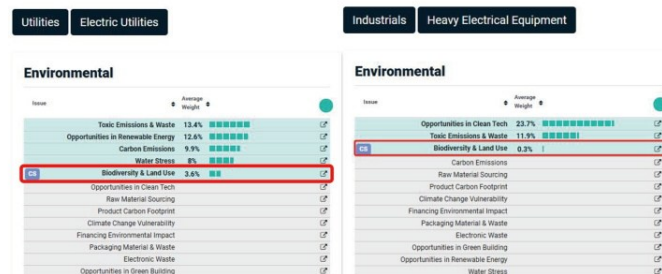
Three companies are rated as AAA/AA, two companies are rated as A/BBB/BB, and one company is not included in the rating. The performance in MSCI rating is good, which is also related to the fact that we have selected the leading power enterprises in each country.



Among domestic new energy companies, Power Assets Holdings (00006.HK) has an MSCI rating of A, the only company that reaches the middle-upper level. However, its rating is still lower than foreign leading companies such as Enel Group (AA). Enel Group disclosed in detail in the rating the process of incorporating biodiversity risks into investment decisions, while domestic companies generally lack such systematic planning.

Domestic enterprises need to draw on the experience of Enel Group, integrate biodiversity conservation into strategic goals in depth, and improve the credibility of disclosure through quantitative indicators.

The importance of MSCI ratings for identifying different industries also varies. The importance of the "biodiversity and land use" issue is low in the weight of utilities - electricity and power equipment, and is not involved in the semiconductor industry. In reality, domestic new energy-related industries are distributed in related industry classifications. It can be seen that from the perspective of capital investment, the importance of biodiversity conservation issues in these enterprises has not been given enough attention.

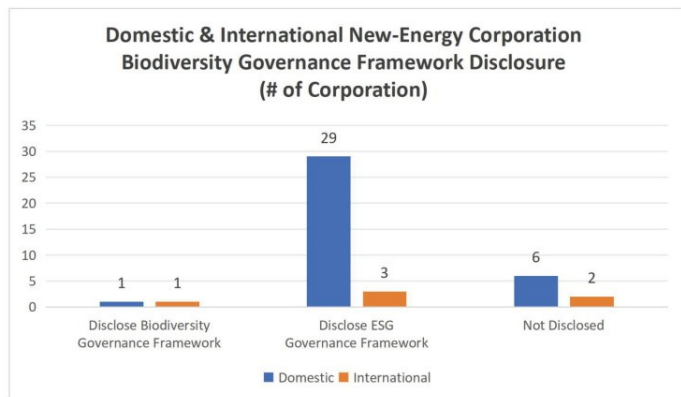


## II. Disclosure of Biodiversity Issues

### (i) Governance

Most of the domestic enterprises have disclosed their ESG governance structure, and only a few have not disclosed it, indicating that ESG management and disclosure work in China has been widely valued; but only one enterprise mentioned that the company has set up a special working group for biodiversity conservation, which shows that biodiversity conservation work has not yet been widely and systematically managed, and there is still a large room for improvement in terms of attention.

The disclosure situation of foreign enterprises is also similar. Most enterprises have disclosed the ESG governance structure, but only one enterprise has disclosed the biodiversity governance structure.



Among domestic enterprises, Suntien Green Energy has the best disclosure of this indicator. It clearly mentions that it has established a leading group for ecological and environmental protection work and clarified the management structure and responsibilities at all levels for biodiversity conservation work. Taking DUKE Energy as an example of the best disclosure among foreign enterprises, it has established an Energy Natural Resources Conservation Strategy Team (NRCST) to manage biodiversity conservation work. It can be seen that in terms of the disclosure of biodiversity governance indicators, both domestic and foreign leading enterprises can achieve a good level.

### 生物多样性保护

新天绿色能源有限公司充分认识到生物多样性保护的重要性和必要性，严格遵守《中华人民共和国环境保护法》《建设项目生态环境保护管理条例》等法律法规，制定《生态环境保护管理办法》《新能源公司生态环境保护管理办法》等内部管理规范。2023年，新能源公司制定了《工程建设水土保持管理办法》，进一步完善了生物多样性保护制度体系。

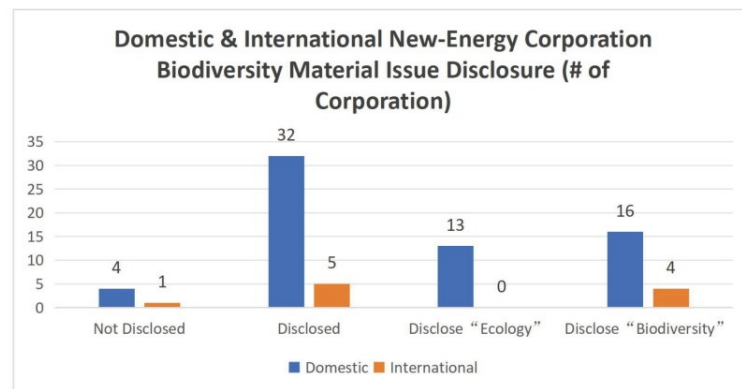
新天已设立**生态环境保护工作领导小组**，明确生物多样性保护工作的管理架构和各级职责，稳步推进生物多样性保护工作，达成生态环境保护控制与管理目标。生态环境保护工作领导小组组长由公司总裁担任，并在各管理单元设置兼职环保管理层层落实管理要求。

### (ii) Strategy

#### 1. Issue Identification

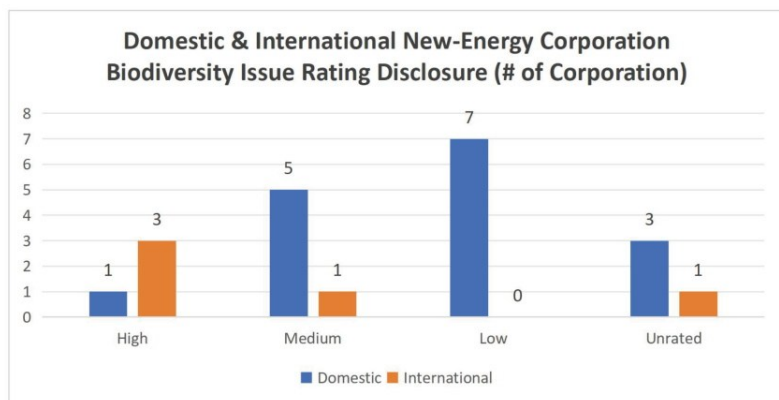
There are 4 domestic enterprises that have not disclosed the analysis of substantive issues, and 32 enterprises that have disclosed. The overall disclosure ratio is relatively high, indicating that domestic enterprises generally pay attention to and practice the analysis of substantive issues. There is 1 foreign enterprise that has not disclosed, and 5 enterprises that have disclosed. Although the sample size is small, it also reflects a strong awareness of disclosure. However, compared with domestic enterprises, due to the difference in sample size, it is difficult to directly compare comprehensiveness. But from the perspective of proportion, the disclosure ratio of foreign enterprises is also relatively high.

