

The NbS Blueprint

→ *Case studies*

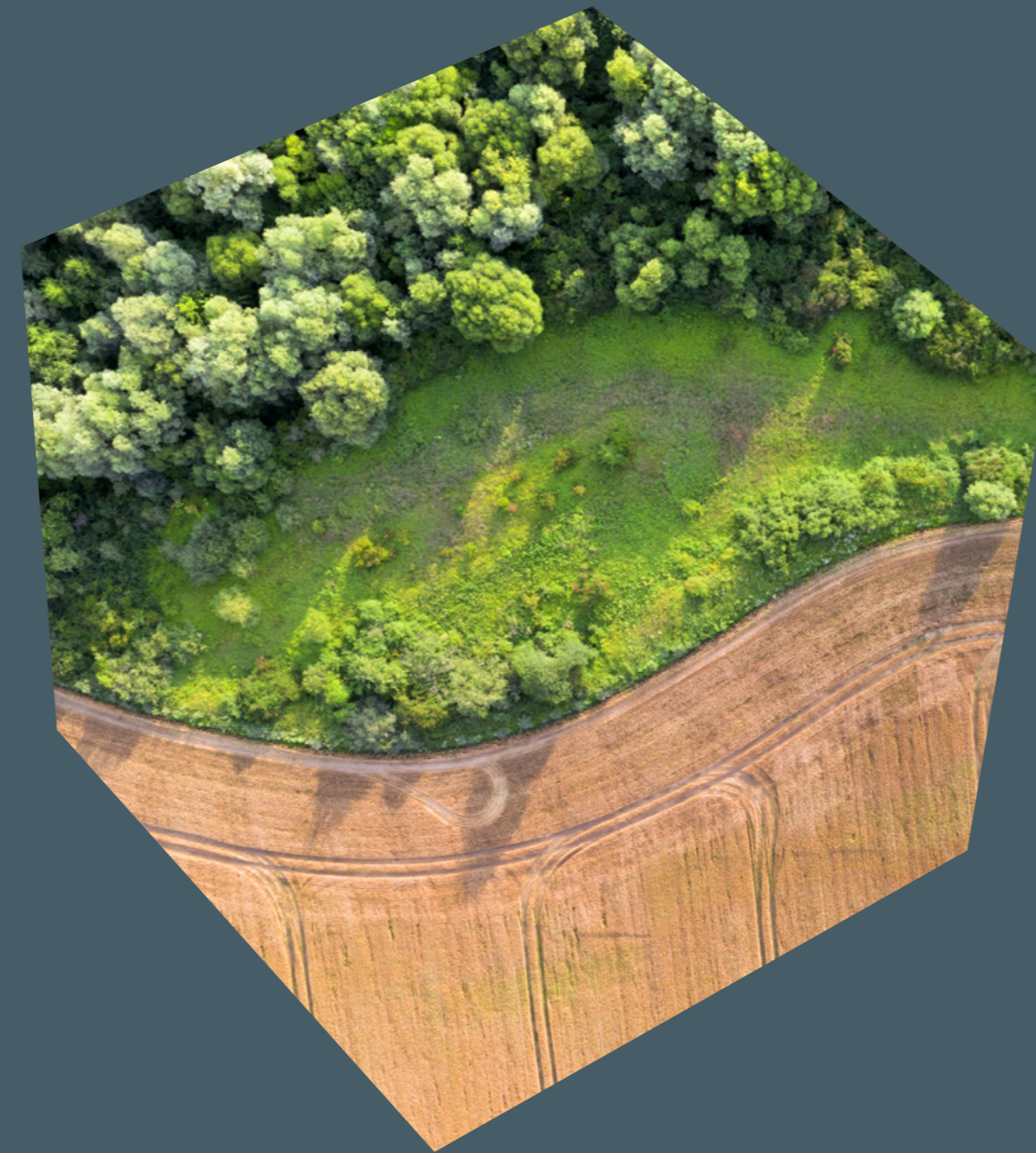


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Arcadis: *Coastal ecosystems restoration in The Netherlands*

Value drivers

- Risk management & mitigation
- Strategic priorities & ESG

NbS type

- Ecosystem restoration



Corporate strategy connections with NbS

- Develop the growing market for Nature-based Solutions (NbS) in Europe, Australia and the U.S. (e.g. for risk management. With 70% of the Dutch GDP being produced in areas below sea level, Arcadis actively aims to play a role in mitigating the risks).

