



# Biodiversity Transition Plan 2030

At Vattenfall, we believe that the energy transition must be Nature-Inclusive



VATTENFALL



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# This is Vattenfall

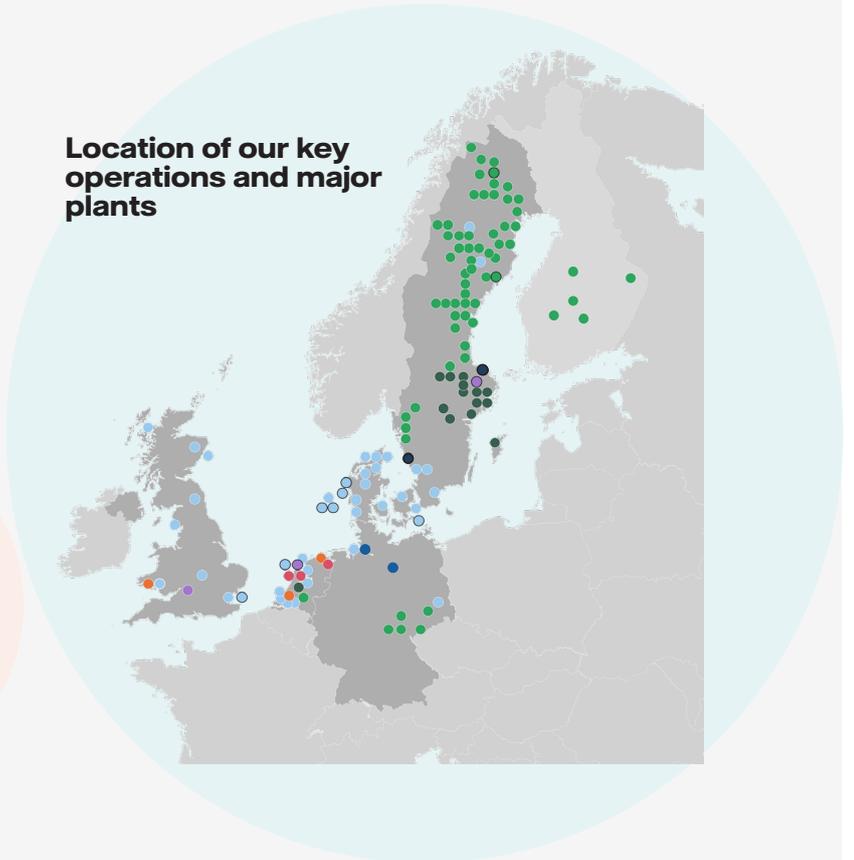
## In brief

We want to enable fossil freedom that drives society forward

Vattenfall is a leading European energy company, 100 per cent owned by the Swedish state

We are driving the transition to a more sustainable energy system through growth in fossil free production and climate smart energy solutions for our customers

## Location of our key operations and major plants



## Vattenfall is committed to a fossil free future

At Vattenfall, our mission is to help society break free from its dependency on fossil fuels. We believe this is the only way for society to progress while preserving the planet for generations to come. The European energy system is undergoing a rapid transformation to reduce greenhouse gas emissions and limit global warming. Decarbonising our assets and customers as well as scaling up new fossil-free electricity are the greatest contributions we can make to the energy transition. At the same time, investing in these activities has an impact on the environment and natural ecosystems around us. Our transition plan is a response to the impact we have on nature.

## What is a Transition Plan?

A Transition plan is a document that shows how a company is managing its biodiversity aspects in a structured way. It shall show how a company responds and contributes to the transition implied by the Kunming-Montreal Global Biodiversity Framework (GBF). A Transition Plan can for example include goals, targets, actions and accountability mechanisms.

## Framing and scope

The *Biodiversity Transition Plan 2030* is an initial set of priorities, and we will expand the coverage and accuracy over time. The scope of the Transition Plan is Vattenfall Group (own operations and upstream scope 3). Metrics are not described in this document but included in the Annual Sustainability Report.

We believe that the energy transition must be

# Nature-Inclusive

Through our *Biodiversity Transition Plan 2030*, we aim to support the Kunming-Montreal Framework in its efforts to halt and reverse biodiversity loss by 2030. Our efforts focus on minimizing impacts and enhancing biodiversity while tackling climate change.

