

Biodiversity Risk and Assessment Report 2024

**Energy Absolute (Public)
Company Limited**



1. Introduction

- 1.1 Executive Summary
- 1.2 The Importance of Biodiversity to EA's Business
- 1.3 Global Context: Nature-related Risks and the TNFD Framework
- 1.4 EA's Commitments and Approach to Biodiversity Management

2. Methodology

- 2.1 Assessment Tools: WWF Biodiversity Risk Filter and Others
- 2.2. Application of the LEAP Process
- 2.3 Scope of the Assessment

3. Biodiversity Risk Assessment Process

- 3.1 Scoping: Defining the Assessment Boundaries and Assumptions
- 3.2 Locate: Identifying EA's Interface with Nature- Spatial Information of Project Sites and Supply Chain
- 3.3 Evaluate: Assessing Dependencies and Impacts on
- 3.4 Assess: Analyzing Biodiversity-related Risks and Opportunities

4. Biodiversity Risk Assessment Results

- 4.1. Summary of WWF Biodiversity Risk Filter Results
- 4.2. High-risk Areas or Activities
- 4.3. Key Issues for Monitoring and Future Improvements

5. Mitigation and Biodiversity Management Plan

- 5.1. Integration of Biodiversity Risk Assessment into EA's Enterprise Risk Management
- 5.2. Biodiversity Management Approach Based on the Mitigation
- 5.3 Monitoring and Evaluation Plan

6. Stakeholder Engagement & Communication

- 6.1 Engagement with Local Communities and Stakeholders
- 6.2. Internal Communication and Awareness Raising

7. Conclusion and Next Steps

- 7.1 Key Findings and Summary
- 7.2 Roadmap for Enhancing Biodiversity Management and TNFD Readiness

8. Annex

- 8. References

1.Introduction

1.1 Introduction - Executive Summary



Energy Absolute PCL (EA) presents its inaugural Biodiversity Risk Assessment Report, developed in alignment with the Taskforce on Nature-related Financial Disclosures (TNFD) recommendations. This assessment utilizes the LEAP (Locate, Evaluate, Assess, Prepare) framework to analyze the company's operational renewable energy projects and downstream activity across Thailand.

The assessment confirms that EA's operations have significant **dependencies** on key ecosystem services, particularly **Climate Regulation** and **Surface Water**, which are vital for operational stability and efficiency. The portfolio-wide risk screening identified **Wildlife Hazard Risk (Score: 4.00)** and **Pollution (Score: 3.92)** as the highest-scoring material risks. The **Hadkanghan Wind Projects** were pinpointed as a priority hotspot, carrying a high **Reputational Risk (Score: 4.0)** due to their proximity to Key Biodiversity Areas (KBAs) and Protected Areas. Furthermore, this assessment highlights a critical nexus with climate risk: while baseline water risk scores are low, the company's forward-looking TCFD analysis confirms that **future water stress is the most severe physical risk for the solar business.**

In response to these findings, EA will build upon its existing mitigation measures, such as wildlife monitoring and reforestation programs. A key outcome of this assessment is the commitment to a **clear next step**: conducting a **site-specific deep-dive analysis using the IBAT tool** for high-risk sites. This will inform the development of targeted **Biodiversity Action Plans (BAPs)**. These actions form the foundation of our strategy to meet our long-term goals of achieving a Net Positive Impact (NPI), governed by our formal No Deforestation Policy.

1.2 Introduction - The Importance of Biodiversity to EA's Business

Biodiversity is the fundamental cornerstone of all life and constitutes the natural capital that underpins global economic and social systems. For **Energy Absolute Public Company Limited (EA)**, as a leader in renewable energy committed to a sustainable future, our businesses, particularly in the wind and solar energy sectors, have significant connections with nature, encompassing both **dependencies and impacts**.

- **For the Wind Energy Business:** The efficiency and reliability of our wind farm operations are directly dependent on consistent wind patterns and velocity, which are outcomes of balanced regional and local climate systems. Large-scale ecosystem degradation, such as deforestation, can potentially alter local microclimates and affect long-term energy production stability. Furthermore, our wind farm locations create a direct interface with local biodiversity, particularly avian and bat species whose flight paths or foraging areas may intersect with our operations. A thorough understanding of the surrounding ecosystem is therefore critical for appropriate site selection and the implementation of effective mitigation measures, enabling us to manage both operational and reputational risks.
- **For the Solar Energy Business:** Our solar energy business relies on land as a primary input. Large-scale solar farms require significant acreage, leading to Land Use Change and the potential for Habitat Loss for native flora and fauna—a key driver of biodiversity decline. Moreover, operations depend on water resources for cleaning solar panels to maintain optimal production efficiency. In regions facing high Water Scarcity risk, this dependency becomes a material Physical Risk that could impact both operational costs and performance.
- EA therefore recognizes that a comprehensive and systematic assessment of nature-related issues is not merely a matter of regulatory compliance or corporate social responsibility. It is a critical component directly linked to our long-term value creation, operational resilience, and competitive advantage. This report has been prepared to assess and communicate these relationships transparently, in alignment with internationally recognized assessment frameworks.



1.3 Introduction - Global Context: Nature-related Risks and the TNFD Framework



Energy Absolute

Building upon our established commitment to climate-related financial disclosures, which are aligned with the Task Force on Climate-related Financial Disclosures (TCFD) and International Financial Reporting Standards (IFRS) S2, **Energy Absolute (EA)** recognizes that the global risk landscape is evolving. The focus is broadening beyond climate-only issues to encompass the wider, interconnected challenges of "nature" and biodiversity.

Climate and nature are deeply intertwined (the Climate-Nature Nexus). Nature loss, such as deforestation, directly impairs the planet's ability to act as a carbon sink, thus exacerbating climate change. Conversely, climate change accelerates the degradation of natural ecosystems. Addressing these issues in silos is no longer sufficient.

The risk concepts familiar from our TCFD reporting are equally applicable to nature:

- **Physical Risks:** Beyond acute and chronic climate events (e.g., storms, floods), this category also includes risks from the direct degradation of ecosystems, such as water scarcity, soil degradation, or a decline in pollinator populations.
- **Transition Risks:** Beyond carbon-related policies, this includes risks from new regulations protecting biodiversity, or shifts in market and investor preferences towards nature-positive products and companies.



Governance	Strategy	Risk & Impact management	Metrics & targets
<p>Disclose the organisation's governance of nature-related dependencies, impacts, risks and opportunities.</p>	<p>Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation's business model, strategy and financial planning where such information is material.</p>	<p>Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities.</p>	<p>Disclose the metrics and targets used to assess and manage material nature-related dependencies, impacts, risks and opportunities.</p>
<p>Recommended disclosures</p> <p>A. Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities.</p> <p>B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.</p> <p>C. Describe the organisation's human rights policies and engagement activities, and oversight by the board and management, with respect to Indigenous Peoples, Local Communities, affected and other stakeholders, in the organisation's assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.</p>	<p>Recommended disclosures</p> <p>A. Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium and long term.</p> <p>B. Describe the effect nature-related dependencies, impacts, risks and opportunities have had on the organisation's business model, value chain, strategy and financial planning, as well as any transition plans or analysis in place.</p> <p>C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios.</p> <p>D. Disclose the locations of assets and/or activities in the organisation's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.</p>	<p>Recommended disclosures</p> <p>A(i) Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its direct operations.</p> <p>A(ii) Describe the organisation's processes for identifying, assessing and prioritising nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s).</p> <p>B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities.</p> <p>C. Describe how processes for identifying, assessing, prioritising and monitoring nature-related risks are integrated into and inform the organisation's overall risk management processes.</p>	<p>Recommended disclosures</p> <p>A. Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process.</p> <p>B. Disclose the metrics used by the organisation to assess and manage nature-related dependencies and impacts on nature.</p> <p>C. Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.</p>

Crucially, the TNFD framework was intentionally designed to be consistent and interoperable with the TCFD. It adopts the same four-pillar structure (Governance, Strategy, Risk Management, and Metrics & Targets). This alignment enables a streamlined and integrated approach for companies like EA, allowing us to build upon our existing climate reporting processes efficiently and without duplication.