Challenge

- Significant loss of biodiversity and local species in the artificial lake created by two important dikes

Opportunities

- Increase biodiversity and resilience by creating a wildlife nature reserve
- Collect important information and data on sandy shores that can be applied to other cases

Context

The Marker Wadden Islands are the largest constructed islands in Europe. They were established to increase biodiversity in a manmade freshwater lake landward of the Afsluit and Houtrib dikes. These dikes were built for flood protection and reduced the natural water variations of the Lake IJssel, causing much of the wildlife to disappear. Arcadis was involved in planning the structure and design of five new islands for a total of 1,000 hectares of new landmass. The islands are constructed using sediment present in the lake, with sand and clay, structured to provide protection for swamplands and to attract fish and other wildlife. The outer boundaries of the islands consist of sandy dams. The project was funded by a Dutch wildlife conservation organization and a Dutch ministry.

Additional sources of value:

- Increased biodiversity (flora & fauna) that had nearly disappeared from the area
- New research area: islands form a living laboratory for the development of new natural systems
- Educational purposes and recreational activities
- Creation of shores and archipelagos that support the establishment of wildlife and new habitats
- Partial restoration of Lake Markermeer as a Nature 2000 site

Tools:

- Results of the pilot experiment in which the application of sandy shore in lake environments was studied
- Numerical models for waves/currents and silt transport

Project evaluation / project metrics

- +1000ha of land created
- Increases in key species, local bird and fish populations

Project partners:

Natuurmonumenten (Dutch Society for Nature Conservation); Rijkswaterstaat (the executive agency of the Ministry of Infrastructure and Water Management) Boskalis, Wttevee+Bos, Vista

Duration:

- 2016 Preliminary work started
- 2021 First five islands
- 2023 Last two islands

Arcadis case study: context and additional information

Arcadis and NbS

- Arcadis is investing in its own capability to meet growing market demand for NbS and biodiversity projects in Europe, especially the United Kingdom, Netherlands, Australia and the U.S. In addition, NbS is playing a vital role in achieving the company's goal of integrating nature and biodiversity into business operations.
- Arcadis views NbS as an important way of improving climate resilience in cities, reversing biodiversity loss, and reducing carbon footprints. Arcadis acknowledges that it is not always possible to choose an exclusively nature-based solution; compromises must be made to ensure that climate-related solutions are as integrative as possible and address multiple issues at once, benefitting nature, society and economy.

Climate adaptation challenges for NbS

Arcadis views NbS according to the different climate challenges it can tackle: flooding, heavy rain, wildfires, heat stress, drought, biodiversity loss / ecosystem degradation.

Flooding: Dutch Coastlines Design

- The Netherlands, with 70% of its GDP being produced in areas below sea level, must be constantly aware of flooding risk. Studies in 2003 revealed that the Dutch North Sea coastline with its extensive stretches of dunes and dikes needed further strengthening to maintain the desired protection levels (with the ambition to withstand a superstorm as extreme as once in 10,000 years).
- The Dutch Government started the reinforcement of coastal "Weak Links", and Arcadis was one of the partners involved in the planning, engineering, coastal morphology investigation, scenario analysis, environmental assessment and archaeological assessment required.
- Arcadis uses NbS to mitigate flooding risks not only in the Netherlands but also in the U.S. (e.g. Louisiana Coastal Area Beneficial Use of Dredged Material).



Bayer: *Sustainable agriculture in Brazil*



Value drivers

- Risk management & mitigation
- Business performance
- Strategic priorities & ESG

NbS type

- Regenerative agriculture

Corporate strategy connections with NbS

- Strengthen supply chain engagement by connecting partners with research institutions, farmer associations and other industry participants
- Improve economic performance
- Deliver climate action by reducing GHG emissions
- Transform farming to regenerative agriculture

Challenge

- Reducing GHG emission footprint while transforming the existing farming system and improving farmers' livelihoods

Opportunity

- Work on soil health while increasing yield

Context

Bayer has established the *PRO Carbono* program to support farmers transitioning toward more sustainable management of their land. According to prior field trials, successful implementation of the program would result in increased productivity and decreased environmental impact. The approach started with testing solutions regionally and investigating a broad range of relevant metrics and indicators before scaling up successful practices as part of the *PRO Carbono* program. The 3 key measures – extending crop rotation, inclusion of cover crops, and no-till management – are baselined so that progress can be tracked.

While the initial focus was on improving economic performance, it quickly became clear that measures that improved yield could also contribute positively to soil stability and other ecosystem services, illustrating that economic and nature-related objectives can align and reinforce one another. Within this program and its broader business activities, Bayer has the chance to work closely with farmers through multistakeholder initiatives and expert organizations to generate more sustainable outcomes. The program has provided a learning opportunity and supported the broadening of Bayer's sustainability approach, identifying the key role that regenerative agriculture plays in transforming agriculture systems.