We will do this through:

1

Mitigation, restoration and nature-based solutions

At Vattenfall, our belief that the energy transition must be Nature-inclusive drives us to continuously explore ways to integrate biodiversity into our operations and land management. We do this by avoiding and mitigating impacts, and by considering nature restoration and implementation of nature-based solutions where relevant.

2

Innovation and biodiversity Research & Development

Additionally, we invest heavily in R&D to ensure a robust scientific foundation for our decisions, fostering innovation in planning and design. We actively seek opportunities to collaborate with others to achieve a broader impact. We aim to develop solutions that integrate ecological considerations, align with climate objectives, and provide societal value. Thus, our belief is that co-existence between nature and energy production is possible.

3

Accelerate partnership and collaboration

# Our “Biodiversity Transition Plan 2030” is a response to impacts, risks and our beliefs about the future

**Vattenfall’s business has several interactions in relation to biodiversity and ecosystems.**

Our business model affects land, water, and marine ecosystems through various activities. Understanding the relationship between climate change and biodiversity is also vital for our business and essential for developing effective strategies. To understand our general impact on biodiversity, both from direct operation and our value chain, a Biodiversity Footprint Assessment (BFA) was conducted in 2022. The report was based on metric Mean Species Abundance and provides an indication of Vattenfall’s key impacts.

## **Vattenfall’s business model is connected to land use impacts**

Our operations impact land, water, and marine ecosystems through land and sea use, construction, and water disturbances. Additionally, sourcing fuels like biomass and gas significantly contributes to our land use footprint (VF BFA 2022). Vattenfall’s land use is estimated to increase considerably by 2040 compared to a 2019 baseline. This projection takes into account our footprint in our fastest-growing markets, particularly in the areas of distribution and onshore wind energy.

## **Aquatic and marine impacts**

Methods for assessing aquatic and marine impacts are not fully included in the Biodiversity Footprint Assessment. However, we know that our operations, particularly hydropower and offshore wind, have significant impacts on biodiversity, which needs to be acknowledged here. To enhance our efforts, investing in research and development is crucial for Vattenfall to understand and minimise the impacts of our operations on marine and aquatic habitats.

## **Climate change and biodiversity**

A majority of our annual growing footprint on biodiversity is, according to our BFA, connected to climate change impacts. Climate change is one of the major threats to biodiversity and actions to reduce CO<sub>2</sub> emissions is therefore intrinsically linked to our *Biodiversity Transition Plan 2030*.

# Our key impacts on nature

## Key Impacts



### Land use change in own operations and supply chain

→ Changes in terrestrial, aquatic, and marine environments occur when land is transformed for energy infrastructure projects. Vattenfall's operations also result in indirect land use changes within our supply chain.



### Impact on biodiversity due to climate change

→ Greenhouse gas emissions in Vattenfall's operations and throughout our value chain leads to an indirect long term negative impact on habitats and ecosystems.



### Impacts on threatened species

→ Impact on threatened species, such as migratory birds, bats, and fish, caused by our operations, including hydropower plants, distribution grids, and wind farms.



## Key Risks & Opportunities



### Project execution risks related to species

→ Management of biodiversity impacts is often an integral part of environmental permits. Therefore, risks could arise for Vattenfall linked to new projects and permit updates with potential consequences such as delays or stopped projects and changes in operating conditions for existing assets. It can also negatively affect our customer trust. Overall this could lead to lost opportunities or increasing costs.



### Opportunity to implement nature-based solutions

→ Nature-based solutions and habitat restoration projects, which not only enhance biodiversity but also contribute to carbon sequestration and climate mitigation.

## Vattenfall's dependencies on nature

Energy production is also dependent on nature, making it vital for Vattenfall's business continuity and growth. For example, climate regulation determines the flow of wind, the availability of water and sunlight, all of which are essential for consistent renewable energy production. Below are three key dependencies crucial to our business model.



Wind, solar, and hydropower generation are intricately linked to climate regulation. Wind turbines depend on consistent wind patterns, solar panels require ample sunlight, and hydropower is dependent on water cycles and climate regulation to regulate water flows.



Effective flood and storm protection are vital for the stability of distribution and hydropower systems. Floods and storms can damage distribution networks and overwhelm hydropower dams and reservoirs, causing outages and costly repairs.