Therefore, EA's adoption of the TNFD framework is not a new beginning, but a logical and necessary "next step". It allows us to develop a more comprehensive understanding of our risks and opportunities, create a more holistic and resilient strategy, and meet the growing expectations of stakeholders for a complete picture of our sustainability management across both the climate and nature agendas.

1.4 Introduction - EA's Commitments and Approach to Biodiversity Management

Energy Absolute (EA) has made a firm commitment to achieve a **net positive impact (NPI)** on biodiversity across all its own operations **by 2050**. To support this ambition, the company will implement projects to deliver **no net loss (NNL)** of biodiversity by aligning with the biodiversity mitigation hierarchy—avoid, reduce, restore, and offset—and in accordance with the Global Biodiversity Framework under the Convention on Biological Diversity. As a foundational step, the company will prioritize actions to deliver NNL in selected priority areas through site-specific biodiversity plans, which will serve as the basis for progressively scaling up efforts towards achieving NPI. To translate this commitment into tangible action, Energy Absolute (EA) has developed a systematic and ongoing approach to biodiversity management, beginning with the use of internationally recognized tools.



A cornerstone of this commitment is our formally adopted **"No Deforestation Policy"**. This policy provides the governing framework for our actions, applying to both our direct operations and our entire supply chain. It establishes clear principles for responsible business conduct, including a commitment to "no net deforestation", a prohibition on the use of burning for land clearance, and critically, respect for the right of local communities to Free, Prior, and Informed Consent (FPIC).

- In 2023, EA began its formal journey into biodiversity risk assessment by **utilizing the WWF Biodiversity Risk Filter (BRF)**, a tool that provides an initial screening to identify operational areas with potential biodiversity-related risks.
- Building on this foundation, in 2024, EA is advancing its approach to better align with global disclosure standards by formally **adopting the LEAP (Locate, Evaluate, Assess, Prepare) process**, the assessment framework recommended by the TNFD. This process provides a structured methodology for the company to understand its nature-related impacts and dependencies, leading to a more comprehensive cycle of risk and opportunity management.
- **This 2024 Biodiversity Risk Assessment report**, therefore, represents the first tangible output of this enhanced approach. It **leverages the latest data from the WWF BRF as a key input for the initial phases of the LEAP process** and demonstrates EA's commitment to transparently and responsibly managing our interface with nature.

2. Methodology

2.1 Methodology - Assessment Tools: WWF Biodiversity Risk Filter and Others

To ensure EA's biodiversity risk assessment process is credible, systematic, and aligned with global best practices, the company utilizes an internationally recognized primary tool and considers other supplementary tools for future assessments.

Primary Tool: WWF Biodiversity Risk Filter (BRF)

For this 2024 assessment, EA continues to use the **WWF Biodiversity Risk Filter (BRF)** as its primary tool. The BRF is a science-based, online screening tool developed by WWF that enables organizations to:

- **Locate:** Visualize the company's entire asset portfolio on a global map.
- **Screen for Risks:** Generate risk scores across dozens of biodiversity and ecosystem-related indicators, such as proximity to Protected Areas, Key Biodiversity Areas (KBAs), and overall Ecosystem Condition.

The outputs from the BRF serve as a critical data input for the LEAP process, particularly for the Locate and Evaluate phases, which will be detailed in Section 3.

Other Tools for Future Consideration

As part of our commitment to continuous improvement and to enhance the depth and scope of our assessments, EA recognizes other valuable tools that may supplement our process in the future:



IBAT (Integrated Biodiversity Assessment Tool)

Provides granular, site-specific data on protected areas, Key Biodiversity Areas (KBAs), and the IUCN Red List of Threatened Species. It is ideal for conducting deep-dive, site-specific assessments for projects identified as high-risk.



ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure)

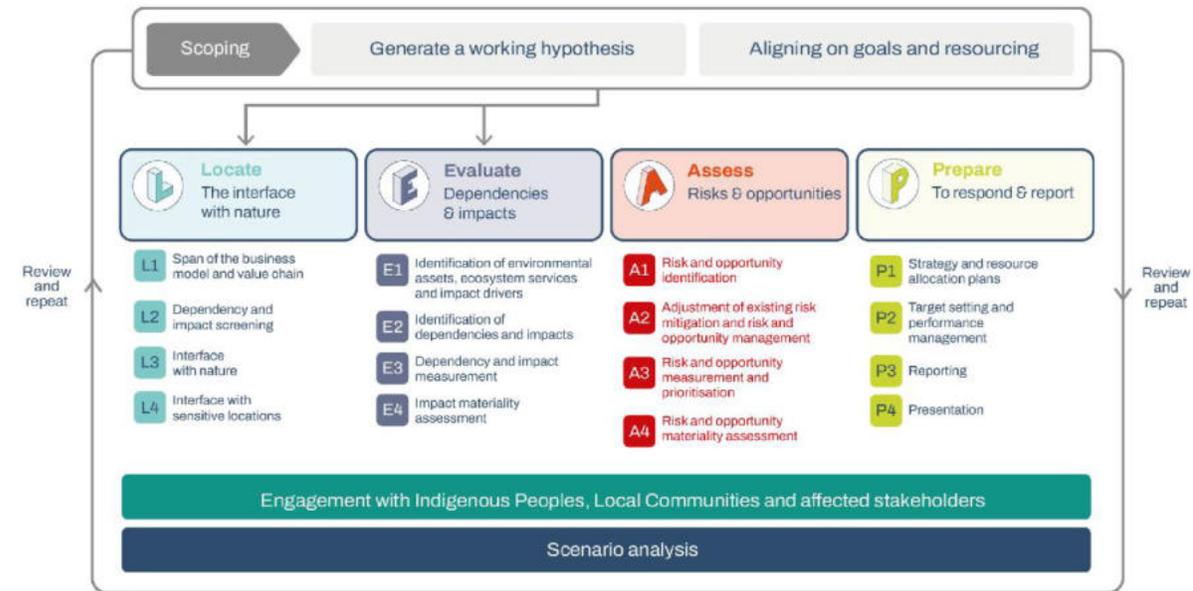
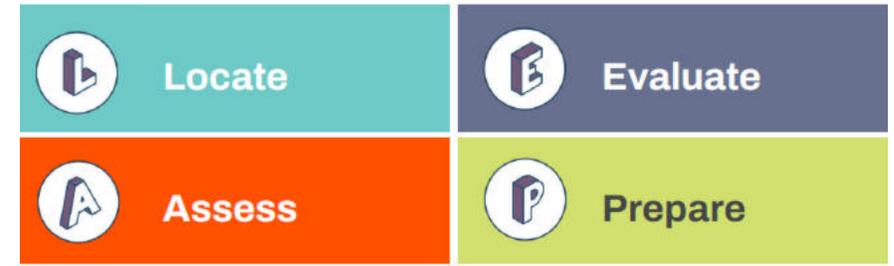
This tool helps systematically identify and understand business dependencies on ecosystem services (e.g., how the wind power sector depends on the service of climate regulation), which enhances the Evaluate phase of the LEAP approach.