Additional sources of value:

- Improved livelihoods for local farmers (e.g. higher incomes)
- Increased soil health (e.g. increased soil organic matter and microbial activity)¹
- Reduced soil erosion from wind and water¹
- Improved water and air quality¹
- Increased habitat for wildlife¹

Tool:

- Bespoke tool development

Project evaluation/project metrics:

(Most metrics measured were preparatory steps to inform agricultural method for the *PRO Carbono* program)

- Productivity (increased output/yield) & yield variability
- Profitability (% gross margin and % return on investment) & temporal variations
- Environment/soil (carbon, water and nutrient balance, environmental impact reduction of chemical crop protection, GHG emissions, soil organic carbon and other physical, chemical and biological soil properties)

Project partners:

Universities, research institutions, external consultants & advisors, farmers associations, other companies/ startups, internal collaborators and local farmers

Duration:

Started as a local initiative in ~ 2014 and has since grown into a regional (LatAm) and global programme

Resources:

¹[Reduced Tillage Systems are a Key Component of Sustainable Agriculture, Soil Health and Mitigating Climate Change \(bayer.com\)](#) for general perspective, and partially investigated locally

Context and additional information

PRO Carbono Management and related Research & Development efforts

- Bayer is actively working on a methodology for setting up and improving agricultural practices that combine environmental and economic indicators. The environmental factors considered are: resource use efficiency; carbon, water and nutrient balance; environmental impact reduction of chemical plant protection products; soil evolution and evolution of pests, diseases and weeds. The economic factors considered are: grain yields; system productivity; yield risk and variability, and economic return.
- The management approach was tested in strip and regionalization trials before being upscaled to 1,800 farmers in Brazil and 130 farmers in Argentina as part of the implementation of the PRO Carbono program.
- A key assumption is that beneficial performances during strip and regionalization trials are likely also beneficial when scaled up, though currently only partially tracked. Outcomes measurement is a work in progress and will evolve over the coming years. This depends in part on possible reduction of costs associated with measuring specific metrics.
- Recommended practices included:
 - **No Tillage:** [increase stover intake and do not revolve the soil]

- **Cover Crops** [additional non-commercial crop for soil conservation] and/or crop rotation [adopt rotation of winter or cover crops]
- **Productivity & Carbon Boosters:**
 - Adopt high-performance genetics & biotechnology
 - Optimize the use of fertilizers and correctives
 - Nitrogen Smart management
 - Precision agriculture adjusting plant density and fertilizers by yield zone
 - Prescription
 - Implement crop protection based on monitoring

New strategic focus: Regenerative Agriculture

- Bayer considers regenerative agriculture an **outcome-based production model** with **soil health** and **increased resilience** at its core.
- Bayer commits to:
 1. reducing the climate footprint of farming,
 2. reducing the environmental impact of crop protection,
 3. enabling smallholder farmers and
 4. improving water use

- Regenerative agriculture also contributes to:
 - mitigating climate change through GHG emissions reduction and carbon removals,
 - maintaining or restoring biodiversity,
 - conserving water resources and
 - increasing yield and improving economic and social well-being of farmers
- Bayer is working with local partners around the world to support farmers in understanding and adopting regenerative farming practices by offering modular, rotational cropping systems, providing a range of agriculture innovations and adapting to farmers' needs.



DOW: Reduced OPEX cost through wetland restoration in Michigan, USA



Value drivers

- Risk management & mitigation
- Business performance
- Strategic priorities & ESG

NbS type

- Ecosystem restoration

Corporate strategy connections with NbS

- By 2025, deliver US\$1bn in Net Present Value (NPV) through business-driven projects that enhance nature

Challenge

- Close ash pond in line with state agency requirements and corporate nature goal

Opportunity

- Reduce long-term costs associated with the closure of a legacy site

Context

Dow had an ash pond in Michigan that had ceased operation in the 1980's and was set for closure. Connected to its corporate goals, the objective was to close this pond in a way that best reduced operating and maintenance costs and liabilities while meeting state agency requirements and enhancing ecosystem services. The solution was a 9ha functional wetland with recreational amenities that improved natural habitats along one mile of the riverfront. In addition to reducing operating costs, the wetland allows for improved stormwater control, which results in reduced floodwaters downstream.



Planned closure



Realized closure (Beyond Dow's restoring property)

Additional sources of value:

- Increased important ecological functions: improved air and water quality and water quantity control (which was the most evident ecosystem service the wetland provided)
- Improved biodiversity through habitat health
- Recreational opportunities and improved aesthetics

Tool:

- ESII Tool: environmental impact measured through performance on 13 ecosystem services and 20 engineering unit outputs. Able to compare the traditional closure method of "cap and treat" to restored wetlands. Providing this data facilitated the adoption of this non-traditional closure solution with Dow leadership and regulatory agencies

Project evaluation / project metrics:

- Ecosystem services performance of various closure methodologies (i.e. "cap and treat" vs functional wetlands)
- Net present value (NPV) of NbS solution versus business-as-usual scenario

Project partners:

The Nature Conservancy, EcoMetrix Solutions Group, AECOM, City of Midland, Michigan Department of Environmental Quality

Duration:

3-4 months to design alternatives

Context and additional information

Key metrics for nature at Dow

- As of 2022, nearly **77%** of the US\$1bn goal in NPV from business-driven projects that enhance nature by 2025 has been reached.
- Realized an NPV of **US\$129m** in 2022, bringing the total to US\$766m since launching the goal.
- A full **100%** of **capital projects screened** for potential benefits and impacts to nature, water, air, soil, land use and opportunities to utilize engineered natural technology.

