



# Understanding nature impacts across financed activities

A Societe Generale pilot project  
on the power utilities sector





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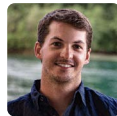
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## Acknowledgements

We'd like to thank our partners at Societe Generale, as well as colleagues across Quantis and BCG who generously offered their time and insight to ensure this report was meaningful.

We are grateful to Keith Lewis for his copywriting and Anne-Charlotte Moreau and Maxime Blet of Downstairs Design ([www.downstairs.design](http://www.downstairs.design)) for their layout and design expertise.

# Foreword

 **Aurore Le Chatelier, Head of Nature Taskforce –  
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Addressing the diverse ways in which business activities impact nature is a complex challenge. However, achieving the goal of halting and reversing biodiversity loss by 2030 requires all economic actors to embrace it. While measuring impacts on nature is a significant undertaking for any organization, it is particularly complicated for financial institutions. With limited direct data from clients, how can we effectively use proxies to gain an accurate view of this multifaceted issue? How can we adopt a portfolio-wide perspective when economic activities affect nature on a local scale? What indicators will enable us to implement the right measures and engage meaningfully with clients?

Amid such uncertainties, there will always be temptation to wait for perfect and comprehensive datasets. Yet, as a responsible bank, we chose to take proactive steps now.

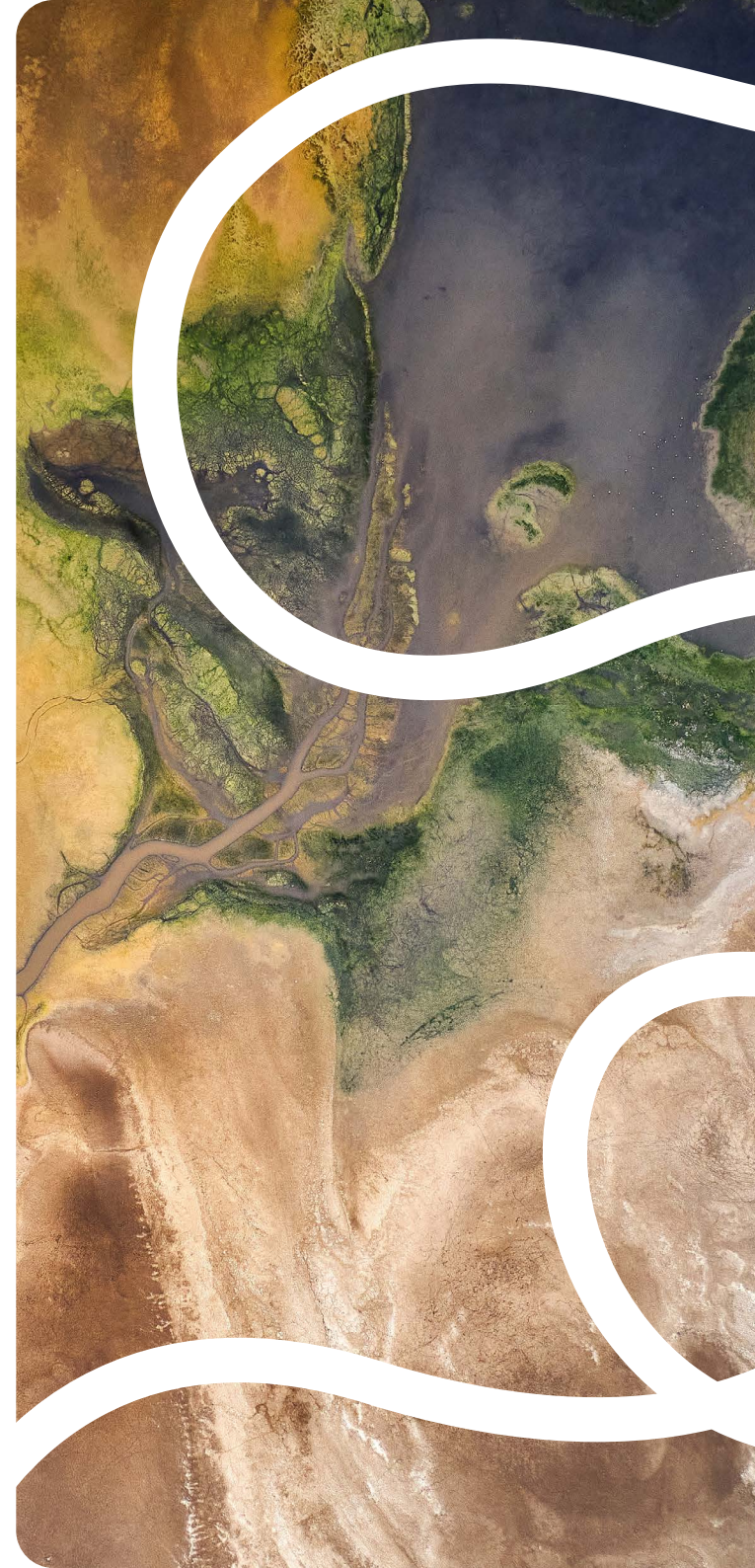
*\*Achieving the goal of halting and reversing biodiversity loss by 2030 requires all economic actors to embrace it.\**

Collaborating with Quantis, we embarked on exploratory efforts that have delivered progress, serving as a significant step forward in our nature journey. These efforts have

provided a solid foundation for deepening our understanding and improving our methodologies. Quantis contributed not only a rigorous framework but also the flexibility needed to address the unique aspects of our portfolio, acting as a true catalyst for progress.

We are excited to share the lessons we've learned from this initiative, recognizing that collective learning is essential to overcoming the challenges ahead. We hope this document

offers valuable insights to inform and enhance your own approaches as we all work together toward a more sustainable future.



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# 1/ Introduction

## The complexity of assessing a financial portfolio's impacts on nature

Nature, more so than climate, is a complex topic. The complexity largely stems from its multidimensionality, where — unlike climate — overall nature impacts are evaluated through the lens of various environmental pressures, each often comprised of multiple indicators and metrics (e.g., land use, water consumption, air/water pollution etc.). Additionally, geospatial considerations are essential to understanding where pressures on nature are occurring for each company and to assess how vulnerable local ecosystems are to them.

Within the financial sector, there's another layer of complexity. Here, we encounter intricate financing and ownership structures, challenges in traceability and a complex spectrum of financing structures to address comprehensively (e.g., project versus corporate), partially due to limited access to (and availability of) data from portfo-

lio companies. Moreover, nature data is less mature than climate data, which creates more uncertainty regarding the accuracy and comprehensiveness of datasets. These factors complicate the assessment of the impact of financed portfolios on nature.

## A pilot aimed at overcoming the challenges around nature impact assessments

Despite these challenges, the market is rapidly evolving. Data sources are improving and stakeholders are actively experimenting with available tools. In this context, **Societe Generale** commissioned **Quantis** for a proof of concept (POC) project to assess the potential nature impacts of its financed activities in the power utilities sector.

Quantis and Societe Generale's teams worked together to overcome some of the challenges in gaining nature-related insights, pushing the boundaries of what's currently feasible in nature assessments for the financial sector.



The objective was to learn, understand and consequently develop a nature impact assessment methodology that Societe Generale could potentially use across other financed portfolios. By embracing, rather than simplifying, the inherent complexity of nature, we assessed impacts at the most granular level of company assets, integrating various data sources across all dimensions considered — including geospatial data at the individual asset level through to the financial data at the portfolio level. We aimed to create a thorough understanding at each level before ultimately consolidating it into an overarching view of the results across the portfolio.

*\*By embracing, rather than simplifying, the inherent complexity of nature, we assessed impacts at the most granular level of company assets.\**

Over the following pages, we present the methodological backbone of this POC, taking a deeper dive into the practicalities of the pilot project. We also identify data sources, visualize nature impacts in the portfolio and distil our insights. Lastly, we discuss the limitations and learnings that have emerged from developing this approach to assessing the nature impacts for the financial sector.

## Common challenges faced by financial institutions in conducting nature impact assessments

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### Location specificity

Unlike climate, nature impacts are heterogeneous and highly location-specific, requiring precise geospatial footprints of portfolio companies' activities.

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### Global versus local

Aggregation remains one of the key challenges for nature impact assessments. Finding a robust logic for aggregating the various dimensions for comparability, without losing actionable nuance, is complex.

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### Data quality/coverage limitations

A current scarcity of publicly available data calls for complimentary proxies and robust modeling capabilities.

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### No standardization

Consistent and comparable assessments can be complicated given the absence of standardized measurement and evaluation approaches. This adds additional complexity to interpreting/combining individual nature pressures for a more nuanced understanding.