2.2 Methodology - Application of the LEAP Process

To ensure our analysis and presentation of information is structured and aligned with global guidance, this report adopts the LEAP (Locate, Evaluate, Assess, Prepare) assessment process.

LEAP is the internal process recommended by the TNFD for organizations to identify, assess, and manage their nature-related risks and opportunities. While this report represents our initial application, the LEAP process serves as the foundational framework for our analysis and data structure as follows:

- **L - Locate:** To identify the geographic interface of EA’s operations and value chain with ecosystems, particularly in areas that are sensitive or important for biodiversity.
- **E - Evaluate:** To evaluate the company's significant dependencies on nature and the impacts of our operations on ecosystems.
- **A - Assess:** To identify, analyze, and prioritize the company's material nature-related risks and opportunities that could significantly affect our financial position and strategy.
- **P - Prepare:** To prepare measures to respond to the identified risks and opportunities and to prepare for disclosure to stakeholders align with the TNFD framework.



The following chapter of this report will present our risk assessment by proceeding through the Locate, Evaluate, and Assess phases of the LEAP process.

2.3 Methodology - Scope of the Assessment

Scope of the Assessment (Geographical Areas, Supply Chain, and Relevant Business Activities)

To ensure a clear and comparable assessment, the scope for this 2024 biodiversity risk assessment has been defined as follows:

Relevant Business Activities: The assessment primarily covers the **Direct Operations** of EA's renewable energy portfolio, with a focus on our wind and solar power generation assets. These are the core activities that have a direct interface with land and ecosystems.

Geographical Areas: The geographical scope of this assessment covers all of the company's operational renewable energy power plants and any adjacent area (if applicable) in Thailand, as of December 2024. This comprises the twelve projects that were subject to the biodiversity risk assessment : **Wind plants 8 projects and solar plants 4 projects**



Value Chain Considerations: For the 2024 assessment cycle, the primary focus remains on our direct operations. **For the upstream value chain**, as our assets are fully operational and not in a construction phase, the focus shifts to suppliers for ongoing Operations & Maintenance (O&M), such as providers of spare parts and maintenance services. For this report, these upstream elements are subject to a high-level qualitative review. **For our downstream value chain**, this assessment acknowledges the critical interface with the national grid via substations operated by state entities.

EA is committed to progressively expanding the scope to include a more in-depth assessment of key O&M suppliers and the entire value chain in future assessment cycles.

We have assessed own operational sites to identify sites with significant biodiversity impacts

Aspects	Number of sites	Area (Hectares)
Overall area of own operational sites	182	1,315
Biodiversity impact assessments for own operational sites	182	1,315
The total exposure of the sites assessed	0	0
Total area of Management plans	0	0

3. Biodiversity Risk Assessment Process

3.1 Biodiversity Risk Assessment Process

- Scoping: Defining the Assessment Boundaries and Assumptions

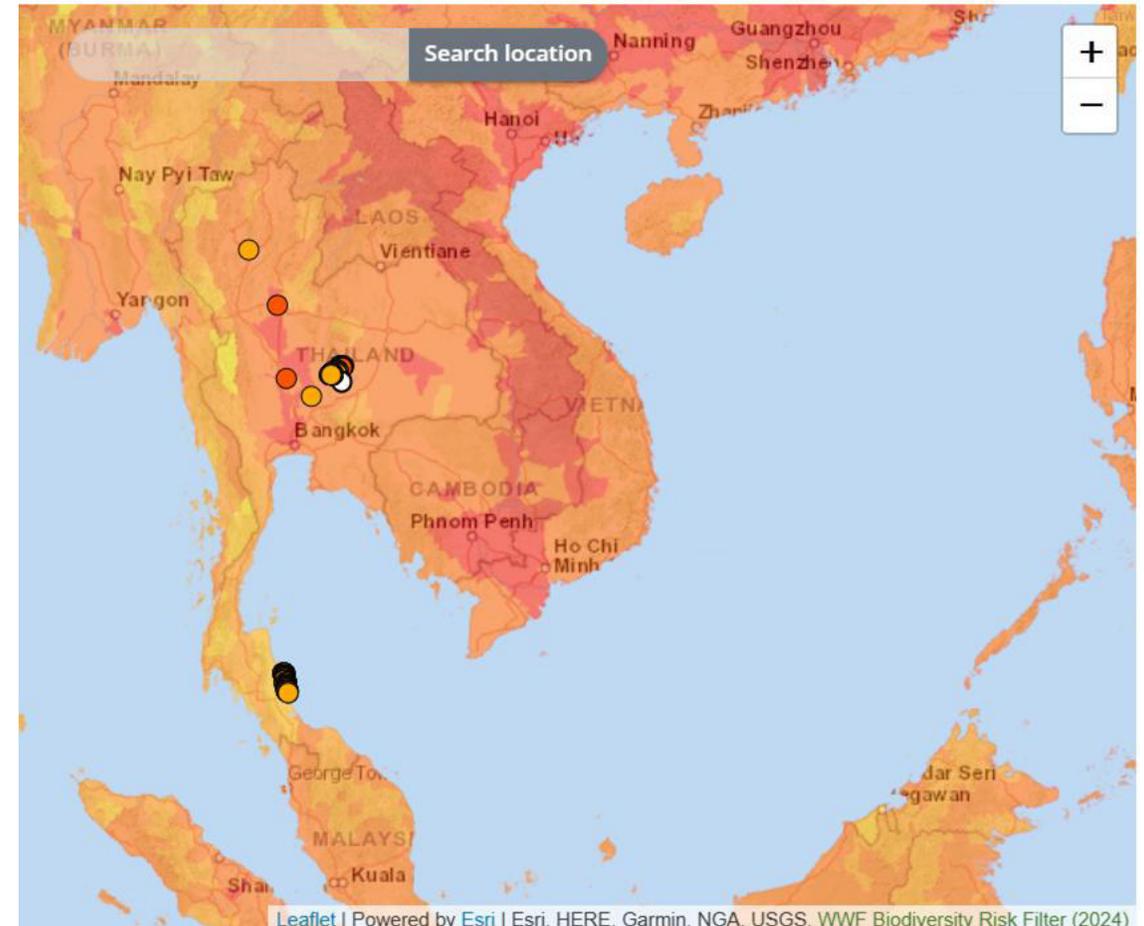
Before commencing the detailed risk analysis, this section reconfirms the boundaries and key assumptions that underpin the assessment, ensuring a focused and effective analysis.

The assessment covers **the direct operations of EA's 12 renewable energy projects** in Thailand, as specified in Section 2.3, with operational data as of December 2024. It also includes a preliminary, qualitative review of the **upstream (O&M) and downstream (grid connection) value chain**.