How Dow sees NbS

- NbS represents additional value to business-as-usual scenario where the overall ecological footprint can be improved and more opportunities are created for the business.
- The nature goal set in 2015 as part of Dow's 2025 Sustainability Goals will create new value for Dow and for society by helping the company understand and value the benefits that nature can provide to the bottom line.

Lessons learned from implementing NbS

- Early development of the ESII tool helped make the impact measurable and was key in establishing the business case.
- NbS can offer numerous opportunities that initially may be hidden or unclear. There is potential to implement NbS in a wide range of projects and locations. The ESII tool helps DOW employees to identify these opportunities.
- It takes time for companies to recognize the full value of NbS and include nature in their decision-making processes. However, institutionalizing this supports implementation at scale.

Future outlook

- With a strong foundation, successful examples to follow and the right tools and processes in place, Dow now asks each new project whether it has considered NbS.
- Dow is already defining the next steps of its nature journey, engaging with TNFD and participating in the development of the **chemical industry's guidance document**.



Givaudan:

Mitigated supply chain risk and improved business and environmental performance in Brazil

Givaudan

Value drivers

- Risk management & mitigation
- Business performance
- Strategic priorities & ESG

NbS type

- Regenerative agriculture

Corporate strategy connections with NbS

- Ensure access to key input materials for products (resilient supply chain)
- Drive business performance and contribute to purpose ambitions and sustainability commitments

Challenge

- Reduce supply chain risk (upstream; materials/ingredients)

Opportunity

- Add to a framework for strategic supply development including NbS, mitigating nature-related risks in the supply of key raw materials

Context

Givaudan's products depend on nature-related inputs; as a result, Givaudan strives to mitigate nature-related risk within the supply chain by piloting regenerative agriculture projects. The starting point for these projects was securing input materials and enhancing performance; however, it became clear that they could also help Givaudan to deliver on its purpose as well as its environmental and responsible sourcing commitments. An example is the GUARABEST program which is designed for more than 240 Brazilian guarana farmers from 2 cooperatives. This program uses extension services on best possible agricultural practices to improve the botanical performance of guarana, establish traceability to source, reduce negative environmental impacts and improve farmers' economic resilience.

Additional sources of value:

- Positive environmental impacts (see metrics below)
- Increase in farmers' incomes and economic resilience and provides greater market opportunities

Tools:

- Traceability to production unit level
- Extension services to farmers
- Regenerative guarana experimentation and demonstration farm

Project metrics:

- Soil health and water
- Carbon mitigation and sequestration
- Biodiversity
- Return on investment for Givaudan and partner farmers

Project evaluation:

Value for the business from:

- Avoided cost related to disruption of supply
- Improved product placement as premium guarana extract

Project partners:

Local guarana producers, cooperatives, local implementation partner, design partner (ReNature)

Duration:

2019-[On-going]

Context and additional information

GUARABEST Programme

A specific Guarana Farming “Handbook” was issued to support the implementation of best practices, accompanied by training sessions and coaching. Key examples of agricultural best practices include:

- Better adapting fertilization methods to the crop needs and fostering the use of organic manure
- Implementing good pruning practices to improve guarana trees fruit setting and consequently seed yield
- Investigating guarana genetic diversity for plant material improvement
- Set up of an experimental and demonstration regenerative guarana farm combining intercropping of guarana trees with fruit and service trees, use of cover crops, integrated soil fertility management, pruning plan, etc.

Givaudan approach to NbS

- The GUARABEST program shows that **Nature-based Solutions** can help **meet core business imperatives** such as building resilient supply chains, continuous improvement of business performance, and contributing to Givaudan’s corporate sustainability goals.

- As such, Givaudan is **expanding this model** by leveraging **other agronomic projects** across different regions and supply chains to test and promote Regenerative Agriculture farming models. All of them are **commercially driven** and have the ability to support the company’s purpose, ambitions and sustainability goals.
- The implementation of these projects is mainly driven by Givaudan’s Agronomy team with support from external partners.
- The insights and experiences gathered through these projects should enable Givaudan to scale up the promotion of regenerative farming practices in its key Naturals supply chains, and therefore contribute to the company’s Scope 3 roadmap.