13 companies disclosed issues related to "ecology", and 16 companies disclosed issues related to "biodiversity". This shows that domestic enterprises have a certain focus on biodiversity-related issues in the analysis of substantive issues, but quite a number of enterprises are still limited to "ecology" issues and have not further discussed "biodiversity" as an issue separately and systematically, indicating that domestic enterprises still have room for improvement in this regard. In contrast, all foreign companies that disclosed information disclosed it under "biodiversity", which is more standardized and detailed.



Only one domestic company has a high level of biodiversity issues, five have a medium level, seven have a low level, and three are not rated. This indicates that most domestic companies have a medium to low level of biodiversity issues, possibly due to the relatively small impact of enterprises on biodiversity or the conservative assessment of biodiversity issues by enterprises; the existence of unrated enterprises may be due to the lack of unified assessment standards or insufficient self-assessment capabilities of enterprises.

Overall, the overall rating of biodiversity issues for foreign enterprises is good, with high priority accounting for the majority; domestic enterprises pay relatively less attention to biodiversity issues, and low priority accounts for the majority.



Taking Zhejiang Provincial New Energy Investment Group, which has a better identification of domestic issues, as an example, it will upgrade the biodiversity issue to a high substantive issue in 2023, and align with foreign leading enterprises such as EDF Group in terms of the importance of the issue. In the future, biodiversity can be refined into sub-issues such as "habitat restoration" and "species protection", and KPIs can be set separately to avoid disclosure still staying at the macro level.

## PRIORITY ISSUES IDENTIFIED

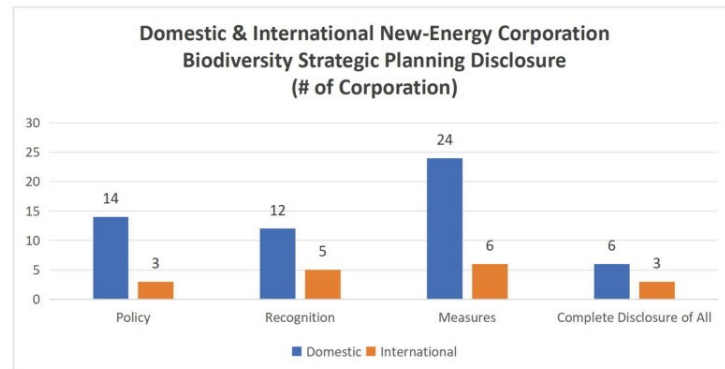
As a result of its initial work, EDF has identified a list of 17 material issues that are the focus of its current analysis of IROs (impacts, risks and opportunities):

- Climate change
- Resources and the circular economy
- Pollution
- Water resources
- Biodiversity
- Health, safety and well-being
- Equality, diversity and inclusion

## 2. Issue Management

There are 14, 12 and 24 companies disclosing domestic policies, identification and measures respectively, and 6 companies disclosing all three items. This shows that Chinese enterprises disclose different aspects of strategic planning to different degrees. The disclosure of measures is relatively more, while the disclosure of policies and identification is relatively less, and there is still room for improvement in overall perfection.

The corresponding number of companies abroad is 3, 5, 6 and 3. Although the overall number is small, the disclosure ratio of each item is relatively balanced, and there are more mature systems and norms in the disclosure of strategic planning.



For example, Goldwind, which manages domestic issues well, has disclosed policies, identification and measures, but there is still a small gap with foreign leading enterprises in terms of the refinement of policies and the comprehensiveness of identification. For example, Cemig Company has more comprehensive and detailed disclosure of biodiversity management, covering environmental management, policies, strategic pillars, driving factors and project initiatives.

The 2023 ESG report of Goldwind Technology on the identification and response measures of biodiversity risks:

风电场类型	对生物多样性的影响	公司应对措施
陆上风电场	<p>风电场在建设、运行和维护期间，对生物多样性会产生直接或间接影响。输电线路、气象塔、变电站、道路、照明灯也会对生物多样性产生影响；包括：撞击引起的鸟类及蝙蝠死亡；由于潜在气压伤引发的蝙蝠死亡；野生动物迁徙；栖息地转换与退化；干扰蝙蝠和鸟类的日常活动（如从喂食到栖息或繁殖地）等。</p>	<p>在风电场选址和开发阶段，公司在风电场宏观选址中，对生物多样性问题做早期筛查，判定项目是否毗邻具有较高生物多样性的区域；在微观选址中，开展风电场厂址范围的生物多样性调查，同时获取厂址基线生物多样性信息；办理环境影响评价、水土保持等批复文件过程中，如涉及自然保护区、珍稀动植物、水土流失易发区等情况，对风机点位进行调整。</p> <p>在风电场建设阶段，公司形成对风机点位进行复核确认的机制，确保避开各类威胁生物多样性的风险点。禁止在风电场中建设吸引鸟类和蝙蝠的人工景观，如水体、栖息区或筑巢区、新建喂食区及中转地和栖息地等。</p> <p>在风电场运维阶段，开展生物多样性监测，通过统计保护植物分布、妥善处理生活垃圾等举措，保护野生动物、鸟类及植物分布，促进人与自然和谐发展。</p>

风单场类型	对生物多样性的影响	公司应对措施
海上风电场	<p>在海上风电规模化、大型化的发展趋势下，海上风电场开发及建设规模加大，其过程中对海洋生态环境的影响也随之凸显。机组部件运输过程中的噪声和震动可能会对鱼类的听觉和行为产生影响；机组建设安装过程可能会对海洋水质、海底地形和海洋生物造成破坏，如破坏珊瑚礁、海草床等；水下桩基打桩、海底输电电缆铺设等是影响海洋生态的主要环节；海上机组运行过程中，风机叶片旋转可能影响鸟类栖还飞或对其造成撞击伤害。</p>	<p>在机组部件运输阶段，公司通过严格控制吊装船舶的污染物排放、制定合理的运输路线规避既有海洋生态保护区、采用低噪声、低震动的运输方式等消除对于海洋生态环境的负面影响。在海上机组启运前，公司利用数字化技术规划运输路线，避开渔业养殖区、海洋保护区。同时，公司选择具备环保体系认证的承运商，要求承运商选择符合运输路线途经海域排放要求的运吊船舶，降低环境损害。在运输过程中，公司还采用减震垫、降低船速等方式减少噪音与震动对海洋生物的影响。</p> <p>在海上风电场建设阶段，公司采用精细化施工，同时借助数字化仿真模拟、高耗时工序优化穿插等技术，大幅缩减吊装时间，避免多次、大范围、长时间施工对海底地形和海洋生物体的破坏。</p> <p>在风电场运行过程中，公司采用智慧监测系统，通过遍布整机数百个智能化传感器及视频监控，设置空-海立体监测网，对靠近机组周边的鸟类、海洋生物活动等实时监测，减少风机运行对生物种群正常活动的负面影响。</p>

The content disclosed in the Cemig ESG report in 2023 about biodiversity management strategy:

## ENVIRONMENTAL PERFORMANCE

### Environmental management

**[3-3 (2023); 3-3 (2024)]** Cemig acknowledges its responsibility towards the environment and is committed to adopting and disseminating good environmental management practices. The Company has an Environmental Policy<sup>19</sup> available to the public, which contributes to taking environmental aspects into account in the Company's decision-making processes and establishes respect for the environment as a value that must be practiced by all employees and other stakeholders acting on its behalf, including its suppliers. As a tool to measure its environmental performance, Cemig uses indicators related to inputs (e.g., material, energy, water) and outputs (e.g., emissions, effluents, waste). In addition, monitoring related to biodiversity, environmental compliance, and other relevant information, such as the impacts of products and services throughout the value chain, is also carried out.