The analysis is based on the following key assumptions:

- The WWF Biodiversity Risk Filter (BRF) serves as an effective portfolio-level screening tool for identifying potential risks and prioritizing areas for further attention.
- The risk scores and indicators derived from the BRF are based on the global datasets integrated within the tool, and their accuracy reflects the status of those third-party sources at the time of analysis.
- The primary focus on direct operations in this initial assessment cycle is assumed to represent the most material and manageable nature-related risks for the company at this stage.



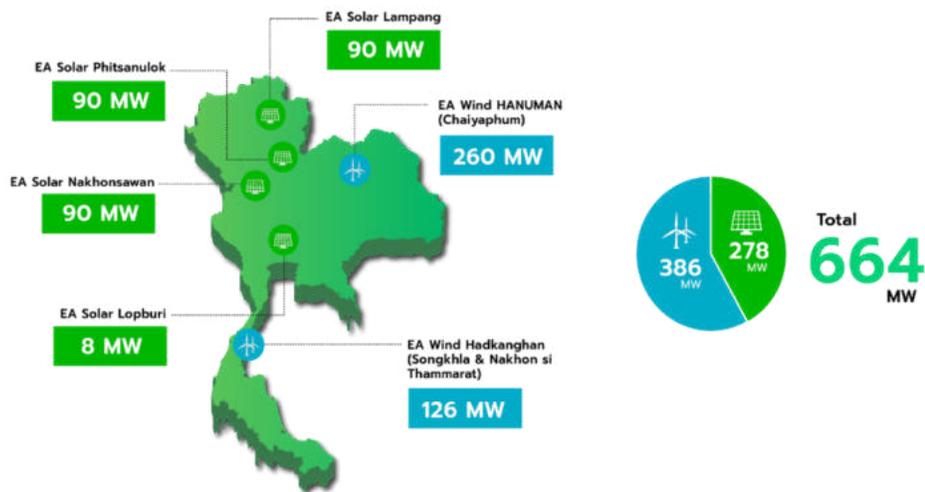
3.2 Biodiversity Risk Assessment Process

- Locate: Identifying EA's Interface with Nature

Spatial Information of Project Sites and Supply Chain

The first step of the LEAP process is to identify the geographical locations of our operations to understand their interface with nature. This understanding allows us to adopt a location-specific approach for dependencies and impacts analysis in the next step.

As specified in Section 2.3, the assets included in this assessment comprise 12 renewable energy projects (182 Sites) across 6 provinces in Thailand, as shown in the table and map. "While the analysis in this Locate phase focuses primarily on our direct operations, the company acknowledges that key value chain interfaces, such as the locations of downstream substations, represent another important geographical dimension that will be considered for more in-depth analysis in the future."



No.	Site Name	Sites	Location	Business Type	Activities
1	Hadkunghan Wind Farm 1 (HKH1)	20	Songkhla	Wind	Own Operations
2	Hadkunghan Wind Farm 2 (HKH2)	25	Nakhon Si Thammarat		
3	Hadkunghan Wind Farm 3 (HKH3)	25	Nakhon Si Thammarat		
4	Hanuman Wind Farm 1 Project (HNM1)	19	Chaiyaphum		
5	Hanuman Wind Farm 5 Project (HNM5)	20	Chaiyaphum		
6	Hanuman Wind Farm 8 Project (HNM8)	19	Chaiyaphum		
7	Hanuman Wind Farm 9 Project (HNM9)	17	Chaiyaphum		
8	Hanuman Wind Farm 10 Project (HNM10)	33	Chaiyaphum		
9	Solar Farm at Lopburi (ESO)	1	Lopburi	Solar	
10	Solar Farm at Nakhon Sawan (ESN)	1	Nakhon Sawan		
11	Solar Farm at Lampang (ESL)	1	Lampang		
12	Solar Farm at Phitsanulok (ESP)	1	Phitsanulok	Customer	
13	Phitsanulok Sub Station 2	1	Phitsanulok		

3.3 Biodiversity Risk Assessment Process

- Evaluate: Assessing Dependencies-related biodiversity risks

Ecosystem Services that EA's Business Depends on



To assess our business dependencies on nature, we utilized the **ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure) tool**. ENCORE evaluates the materiality (level of dependency) of a business's production processes on specific ecosystem services. For the "Renewable Electricity" sector, the assessment reveals "Very High" and "High" dependencies on several critical services.

Very High Dependencies

- **Global Climate Regulation:** Both our solar and wind operations are highly dependent on stable and predictable climate patterns. For wind power, this ensures consistent wind resources, while for solar power, it maintains optimal panel efficiency by preventing extreme temperatures. Crucially, this service also mitigates the frequency and intensity of extreme weather events (e.g., severe storms, hail) that could cause significant damage to our high-value infrastructure.
- **Surface Water:** This dependency is particularly material for our solar power operations. A reliable supply of surface water is essential for the regular cleaning of solar panels, a process critical for maintaining maximum energy production efficiency. Any scarcity of this resource presents a direct operational risk.

High Dependencies

- **Flood and Storm Protection:** Our physical assets rely on the protective services of natural ecosystems. Healthy ecosystems, such as forests and wetlands, act as natural buffers that reduce the impact of floods and storms, thereby protecting our solar panels, wind turbines, and control buildings from damage.

The materiality of these dependencies, particularly on water, is further underscored by the risk scores from the WWF BRF, which highlight "Water Scarcity" as a significant risk in certain operational areas. Any disruption to these essential services could therefore directly impact our operational efficiency and financial position.

3.3 Biodiversity Risk Assessment Process

- Evaluate: Assessing Impact-related biodiversity risks

Positive and Negative Impacts on Ecosystems

Based on the assessment using the WWF Biodiversity Risk Filter (BRF), we have analyzed the potential impacts of EA's operations, categorized according to the TNFD's key Impact Drivers as summarized in the figure below.