Power plants that use biomass to produce heat or electricity are dependent on natural processes to produce material such as wood, agricultural residues, and other organic fibers.

# Responding to our beliefs about the future

External factors and assumptions about the future drives our need to work strategically with biodiversity:

## External factors



**Economic conditions:** The overall economy can affect funding availability and investment in biodiversity.



**Political landscape:** Stability and policies of governments can influence regulatory frameworks and support for biodiversity.



**Social trends:** Public awareness and attitudes towards biodiversity conservation and sustainability can drive demand.



**Environmental events:** Natural disasters, climate change impacts, and other significant environmental change can impact our biodiversity work.



**Market dynamics:** The demand for sustainable products and services can influence business practices and investment.

## Key assumption



**Financial Resources:** Assuming that there will be sufficient funding and investment available for biodiversity initiatives.



**Regulatory Changes:** Assuming that stricter environmental regulations will influence how energy projects are planned and executed.



**Stakeholder Engagement:** Expecting that effective collaboration with stakeholders will be possible and beneficial for sustainable practices.



**Technological Advancements:** Believing that new technologies will help minimise environmental impacts and improve biodiversity monitoring.

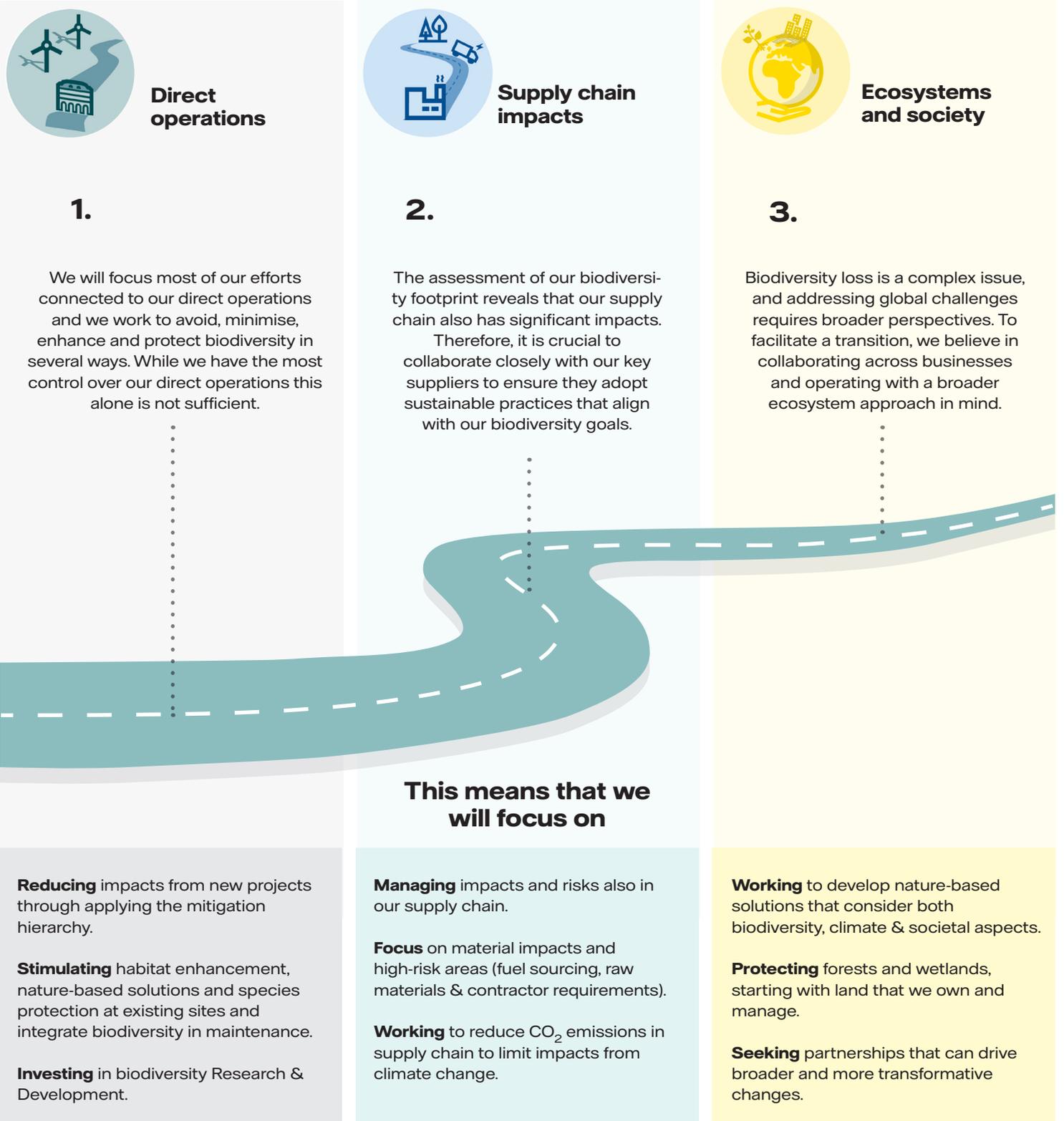


**Market demand:** Believing the demand for fossil free electricity will increase and our ecological footprint will grow.



# Three level framework to steer our efforts

To further strengthen our efforts, we direct our work across three levels, contributing to progress on the road of a Nature-Inclusive Energy Transition.



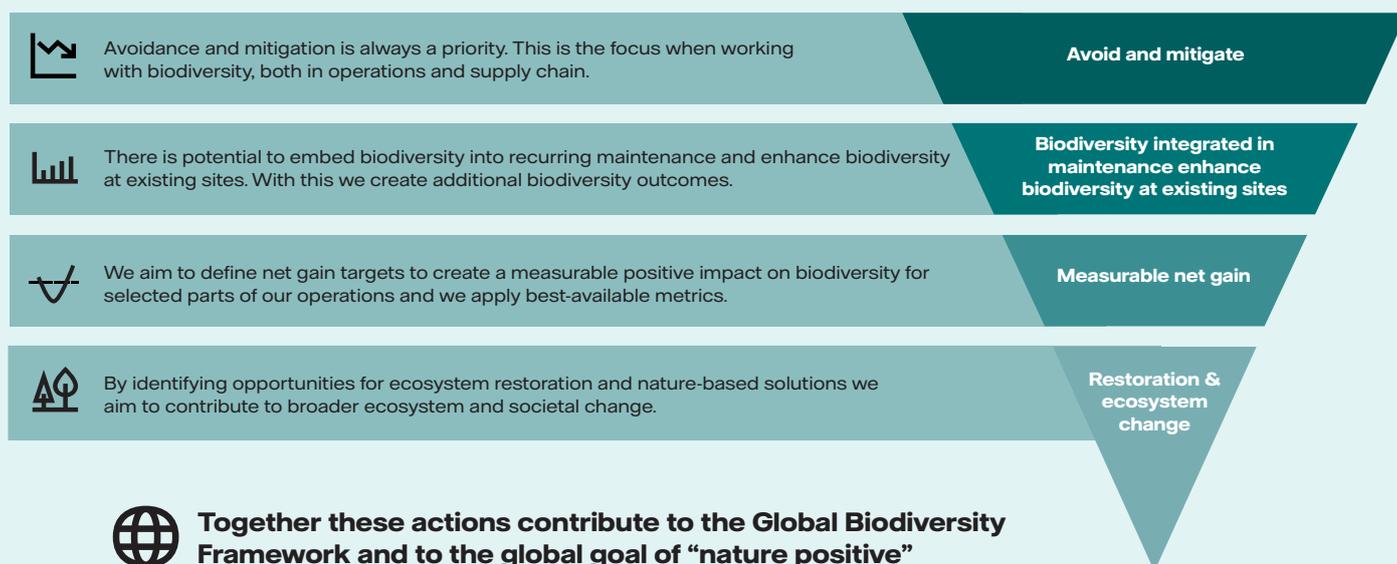
# Targets and strategic actions will steer the direction

To ensure that we prioritise the right measures at the right place, we have, and will continue to define activities and timebound targets across prioritised Business Areas.



## We work with a broad palette of actions and principles

Each business area has its own challenges and opportunities that are important to consider when defining targets. To further strengthen our targets and contribute to the Global Biodiversity Framework we adhere to several key principles. The figure below highlights that the application and emphasis of these principles vary across different business areas, requiring different approaches and levels of focus.