### Cemig's Environmental Strategy

Cemig aims to reconcile its development with environmental protection, biodiversity preservation, rational use of natural resources, and compliance with environmental legislation. This objective is based on its business mission and vision and is reinforced in the Company's Strategic Planning. The planning considers current and future risks and opportunities, challenges, medium and long-term scenarios, and the expectations of its stakeholders.

This entire process is guided by the Environmental Policy, Biodiversity Policy<sup>20</sup>, Water Resources Policy, Commitment to Climate Change, and Internal procedures. Based on these guidelines, the Company constantly contributes to creating shared value in the regions where it operates, as well as to achieving the UN Sustainable Development Goals, especially goals 7 (Affordable and Clean Energy), 13 (Climate Action), and 15 (Life on Land).

The Environmental Adequacy Program, multi-year and with a transversal approach throughout Cemig, is the instrument that details the corporate strategy at a tactical level, in which several guidelines are established. Through a prioritization matrix, the operationalization of the environmental strategy is conducted based on the definition of programs and initiatives, with their respective responsibilities, actions, goals, objectives, indicators, and resource allocation, composed of themes such as Biodiversity, Water, and Climate Change. The goals related to these and other themes are listed in the Strategy chapter of this Report.

The Environmental Adequacy Program is periodically monitored by the Socio-Environmental Adequacy Committee, made up of representatives from Cemig's management, in which compliance with the proposed actions is assessed.

Therefore, it is considered essential to involve multiple stakeholders through action networks, as well as

building partnerships in the preparation and execution of all environmental programs. Based on this bias, the Company continually invests in R&D and new technologies that aim to mitigate impacts and reduce environmental risks.

#### STRATEGIC PILLARS

- Strengthen Cemig's performance on environmental issues;
- Minimize environmental risk, avoiding fines, disputes and lawsuits;
- Strengthen the company's sustainability.

#### DRIVERS

- Preparation of the company for future environmental issues;
- Conservation of Ichthyofauna;
- Adequate waste management;
- Adequate management of vegetation;
- Climate change management;
- Water management.

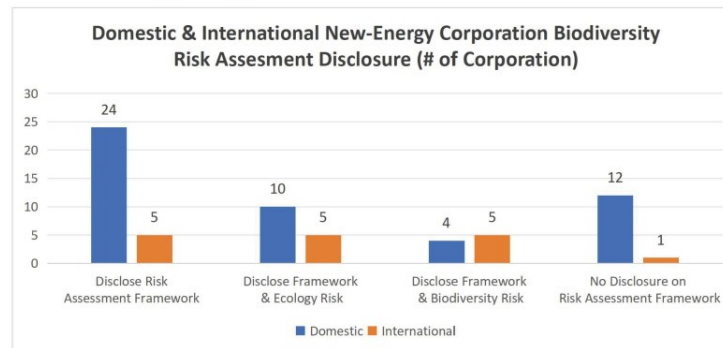
#### PROGRAMS AND INITIATIVES

- Peixe Vivo (Fish Alive Program);
- Afforestation Management Program;

## (iii) Risk Management

The number of domestic companies disclosing risk aSHSEssment frameworks, ecological risks and biodiversity risks are 24, 10 and 4 respectively. This shows that domestic companies disclose more about risk aSHSEssment frameworks in risk aSHSEssment, but less about ecological risks and biodiversity risks, especially biodiversity risks. This may be because companies focus more on building an overall framework when aSHSEssing risks, but lack in-depth aSHSEssment and disclosure of specific areas of risk, especially biodiversity risks.

The corresponding number of companies abroad is 5, 5 and 5 respectively. The disclosure of different types of risk aSHSEssment is relatively balanced, the risk aSHSEssment system is more perfect, and the degree of attention to biodiversity risks is higher.



Taking POWERCHINA, which has relatively good domestic risk management, as an example, although it disclosed the risk management process system, the management of biodiversity risks is not deep enough, and some enterprises even did not mention biodiversity risks. Taking GE Vernova as an example, foreign enterprises not only disclosed a clear and detailed risk management system and process, but also disclosed in detail the special risk management of biodiversity. Domestic enterprises should pay more attention to biodiversity risks, improve the risk assessment system, and enhance the ability to respond to risks.

Biodiversity risk management disclosed in GE Vernova's 2023 ESG report:

#### Additional area of focus

## BIODIVERSITY

As a leading supplier to the electricity industry with a global presence, we recognize our dependence on nature and biodiversity, as well as our impacts. As we further develop our sustainability program, we will aim to track and mitigate the risk of impacts to biodiversity in our operations and supply chain, particularly at our project and manufacturing sites.

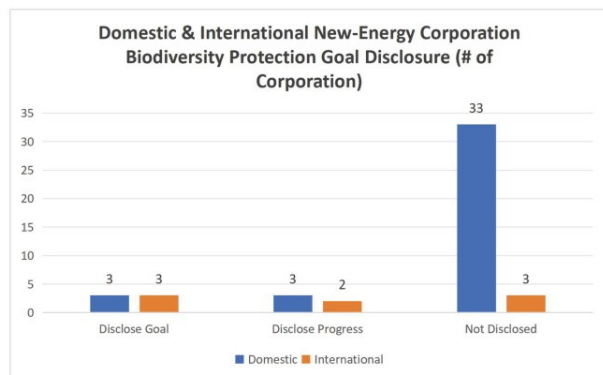
We are developing a roadmap to identify and address our biodiversity risks and opportunities in our operations and across our value chain. We will continue to advance the governance, processes, and data collection tools necessary to support a biodiversity strategy. Our biodiversity strategy intends to follow the Locate, Evaluate, Assess, Prepare (LEAP) methodology of the Taskforce on Nature-related Financial Disclosures (TNFD), to prepare for future regulatory disclosure requirements.

Building on the learnings from this work,

#### (iv) Indicators and targets

Three companies disclosed their targets and progress in achieving the targets, while 33 did not. There is a serious lack of disclosure on target setting and progress in achieving the targets.

The corresponding number of companies abroad is 3, 2 and 3. However, they are relatively better than domestic companies in terms of target setting and disclosure of completion progress, with more complete management and disclosure mechanisms.



Taking CK Infrastructure Holdings, which has relatively good performance in domestic indicators and targets, as an example, it disclosed the main objectives and completion progress of biodiversity conservation, and had relatively clear quantitative indicators.