Partnerships

- Globally, Givaudan has developed a broad network of implementation, technical and academic partners
- reNature was the partner for the design of the Regenerative guarana project

Challenges / lessons learned

- High volatility of ingredient price and competition at farm gate were both notable challenges
- Little available background experience on a “regenerative guarana model”. Based on the initial

socio-economic and agronomic diagnosis, a model farm and associated crop management programme was developed and is being tested for a minimum period of 3 years to assess the performance of the design (agronomically, environmentally and economically).

- Based on the trial results, the model can be promoted at scale to other guarana producers in the supply chains provided that the enabling conditions are also met (capital expenditure, technical support, etc.)
- It remains a challenge to assess the contribution of the model in terms of carbon removals in the scope 3 accounting calculations.



Godrej Group: *Integrated Watershed Development Project in Nashik, India*



Value drivers

- Risk management & mitigation
- Strategic priorities & ESG

NbS types

- Watershed/wetland restoration
- Regenerative agriculture

Challenge

- Drought conditions, poor water quality, high water use, heavy use of fertilizers and chemicals that flow into the catchment area, and weak governance

Opportunity

- Using a multistakeholder approach, Godrej worked in drainage basins and catchment areas to help restore the ecological balance of the region by harnessing, conserving and regenerating degraded natural resources such as soil, vegetative cover and water

Corporate strategy connections with NbS

- To manage the identified risk of water stress, Godrej Industries has committed to water positivity
- The "Integrated Watershed Development Program" was established and rolled out in 2016 across locations in India in order to meet the water positive target

Context

The aim of the ***Integrated Watershed Development Program*** is to help restore the ecological balance of target regions by harnessing, conserving and regenerating degraded natural resources such as soil, vegetative cover and water while reducing the company's risk of water stress. The program comprises of multiple projects covering a total of ~4,850ha situated in drought-prone regions in India. One example project is the catchment area of Dindori in Nashik where a Godrej Plant is located. It is a large basin of water connected to agricultural production as well as water for drinking, domestic needs, marketing and local livelihoods. The delineated catchment in the vicinity of the Godrej Agrovet plant at Ashewadi village consists of 9 villages with an overall area of 6,688ha. Water scarcity in the summer months, harmful farming practices and high demand and use have negatively impacted the water quality and availability in the area. With the support of implementation partners, Godrej is restoring and improving water quality, availability and groundwater resources by maintaining existing dams and irrigation structures, improving soil health, inserting artificial groundwater recharges, and educating the local population on the importance of water.

Additional sources of value:

- Improved water quality, availability
- Better educated population
- Improved agricultural practices and chemical use
- Improved agricultural yield

Activities that are undertaken in this program:

- Capacity building and awareness program
- Implementation of Sustainable Agriculture & Land Management (SALM) practices with nearby farmers
- Community development initiatives

Project evaluation / project metrics:

- Watershed area developed
- Reduced GHG emissions
- Water captured
- Farmers impacted

Project partners:

National Bank for Agriculture & Rural Development (NABARD), Watershed Organisation Trust (WOTR), Aga Khan Rural Support Programme (AKRSP), Peoples Action for Creative Education (PEACE)

Duration:

2016-2024

Context and additional information

Integrated Watershed Development Program

- The program comprises of multiple projects covering a total of ~4,850ha throughout drought-prone regions in India.
- The Integrated Watershed Development Program is a large-scale, agriculture-based, water percolation project that involves the restructuring of a valley to arrest or slow down water after rainfall, allowing it to percolate into the soil. This helps to increase the water table and improve water availability.
- In regions dependent on agriculture, a higher water table helps ensure year-round cropping. In FY22-23, Godrej captured 32 million kiloliters of water which was made available for agriculture.
- The program also allowed for the formation of the Village Watershed Community, which provides educational and financial support to village members involved.

NbS at Godrej

- At the Godrej Group, biodiversity and water management began as part of the family owners' philanthropy efforts and is now embedded in the group's goals and strategy.

- Once water stress was identified through the corporate risk process, improved management practices were initiated at operating sites. The knowledge and skills gathered through the Integrated Watershed Development Program were used to establish projects that allow Godrej to pivot towards becoming water positive and mitigating future risks.

Lessons learned

- The social impact of the project enhanced community camaraderie and ownership through the formation of village watershed committees. These also offer a platform for financial access and an avenue for women to speak and be heard (~30% of women participate). The interventions also promoted income and employment diversification.
- For the successful implementation of sustainability projects, it is critical to set clear goals, realistic deadlines and have support from the board/executive leadership and senior business leaders. As a result, Godrej Group now:
 - prepares an annual operating plan which weaves sustainability targets into key responsibility areas for dedicated Green Champions;
 - enforces a robust governance mechanism that provides the ability to monitor, review and enhance sustainability performance;

- has established an innovation cell specifically dedicated to exploring state-of-the-art sustainability solutions that can shape medium to long-term strategies;
- holds itself accountable and continuously improves by participating in multiple ESG disclosures and measuring its performance against industry peers.