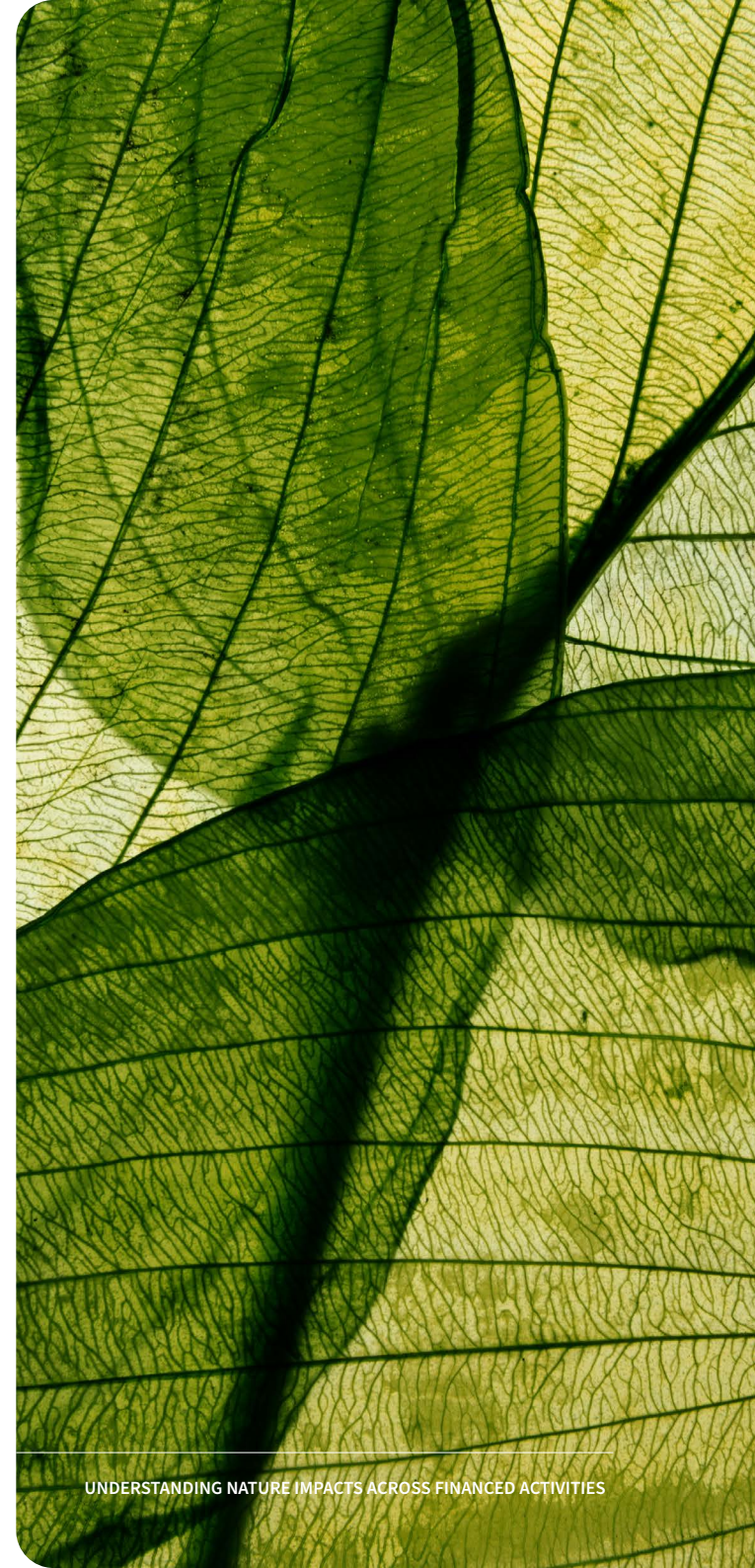
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### Complex data landscape

The countless data providers, metrics and frameworks make it challenging to determine the most appropriate tools/data points and create a streamlined/affordable approach.



2/ *A new methodology*  
to assess nature  
impacts:  
the power utilities sector



# Building on a qualitative heatmap with more nuanced quantitative analysis

## Building on an initial ENCORE-based assessment

Societe Generale set out to better understand and manage the potential impacts of its financed activities on nature, focusing specifically on its credit portfolio. By conducting an initial heatmap of the sectors financed across its portfolio using the tool ENCORE (Exploring Natural Capital Opportunities, Risks and Exposure), it gained a high-level qualitative overview of nature impacts — with the initial mapping yielding valuable science-based insights by identifying hotspots to prioritize across the credit portfolio.

To take this a step further, Societe Generale partnered with Quantis and built on the ENCORE assessment. The aim of the partnership was to more comprehensively map the nature impacts of its global credit portfolio — and overcome the broader challenges that financial institutions face in understanding their nature impacts — through more nuanced, quantitative findings.

## Taking a deeper dive with a focus on the power utilities sector

To deliver more accurate, granular insights and a refined methodology, Quantis led a pilot project focusing on Societe Generale's power utilities sector. This sector was selected due to its exposure within the portfolio and its impacts on nature, according to ENCORE. The objective was to refine the qualitative assessment and deliver pragmatic insights that would deliver more meaningful business value — especially around practically integrating the findings into counterparty evaluation and decision making.

To do this, a representative sample of 19 power utilities clients was selected for a deep dive. Quantis developed a unique methodology that explored and combined numerous pressures on nature, offering a deeper view into the impact of each portfolio company. Specifically, this would require a more detailed understanding by using quantitative data to look at the geographical dimension to this data, along with the supply-chain impacts for each company.

We explored three key dimensions of nature to provide more depth:

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### Nature pressure quantification

Evaluating a comprehensive range of nature pressures

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### Geography

Integrating location-specific data to assess regional environmental impacts and vulnerabilities of ecosystems.

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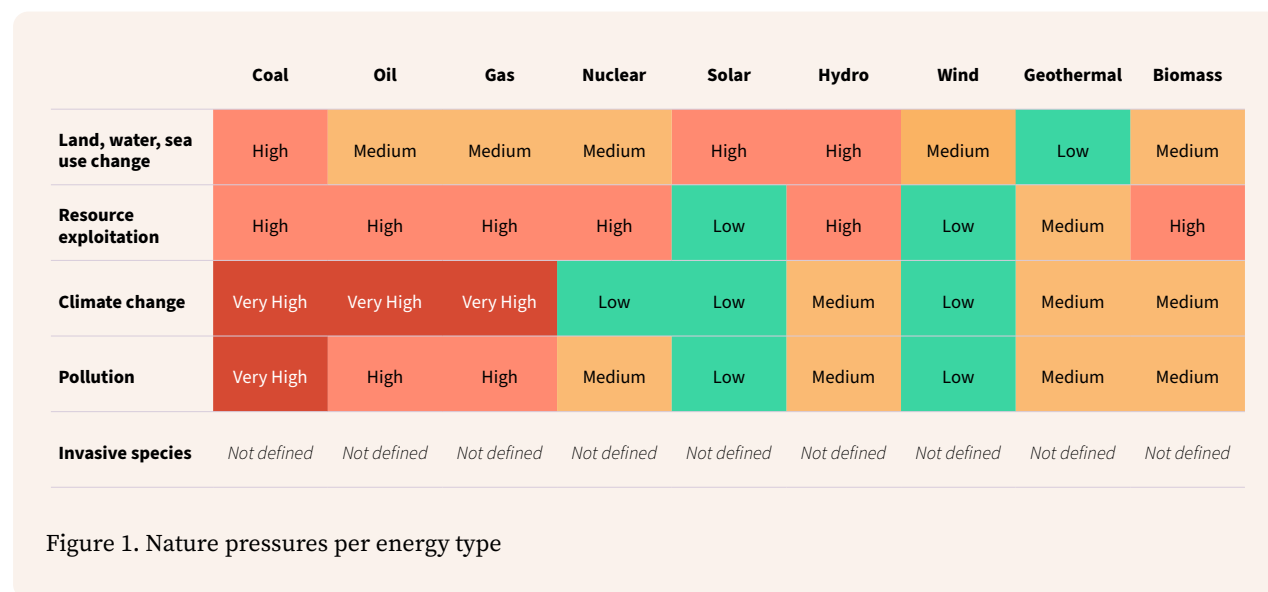
### Value-chain impacts

Analyzing the full value-chain impacts.

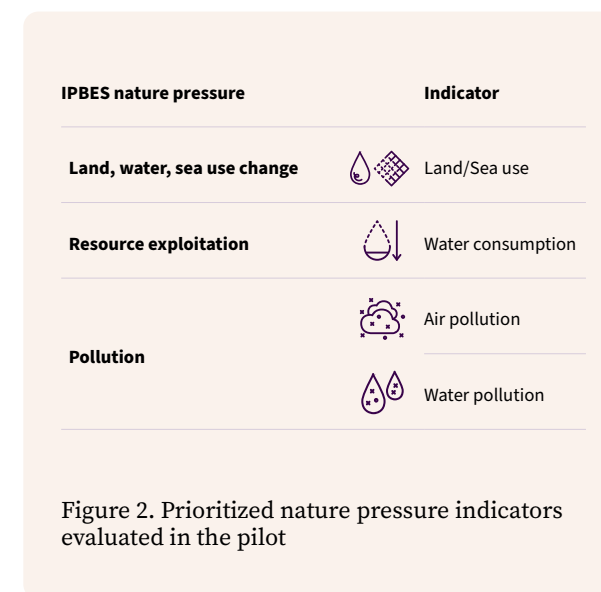


## Defining the relevant nature related indicators for the power utilities sector

To focus on the most relevant indicators of nature impacts for the sector, we conducted a sector-specific assessment derived from a combination of industry reports and guidance from **TNFD** (Taskforce on Nature-related Financial Disclosures), **SBTN** (Science-Based Targets Network) and **WBCSD** (World Business Council for Sustainable Development) among others. This was complemented by Quantis expertise, which helped provide a complete view of materiality for the sector against the **IPBES** (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services) nature pressure categories (Figure 1).