#### 集團承諾 (續)

主要目標及進度		
業務單位	目標詳情	進度
SA Power Networks	<ul style="list-style-type: none"> <li>制訂《自然和生物多樣性行動計劃》</li> </ul>	進行中
	<ul style="list-style-type: none"> <li>實施計劃涵蓋對本土動物群具有高風險影響的電力基礎</li> </ul>	進行中
UKPN	<ul style="list-style-type: none"> <li>於二零二八年或以前識別及評估額外100個可提升生物多樣性的地點</li> </ul>	進行中
WWU	<ul style="list-style-type: none"> <li>承諾自二零二六年起於GD2指定項目中實現「淨零流失」，於受影響工作中實現「生物多樣性淨增值」</li> </ul>	進行中
	<ul style="list-style-type: none"> <li>承諾就每砍伐1棵樹種植5棵樹</li> </ul>	進行中
港燈	<ul style="list-style-type: none"> <li>在二零二三年在南丫發電廠種植至少多一個品種的本土樹木或灌木，以支持生物多樣性</li> </ul>	已達成
AGIG	<ul style="list-style-type: none"> <li>於二零二五年底或以前設定生物多樣性目標</li> </ul>	進行中
NGN	<ul style="list-style-type: none"> <li>於二零二五年前或以前完成最多50個場地的自然資本評估</li> </ul>	進行中
	<ul style="list-style-type: none"> <li>於二零二六年前或以前於250個場地建立「自然家園」</li> </ul>	進行中
EDL	<ul style="list-style-type: none"> <li>於英國正進行氣田基礎改造的場地種植額外50,000棵樹</li> </ul>	已達成

Cemig, a foreign company, also clearly disclosed its quantified biodiversity conservation indicators for 2023.

ABOUT THIS REPORT

CEMIG

WHERE OUR POWER COMES FROM

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Forest restoration and biodiversity conservation

Cemig has three conservation units, which function as places to preserve plant species native to the Atlantic Forest and Cerrado biomes: the Private Natural Heritage Reserve (RPPN) Fátima in the Municipality of Capelinha-MG, with 1,455 hectares; the RPPN Galvão located in Perdizes-MG, with 2,695 hectares; and the RPPN Usina Coronel Domiciano located between the municipalities of Murai and Rosário da Limeira, in which the PCH Coronel Domiciano is located. The latter, measuring 263.56 hectares.

These units also serve as spaces for scientific research, environmental education for nearby communities, and refuge areas for fauna. There is also the Itaipava Environmental Station, which has a nursery with an average annual production of 22 thousand seedlings used in reforestation carried out by Cemig and/or donated to the population.

In addition to these areas, the Company also has projects to restore degraded areas and forest restoration that allow for the mitigation and compensation of impacts caused by the creation/maintenance of its operational units.

The following table shows the extent of protected and restored areas under Cemig's management:

[304-1]	2023
Protected areas	4,413.56 ha
Restored areas	684.06 ha

Thus, for the year 2023, the Company made the following advances in forest restoration activities and land regularization as compensatory measures, in addition to maintenance of species already planted:

Project Type	Extension (ha)
<b>Maintenance Actions</b>	<b>601.22</b>
Cemig D	378.87
Cemig GT	222.35
<b>Planting</b>	<b>208.92</b>
Cemig D	204.97
Cemig GT	3.95
<b>Land Property Regulation</b>	<b>80.68</b>
Cemig D	80.68
<b>Grand Total</b>	<b>890.82</b>

[304-1, 304-3] In all areas considered environmentally relevant or sensitive concerning biodiversity, there is some type of operational unit, be it substations, transmission and/or distribution lines, hydroelectric and/or wind power plants, given the extent of Cemig's activities. Cemig has a mapping of the extensions of its projects and areas of influence, but it does not have a correlation of the projects located in each relevant or sensitive area in terms of biodiversity.

Complementary, it should be noted that, in some cases, the protected zone was defined after the existence of Cemig structures. Most of the Company's hydroelectric plants date back to the 1980s and 1990s, a period in which there was little representation of protected areas in the state of Minas Gerais or even assessed as relevant to biodiversity conservation. For example, the first systematic study of priority areas for conservation took place only in 2005, by the Biodiversitas Foundation.

Overall, most companies have not or rarely set quantifiable biodiversity conservation targets, such as the growth target of specific species, the protection and restoration target of habitat area, etc., and regularly disclose the progress of target completion in detail. It is necessary to formulate clear and quantifiable biodiversity conservation targets as soon as possible, establish an effective tracking and disclosure mechanism, and improve management and disclosure levels.

### III. Case disclosure

27 domestic cases were disclosed, and 9 were not disclosed. Most enterprises can disclose the progress of biodiversity conservation related cases.

There are 6 cases disclosed by foreign companies, and 0 cases not disclosed. All foreign companies have disclosed cases.

Most domestic and foreign enterprises have disclosed this indicator. However, in terms of domestic enterprises, the number of disclosed cases is small, the content is not clear enough, and it is relatively scattered. In contrast, NextEra Energy, a foreign enterprise, has more and longer cases on biodiversity conservation, which are listed according to species classification, making the disclosure level clearer and the system more complete.

The content of the case on biodiversity conservation in NextEra Energy's 2023 report:



#### Solar stewardship

At our Florida solar energy centers, we work with Audubon Florida, plus additional local organizations, regulatory agencies, municipalities, academic institutions and community groups to address local or regional environmental objectives. Stewardship objectives focus on four guiding pillars: conservation, wildlife, land management, and research and education.

We use a variety of methodologies, including but not limited to preserving and restoring wetlands and sensitive habitats; increasing biodiversity through the use of appropriate native plant species; incorporating pollinator species into existing ground cover; integrating approaches to minimize the prevalence of invasive species; using wildlife-friendly fencing

to facilitate safe travel to and from other habitats; and installing artificial perches, nest boxes and platforms.

For example, to promote wildlife access and utilization, sites within panther habitat include wildlife-friendly fencing. This special fencing is designed so that both panther prey species and panthers themselves can pass through or over the fence. At our FPL Hammock Solar Energy Center, which has been operating since 2018, we conducted a study with 20 cameras placed along the 4-foot and 6-foot fern field perimeter fences and throughout the site to ensure that wildlife could access and use the site successfully. FPL initiated another camera study at the Sawgrass Solar Energy Center in March 2022 to continue studying wildlife use at solar sites.

At the conclusion of this year-long study, FPL captured more than 5,000 photos of various wildlife at the solar site, including 15 panthers. Documentation of panthers and other wildlife on this solar site shows that a diverse array of species can and do utilize solar energy center land. In 2021, FPL standardized the use of wildlife-friendly fencing at all future solar sites in Florida to further allow for wildlife use. Outside of Florida, we follow a similar process.

NextEra Energy Resources evaluates opportunities to implement additional voluntary stewardship actions on a project-by-project basis. Voluntary stewardship supplements the development process and takes further steps to preserve and enhance existing natural resources. These additional actions can work to address local stakeholder concerns, build upon required regulatory actions and address stewardship goals, such as promoting species conservation. NextEra Energy Resources also developed a cost-effective, pollinator-friendly seed mix to use at solar energy projects. This carefully and deliberately developed seed mix is beneficial for pollinators and compatible with the operation and maintenance needs of solar projects. This seed mix was built upon established concepts, published research and professional recommendations to support pollinator species, while also supporting clean and reliable renewable energy.

#### Monarch butterfly and pollinators

To further demonstrate our commitment to pollinators and their habitats, FPL is one of the first electric utilities to have enrolled in the voluntary Monarch Candidate Conservation Agreement with Assurances. By enrolling, FPL has committed to implement measures to create conservation benefits for the monarch butterfly. These measures can also benefit other pollinators. In addition to direct habitat conservation measures, it is also important to contribute to our scientific understanding of pollinator preservation.