GSK: *Contributing to a nature positive world through watershed replenishment in Nashik, India*



Value drivers

- Risk management & mitigation
- Strategic priorities & ESG

NbS types

- Wetland restoration
- Regenerative agriculture

Corporate strategy connections with NbS

- GSK is publicly committed to a net zero, nature positive, healthier planet with ambitious goals set for 2030 and 2045 and believes that action on nature matters for health, climate and business success.
- GSK has a clear pathway to reduce carbon emissions by at least 90% by 2045 and to contribute to a nature positive world in line with the goal of the post-2020 Global Biodiversity Framework: to halt and reverse biodiversity loss by 2030.
- To support its commitment to reducing its impact on climate and nature, GSK invests in high quality nature protection and restoration, including investing in nature-based solutions.

Challenge

- Reducing water risk and improving local communities' health and livelihoods

Opportunity

- Go above and beyond initial objectives, create a long-lasting positive impact in the wider basin

Context

Human health relies on the fundamentals of nature: clean air and fresh water. Nature loss has a range of negative impacts on health. For example, habitat degradation and deforestation are increasing the risk of new human pathogens and pandemics and nutrition is impacted by changes to agriculture. Protecting nature makes businesses more resilient and can inspire future innovations. Water is also essential for the production of GSK vaccines and medicines. GSK is committed to reducing the amount of water used for manufacturing, keeping any Active Pharmaceutical Ingredient (API) emissions from manufacturing below the predicted no-effect level for all sites and working with local communities to further take action to improve livelihoods and sanitation in water-stressed basins. In India, GSK has partnered with WOTR, a non-profit

organization that works to tackle the key causes of rural poverty by rejuvenating ecosystems and building the community's resilience to climate change. The project will be implemented in four villages in the Nashik district and aims to tackle the problem on two main fronts: (1) improve the water storage potential of the four identified villages through ecosystem-based adaptation solutions and (2) build the response capacity of the communities to stabilize and enhance agricultural productivity through soil and water conservation. This project also involves educating and empowering communities to implement sustainable agriculture and improve degraded landscapes. These activities aim to improve water availability in the dry season and slow the flow of excess water during monsoon season for sustainable agriculture use, domestic purposes and ecosystems regeneration.

Additional sources of value:

- Increased economic stability, health and education to local families through improved agriculture yield of local subsistence farmers
- Increased biodiversity through eco-friendly agricultural practices
- Increased resilience to climate change

Tools:

- Engagement with local communities on sustainable agriculture practices and conservative water use
- WOTR's water budgeting tool and micro-irrigation techniques
- Technological improvement of water infrastructure (WRI Volumetric Water Benefits Accounting Methodology)

Project evaluation metrics and targets:

- Target population: >2,000 ha and >4,000 people
- Water replenishment: increase water capacity (m³) through water storage and soil/water conservation
- Sustainable agriculture: improve crop productivity (%) and improve livelihoods (\$)
- Health: drinking water sources and nutrition (via crop productivity)

Overcoming challenges:

- Identification of a water replenishment program with human and health co-benefits incorporated
- GSK's first NbS pilot intervention – opportunity to learn how it can scale intervention in other basins

Project partner:

Watershed Organisational Trust (WOTR)

Duration:

Project began Q4 2023 for 3 years [on-going]

Context and additional information

Environmental sustainability strategy and approach at GSK

GSK's environmental sustainability strategy focuses on the interconnectedness of climate, nature and human health. GSK is publicly committed to a net zero, nature positive, healthier planet, with ambitious climate and nature goals set for 2030 and 2045. In November 2020, it set ambitious twin goals on climate and nature and it is taking action to achieve those goals.

GSK has a clear pathway to a net zero impact on climate and aims to reduce carbon emissions across the full value chain by at least 90% by 2045. Its plan to contribute to a nature positive world is in line with the goal of the post-2020 Global Biodiversity Framework to halt and reverse biodiversity loss by 2030. GSK's approach is through four focus areas which are aligned to the 'realms' of nature as defined by TNFD and SBTN. These are the major components of the natural world – freshwater, land, oceans and atmosphere – including the biodiversity of living species across these realms.

GSK is taking action by:

1. avoiding and reducing impacts on nature across the full value chain,
2. investing in the protection and restoration of nature and
3. helping to drive collective action for nature.

GSK has deepened its understanding of its full value chain nature impacts and dependencies and continues to align with evolving practices and guidance. For example, in 2022 GSK followed the TNFD LEAP (Locate, Evaluate, Assess and Prepare) methodology to better understand its nature-related risks and opportunities.

It is also part of the first group of companies working with the Science Based Target Network (SBTN) to set validated science-based targets for nature starting with targets for freshwater and land, followed by targets for oceans and biodiversity. These targets will focus on locations across GSK's value chain where nature is particularly under pressure. GSK expects to set its first science-based targets for nature in 2024.