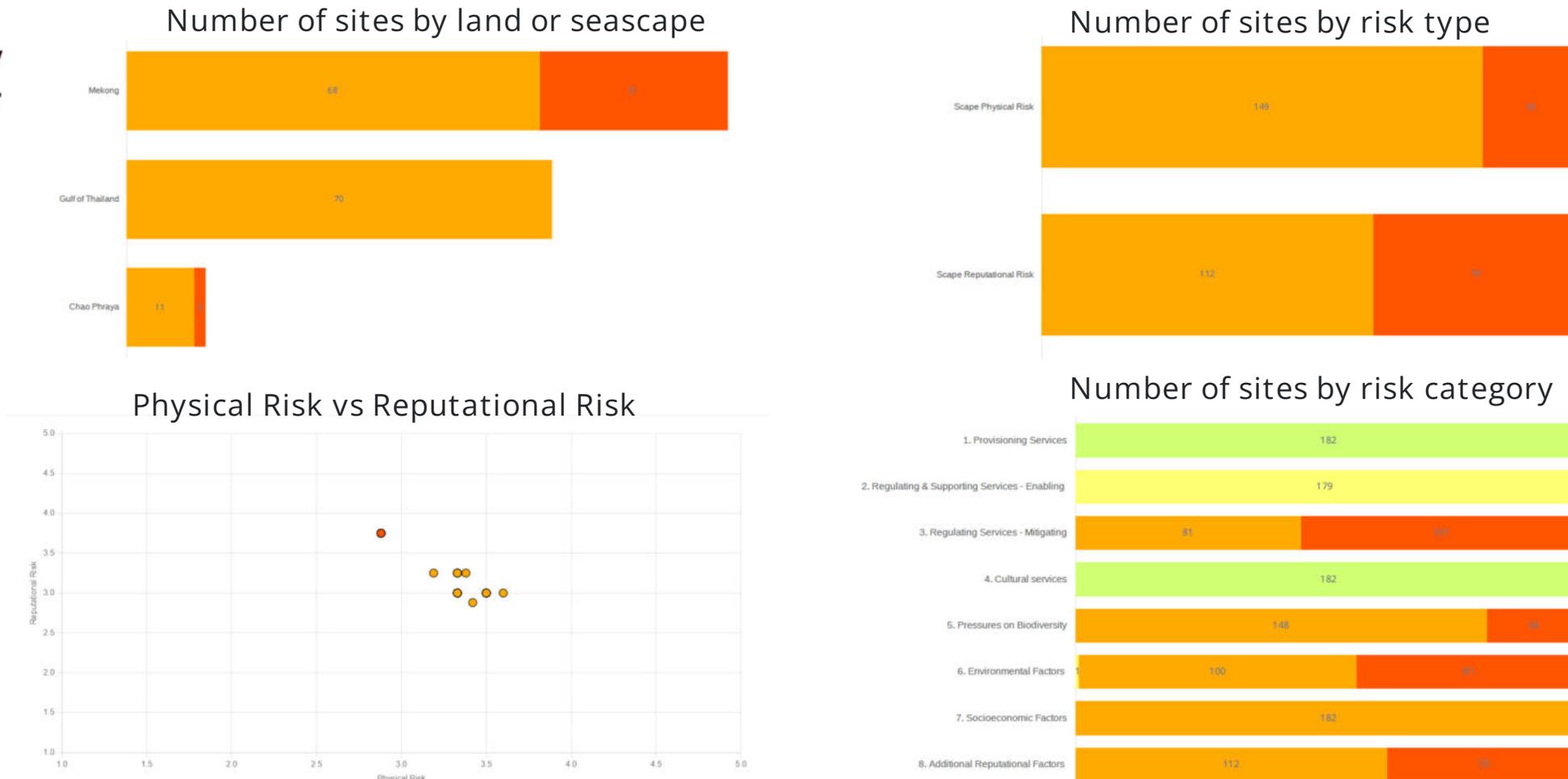


Figure: Summary of Risk Scores by key Impact Drivers from WWF BRF

3.3 Biodiversity Risk Assessment Process

- Evaluate: Assessing Impact-related biodiversity risks (Cont.)

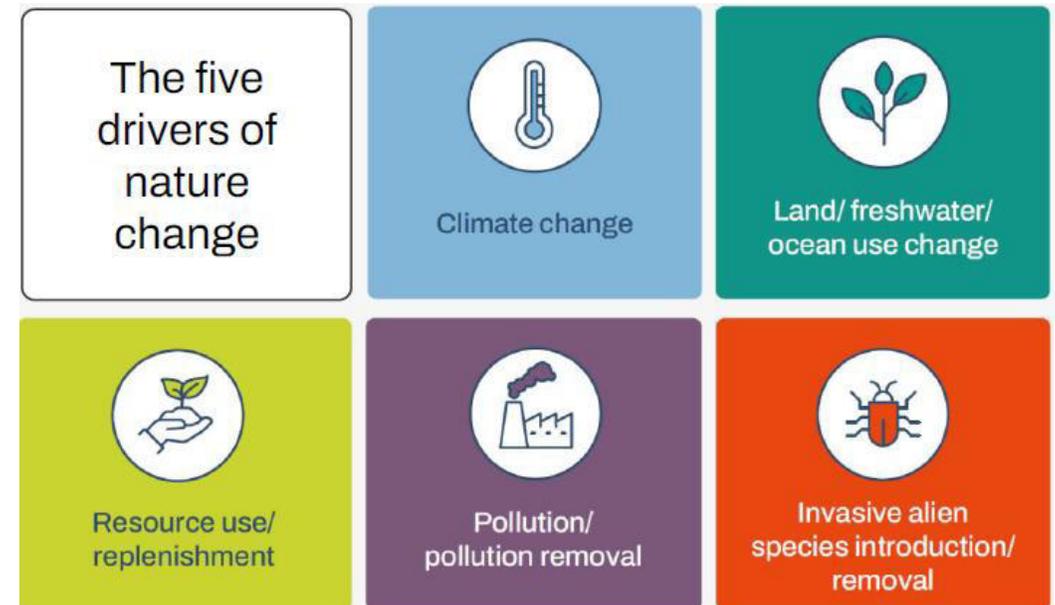
Key Negative Impacts (Impact driver) :

The assessment highlights the following potential impacts, prioritized by their risk scores:

- **Pollution:** The WWF BRF assessment identifies Pollution as our highest-scoring impact driver, with an average risk score of 3.6 (High). This is primarily driven by regional risks associated with Nitrogen deposition, even though our direct operations are clean energy-based.
- **Land Use Change:** This impact driver also presents a High risk, with an average score of 3.1. This aligns with the nature of our business, which requires land for project development. However, the company has mitigation measures through reforestation projects.
- **Resource Use:** For this dimension, the WWF Water Risk Filter (WRF) indicates a low overall baseline water risk, with an average score of 1.45. However, the company's forward-looking climate scenario analysis, as detailed in our TCFD&IFRS S2 Report, identifies water stress as "the most severe risk for the Solar business" and projects this risk to escalate to a "Very high" level in the future. Therefore, while the current baseline risk may be low, the future risk associated with water stress is considered highly material for our strategic planning.

Positive Impacts:

- Concurrently, EA's core business of generating clean energy creates a significant indirect positive impact on biodiversity by helping to reduce GHG emissions, a key driver of nature loss. In 2024, our renewable energy projects contributed to the avoidance of 771,468 tCO₂e of GHG emissions. Furthermore, the company is committed to utilizing Nature-based Solutions, such as forestry and afforestation projects, as part of its long-term Net-Zero strategy.



The five drivers of nature change

3.4 Biodiversity Risk Assessment Process

- Assess: Analyzing Biodiversity-related Risks and Opportunities

In this Assess phase, we analyze how the dependencies and impacts on nature, as identified in Section 3.3, translate into risks and opportunities that could affect the company's financial position and strategy.

Nature-related Risks

Physical Risks:



Water Scarcity Risk: The assessment reveals that water risk is a multifaceted issue requiring a nuanced perspective. While our operations, particularly the solar business, have a relatively low water consumption footprint, consistent with our Integrated Water Efficiency Report which focuses on maximizing efficiency and reducing water use, our business nonetheless remains dependent on a reliable supply of surface water for critical processes, such as cleaning solar panels. The key issue is the vulnerability to future risk. The company's TCFD&IFRS S2 Report, through its scenario analysis, explicitly identifies "water stress as the most severe physical risk for the Solar business," projecting this risk to intensify in our operational regions. Therefore, although current water consumption is low, the potential future disruption to the availability of that essential water supply constitutes a material risk to our business continuity and financial position.