### IV. Analysis of the Current Situation of Disclosure

Overall, foreign new energy listed companies performed better in the management and disclosure of biodiversity issues. In MSCI ratings, foreign companies performed better in the ratings, reflecting their advantages in sustainable development, etc. On the one hand, this is related to the fact that the foreign company samples selected for the report analysis are relatively leading companies in each country and region; on the other hand, it is also because foreign countries are more advanced in disclosure standards and pay more attention to biodiversity issues.

Foreign companies stand out in key aspects of biodiversity conservation, such as issue identification, strategy, risk management, indicators and targets, and case disclosure. Their issue identification is standardized and mostly high priority; their strategic disclosure is balanced across all aspects, with a mature system; their risk management discloses various risks in a balanced manner, with a complete evaluation system; their indicator and target disclosure is relatively good; and their case disclosure is fully completed, with a sound management and disclosure mechanism.

In contrast, the overall performance of new energy listed companies in China included in MSCI ratings is generally average and still needs to be improved. In terms of issue management, such as issue identification, biodiversity is generally identified as a medium or low-level issue. There is less disclosure in the policy and identification links in strategic disclosure; risk management focuses on the disclosure of risk assessment frameworks, with less disclosure of biodiversity risks; indicators and target setting and completion progress are seriously insufficient.



## Chapter 4: Typical Cases of Domestic New Energy Enterprises' Disclosure

### I. Case disclosure in the report

By summarizing the performance of domestic related listed companies' 2023 annual sustainable development reports (including ESG reports and social responsibility reports), we found that the following companies performed well or still had room for improvement.

- Excellent disclosure case: Power Assets Holdings, 00006.HK, MSCI rating A

From the perspective of governance structure, Power Assets has established a four-level sustainable development management structure and clarified the management responsibilities of each level. At the same time, it has clarified the concept of sustainable development risk management.

In terms of substantive issue management, maintaining biodiversity is identified as a key focus area in its environmental field, and "protecting the natural environment and environmental management" is also identified as its major sustainable development issue.

In the specific issue disclosure, it clearly disclosed its own management strategy and management goals for 2023, and demonstrated its effectiveness in biodiversity conservation work with actual cases from various continents where its business is located:

#### 保護生物多樣性

集團致力在資產整個生命週期中保護生物多樣性及棲息地。公司旗下營運公司均有責任監督和管理環境管理策略，包括生物多樣性議題、關閉和修復土地。大部分管理人員或委員會負責評估及管理相關風險和機遇。集團會竭力避免和舒緩項目對周邊環境的不利影響，並將生物多樣性納入規劃。對於高風險的生態地點，除定期進行環境影響評估外，我們更外聘專家量身定制管理計劃。我們秉持「淨正向效益」理念，致力透過商業項目成果實現生物多樣性淨收益。

為了履行我們對自然環境回饋多於索取的承諾，集團要求所有營運公司和供應商避免在具有全球或國家重要生物多樣性的地點（包括但不限於世界遺產地區及國際自然保育聯盟(IUCN)I-IV類別等保護區）附近進行操作。在具有關鍵生物多樣性的地點附近開展業務時，我們以「避免、減少、修復及抵銷」不同等級的緩解措施減少對生物多樣性的影響。在站點關閉後，集團亦致力進行土地修復工作，並撥出足夠資金支持緩解措施及復原工作。

#### 港燈

- 2023年，在南丫發電廠種植至少一種本土樹木或灌木以支持生物多樣性。

已達標  
■■■■

#### SAPN

- 制訂自然和生物多樣性行動方案。

進展如期  
■■■■

- 推出覆蓋電力基礎設施的計劃，尤其是可能對本地野生動物構成危險的設施。

#### AGIG

- 2025年底前設定生物多樣性目標。

進展如期  
■■■■

#### EDL

- 在英國的天然氣田基礎設施改造地點，額外種植5萬棵樹木。

已達標  
■■■■

#### 实质性议题矩阵



In addition to the upgrade of the issue level, there has also been a certain improvement in the disclosure of content. Compared with the vague case disclosure in 2022, the content substance and the number of cases have improved in 2023. However, compared with the disclosure of leading enterprises, Zhejiang New Energy's biodiversity governance structure, strategy and management policy disclosure are still insufficient and need to be improved.

- Cases to be improved: Power Construction Corporation of China, 601669.SH, MSCI rating None

POWERCHINA is a leader in the construction of global clean and low-carbon energy, water resources and environment. It has undertaken a large number of new energy projects. The construction of the project is often the most important link that affects biodiversity, so it is particularly important to strengthen related management work.

Although the three-level governance system of sustainable development and substantive issue analysis have been established, PowerChina has not placed biodiversity in high substantive issues. It identified 3 issues related to biodiversity conservation and biodiversity conservation issues respectively, with importance of 27 ecological environment monitoring, 34 green construction, 42 overseas environmental protection and 40 biodiversity conservation. The four issues are distributed in the medium and low substantive issue range as a whole, among which the most direct biodiversity conservation issue is the least important.

From the content disclosed, it is also focused on case disclosure and has not systematically disclosed how to carry out biodiversity.

Management Improvement Case: Zhejiang Provincial New Energy Investment Group, 600032.SH, MSCI Rating None

Compared with 2022, we can see that Zhejiang Provincial New Energy Investment Group has made progress in the issue of biodiversity in 2023, from a medium material issue to a high material issue:

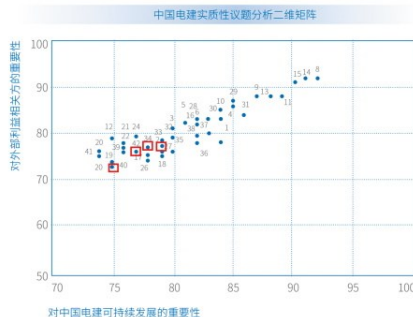
## 议题识别

实质性议题的分析结果是公司未来可持续发展管理的重要参考。为识别和提炼公司核心议题，公司深入分析研究国家宏观政策导向、行业市场发展趋势、监管机构要求，对标 ESG 主流标准和行业先进企业，结合公司经营战略等并充分了解利益相关方的期望与诉求，不断更新完善 ESG 议题库，提升报告议题的实质性。按照内容性质，将议题分为管治、社会和环境三大类，共计 42 项。

管治议题	社会议题	环境议题
1. 加强党的建设	8. 收益与业绩	25. 环境管理体系
2. 深化改革	9. 服务区域发展	26. 环保应急机制
3. ESG 管理	10. 优化客户服务	27. 生态环境监测
4. 优化产业布局	11. 科技创新	28. 落实“双碳”战略
5. 合规经营与风险管理	12. 供应商管理	29. 应对气候变化
6. 可持续发展未来规划	13. 隐私和数据安全	30. 使用及发展清洁能源
7. 坚守商业道德	14. 工程质量与安全	31. 节约能源资源
	15. 保障电力安全稳定供应	32. 发展循环经济
	16. 行业合作与进步	33. 环保技术
	17. 保障职工权益	34. 绿色施工
	18. 职业健康与安全	35. 排放物管理
	19. 工作生活平衡	36. 废弃物处置与利用
	20. 支持社区发展	37. 水资源综合利用
	21. 海外履责	38. 环保教育宣传
	22. 乡村振兴	39. 绿色办公
	23. 抢险救灾	40. 生物多样性保护
	24. 公益慈善	41. 环保公益
		42. 海外环境保护

## 议题分析

公司科学开展实质性议题统计分析、评估研判，依据议题风险程度分配各议题权重，构建“中国电建实质性议题分析二维矩阵模型”，识别出公司的实质性 ESG 议题，用以指导公司准确、全面地披露环境、社会与管治相关信息。



Scan the QR code to learn more details of the three cases:



## II. Ecological Destruction Penalty Cases

### • Policy Basis

#### United Nations Sustainable Development Goals

Goal 13: Take urgent action to combat climate change and its impacts.

Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.

#### China's Biodiversity Conservation Strategy and Action Plan (2023-2030)

Priority Action 15: Promote synergies between biodiversity and climate change.

Priority Action 21: Strengthening policy synergies between biodiversity conservation and other sectors.

Priority Action 22: Strengthen the integration and sharing of data related to biodiversity and climate change.

#### The Environmental Impact Assessment Law of the People's Republic of China (Amended in 2018)

Article 10: The environmental impact assessment of planning shall include the special evaluation of biodiversity impact and clarify the protection measures.

Article 17: The environmental impact assessment of construction projects shall analyze the long-term impact on ecosystems and species habitats, and propose avoidance and mitigation measures.

#### Catalogue of Environmental Impact Assessment Classification Management for Construction Projects (2021 Edition)

Category 52 (new energy projects): Projects involving nature reserves and ecological redline areas shall prepare a report and argue for biodiversity conservation plans.

#### Opinions on Further Strengthening Biodiversity Conservation (Huan Shengtai [2021] No. 26)

Article (8): Incorporate the impact of biodiversity into the core content of environmental impact assessment approval, and prohibit the layout of highly destructive projects in key habitats.

#### Notice on Strengthening the Ecological and Environmental Protection of Land-based Wind Power and Photovoltaic Power Generation Construction Projects (Draft for Comments)

Scientifically optimize the site selection layout: propose to prevent or mitigate adverse environmental impacts such as biodiversity damage in the preparation of planning environmental impact report.

Strengthening the management of sensitive areas: In principle, no transformation and upgrading will be carried out for projects already built in environmentally sensitive areas. It is strictly prohibited to expand the existing scale and scope. After the project expires and retires, ecological restoration shall be done well.

Emphasize the long-term impact of projects: Considering the long-term, hidden and cumulative nature of the damage to the ecological environment caused by land-based wind and solar power projects, it is required to ensure that the ecological environment will not be damaged during the decommissioning and ecological restoration of the project.

#### **The Grassland Law of the People's Republic of China**

Article 44: The people's governments at or above the county level shall strengthen the protection and management of rare and endangered wild plants and germplasm resources in grasslands according to law.

Article 49: It is prohibited to dig up plants and engage in other activities that destroy the vegetation of grasslands in desert, semi-desert and severely degraded, sandy, saline-alkali, rocky desertification, soil erosion grasslands and ecologically fragile areas.

Article 67: Those who dig up plants or engage in other activities that destroy the vegetation of grasslands in deserts, semi-deserts and severely degraded, desertified, salinized, rocky desertified and soil-eroded grasslands, as well as grasslands in ecologically fragile areas shall be ordered to stop the illegal acts by the competent department of grassland administration under the people's government at or above the county level according to their powers, have their illegal property and illegal gains confiscated, and may be fined one to five times the amount of the illegal gains; if there are no illegal gains, they may be fined less than RMB 50,000; if they cause losses to the owners or users of the grasslands, they shall bear compensation liability according to law.

#### **The Forest Law of the People's Republic of China**

Article 31: The State shall establish a nature conservation system with national parks as the main body in typical forest ecological areas of different natural zones, precious animals and plants growing and breeding forest areas, natural tropical rainforest areas and other natural forest areas with special protection value, and strengthen protection and management.

Article 40: The State shall protect ancient and famous trees and precious trees. It is prohibited to destroy ancient and famous trees and precious trees and their natural environment of survival.

#### **The Fisheries Law of the People's Republic of China**

Article 39: Those who steal or seize others' aquaculture products, or destroy others' aquaculture water bodies and facilities shall be ordered to make corrections and may be fined less than RMB20,000; those who cause losses to others shall bear compensation liability according to law; those who constitute a crime shall be investigated for criminal responsibility according to law.

#### **The Land Management Law of the People's Republic of China**

Article 75: If land is illegally occupied without approval or by means of fraud, the competent authority for natural resources of the people's government at or above the county level shall order the return of the illegally occupied land. If agricultural land is converted into construction land in violation of the land use master plan, the newly constructed buildings and other facilities on the illegally occupied land shall be demolished within a time limit and the original state of the land shall be restored. If it conforms to the land use master plan, the newly constructed buildings and other facilities on the illegally occupied land shall be confiscated and may be fined; the directly responsible supervisors and other directly responsible personnel of the unit that illegally occupies the land shall be punished according to law; if it constitutes a crime, criminal responsibility shall be investigated according to law.

#### **The Marine Environmental Protection Law of the People's Republic of China (effective from January 1, 2024)**

Article 32: Strictly control the discharge of wastewater containing non-degradable organic matter and heavy metals into the ocean.

Article 46: If the construction project needs to dismantle or relocate the marine engineering pollutant discharge facilities, it shall obtain the consent of the competent authority of ecological environment in advance. If the dismantling or relocation may cause significant environmental impact, an environmental impact assessment shall be conducted.

Article 88: Any of the following acts in violation of the provisions of this Law shall be ordered to be corrected by the department exercising the supervision and administration of the marine environment in accordance with the provisions of this Law, and a fine of not less than RMB 20,000 yuan but not more than RMB 200,000 yuan shall be imposed: (1) discharging pollutants or other substances prohibited by this Law into the sea; (2) discharging pollutants into the sea without complying with the provisions of this Law, or discharging pollutants exceeding the standards or total control indicators; (3) dumping waste into the sea without obtaining a marine dumping permit; (4) failing to take immediate measures to deal with the situation when an accident or other sudden event occurs, causing a marine environmental pollution accident.

#### **The Water Pollution Prevention and Control Law of the People's Republic of China**

Article 83: In violation of the provisions of this Law, any of the following acts shall be ordered to be corrected or restricted in production or shut down for rectification by the environmental protection department of the people's government at or above the county level, and a fine of not less than RMB100,000 yuan but not more than RMB1 million shall be imposed; if the circumstances are serious, it shall be reported to the people's government with approval authority for approval, and ordered to suspend business or close down: (1) discharging water pollutants without obtaining a discharge permit in accordance with the law; (2) exceeding the emission standards of water pollutants or exceeding the total control indicators of key water pollutant emissions to discharge water pollutants; (3) using infiltration wells, infiltration pits, fissures, karst caves, setting up secret pipes privately, tampering with or forging monitoring data, or discharging water pollutants in an abnormal operation of water pollution prevention and control facilities and other ways to evade supervision; (4) failing to carry out pretreatment as required, discharging industrial wastewater that does not meet the treatment requirements into centralized sewage treatment facilities.

## Regulations on the Prevention and Control of Pollution Damage to the Marine Environment by Marine Engineering Construction Projects

Article 16: If the marine engineering needs to be dismantled or converted for other uses, it shall be filed with the marine administrative department that originally approved the environmental impact report of the project before the operation.