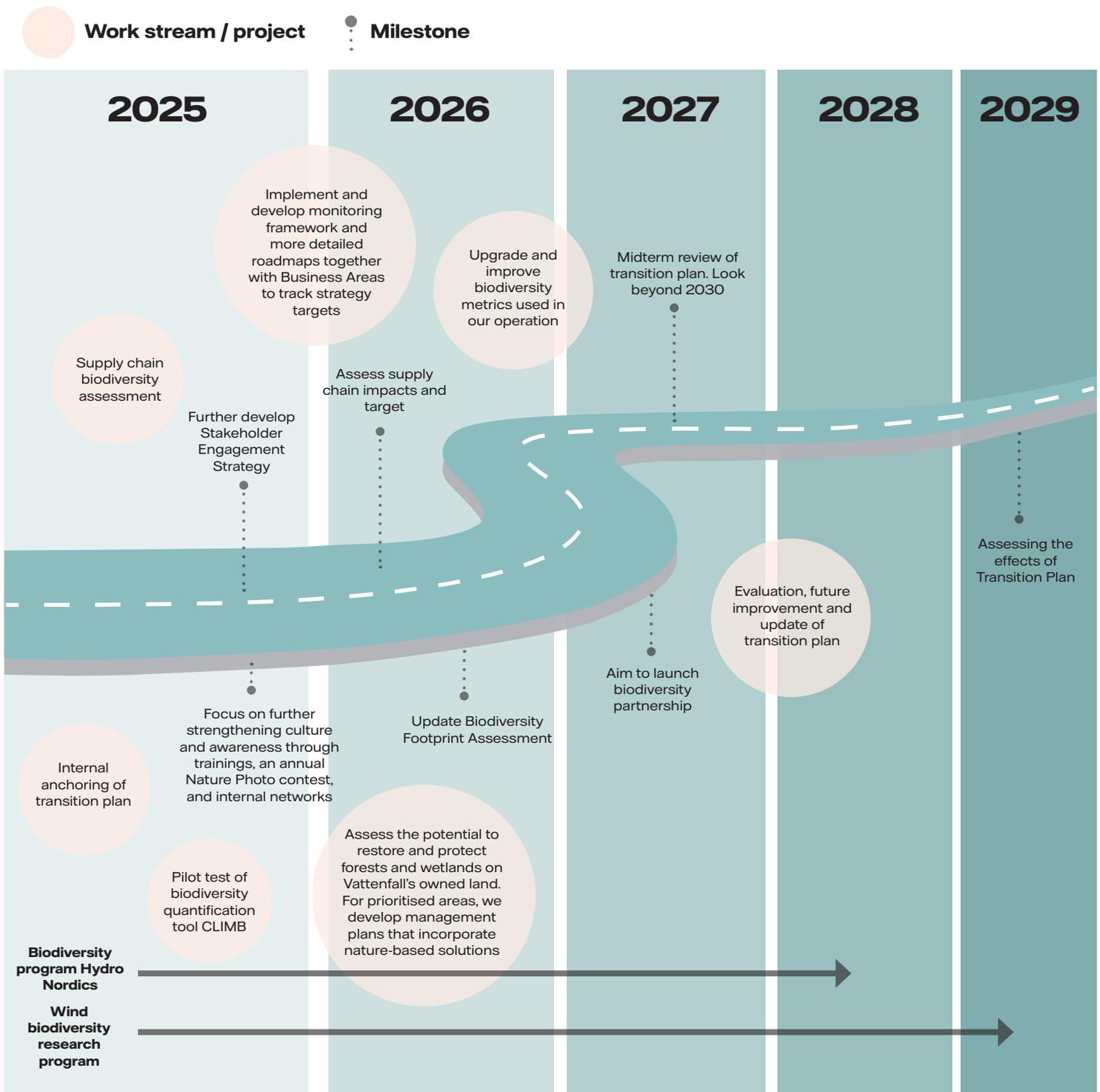
# Prioritised activities and targets for 2030

Delivering on our aim to integrate nature considerations into the energy transition involves setting targets and deliver on strategic activities. Below is a summary of current strategic focus areas, targets and key activities. These may be refined in the coming years as part of our ongoing strategic efforts to address biodiversity.