GSK approach to NbS

- Investing in nature protection and restoration within and outside its value chain is a key part of GSK's ambition and commitment to achieve a net zero, nature positive, healthier planet.
- While continuing to reduce its impact, to support its net zero impact on climate goal, GSK is investing in high quality nature protection and restoration, including Nature-based Solutions equivalent to 20% of its 2020 carbon footprint.
- GSK recognizes that carbon credits and Nature-based Solutions are a key part of the solution but are complicated and difficult to get right. That's why it really matters that projects and credits are genuine and high-quality.

INGKA:

Wild gardens for local biodiversity at IKEA Timisoara

Value drivers

- Business performance
- Strategic priorities & ESG

NbS type

- Creation of urban green spaces

Corporate strategy connections with NbS

- INGKA Group's main priority areas are circularity, reducing climate impact and supporting vulnerable communities
- INGKA is currently working on developing its sustainability strategy including and amplifying nature and biodiversity
- All IKEA buildings (including those under INGKA's management) follow the BREEAM sustainable building certification requirements but INGKA aims for further positive impact

Challenges

- High water and maintenance cost of existing green gardens
- Low biodiversity and insect population

Opportunity

- Reduce water and maintenance cost while improving biodiversity and employee health

Context

IKEA's policy requires all shops (including those managed by INGKA) to landscape with grass and trees. To increase biodiversity and reduce water and maintenance costs, IKEA Timisoara implemented a project piloting partnering with InsectRespect to transform one of the existing gardens into a wild local vegetation biodiversity hotspot. The primary goal and business case was to reduce maintenance cost and water use, especially in a climate change scenario where extreme weather events significantly increase. The garden included local insect-friendly shrubs and bushes in the outer margin, structure elements for habitat, hibernation, and shelter and local flowering insect-friendly herbs and flowers. The pilot project was extremely successful in reducing water use and maintenance costs but additional positive impacts on employee and customer wellbeing were also apparent. In general terms a biodiversity garden offers diverse habitats for a broad range of insects, small mammals, reptiles, and amphibians, as well as food sources and a wider variety of flowering plants (compared to traditional landscaped gardens). Furthermore, a biodiversity garden requires less maintenance as flowering areas are cut only once a year, which leads to cost savings.

Additional sources of value:

- Increased happiness and mental health of employees
- Customers were also happy to see more diverse biodiversity
- Reduced maintenance costs

Project evaluation / project metrics:

- Number of flowering species
- Period of flowering
- Number of insect species
- Diversity in habitat and shelter

Project partner:

InsectRespect

Duration:

2023 - ongoing

Context and additional information

INGKA Group

INGKA Group consists of three business areas:

- The core business is IKEA Retail which consists of 379 IKEA stores including city stores across 31 markets and counting.
- INGKA Centres creates meeting places where each center is anchored by an IKEA store. So far, Ingka has established 44 experience-oriented shopping centers across Europe and China – and more are on the way.
- INGKA Investments allows IKEA to expand the retail business by partnering with companies that share similar values.

Sustainability strategy at IKEA

IKEA's three major focus areas are:

- Healthy & sustainable living
- Circular & climate positive
- Fair & equal

Nature commitments are being developed as IKEA is working towards setting SBTi targets and looking at SBTN for guidance.

INGKA & IKEA approach to NbS

- An initial materiality assessment identified hotspot locations; Nature-based Solutions are being identified to mitigate risks and reduce impact.
- The pilot project in Timisoara was a great success with both customers and employees and generated a stronger push to implement similar solutions across multiple IKEA facilities.



Reckitt: *Sustainable cultivation of rubber farms in Thailand*



Value drivers

- Risk management & mitigation
- Business performance
- Strategic priorities & ESG

NbS type

- Sustainable agriculture and farming practices

Corporate strategy connections with NbS

- Biodiversity strategy aimed at protecting and restoring nature by assessing top-priority materials, identifying risks and opportunities
- Ensuring access to key input materials for products (resilience to safeguard business continuity)

Challenge

- Reduce supply chain risk (upstream; materials/ingredients)

Opportunity

- Add to a framework for strategic supply development including NbS, mitigating nature-related risks in the supply of key raw materials

Context

Reckitt is collaborating with external partners to develop a “good” practice approach to assess, manage and report on environmental factors with the aim to identify impactful NbS investments. Reckitt worked with Nature based Insights (Nbi – a spinoff of Oxford University), smallholder farming communities and local NGOs (including Earthworm Foundation) to build an analytical framework for the rubber farming landscape in southern Thailand. The framework is designed to estimate the impacts of Reckitt’s operations on biodiversity and livelihoods in this region which forms part of Reckitt’s supply network and is related to a material input (latex). Impact estimation is supported by the Nbi Analytics model which relies on the best available models and datasets to estimate a Biodiversity Impact Metric (BIM) and is then used to establish biodiversity baselines. Once a baseline is set, the Analytics model simulates scenarios to project and address impacts through Nature-based Solutions activities, identifying ecologically-sound investment strategies which will have a positive impact for both farmer communities and biodiversity. By providing a comprehensive and multidimensional perspective, this approach informs strategies for mitigating and adapting to nature-related risks.