Article 39: If a construction unit violates the provisions of this Regulation and commits any of the following acts, the marine administrative department responsible for approving the environmental impact report of the project shall order it to stop construction and operation, make up procedures within a time limit, and impose a fine of not less than RMB 50,000 yuan but not more than RMB 200,000 yuan: (1) commences construction without approval of the environmental impact report; (2) puts the environmental protection facilities of the marine engineering into operation without applying for acceptance or after failing the acceptance.

### • Destroying the grassland

Cooperation City Jinling New Energy Co., Ltd. (China Power Construction, 601669.SH) was fined RMB 138,917.1 by the Natural Resources Bureau of Cooperation City for illegally using 19.839 mu of grassland to build a photovoltaic power generation project without approval, in accordance with Article 65 of the Grassland Law of the People's Republic of China, No. 02 of the Natural Resources Bureau of Cooperation City (2023).

Huadian Hainan Prefecture New Energy Power Generation Co., Ltd. (Huadian Power International, 600027.SH) was fined RMB 78,449 by the Natural Resources and Forestry and Grassland Bureau of Gonghe County for illegal occupation of grassland according to Article 65 of the Grassland Law of the People's Republic of China, with the document number being GongZiRanZi[Cao] No. 8, 2023.

Huanneng Ningnan Wind Power Generation Co., Ltd. (Huaneng Renewables, 00958.HK) was fined RMB26,701.99 by the Forestry and Grassland Bureau of Ningnan County for illegally using 18.3898 mu of grassland to build wind power lifting platforms, machine positions and roads, according to Article 65 of the Grassland Law of the People's Republic of China, NingLinCaoChu [2023] No. 21.

### • Deforestation

Huanneng Ningnan Wind Power Generation Co., Ltd. (Huanneng New Energy, 00958.HK) was fined RMB160,725.6 by the Forestry and Grassland Bureau of Ningnan County for changing the use of forest land with an area of 8.9292 mu to build wind power lifting platform, machine position and road without authorization, according to Article 73, Paragraph 1 of the Forest Law of the People's Republic of China, Ninglincao Chu [2023] No. 20.

Hengxin New Energy Co., Ltd. of Dingxi Anding District (Shanghai Electric Wind Power, 688660.SH) was fined RMB 31,749 by the Forestry and Grassland Bureau of Anding District, Dingxi City for illegally using forest land with an area of 5.3 mu in violation of Article 73 of the Forest Law of the People's Republic of China due to destroying the forest land of Hongbao Village, Gaofeng Township when constructing No. 1 wind turbine and destroying the forest land of Nanyang Village, Neiguanying Town when constructing No. 6 wind turbine. Anlinfa Juezijiezi [2023] No. 009.

Huidong Huineng Energy Co., Ltd. (China Nuclear Power, 601985.SH) was fined RMB 25,996 by the Forestry and Grassland Bureau of Huidong County for changing the use of forest land of 2.99 mu without authorization, according to Article 39, Paragraph 1 of the Forest Law of the People's Republic of China, with the penalty decision number Donglincaofajuejizhian2023XJ027.

### • Destroying agriculture and fisheries

Tianjin Jingneng Dongjituo Clean Energy Co., Ltd. (Jingneng Clean Energy, 00579.HK) was fined RMB 393,048 by the Ninghe Branch of Tianjin Planning and Natural Resources Bureau for constructing wind turbine positions on 655.08 square meters of farmland without authorization, according to Article 77 of the Land Management Law of the People's Republic of China and Article 57 of the Implementation Regulations of the Land Management Law of the People's Republic of China, Jin Gui Zi (Ning) Fa [2023] No. 006.

Huakang Anze New Energy Co., Ltd. (Huaneng Power International, 600011.SH) was fined RMB 159,200 by the Natural Resources Bureau of Anze County for illegally occupying land in Gaobi Village, Fucheng Town, Anze County to build a 220kV transmission line interval expansion project, according to Article 3 of Article 2 and Article 1 of Article 44 of the Land Management Law of the People's Republic of China, with the penalty number being Anziranzi Fa Zi [2023] No. 12.

Lincang Yue Electric Energy Co., Ltd. (Yue Electric Power, 000539.SZ) was fined RMB15,480 by the Lincang Municipal Agriculture and Rural Affairs Bureau for causing a dramatic change in the hydrological environment of some sections of the Nanding River Basin due to a large amount of water discharge from the Xintangfang Hydropower Station in a short period of time, resulting in the death of grass carp, carp, tilapia, crucian carp, catfish, loach, loach, and large spiny loach in some sections of the Nanding River downstream of the Xintangfang Hydropower Station in the jurisdiction of Linxiang District, Lincang City, with a total weight of 921.65 kg, according to Article 47 of the Fisheries Law of the People's Republic of China, Lin Agricultural Fishery Penalty [2023] No. 1.

### • Destruction of terrestrial ecosystems

Huaneng (Danzhou) Photovoltaic Power Generation Co., Ltd. (Huaneng International, 600011.SH) was fined RMB 3.43052 million by the Danzhou Comprehensive Administrative Law Enforcement Bureau for illegally occupying 8,576.30 square meters of land to build a step-up substation for the Huaneng agricultural forestry and fishery complementary photovoltaic power generation project, according to Article 77 of the Land Management Law of the People's Republic of China and the Administrative Punishment Discretionary Standard in the Field of Natural Resources of Hainan Province, (2023) Qiong Zong Zhi Danzhou Fa Zi No. 02-230.

Lingao Yue Electric Power Energy Co., Ltd. (Yue Electric Power, 002060.SZ) was fined RMB 29.962296 million by the Lingao County Comprehensive Administrative Law Enforcement Bureau for illegally occupying 5,761.98 square meters of farmland in Meizhu Village, Bolian Town to build a photovoltaic power station without authorization, according to Article 77 of the Land Management Law of the People's Republic of China, Article 57 of the Implementation Regulations of the Land Management Law of the People's Republic of China and the Administrative Punishment Discretionary Standard for Natural Resources in Hainan Province (Land Category), with the decision number being Linzongzhifa Juejiziezi [2023] ZG23.

Gansu Yiheng New Energy Co., Ltd. (China Nuclear Power, 601985.SH) was fined RMB 2.82919 million by the Liangzhou Branch of Wuwei Natural Resources Bureau for illegally occupying 28,291.9 square meters of state-owned land in Liangzhou District without approval to construct buildings and structures, according to the Land Management Law of the People's Republic of China, Liang Natural Resources Punishment No. [2023] No. 2.

### •Destroying the marine water body

Guangdong Jiangmen Hengguang Phase II New Energy Co., Ltd. (Shenzhen Hengyun A, 000531.HK) was fined RMB 796,899.92 by the Taishan Marine Comprehensive Law Enforcement Team under Article 42 of the "Law of the People's Republic of China on the Administration of the Use of Sea Areas" for illegally occupying 6.3931 hectares of sea areas to implement photovoltaic projects, Decision No. 703 of the Guangdong Taishan Marine Comprehensive Penalty [2023].