# Group strategic high-level roadmap

As we look ahead, we anticipate numerous key activities in the implementation phase of our transition plan. Below, we outline the key milestones and work streams that the Vattenfall group will focus on during the implementation phase of our transition plan. As a company, we aim to remain responsive to external changes, making this our initial assessment of prioritised actions. Our *Biodiversity Transition Plan 2030* extends until 2030, with a planned review in 2027 to explore further improvements and begin considering our strategy beyond 2030. Our activities, strategic priority areas and targets will be further developed and defined as part of creating a monitoring framework and a more detailed roadmap in 2025-2026 to track our progress.



# Accelerate the development of biodiversity solutions

One of our key strategic opportunities is to advance our work with biodiversity solutions, including both nature-inclusive design and nature-based solutions. Over the years, we have made significant progress and consistently sought ways to deliver benefits for nature. Our commitment to developing and implementing effective solutions remains strong. Below are examples of how we have incorporated biodiversity into various Business Areas.



## Environmental adaptation of hydropower

Swedish hydro power will adapt to new environmental requirements. We invest 65 million SEK in a Biodiversity Program where we during a five year period will test different biodiversity measures. In 2019, Vattenfall invested in "Laxeleratorn," a large-scale laboratory. This facility is used by us and others to test innovations for safer fish passage, including intake racks, "dancing rods," and bubble curtains.



## Nature-inclusive design in offshore wind

We conduct biodiversity research to understand how wind power impact birds migration and marine wildlife. We use different mitigation measures, like bubble curtains around monopile installations, that can reduce underwater noise with the aim to protect marine mammals. We create artificial reef around turbine foundations to improve habitat and environment for different species.



## Biodiversity management in power line corridors and stations

An extensive mapping of the regional network has resulted in identification of rich grasslands along 250 km of the power lines. These have a high diversity of native wildflowers and grasses, which have co-evolved with traditional farming practices over the past 1000 years. To promote wildflowers species typical of rich grasslands, tailor-made maintenance plans have been developed and implemented in these areas.



## Peatland restoration to store carbon and enhance biodiversity

As part of our permit requirements, Vattenfall aims to restore up to 1,500 hectares of peatland habitat in Wales. This restoration will support increased biodiversity and provide habitat for species such as nesting birds, reptiles, insects, and wetland floral specialists. In parallel, Vattenfall has voluntarily provided substantial funding to Swansea University to document the ecological outcomes and generate applied knowledge to inform future similar restoration projects.

Learn more about Vattenfall's biodiversity project [here](#).

## Nature-based solutions are actions that are aiming at

protecting, conserving, restoring, and sustainably managing natural or modified terrestrial, freshwater, coastal, and marine ecosystems, which address social, economic, and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits.

## Nature-inclusive design

is an approach to planning and building that deliberately integrates habitat functions and ecological processes into the built environment, enabling species persistence and supporting local biodiversity alongside human use.

# Kunming-Montreal Global Biodiversity Framework

**We have identified that our activities contribute to following targets in the Global Biodiversity Framework:**



## Plan and Manage all Areas To Reduce Biodiversity Loss

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.



## Restore 30% of all Degraded Ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.



## Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence.



## Minimize the Impacts of Climate Change on Biodiversity and Build Resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.



## Restore, Maintain and Enhance Nature's Contributions to People

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.



## Businesses Assess, Disclose and Reduce Biodiversity-Related Risks and Negative Impacts

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions: **(a)** Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity. **(b)** Provide information needed to consumers to promote sustainable consumption patterns; **(c)** Report on compliance with access and benefit-sharing regulations and measures, as applicable; in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

The goals and their descriptions presented on this page are directly sourced from the Kunming-Montreal Global Biodiversity Framework.

# Governance & steering

Good environmental performance and governance is fundamental for implementing the biodiversity transition plan successfully

## Environmental policies

- Biodiversity is an integrated part of environmental management systems.
- Activities are governed by our environmental policy and operational instructions, which describe environmental governance and management principles.
- The *Biodiversity Transition Plan 2030* is incorporated in our Environmental Action Plan (EAP). The EAP charts our course across three focus areas: reduce climate impact, protect nature and biodiversity, and sustainable use of resources and is approved by top management and followed-up annually with relevant Business Areas in the Environmental Management Review.
- Progress according to the *Biodiversity Transition Plan 2030* outlines the foundation for annual sustainability reporting (in accordance with ESRS E4).