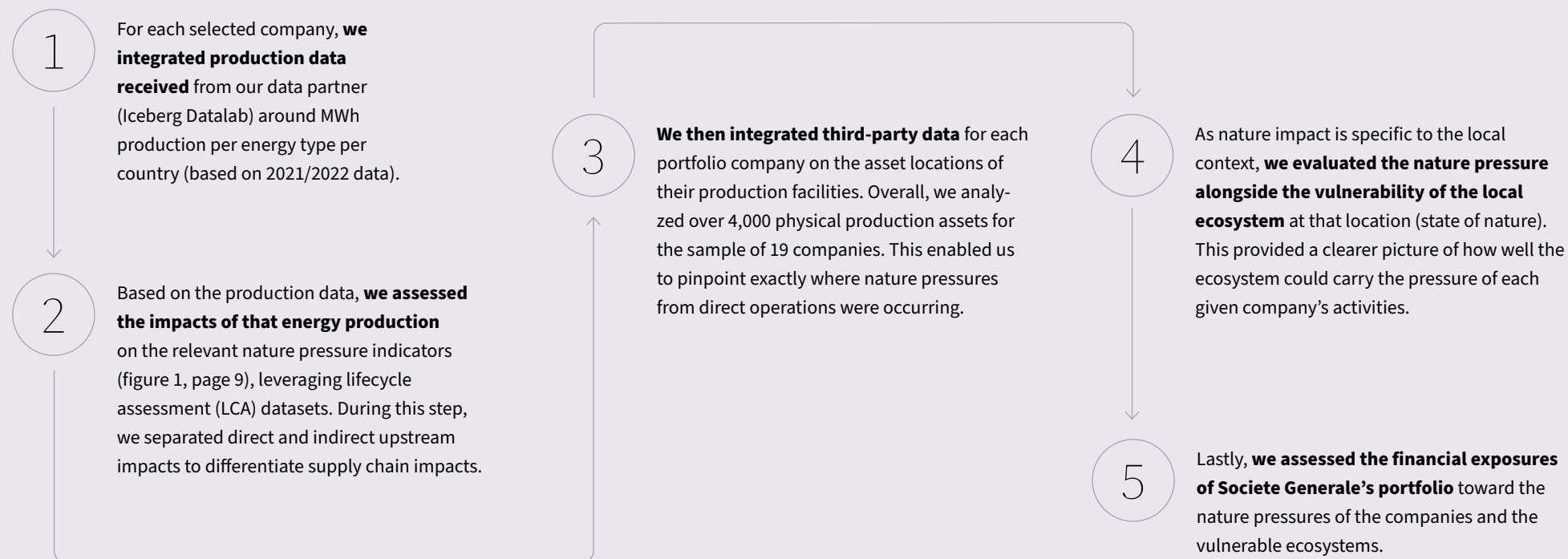


This enabled us to narrow down the focus on the most pertinent nature indicators for the power utilities sector. Pressure related to invasive species was excluded from the scope, as methodologies and data don't currently allow for a robust analysis. While climate is a critical topic, we also excluded it from the analysis due to the extensive prior work already conducted by Societe Generale in this area. Thus, the final focus of the analysis was on the following key indicators (Figure 2; more details on metrics and data sources provided in the appendix).



Using these indicators as a starting point, we assessed nature pressures for the companies in the sample using the following approach.

This approach answers to the Locate and Evaluate step of the TNFD LEAP (Locate, Evaluate, Assess and Prepare) process and sets a strong foundation to expand with dependencies, risk and opportunities.





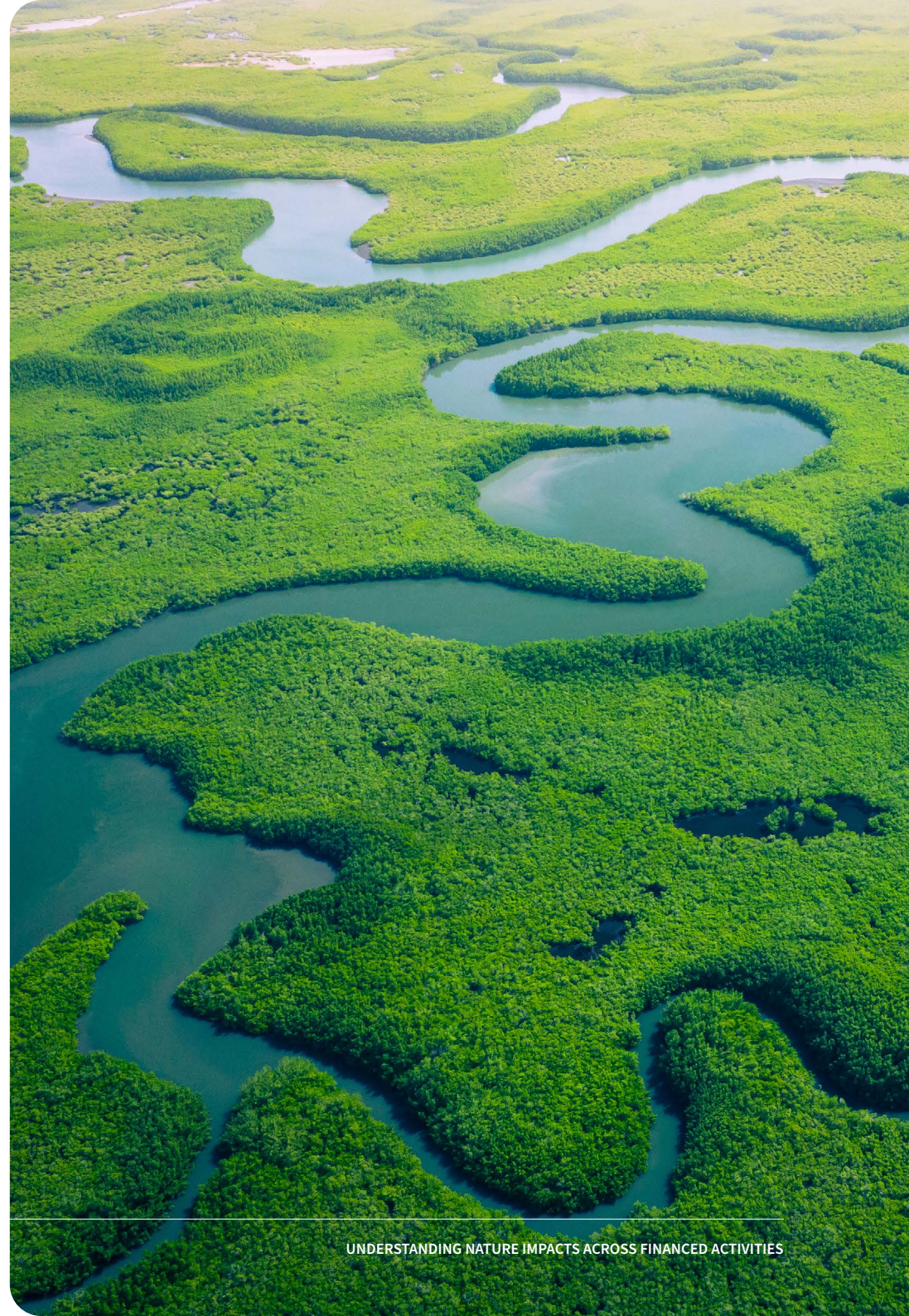
## A more accurate picture through in-depth analysis

**Avoiding the oversimplification of a single metric**, we disaggregated the impact on nature through relevant pressure indicators.

**We integrated asset location data** to create more granular geospatial insights. By combining nature pressures and local states of nature, we were able to assess nature pressures within their specific context.

For each pressure, **we mapped both direct and indirect impacts** through life cycle assessment (LCA).

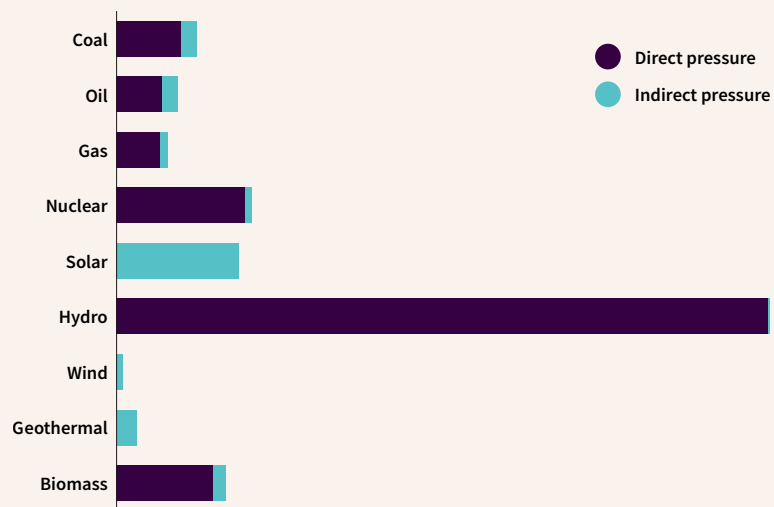
The analysis described above allowed us to deliver a better understanding of the potential nature impacts across various aspects of the portfolio's composition, including the underlying drivers of these impacts.