Fujian Runxia New Energy Co., Ltd. (Goldwind Science & Technology, 02208.HK) was fined RMB170,000 by the Fujian Provincial Marine and Fisheries Law Enforcement Corps for laying submarine pipelines without approval in violation of Article 20, Paragraph 4 of the Implementation Measures for the Administration of Laying Submarine Cables and Pipelines, No. Minhaiyu Chufa [2023] 2007; and was fined RMB62,499 by the Fujian Provincial Marine and Fisheries Law Enforcement Corps for putting environmental protection facilities into production and use before meeting the specified requirements in violation of Article 82, Paragraph 2 of the Marine Environmental Protection Law of the People's Republic of China, No. Minhaiyu Chufa [2023] 2008.

\*Click on the link(<https://www.epmap.org/archives/2432>) or scan the QR code to learn more detailed penalty cases.



## Chapter 5 Summary and Recommendations

In the booming new energy industry, biodiversity conservation cannot be ignored. Many practical cases have profoundly revealed the risks faced by enterprises that ignore biodiversity.

Take the case of green peafowl as an example. As a national first-class protected wild bird, its core distribution area is located in the middle and upper reaches of the Honghe River. The construction plan of the Jiasajiang First Hydropower Station has aroused great concern from the society because it may flood the important habitat of green peafowl. After the environmental protection organization filed a preventive public interest lawsuit, the hydropower station project was suspended in August 2017. This case fully demonstrates that if enterprises do not fully consider biodiversity conservation in the process of project planning and construction, it may not only cause the survival of rare species to be threatened, but also fall into the dilemma of project stagnation and reputation damage due to litigation.

In addition, the case promoted Yunnan Province to include the habitat of green peacocks in the ecological protection red line, highlighting the firm determination of society to protect biodiversity. Once enterprises violate it, they will face strong public opinion pressure and legal constraints.

The construction of the Shanglitin Hydropower Station in the Banna National Aquatic Germplasm Resource Reserve also sounded an alarm for the new energy industry. As the main protected object of the Mengjiang Damwang River National Aquatic Germplasm Resource Reserve, the construction and operation of the Shanglitin Hydropower Station in the core area of the reserve has caused a series of problems. Although the owner of the hydropower station finally reached an ecological environment damage compensation agreement with the relevant departments, it still needs to bear the responsibility of apologizing, paying fees, etc.

This indicates that enterprises will still face legal accountability and bear the consequences of ecological restoration and economic compensation if they cause damage to protected species, even if the project has been completed when carrying out projects in areas involving biodiversity conservation.

These cases jointly indicate that enterprises in the new energy industry must attach great importance to biodiversity conservation during the construction and operation of projects. From the early assessment of project planning to the whole process of construction and operation, the potential impact on biodiversity should be fully considered, and effective protection measures should be actively taken to avoid falling into legal disputes, project obstruction, reputation damage and other risks due to ignoring biodiversity, so as to achieve a win-win situation between enterprise development and biodiversity conservation.

However, from the current disclosure status of domestic new energy industry listed companies, the overall management and attention to biodiversity issues in the industry are still insufficient, and the disclosure performance is still a certain gap compared with international excellent industries.

In this regard, we propose the following suggestions:

### 1. Enhance the level of attention and management of biodiversity

Domestic enterprises should elevate biodiversity to a strategic level and incorporate it into the overall development strategy and daily operation management of the company, just like excellent foreign enterprises. The board of directors and management should strengthen their understanding of biodiversity conservation, clarify responsibilities and divisions of labor, and ensure that relevant work is effectively implemented; establish a dedicated biodiversity conservation team or department responsible for formulating and implementing biodiversity conservation plans, conducting biodiversity impact assessments, monitoring and management work, and enhancing the professionalism and systematicness of enterprise biodiversity management.

### 2. Improve the disclosure system of biodiversity management

When preparing ESG reports, enterprises should strictly follow authoritative ESG disclosure standards at home and abroad, such as A shares, GRI, TNFD, etc., to ensure the comprehensive, accurate and standardized disclosure of biodiversity management information. Strengthen the identification and analysis of substantive issues related to biodiversity, discuss "biodiversity" separately and systematically as an important issue, and reasonably assess the level of issues to avoid being limited to "ecological" issues only. At the same time, disclose in detail the biodiversity conservation strategy, including the laws and regulations followed, the identification of the impact of biodiversity at various stages of project construction, and specific prevention and restoration measures.

In addition, it is necessary to improve the risk management system, strengthen the identification, assessment and disclosure of response measures for biodiversity risks, clarify the position of biodiversity risks in the overall risk framework of enterprises and response strategies. In terms of indicator and target setting, clear and quantifiable biodiversity conservation targets should be set, and the progress of target completion should be disclosed regularly to enhance transparency.

### 3. Strengthen case reference and experience exchange

Domestic enterprises should actively draw on the successful experience of foreign excellent enterprises in biodiversity management and disclosure, such as Power Assets Holdings Limited, etc., learn their sound management structure, clear management strategy and effective practice cases. Industry associations and related institutions can organize exchange activities among enterprises to share the best practices of biodiversity conservation and promote enterprises to jointly improve the level of biodiversity management and disclosure. At the same time, enterprises are encouraged to carry out cross-industry exchanges and learn innovative methods and technologies of other industries in biodiversity conservation.

### 4. Strengthen supervision and policy guidance

Regulators should strengthen supervision of biodiversity conservation by new energy enterprises, establish and improve relevant laws, regulations and standards system, clarify the responsibilities and obligations of enterprises in biodiversity conservation, and increase penalties for violations; formulate incentive policies to reward enterprises that perform well in biodiversity management and disclosure.

### 5. Promote industry self-discipline and cooperation

The new energy industry should strengthen self-discipline, establish biodiversity conservation norms and standards within the industry, and guide enterprises to voluntarily comply. Industry associations can play an organizational coordination role, promote cooperation among enterprises, and jointly carry out biodiversity conservation research and practice projects. Enterprises can cooperate to share biodiversity conservation technologies, experiences, and data, jointly address the challenges of biodiversity conservation, form industry synergy, and promote the sustainable development of the new energy industry and the coordinated progress of biodiversity conservation.



## About Qingyue

Shanghai Minhang District Qingyue Environmental Protection Information Technology Service Center was registered as a non-profit organization in January 2015 by the Civil Affairs Bureau of Shanghai Minhang District. It is committed to promoting China's economic and social green, sustainable and high-quality development through information technology.

### •About the Report

The report analyzes the current status of disclosure on the topic of "biodiversity management" in ESG reports of some domestic and foreign new energy listed companies and data on penalties for ecological damage. It conducts a survey on the current status of biodiversity conservation work management and disclosure of domestic listed companies involved in new energy (including hydropower) construction and operation, and compares it with the disclosure situation of related foreign listed companies to promote the improvement of biodiversity conservation work of listed companies related to new energy construction and operation, and promote the synergy between climate response and biodiversity conservation.

### Data source:

Sustainability report of listed companies in 2023 (including ESG report and social responsibility report);

Analytical tools and methods:

Text analysis and data extraction were conducted through the Qingyue ESG Report AI Data Extraction Tool (<https://esg.epmap.org/dig>), and the results were manually reviewed and analyzed.

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### Disclaimer

This report is based on data and information obtained from public and legal channels, and we have tried our best to ensure its reliability, accuracy and completeness. AI analysis is based on the automatic retrieval, extraction and organization of public data and AI technology, and the accuracy of the data is limited by the source of information and algorithm capabilities. The information provided in this report is for reference only.

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