Additional sources of value:

- Measurable biodiversity impacts from latex farming and from implementing NbS on and off-farm in the latex production landscape
- Improving Reckitt’s TNFD disclosure

Tools:

- Bespoke Analytical Framework supported by the Nbi Analytics model; designed to estimate Reckitt’s impacts, risks and opportunities associated with biodiversity, and monitor and evaluate the biodiversity impacts of NbS as they are implemented
- Biodiversity Impact Metric (BIM): estimates biodiversity impacts as a function of land use, land cover, the proportion of biodiversity lost and the importance of local biodiversity

Project evaluation / project metrics:

- Improved BIM (in km²)
- Farm/landscape footprint
- Farming activity, soil/aquatic eutrophication, carbon emissions

Project partners:

Nature-based Insights; Earthworm Foundation, Sustainable Rubber Association of Surat Thani

Duration:

3 years with ongoing interventions and measurement

Context and additional information

Reckitt's approach to biodiversity

Reckitt's purpose is "to protect, heal and nurture in the relentless pursuit of a cleaner, healthier world". It is working on a biodiversity strategy that supports a nature-positive future. To do so, it partnered with Nature-based Insights (Nbi) to measure the impact of its priority natural raw materials such as latex. The resulting framework and results will guide Reckitt's actions to reduce greenhouse gas emissions, address biodiversity priorities and enhance people's livelihoods. Reckitt has also applied the TNFD recommendations, which provided insights on material nature-related risks and will help to inform the biodiversity strategy.

Challenges and lessons learned

Framework development

Key challenges:

- **Localized data:** need to develop local data at a quantitative level to assess impacts and interventions from a broader initial qualitative evaluation.
- **Time scale and scope for updating and monitoring data:** annual assessments do not always support an effective change in nature as biodiversity takes longer to be measured. Data analysis cycles also need to align with program implementation schedules for findings to be implemented efficiently.
- **Social aspect** is a **crucial** part of implementation and needs to be part of evaluation as well. Therefore, working with local supply chain to improve data granularity is key.

Lessons learned:

- Pragmatic approach is needed due to scale of landscape and with limited specific localized data at the outset (in this case from ~800 smallholder farmers). Impact assessment is also still evolving and will have various options as more approaches are defined at landscape level (in support of disclosure at company level) such as:
 - **Measuring direct impact on project or near-project activities** with robust metrics that can be applied to consider impact and to other interventions/projects
 - **Measuring/assessing indirect impact to the landscape or company** to provide context and support for principles of land use, interventions developed and impact to the company
- Robust methodology and similar metrics are needed to establish a representative sample size and establish confidence for NbS project implementation (and investment).
- TNFD will be the framework referenced in the future by Reckitt with disclosures and further development of the methodology. This reflects the company's existing approach on climate-related disclosures (TCFD).

The business value of NbS

- Clear understanding among senior management that dependence on natural resources can pose a risk to operations.
- Evidence for senior management where NbS reduce supply and quality risks (e.g. latex quality, yield).

- Buy-in from management regarding nature-related risks including development of the assessment framework and NbS investment.
- Assessing the current and avoided nature-related and supply chain risks within a framework that allows performance management of interventions to strengthen biodiversity and offer potential climate solutions.
- Building stronger quantification of risks in an emerging area.



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Disclaimer

This guidance has been developed in the name of WBCSD. Like other WBCSD publications, it is the result of collaborative efforts by representatives from member companies and external experts. A wide range of member companies reviewed drafts, thereby ensuring that the document broadly represents the perspective of WBCSD membership. Input and feedback from stakeholders was incorporated in a balanced way. This does not mean, however, that every member company or stakeholder agrees with every word.

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About Nature Action Imperative

WBCSD's Nature Action Imperative supports members to accelerate credible corporate action and mainstream nature in business strategies & decision-making: building the tools and guidance needed to define credible business contributions to Nature Positive (halt and reverse nature loss by 2030); preparing to engage with the emerging performance and accountability system for nature; and, catalyzing investments into nature assets. To learn more about the Imperative and related projects, visit www.wbcsd.org/Imperatives/Nature-Action.

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We accelerate value chain transformation across key sectors and reshape the financial system to reward sustainable leadership and action through a lower cost of capital. Through the exchange of best practices, improving performance, accessing education, forming partnerships, and shaping the policy agenda, we drive progress in businesses and sharpen the accountability of their performance.

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