## Biodiversity and human rights

- There is a close link between biodiversity and human rights. Collaborating and engaging with indigenous peoples, local communities and stakeholders is crucial for enhancing biodiversity.
- Helping society break free from fossil fuels requires a comprehensive transition of the energy system, a transition which will only succeed if the human perspective is addressed.
- We commit to respect the rights, interests, concerns and development aspirations of the communities affected by our operations by conducting meaningful stakeholder engagement.
- We comply with local regulatory standards regarding consultation and social impact assessments, and we also seek to go beyond minimum requirements, for example in regard to supporting community-based initiatives and engaging local workforce and businesses.
- We strive to engage stakeholders as early as possible, with a particular attention given to seldom heard or vulnerable groups.



# Biodiversity requirements in our environmental management system

The following requirements are applicable to all Business Areas and Business Units within Vattenfall that have a potential negative impact on biodiversity. This is the foundation for our biodiversity work across the company.



Significant impacts connected to changes in land, freshwater and marine environments, shall be taken into consideration in Vattenfall's operations, project siting, planning, design and localisation in accordance with the mitigation hierarchy.



High environmental values surrounding our sites shall be documented. When measures to enhance biodiversity or work with restoration are conducted, we shall strive to have measurable biodiversity outcomes. Resources shall be dedicated to carry out ecological monitoring where this is considered necessary (e.g. when a negative impact is likely to occur or where priority species or habitats are present) and use best-practice metrics.



Vattenfall's operations shall aim to not cause significant harm to the designated features and conservation objectives of existing or proposed European Natura 2000 or Ramsar sites. This is applicable both within the site of operations and wider area.



The long-term viability of regional populations of species is a priority for new projects and existing operations. Specific policies for critically endangered species that are at risk of being impacted by Vattenfall's operations shall be developed to assess state of species.



We shall control pathways for the introduction of invasive species and eradicate or control invasive species located within our onshore operating assets, to reduce the negative impacts these species have on natural flora and fauna.



In areas where Vattenfall has projects and operations, opportunities to enhance biodiversity and have a positive impact on local species and ecosystems shall be assessed. Where relevant, nature-inclusive design and new innovative technologies shall be considered in order to reduce the biodiversity footprint from new projects.



Social consequences of biodiversity and ecosystems-related impacts shall be assessed for operations, projects and new assets, and impacts shall be effectively managed. We shall engage and consult with stakeholders e.g. as part of Environmental Impact Assessment, when considering potential compensation and restoration measures or implementing biodiversity projects in communities.



Biodiversity aspects and management shall be addressed in procurement and sourcing, and considered in the evaluation of suppliers and technologies, using a risk-based approach.

# Accountability mechanisms

Biodiversity topics are addressed across different levels of Vattenfall’s organisation. The *Biodiversity Transition Plan 2030* has been developed with involvement of Business Area experts and anchored with management representatives.

Level	Function	Alignment & Approvals
<b>Board of Directors (BoD)</b>	Sustainability aspects are integrated into the Board’s strategic oversight and the business planning process.	Information via annual BoD Sustainability presentation June 2025
<b>CEO &amp; Executive Group management</b>	The President and CEO of Vattenfall addresses sustainability matters, either independently or alongside internal governance bodies, including the Executive Group Management (BA Heads), which sets the Group’s overarching direction.	EGM Biodiversity session June 2024  EGM approval of corporate aspiration, structure and steering approach October 2024
<b>Head of Strategic Development</b>	Head of Strategic Development leads on sustainability topics under the CEO’s mandate from the BoD.	Continuous alignments
<b>Environmental Executives (EE) &amp; Environmental Responsibilities (ER)</b>	Business Areas (BA) and Staff Functions (SF) have full responsibility for managing the business in their respective areas, including delivering on their biodiversity targets. As such, Environmental Executives and Environmental Responsibilities (ER) are appointed by Group Environment to drive this accountability. Environmental Executives support the Head of the BA/SF in environmental management and ensures environmental liability (including biodiversity) is properly managed.	Continuous alignments, document review and approval
<b>Business Area (BA) experts</b>	Biodiversity BA experts are responsible for setting BA specific targets and connecting this to local management system, operational implementation and governance.	Cross BA workshop March 2024  Continuous alignments