Ecosystem Degradation Risk: The proximity of our projects to protected areas and Key Biodiversity Areas (KBAs), particularly the Hadkanghan wind projects (risk score 4.0), exposes the company to risks from the degradation of surrounding ecosystems. This could affect the stability of ecosystem services, such as reduced natural protection from physical events like cyclones and flooding, which are physical risks the company has already assessed in its TCFD&IFRS S2 report.

Transition Risks:



Reputational Risk: Operating in sensitive locations, such as near Key Biodiversity Areas (KBAs), without transparent and acceptable management measures, could lead to a loss of confidence from stakeholders and investors.



Policy & Legal Risk: The global trend towards stronger nature protection may lead to stricter future regulations, which could increase costs and lead times for new project development, similar to other policy risks the company faces, such as the expiration of the Adder subsidy.

3.4 Biodiversity Risk Assessment Process

- Assess: Analyzing Biodiversity-related Risks and Opportunities (Cont.)

Nature-related Opportunities

Proactive management of biodiversity-related issues also presents significant opportunities for EA's business:



Access to Green Finance:

A systematic risk assessment aligned with the TNFD framework enhances opportunities to access green financial instruments, such as Green Bonds, for which the company has already developed a Green Bond Framework.



Innovation and Efficiency:

The risk of water scarcity creates an opportunity to invest in and develop innovative solutions, such as waterless solar panel cleaning technology, which can reduce long-term operational costs and enhance competitiveness.



Environmental Asset Monetization:

Ecosystem restoration initiatives, such as reforestation projects, can lead to revenue generation from voluntary carbon credits (T-VER), which is one of the company's stated strategies.

4. Biodiversity Risk Assessment Results

4.1 Biodiversity Risk Assessment Results

- Summary of WWF Biodiversity Risk Filter Results



To prioritize key areas for management attention, we have identified the top three risks from our portfolio-wide WWF Biodiversity Risk Filter (BRF) assessment. The following summary highlights these risks, which are ranked by their average risk scores and encompass both Impact Drivers and Physical Risks.

Risk Type	Average Score	Risk Level	Description
Physical Risk			
Pollution	3.6	High	This risk reflects the potential exposure of operational sites to regional, transboundary pollution, such as nitrogen deposition. While the company's direct operations are clean, high levels of regional pollutants can degrade the local ecosystem, potentially impacting soil, water quality, and asset integrity over the long term.
Wildlife Hazard Risk	3.4	High	This refers to the two-way risk associated with the interaction between wildlife and company assets. It includes the potential for operations to harm local fauna (e.g., bird/bat collisions with wind turbines) and the risk of wildlife causing operational disruptions or damage to equipment (e.g., nesting, damaging cables), leading to increased maintenance costs and potential regulatory scrutiny. To further understand and assess this risk in-depth, the company has implemented an on-site expert survey at its wind farm sites.
Land Use Change	3.1	Medium	This impact is inherent to the development of large-scale renewable energy projects. It refers to the physical conversion of land from its prior state to accommodate solar arrays and wind turbine infrastructure, which can lead to habitat loss or fragmentation for local species.
Reputational Risk			
Protected/Conserved Areas	3.6	High	This represents the reputational risk arising from the perception that company operations are in close proximity to, or could potentially impact, legally protected or culturally significant conservation areas. Such proximity can attract significant scrutiny from the public, NGOs, and regulatory bodies.
Range Rarity	3.4	High	This risk stems from operating in areas that are habitats for species with a very limited geographical distribution, making them particularly vulnerable. Any negative impact could be perceived as a threat to unique and irreplaceable biodiversity, drawing criticism from conservation groups and the scientific community.
Media Scrutiny	3.5	High	This measures the level of media attention on environmental topics in the operational region. A high score indicates that any environmental or social incident has a greater likelihood of being amplified into a widespread negative news story, potentially damaging the company's brand and investor confidence.

4.2 Biodiversity Risk Assessment Results - High-risk Areas or Activities

High-risk Areas or Activities

When analyzed at the individual asset level, the assessment indicates that the most significant risks are concentrated in the following key operational areas:

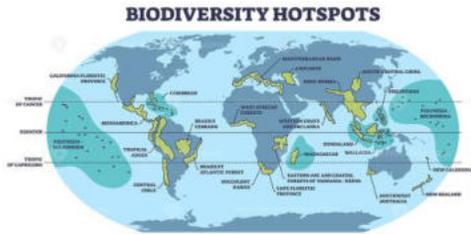
- **High Wildlife Hazard Risk (Score: 4.00):** Four projects share the highest score for wildlife hazard risk: **the Hanuman Wind Projects (HNM1 and HNM8) and all solar farm Nakhon Sawan, and Phitsanulok sites**. This indicates that not only wind farms (due to collision risk) but also large-scale solar farms are assessed as having a significant interface with local fauna, which could lead to operational and reputational risks. For wind projects areas are subject to close wildlife population monitoring through our bird and bat survey programs.
- **High Pollution Risk (Score: 3.92):** The highest risk for pollution is found equally across three solar farm sites: **Lopburi, Nakhon Sawan, and Phitsanulok**. This suggests these locations are situated in regions with higher background environmental pressures, potentially from agriculture or industry.
- **High Land Use Change Risk (Score: 3.5):** The highest risk related to land use change is shared by **the Hanuman Wind Projects (HNM1 & HNM8) and the Nakhon Sawan Solar Farm**. This highlights that the development of both large-scale wind and solar projects involves a significant physical footprint and conversion of land, which is a key direct impact on the local environment.



4.3 Biodiversity Risk Assessment Results

- Key Issues for Monitoring and Future Improvements

Based on the overall risk assessment, **there is no site has both reputational and physical risk in high or very high level.** Therefore, there is no site that might create significant biodiversity impact. However, the following key issues have been identified for ongoing monitoring and future improvement:

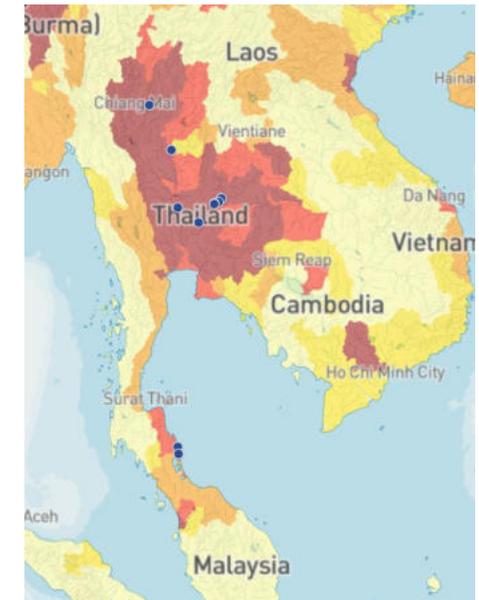


- **Hotspot Management:** The **Hanuman Wind Projects** and the **Solar Farms in Nakhon Sawan, Lopburi, and Phitsanulok** are identified as areas with the highest concentration of risks across multiple dimensions (e.g., Wildlife Hazard, Pollution, Land Use Change) and require site-specific management plans.

- **Future Water Stress Vulnerability:** While current baseline water risk is low, our TCFD analysis confirms this is the most severe long-term risk for the solar business. It is a key issue that requires monitoring and the development of water-saving innovations.