Ultimately, we can see that zooming in on the nature pressures provides a better understanding of where hotspots are situated in the value chain for the sample portfolio companies. This insight is well illustrated in the example in figure 3, which looks at water consumption per energy type.

By overlaying this view with the energy mix of the sample companies, sourced from Iceberg Datalab, we can already identify some potential hotspots related to the energy production of the sample companies.

*\*Zooming in on the nature pressures provides a better understanding of where hotspots are situated in the value chain.\**



### Key insights

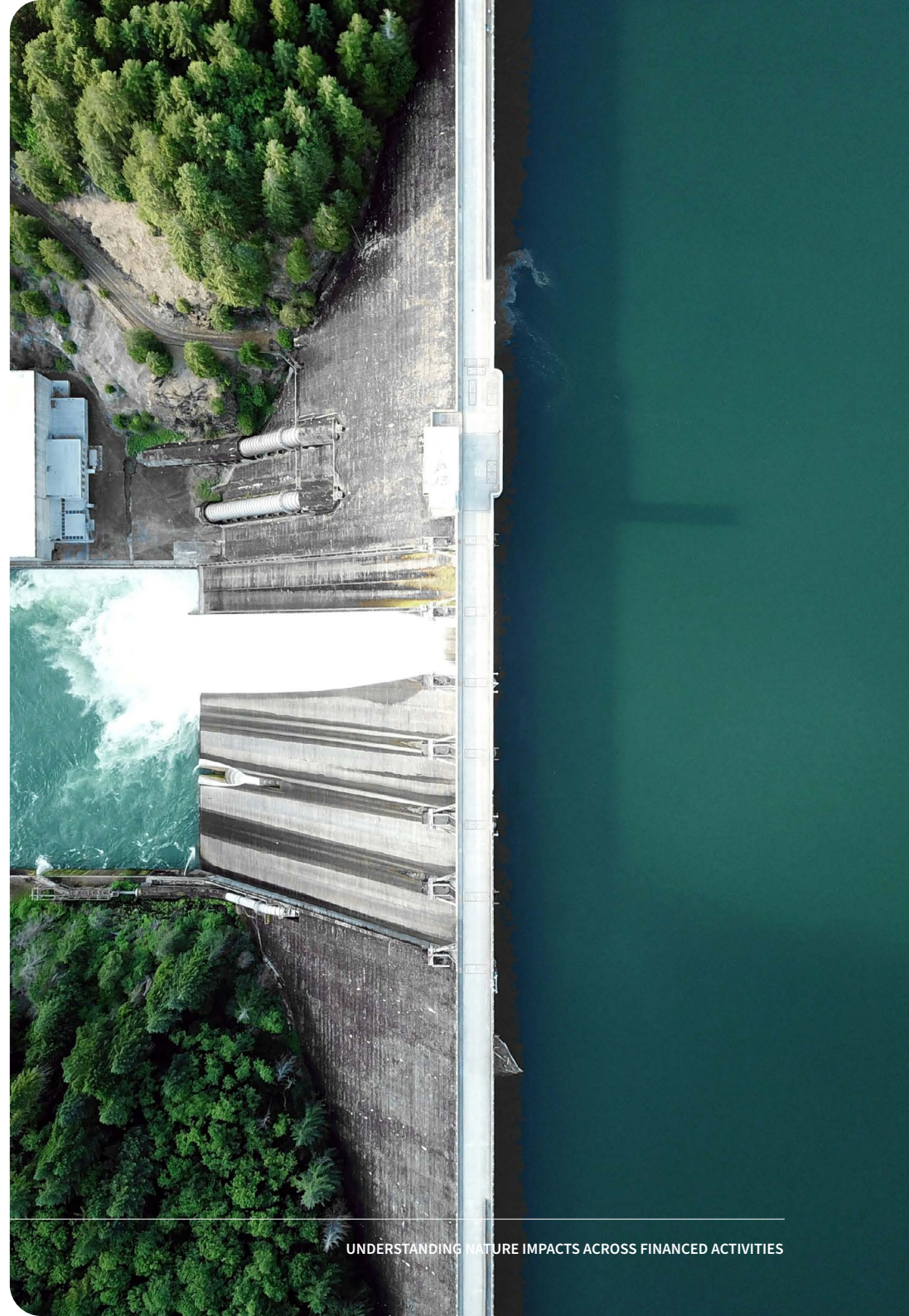
- This figure indicates the annual water consumption associated with the **production of 1 MWh** for each energy type
- Hydro energy is associated with the highest water consumption, mostly due to evaporation, followed by nuclear and biomass
- High indirect water consumption is associated with production of solar panels, mostly upstream in material extraction and manufacturing
- Results are based on average power plant datasets and may vary from one region/technology to another

Figure 3. Proportion of direct/indirect nature pressures: the example of water consumption (per MWh)



## Interpreting the data based on the intended use case

The energy mix and the pressure view over the value chain (described in the previous section) laid the groundwork for interpreting the quantified and granular nature impact results for each sample company and its production assets. Examining these results from different perspectives allowed us to obtain a more comprehensive picture. In the following pages, we present two valuable use cases, illustrated by zooming in on just one of the specific nature pressures — *water consumption* — to demonstrate the depth of insight such granular analysis can offer.



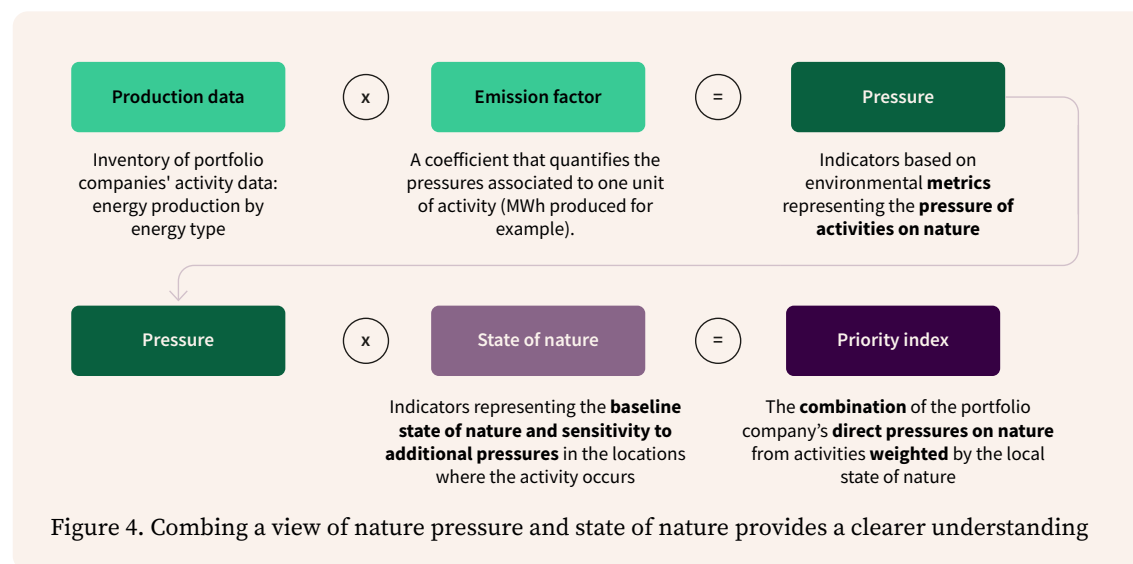
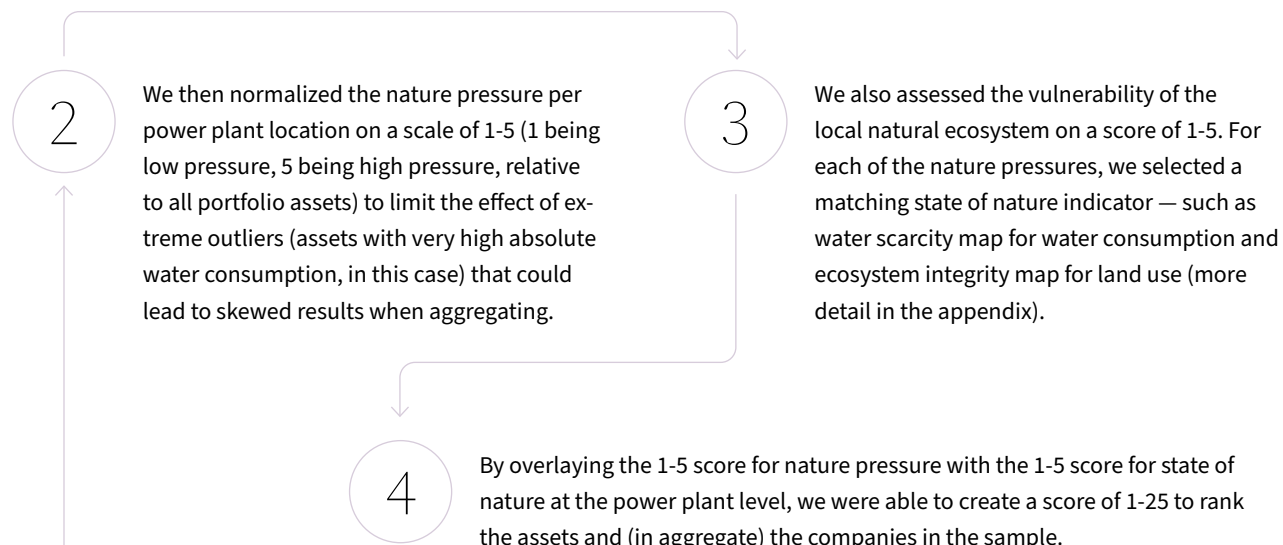
USE CASE ONE:

## Identifying critical nature impacts in the portfolio by combining nature pressure and state of nature

The first use case was inspired by the Science Based Targets Network (SBTN) guidance, using Quantis' nature assessment methodology (detailed in the appendix). The aim was to identify and prioritize critical nature impacts across the portfolio. By providing clear comparisons between portfolio companies, we could further explore the root causes through breaking down different drivers (such as energy types, value-chain stages, nature pressures and asset locations). This approach allowed Societe Generale to identify key impact hotspots in its portfolio, and actions to manage and mitigate these nature impacts.

The prioritization methodology follows four steps:

**1** First, we assessed the absolute nature pressure through the 4 priority indicators for this pilot, (land use, water consumption, water pollution and air pollution) per power plant and then aggregated at company level.





Continuing with the water consumption example, we explain the ranking methodology in more detail below. The ranking methodology can be applied at a number of levels. These include both the aggregate level (comparing companies across the portfolio) and the asset level (zooming in on one company to understand which power plants are the most impactful), and for either a single nature indicator or across all nature indicators (using average pressure and state of nature scores).

Figure 5 illustrates that although some companies could have significant water consumption — due an energy mix relying heavily on water resources (as reflected by the chart on the left, like companies F, H or I) — their final score (table on the right) is mitigated because their assets are located in regions with relatively abundant water. Adversely, companies with all (or most) of their assets located in water-scarce areas are penalized by this scoring methodology, even if the absolute pressure on water consumption seems limited (like company R).

Therefore, such scoring provides an aggregated view, which enables a ranking of the portfolio companies. This is useful when it comes to prioritizing client engagement or managing the portfolio’s overall pressure — while being asset- and location-based. At the individual company level, the ranking of assets can also feed into an in-depth discussion on the client’s hotspots and its strategy to reduce pressures locally.

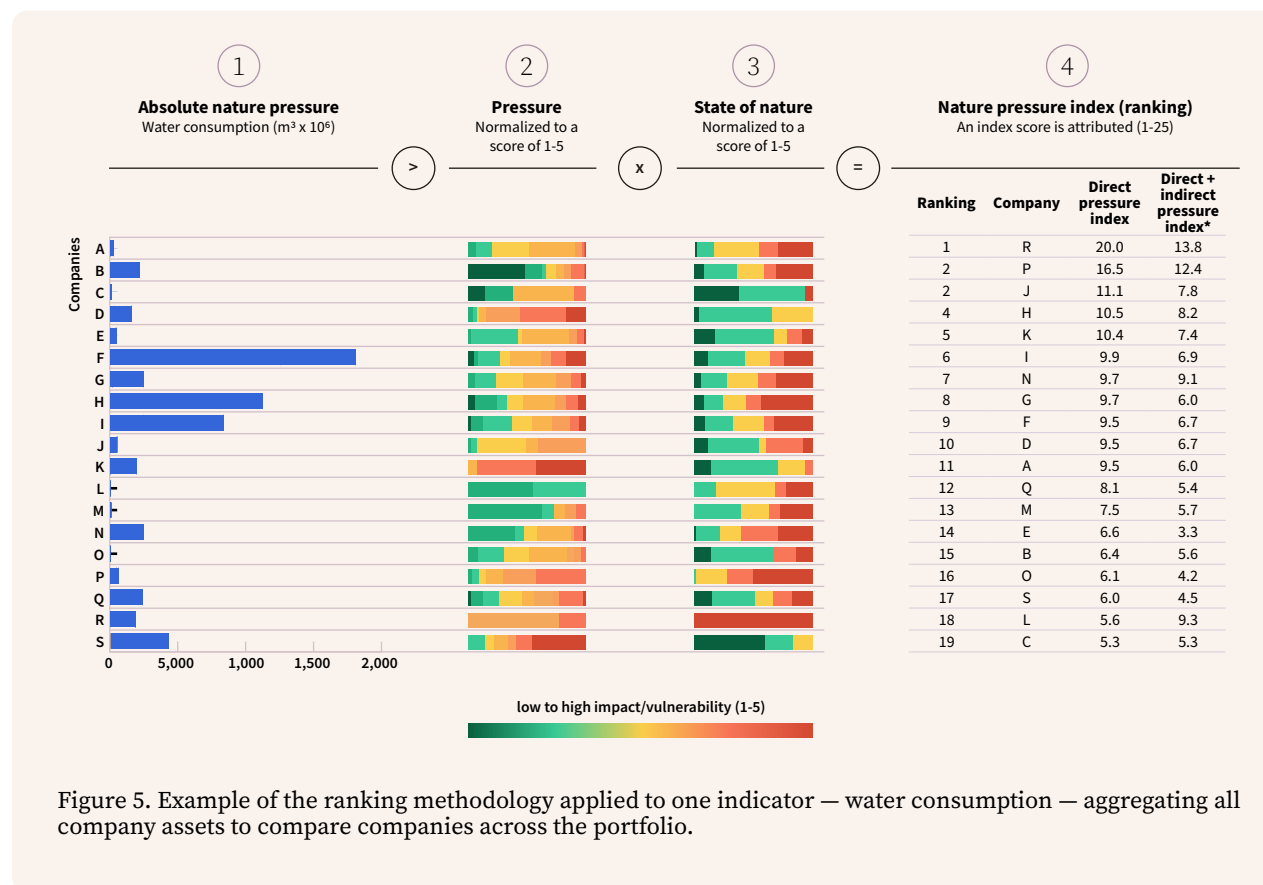


Figure 5. Example of the ranking methodology applied to one indicator — water consumption — aggregating all company assets to compare companies across the portfolio.

This doesn't suggest that high water consumption in water-abundant areas should be overlooked. Instead, it highlights the need to carefully consider the nuances that

exist between nature pressure and local sensitivity to that pressure, to make well-informed decisions.

## USE CASE TWO:

### Evaluating the financial exposure potentially associated with assets in sensitive locations

The second use case is aligned with the TNFD recommendations, offering a view based on its impact metrics. For financial institutions, the TNFD guidance recommends assessing financial exposures to critical nature pressures and vulnerable locations.

To provide a holistic view of financial exposures to vulnerable ecosystems (Figure 6), we applied three different state-of-nature maps to the portfolio's assets:

- 1/ Areas important for biodiversity → **Key Biodiversity Areas (KBA)**
- 2/ Areas of high ecosystem integrity → **Ecosystem Integrity Index (EII)**
- 3/ Areas of high physical water risk → **Water Scarcity (WWF/Aqueduct)**.

We allocated the financing exposure of each company to each asset, based on the weight of energy production capacity of that asset relative to the company's overall production capacity. This allocation was then used to calculate the proportion of financing in assets located in high-vulnerability locations (in red) and less vulnerable ecosystems (in blue).

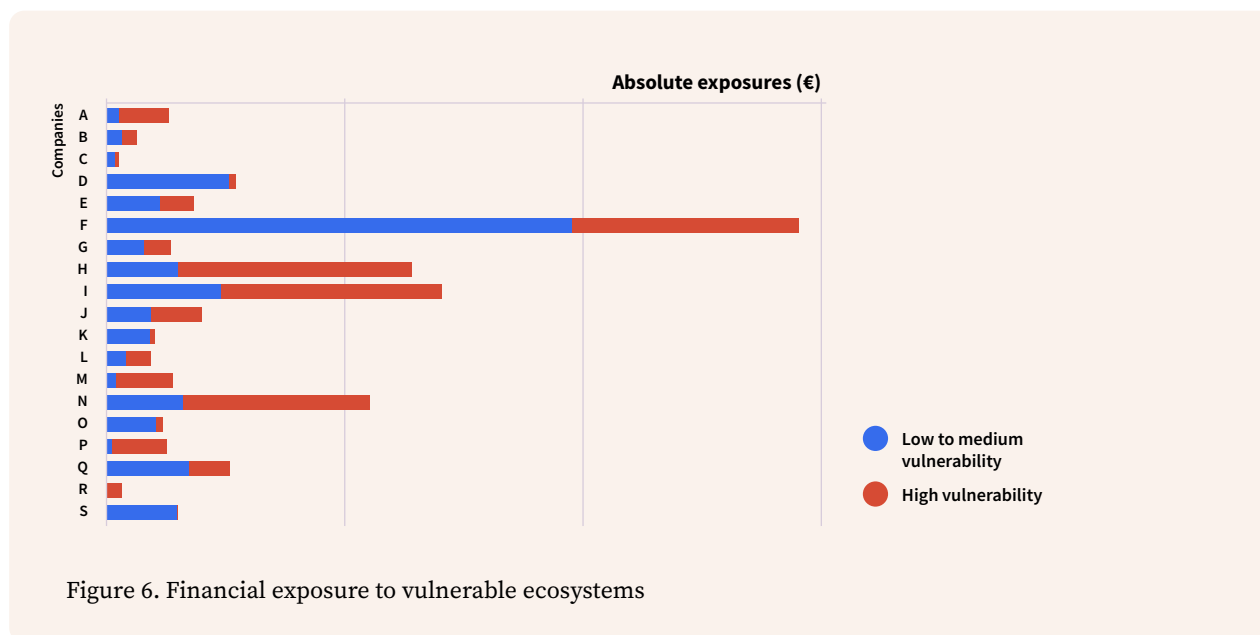


Figure 6. Financial exposure to vulnerable ecosystems

It's worth noting that such analysis only reflects theoretical indirect exposure associated with sensitive locations, as:

1. Companies are often financed on a corporate basis, meaning that the use of proceeds is not determined or "located." The way in which we attribute to the bank an impact on sensitive locations, via the exposure to clients' operations, can therefore only be a proxy.
2. As shown above, companies could have assets in a sensitive location (e.g., in a water-stressed area) but without

exerting pressure linked to this vulnerability (e.g., a wind farm having very low water consumption).

This underscores the importance of integrating **nature pressures** with **local state of nature** to gain a more holistic understanding of a company's nature impact. Nuances get lost when we oversimplify or over-aggregate, and while the TNFD guidance provides a valuable framework, it was essential for us to take the additional step of combining these two critical elements for a more accurate picture.

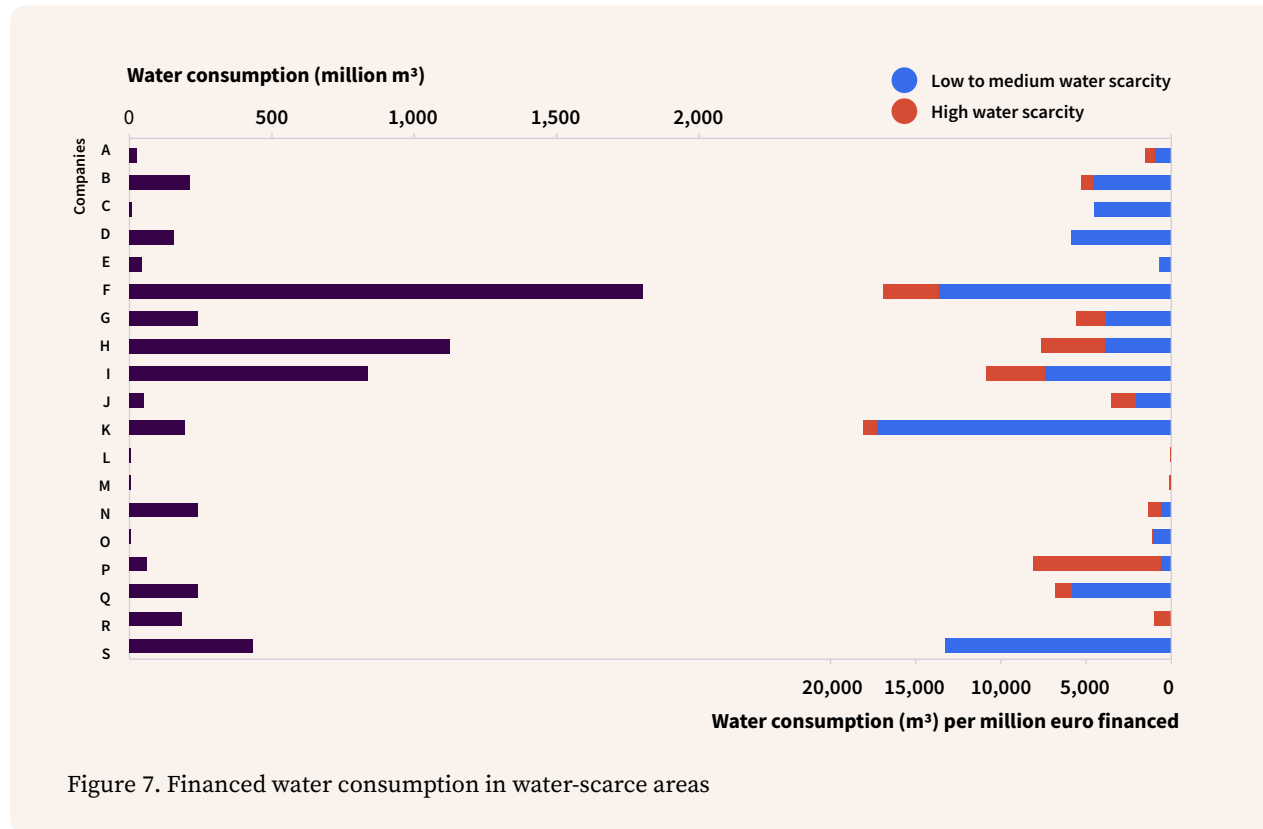


Figure 7. Financed water consumption in water-scarce areas

Taking this integrated perspective, Figure 7 illustrates this point with regard to water consumption. On the left, we see absolute water use — both direct and indirect (upstream). The right side provides a more nuanced view than Figure 6, illustrating water consumption intensity per million euros financed, along with the proportion that occurs in water-scarce areas (highlighted in red).

This comprehensive perspective, though indirect, enables financiers to connect corporate financing decisions to the environmental impacts of the companies they fund. By examining more than just the environmental impact profile (e.g., water consumption) illustrated on the left side of Figure 7, and focusing on metrics like the intensity of water consumption per million euros financed instead, we can

uncover the potential indirect impact of capital allocations in the portfolio. Further refining this analysis by considering the proportion of water consumption in water-scarce areas provides financiers with actionable insights into how their financing choices can potentially shape the environmental impact of their portfolio companies.

Although this remains a theoretical framework that reflects potential indirect impacts, it offers a valuable proxy for prioritizing client engagement and devising strategies to mitigate environmental pressures. By leveraging these insights, financiers can adopt a more informed and strategic approach to aligning capital allocations with nature objectives.



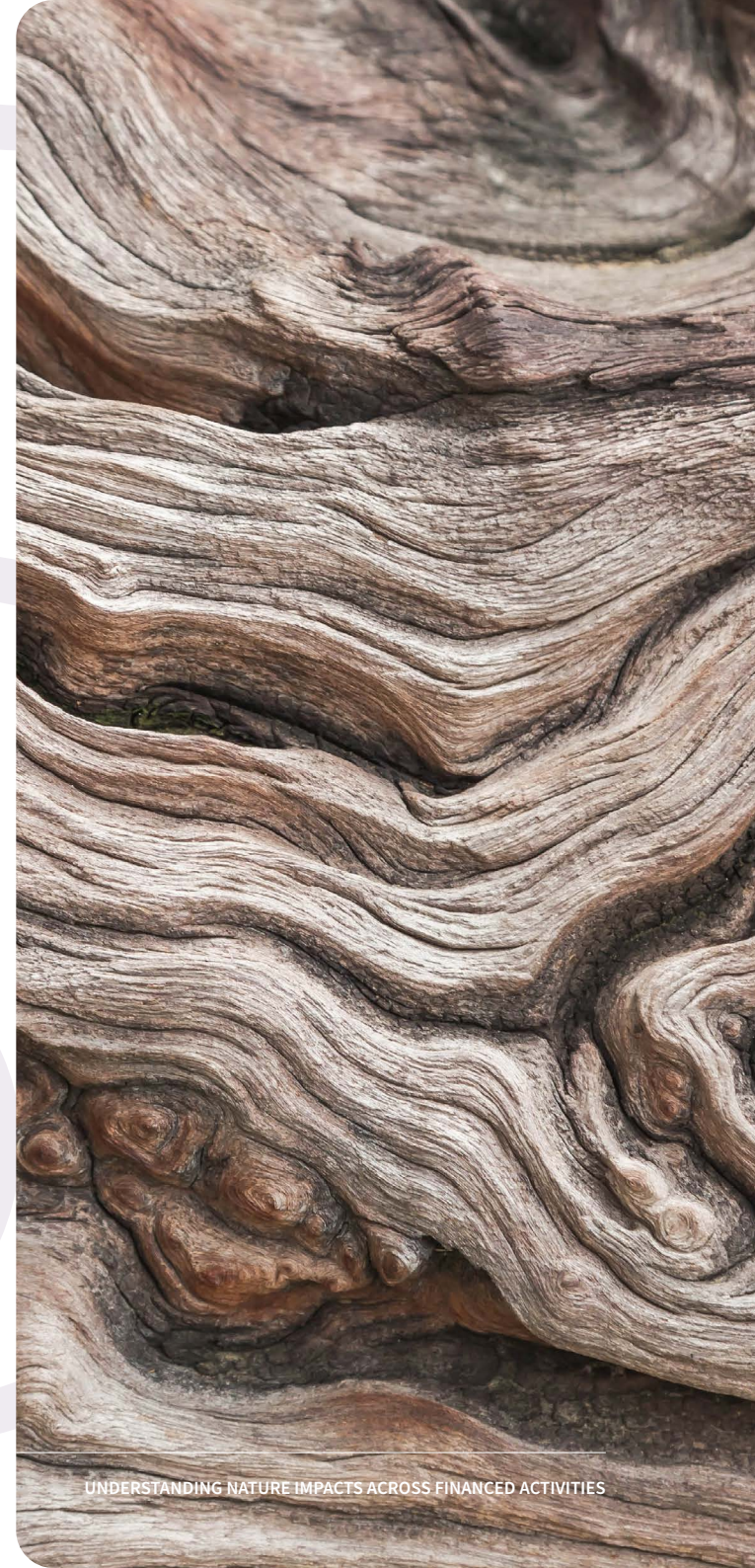
# 3/ Pilot project takeaways and lessons learned

## Existing data provides a good starting point

Despite progress in the market, the nascent state of nature data and reporting means that gaps and limitations persist. That said, nature data measurement and reporting are evolving rapidly, and environmental modeling techniques can be used to bridge many of these gaps.