- **Proactive Reputational Risk Management:** Reputational risks linked to operating near Key Biodiversity Areas (KBAs) require continuous stakeholder engagement and communication, even if not ranked highest by the screening tool's score.



- **Future Improvement - Deep-Dive Assessment:** To better understand the risks at high-priority sites (particularly the Hadkanghan projects), the company plans to conduct a detailed, site-specific assessment using the **Integrated Biodiversity Assessment Tool (IBAT)** in the next phase. This will inform the development of a targeted **Biodiversity Action Plan (BAP)**.

5. Mitigation and Biodiversity Management Plan

5.1 Mitigation and Biodiversity Management Plan

- Integration of Biodiversity Risk Assessment into EA's Enterprise Risk Management

EA's approach to biodiversity risk management is systematically integrated into the company-wide Enterprise Risk Management (ERM) framework. This ensures that nature-related risks are identified, assessed, and managed with the same rigor and consistency as other principal business risks.

Integration of Biodiversity Risk Assessment into Enterprise Risk Management

- The Corporate Governance & Sustainability Committee (CGS) and the Risk Management Committee (RMC), which report to the Board of Directors, have direct oversight of nature-related risks as part of their broad mandate. This ensures a single, high-level channel of accountability.

Unified Governance Structure



- Biodiversity is formally recognized and categorized as a key component of the company's major risk areas. This classification ensures it receives the same level of strategic attention and resource allocation as other significant business risks.

Formal Inclusion in the Corporate Risk Framework



- The process for managing nature-related risks adheres to the standardized corporate methodology. The identification and assessment of risks utilize consistent tools across the organization, such as the corporate Risk Assessment Matrix.

Consistent Methodology and Tools



- The Sustainable Development Department is responsible for the ongoing identification and assessment of nature-related risks. Findings and management plans are reported on a regular basis to the CGS and RMC, ensuring a continuous loop of top-level oversight and facilitating timely strategic adjustments.

Continuous Oversight and Reporting Loop



5.2 Mitigation and Biodiversity Management Plan

- Biodiversity Management Approach Based on the Mitigation

Energy Absolute (EA) is committed to managing its biodiversity impacts in line with the Mitigation Hierarchy, a framework that prioritizes actions to minimize negative long-term impacts on nature, with the following approach:

1. Avoid

- The first and most critical step is to prevent impacts from occurring. EA applies Spatial Avoidance in its site selection process for future projects by integrating climate and biodiversity risk screening. This involves using risk tools (e.g., WWF Risk Filter) to assess and, where feasible, avoid project development in areas of the highest ecological sensitivity.
- EA had committed in biodiversity commitment that no business units operated in the areas of world heritages and in the protected areas of the International for Conservation of Nature (IUCN), Category I-IV to avoid significant impact to high biodiversity value area.

2. Reduce

For impacts that cannot be avoided, EA is committed to implementing robust measures to minimize them across our operations:

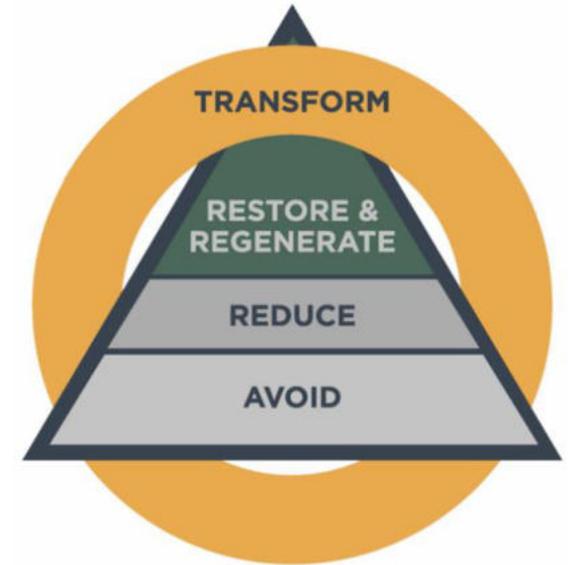
- For our wind assets, a key example is the ongoing bird and bat population monitoring program conducted by expert consultants. This program gathers data on species' behavior and activity patterns to inform and develop specific operational procedures, such as considering turbine curtailment during high-risk periods, to minimize collision risk.
- For our solar assets, we are pursuing Technological Reduction by exploring innovations such as waterless solar panel cleaning systems. This initiative directly addresses the high future risk of water scarcity identified in our assessment and aims to reduce our dependency on local water resources.

3. Restore & Regenerate

- EA takes responsibility for remediating areas potentially affected by our operations. Through our ongoing reforestation projects in surrounding areas, we aim to support Ecological Restoration and create habitats for local species. This is a core component of our commitment to Nature-based Solutions under our Net-Zero target.
- EA helped regenerate degraded forests and their ecosystems at Tat Ton National Park, Mueang District, Chaiyaphum Province by planting seasonal trees native to the local forests. Our contribution covers an area of approximately 5,140 acres, including a weir EA built to help store water in a brook, which is a branch of the Chi River.

4. Transform

- EA drives systemic transformation by extending its influence beyond its direct operations. We drive this through our No Deforestation Policy, which sets clear expectations for our partners and outlines a process for engagement on corrective action plans to ensure compliance. Furthermore, through collaborations such as the RE100 Thailand Club, we work with industry peers to accelerate the broader market's transition to sustainable energy.



Source: SBTN's Action Framework, AR3T.

5.3 Mitigation and Biodiversity Management Plan - Monitoring and Evaluation Plan

Energy Absolute (EA) has established a systematic plan to monitor and evaluate its biodiversity management performance, ensuring that mitigation measures are implemented effectively and achieve their intended goals.

Monitor and Evaluation (M&E) process

The M&E process operates within the company's governance structure. The management-level Sustainable Management Committee is responsible for driving and coordinating the implementation of sustainability projects, while the Corporate Governance & Sustainability Committee (CGS) convenes quarterly to systematically monitor and assess performance against established targets. The results of this monitoring are reviewed and used to inform and improve the Biodiversity Action Plan (BAP) and future strategies.

Monitoring Framework and Key Performance Indicators (KPIs), to track progress tangibly, the company has defined an initial monitoring framework and Key Performance Indicators (KPIs) as follows:



Mitigation Action	Key Performance Indicator (KPI)	Monitoring Frequency	Lead Responsible Party
Avoid: Project Site Screening	Number of new projects screened for biodiversity risk prior to investment decision.	Per Project	Sustainable Development Dept.
Reduce: Wildlife Monitoring (Birds/Bats)	Number and rate of bird/bat collision incidents at wind farm sites.	Quarterly/Annually	Site Operations
Reduce: Water Efficiency	Water consumption per MWh (m3/MWh) at solar farm sites.	Quarterly/Annually	Site Operations
Restore: Reforestation Program	Hectares reforested and seedling survival rate (%).	Annually	Sustainable Development Dept. / Community Affairs
Overall: Portfolio Risk Reduction	Year-on-year change in WWF BRF risk scores for key issues.	Annually	Sustainable Development Dept.

6. Stakeholder Engagement & Communication

6.1 Stakeholder Engagement & Communication

- Engagement with Local Communities and Stakeholders



Energy Absolute (EA) believes that building open, collaborative relationships with local communities and all stakeholders is fundamental to sustainable development. Stakeholder Engagement is a core component of the company's Sustainability Framework, and we are committed to listening, understanding, and working with communities to create long-term shared value.

The company engages with communities and stakeholders through various initiatives, with key examples including:

- **Collaborative Reforestation Programs:** A prime example of our community engagement is our ecosystem restoration program, where we work together with local communities in areas surrounding our projects to plant trees. This approach not only increases green spaces and restores biodiversity but also strengthens community ties and creates shared value.
- **Community-based Water Management:** To sustainably manage water-related risks, we engage with communities on sustainable water usage to ensure equitable access and prevent potential resource conflicts, particularly in areas identified with high future water stress risk.
- **Regular Dialogue and Communication:** The company maintains open communication channels for communities to voice concerns and provide feedback regarding our operations, while also providing regular updates on operational plans and safety measures.

These meaningful engagement activities help EA to understand local perspectives, better manage social and environmental risks, and ensure our projects deliver sustainable benefits for both the company and the surrounding communities.

6.2 Stakeholder Engagement & Communication

- Internal Communication and Awareness Raising

In addition to external stakeholder engagement, Energy Absolute (EA) places great emphasis on fostering a corporate culture of sustainability and biodiversity awareness internally, from the executive level to all employees.

The company facilitates internal communication and engagement through several mechanisms:

- **Integration at the Management Level:** Environmental performance is integrated into executive Key Performance Indicators (KPIs) and remuneration systems to drive accountability and foster the achievement of the company's sustainability goals. Relevant committees, such as the CGS and RMC, regularly review these topics, ensuring awareness at the highest levels of the organization.
- **Employee Training and Capacity Building:** The company provides targeted training to enhance the knowledge and skills of relevant staff. For example, training on bird and bat species identification is provided to employees at our wind farm sites to improve their ability to support on-site monitoring and mitigation measures.
- **Employee Engagement and Innovation Programs:** The "EA Inside EA Program" was established to promote employee participation in developing innovations for energy efficiency and greenhouse gas reduction. Employees who develop successful projects receive monetary incentives as a reward.

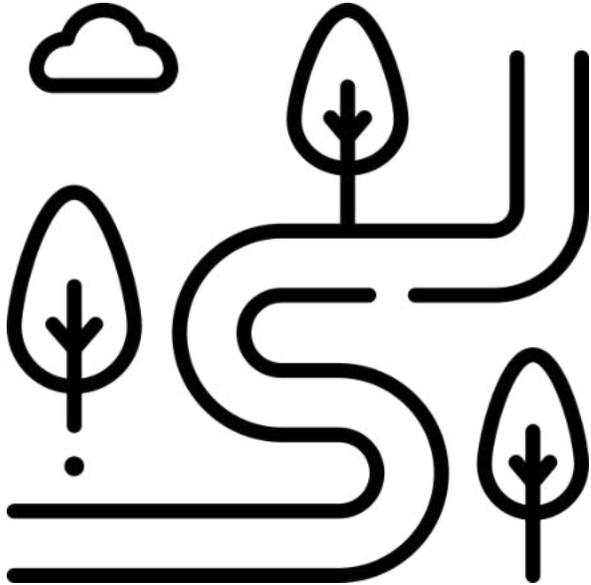
These internal communication and awareness initiatives help create a shared sense of responsibility and empower all employees to contribute to EA's long-term biodiversity and sustainability objectives.



7. Conclusion and Next Steps

7.1 Conclusion and Next Steps

- Key Findings and Summary



This Biodiversity Risk Assessment Report, conducted in alignment with the TNFD framework using the LEAP process, has yielded several key findings that will inform the company's strategy and management actions:

- **Core Business Dependencies on Nature:** The assessment confirms that EA's renewable energy business has significant dependencies on key ecosystem services, particularly the very high dependency on Climate Regulation for operational stability and Surface Water for solar farm efficiency.
- **Identification of Hotspots & Key Risks:** The portfolio-wide risk screening revealed that the highest-scoring risks are Wildlife Hazard Risk (Score: 4.00) and Pollution (Score: 3.92). These risks are concentrated at the Hanuman Wind Projects and a group of solar farms (Lopburi, Nakhon Sawan, Phitsanulok).
- **Site-Specific Risks in Sensitive Areas:** The Hadkanghan Wind Projects are identified as the highest-risk sites regarding their proximity to Protected Areas and Key Biodiversity Areas (KBAs), carrying a High associated Reputational Risk (Score: 4.0).
- **The Climate-Water Risk Nexus:** A key finding is the nuanced nature of water risk. While the baseline water risk score from the WRF tool is low, the company's forward-looking TCFD scenario analysis confirms that future water stress is a material physical risk with significant financial implications, underscoring the need to integrate climate and biodiversity assessments.
- **A Clear Management Path Forward:** The company has existing mitigation measures, such as wildlife monitoring and reforestation. This assessment concludes that a necessary next step is to conduct a site-specific deep-dive analysis for high-risk sites using the IBAT tool, which will inform the development of a targeted Biodiversity Action Plan (BAP).

7.2 Conclusion and Next Steps

- Roadmap for Enhancing Biodiversity Management and TNFD Readiness

Roadmap for Enhancing Biodiversity Management and TNFD Readiness

Energy Absolute (EA) recognizes that this assessment is a critical first step. The company is committed to the continuous enhancement of its biodiversity management through the following phased roadmap:

Timeline	Key Initiatives for Biodiversity Management
Short-Term (Next 1-2 Years):	Deep-Dive Assessments and Foundational Capabilities <ul style="list-style-type: none">• Site-Specific Deep-Dive Assessments: Conduct detailed, site-specific assessments for the highest-risk projects identified in this report (particularly the Hadkanghan Wind Projects) using the Integrated Biodiversity Assessment Tool (IBAT) to understand risks to specific species and habitats.• Develop Biodiversity Action Plans (BAPs): Use the findings from the deep-dive assessments to develop targeted Biodiversity Action Plans (BAPs) with clear mitigation and monitoring measures for priority sites.• Enhance Metrics and Targets: Formalize biodiversity-related Key Performance Indicators (KPIs) and begin collecting baseline data to track performance.
Medium-Term (2-4 Years):	Broadening Scope and Integration <ul style="list-style-type: none">• Expand Value Chain Assessment: Conduct a more in-depth assessment of nature-related risks and opportunities within the value chain, covering both upstream and downstream activities.• Integration into Investment Decisions: Develop and implement formal mechanisms to integrate biodiversity-related risks and opportunities into the company's investment screening and capital expenditure (CAPEX) planning processes.• Explore Scenario Analysis: Begin exploring nature-related scenario analysis, as recommended by the TNFD framework, to test the long-term resilience of the company's strategy.
Long-Term (5+ Years):	Achieving Goals and Full Disclosure <ul style="list-style-type: none">• Achieve No Net Loss (NNL) and Net Positive Impact (NPI) Targets: Fully implement BAPs at priority sites to achieve No Net Loss of biodiversity, and progress towards the long-term goal of achieving a Net Positive Impact.• Full TNFD-Aligned Disclosure: Prepare for comprehensive disclosure in full alignment with all TNFD recommendations across the four pillars of Governance, Strategy, Risk & Impact Management, and Metrics & Targets.

8. Annex

8. Annex - References

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