In the Societe Generale pilot, the POC demonstrated what can be achieved with the currently available data and modeling, offering a fair picture of nature impacts.

With frameworks like the Corporate Sustainability Reporting Directive (CSRD) and TNFD, data availability and quality will only continue to improve. However, financial institutions don't need to wait for the perfect data to start moving forward on nature. The existing data landscape and methodologies can already provide views to enable the prioritization of actions, to engage with clients and refine impact mitigation strategies.





# Success calls for building internal nature capabilities

## Cross-departmental collaboration

While data is a crucial starting point, it holds limited value without the expertise to navigate its complexity and transform it into actionable insights, interpret results, ensure checks and balances and achieve the required quality and confidence levels for integration into decision-making processes. Interpreting data effectively — and making decisions that reflect the true depth of nature's impact — also requires cross-departmental collaboration between functions and skill-sets. In the Societe Generale pilot, dedicated industry experts in the risk department joined forces with bankers (dedicated to the energy sector) and the CSR team to explain or validate/invalidate the raw quantitative results. Moreover, the right granular data is only the starting point. It must be understood by employees and clients alike, and must also be operational to contribute to reducing nature impacts, or improving client engagement and evaluation. While significant work lies ahead, the outcomes achieved in this pilot offer a solid building block for Societe Generale's nature efforts.



## Integrating data streams, processes and environmental frameworks

Nature-focused initiatives must also be integrated into existing frameworks. For example, embedding nature-related work within established climate frameworks can maximize synergies, streamline processes and accelerate the adoption of nature strategies by leveraging existing tools. An integrated sustainability strategy would help optimize data streams and processes while avoiding conflictual or duplici-

tative efforts, ensuring climate solutions do not negatively impact nature and vice versa.

While strong internal capabilities will provide a competitive edge, addressing the broader challenge of accelerated ecological decline requires external collaboration as well. This leads us into our final section.



## Collaboration with clients is critical to driving sustainable outcomes

Nature preservation and restoration is not only complex, it demands an urgent and proactive response. The scale of the challenge is too vast for any single company, or even a handful of industries, to address alone — and the learning curve will be steep. As such, a collective effort is required.

Clients will certainly need sustained support during these times of profound transformation. This means working closely with them, learning from clients who might be at a more advanced stage in addressing nature impacts, while supporting those who are further behind. What's more,

financial firms need data from their clients to be able to measure the impacts, risks and opportunities related to their activities.

*\*The scale of the challenge is too vast for any single company, or even a handful of industries, to address alone.\**

To address the complex and systemic challenges of climate change and biodiversity loss in parallel, collaboration is key. On the following page, we explore an example of such collaboration — between **Societe Generale**, **EDF Renewables** and **Quantis** — as part of this pilot project, highlighting the positive impacts already emerging.



## What cross-industry collaboration can look like

Societe Generale and EDF Renewables (with support from Quantis) conducted a series of workshops to discuss their respective experiences with nature impacts. The outcomes below highlight the value of such cross-sector collaboration.

### Enhanced credibility by comparing insights

The workshops helped validate the credibility of both organizations' approaches to nature-related assessments. By comparing Societe Generale's portfolio analysis with EDF Renewables' internal operational data, we confirmed that the results were representative. Societe Generale's assessment covered around 80% of EDF Renewables' installed capacity, and both analyses pinpointed the same key ecological risks in EDF Renewables' activities, particularly regarding land use and ecosystem integrity in high-sensitivity regions.



### Mutual understanding of challenges + opportunities

The collaboration fostered a deeper understanding of nature-related challenges from both financial and corporate perspectives. For Societe Generale, the primary obstacles included data gaps, especially in location-specific data, company activity data, and the lack of visibility into corporate governance structures for nature-related risks. For EDF Renewables, gathering comprehensive upstream scope 3 data was a central challenge. Sharing these insights has paved the way for more effective nature strategies and impact management across both organizations.

### Streamlining data + elevating nature as a strategic priority

The collaboration uncovered opportunities to streamline data sharing. Aligning data standards on nature impacts, risks and corporate governance enhances transparency and reduces the reporting burden for EDF Renewables. Moreover, the engagement between Societe Generale's and EDF Renewables' teams can help elevate nature-related topics as a strategic objective, driving internal change in both organizations and fostering a collaborative approach to environmental stewardship.

### Identifying financing opportunities for nature

By engaging on shared nature ambitions and challenges, Societe Generale and EDF Renewables explored new avenues for financing transition projects with reduced impact on nature. The collaboration helps identify opportunities for both organizations to invest in and support initiatives that contribute to nature preservation, while also addressing the regulatory requirements and growing market demand for sustainable finance solutions.

# 4/ Conclusion

Through experimentation and improvement from applying the lessons learned, Societe Generale now has a methodological backbone for nature impact assessment at a sector level. The question of replicability to other sectors is still open, as this methodology — which is relevant for the power utilities sector — could prove more difficult to apply to asset-light sectors with complex supply chains (such as agrifood).

The project demonstrates that meaningful insights can be derived by modeling currently available data. While the applied methodology discussed above is not without shortcomings — especially when we consider the market's developmental stage — the pilot POC does signify an innovative leap forward for nature impact assessments, and we believe it offers an example of how financial institutions can get started using data resources that are already available.

*\*The pilot provided Societe Generale with a solid foundation for addressing nature impacts in its power portfolio.\**

The project also illustrates that effectively integrating nature insights into business processes — and ensuring they generate value — requires internal expertise. Additionally, the success hinged on fostering collaboration within the organization, with clients and across industries — for which there's a growing array of tools, frameworks and insights to enable financial institutions to drive such collaboration.

The pilot provided Societe Generale with a solid foundation for addressing nature impacts in its power portfolio. These first steps on the nature learning curve, help create solid groundwork for Societe Generale to build upon for managing nature impacts/dependencies across its wider portfolio, strengthen client relationships, spark innovation, and crucially build long-term resilience.

# 5/ Appendix

## Quantis' nature assessment methodology

Quantis' impact and dependency methodology is designed to provide financial institutions with the tools to integrate nature considerations into strategic planning. It's grounded in two decades of experience across environmental science and impact measurement and draws on industry-leading frameworks (such as SBTN, TNFD and CSRD). The methodology is designed to guide financial institutions through the Locate and Evaluate steps of the TNFD LEAP framework, providing insights around nature impacts and dependencies as a foundation for the risk and opportunity in the Assess phase.

Quantis' nature assessment methodology is based on...

### Localized asset-level analysis

Nature impacts and dependencies need to be pinpointed geospatially, and at the most granular level that the data allows — from the global and national levels to regional and coordinate specific. Asset-location data delivers precise insights into the pressures exerted on local environments. This enables financial institutions to assess how vulnerable specific locations are to those nature pressures/dependencies. By understanding the local context of impacts and dependencies, institutions can make more informed decisions about their exposure to nature risks and opportunities.

#### Example

*By analyzing geospatial data on a company's electricity production plants, we can identify which assets are located in vulnerable ecosystems, where those pressures have a significant impact.*

### Aggregate-to-disaggregate approach

It's essential to strike the right balance between aggregating insights for decision-making and disaggregating them to reveal the underlying impact drivers. Quantis' model achieves a level of granularity that allows for a practical assessment at the portfolio level, as well as actionable insights at the company level, by providing the detailed information needed to assess how nature pressures interact with the business.

#### Example

*A portfolio-level analysis might identify that Company X contributes the most to nature impacts within the portfolio. A more detailed breakdown might reveal that the company's Freshwater pollution of a coal-fired thermal power plant in China is the biggest contributor to this impact.*



## A transparent, agnostic approach to data providers and tools

Quantis has an agnostic approach towards nature data providers. We tailor our model by selecting the combination of providers and tools that best fit the client — including any of the client’s existing data providers — and the scope of any project we are working on. Transparency comes from clear communication and education around the strengths and limitations of the data proxies and metrics used, especially where primary data is unavailable. This means confident decisions, with flexibility around data sources and tools.

## Scientific rigor and alignment with industry standards

Leaning on best industry practice and Quantis’ scientific expertise, the data and insights provided are both accurate and consistent with scientific standards. By integrating best practices from industry standards such as STBN and TNFD, and regulatory frameworks like CSRD, the methodology ensures resilience for long-term strategic planning.

## Integrating nature pressures (per location) with the state of nature

Analyzing nature pressures and states of nature independently from each other can lead to misleading or inaccurate insights. Thus, a key premise of the Quantis methodology is to integrate pressures with local states of

nature — an essential step for accurately assessing and prioritizing environmental impacts within the ecosystem contexts they occur.

### Example

*Consider the impact of a company consuming 1 cubic meter of water by a nuclear plant in the Scottish Highlands (where water is abundant) versus a similar plant in the Sahara Desert (where water is scarce). The environmental impact differs significantly between these two contexts.*

## Matching nature pressure metrics with state of nature indicators:

	<b>Land/Sea use (change)</b>	<b>Resource exploitation: Water consumption</b>	<b>Air pollution</b>	<b>Freshwater ecotoxicity</b>
<b>Pressure metric (LCA)</b>	Surface used per site (m <sup>2</sup> )	Water consumption (m <sup>3</sup> )	Particulate matter release (PM 2.5)	Freshwater ecotoxicity (CTUe)
<b>State of nature</b>	Ecosystem Integrity Index (EII)	Water stress/scarcity	Air condition score	<i>Not available</i>
<b>Indicator tool</b>	DeClerck et al. (in review) EII dataset	WWF/Aqueduct Risk Filter Suite	Biodiversity Risk Filter	<i>Not available</i>
<b>Level</b>	Site/basin	Site/basin	Site/basin	<i>Not available</i>

Figure 8. Matching nature pressure metrics with state of nature indicators

# Unlocking insights by collaborating with key data partners

The Societe Generale pilot brought together a number of best-in-class data providers to deliver nuanced, tailored insight.

## **Iceberg Data Lab**

As a provider of environmental data, the partnership with Iceberg Data Lab delivered the robust, precise data that enabled accurate assessments of nature-related impacts across Societe Generale's portfolio.

Its market-leading Wunderpus input-output model helped break down portfolio company revenues, tracing them through various activities to specific physical energy production streams. And its science-based, sector-specific insights on natural capital impacts were essential to achieving the depth of insight required for this pilot project.

## **Global Energy Monitor**

For our analysis, we leveraged Global Energy Monitor's (GEM) asset location data. It provides comprehensive geo-

graphic details on energy production facilities worldwide, covering coal, oil, gas and renewables, enabling precise assessment of nature impacts at production facility locations within our sample.

## **Ecoinvent**

Ecoinvent is a leading database for life cycle assessment (LCA) data, offering high-quality, transparent information on the environmental impacts of processes and products across multiple industries. Ecoinvent supported the supply-chain modeling, allowing for a comprehensive understanding of upstream impacts.

## **WWF Biodiversity Risk Filter and Water Risk Filter**

The WWF Biodiversity Risk Filter and Water Risk Filter helped assess the vulnerability of local ecosystems to biodiversity and water-related pressures

## **Ecosystem Integrity Index**

Ecosystem Integrity Index (DeClerck et al., 2021) is a custom state of nature dataset that measures an ecosystem's ability to support Earth system and ecosystem processes. It's based on land use and land cover data, focusing on the proportion of natural or semi-natural habitats in a landscape.

# Glossary

## **Biodiversity**

The variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part. This includes diversity within species, between species and of ecosystems.

## **Corporate Sustainability Reporting Directive (CSRD)**

The European requirement for large and listed SME companies to report on the environmental and societal impact of activities.

## **Ecosystem**

The combination of all living organisms, including plants, animals, weather and physical landscape, in any given geographic area.

## **ENCORE**

An online tool designed to help organizations explore their exposure to nature-related risk and understand their dependencies and impacts on nature.

## **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)**

An intergovernmental organization that was set up to improve the interface between science and policy on issues of biodiversity and ecosystem services.

## **LEAP framework**

TNFD's (see below) four-stage framework used to understand and act on nature impacts:

- Locate your interface with nature.
- Evaluate your dependencies and impacts.
- Assess your risks and opportunities.
- Prepare to respond to nature-related risks and opportunities and report.

## **Nature impacts**

The adverse changes on the natural (the air, land, water, fish and wildlife) that result from human/business activity.

## **Nature pressures**

Human activities that alter the environment and ecosystems, driving nature loss. The five main pressures (as identified by IPBES) are changes in land and sea use, direct exploitation of species, climate change, pollution and invasive species.

## **Science Based Targets Network (SBTN)**

A group of organizations working to shape private sector and city impacts on nature by using science-based targets.

## **State of nature**

The quality of the environment in relation to the functions that it fulfils. It refers to species (abundance and extinction risk), ecosystems (extent, integrity and connectivity) and nature's contributions to people.

## **Taskforce on Nature-related Financial Disclosures (TNFD) framework**

A risk management and disclosure framework designed to aid corporate and financial institutions to report and act on nature-related risks, to drive more nature positive outcomes.

## **World Business Council for Sustainable Development (WBCSD)**

A community of over 230 global member organizations designed to lead actions around climate, nature and equity.



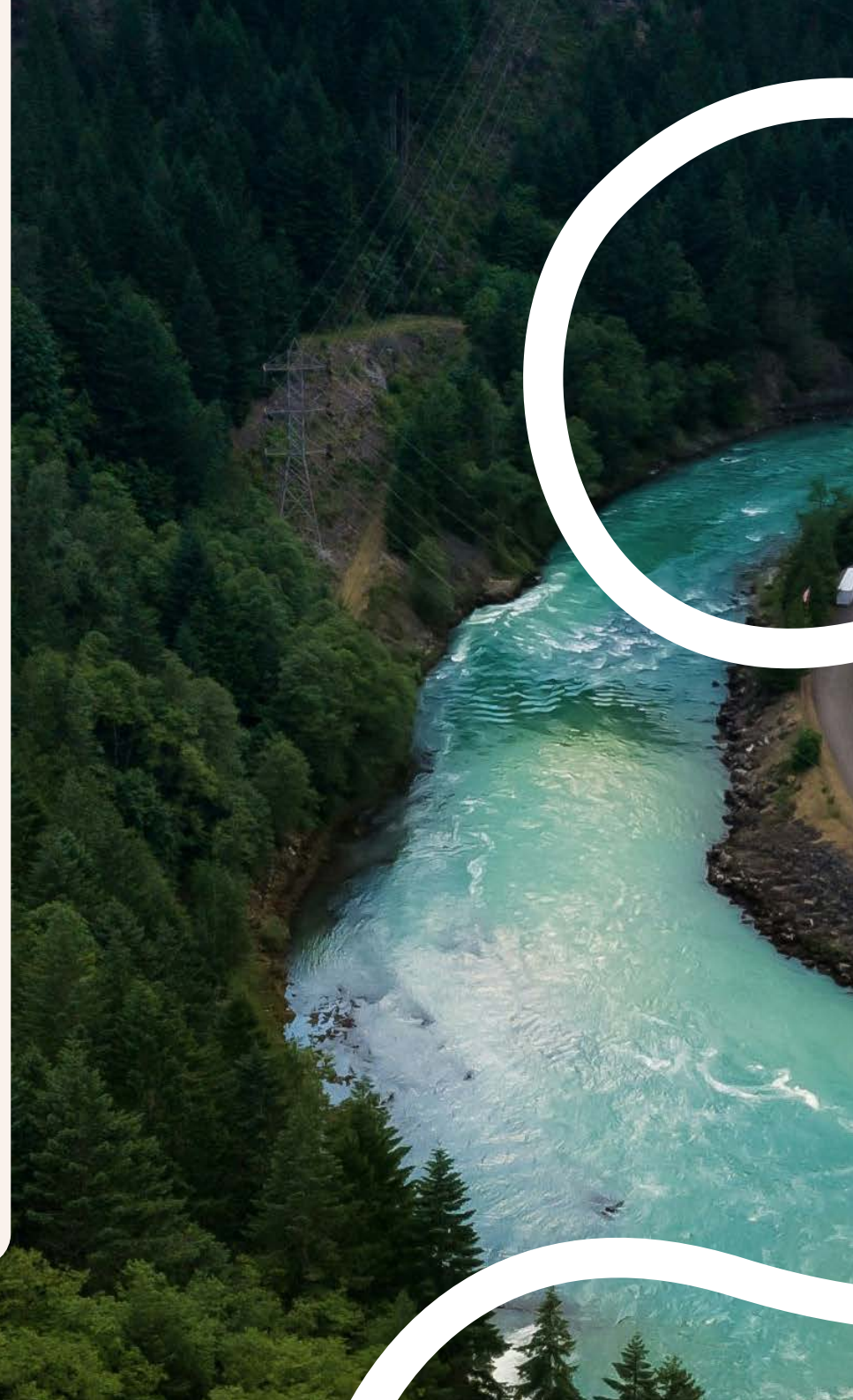


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