

# Biodiversity

**GRI Standards:**

304-1, 304-2, 304-3, 304-4: Biodiversity

## EXECUTIVE SUMMARY

“Biodiversity” or biological diversity refers to the variety of life on earth and refers to the variation of genes within a species, to the variety of species within a region and to the different communities of habitats found in a location.

Sanofi manages the biodiversity around its sites through its environmental sustainability program “Planet Mobilization”.

Natural resources are critical for the discovery and development of new drugs, Sanofi strives to ensuring the protection of biodiversity and fair and sustainable use of natural resources.

Sanofi is committed to a responsible use of natural resources in research and in production. We adapt our practices to comply with international regulations such as the Nagoya Protocol and the Convention on Biological Diversity (CBD) and local regulations. In addition, Sanofi works towards elimination of use of endangered natural resources and their derivatives.

In 2021, Sanofi reinforced its commitment to the protection of biodiversity by renewing its engagement to Act4Nature international.

Sanofi expects from its suppliers to also apply highest environmental and biodiversity protection standards.

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# 1. Our strategic approach

“Biodiversity” or biological diversity, refers to the variety of life on earth. It encompasses three categories:

- genetic diversity refers to the variation of genes within species;
- species diversity refers to the variety of species within a region; and
- ecosystem diversity refers to the different communities or habitats found in a location.

Biodiversity is vital to maintaining the balance of life in our planet. The world’s natural ecosystems are deteriorating at a rate unprecedented in human history. Preserving biodiversity and ensuring the sustainable and fair use of natural resources stand out as key issues worldwide. Today they are an essential part of any environmental sustainability and Corporate Social Responsibility (CSR) policies and are considered critical topics for Sanofi.

The pharmaceutical industry places a great deal of importance on biodiversity because natural resources are critical for the discovery and development of new drugs. Natural resources have valuable potential as sources for new chemical substances and active ingredients. Despite the decline in the use of natural products for drug discovery, biologists consider natural resources to be the treasure troves of pharmacopoeia in the 21<sup>st</sup> century, given the remarkable diversity of their substances and active ingredients.

Sanofi actively contributes to protect biodiversity through its Planet Mobilization roadmap addressing today’s environmental challenges (such as climate change, waste management, pharmaceuticals in the environment, water stewardship).

Sanofi is also working on three key issues directly related to biodiversity:


- ensuring protection of biodiversity surrounding Sanofi sites and beyond, particularly in fragile or protected areas;
- determining the fair distribution of benefits resulting from products derived from biodiversity on the market; and
- the controlled use of natural plant and wild animal species in research projects to discover new drugs.

To translate our approach into action, Sanofi committed to:

- complying with local regulations. Regarding the protection of protected natural areas surrounding the concerned sites, Sanofi carries out relevant environmental impact assessments;
- ensuring that all new relevant contracts are in line with the CBD and The Nagoya Protocol and take into account the Convention on International Trade in Endangered Species (CITES) and the International Union for Conservation of Nature (IUCN) Red List criteria;
- verifying, prior to placing an order, that relevant plant species are not on the lists established by the CITES of Wild Fauna and Flora. *For more information, see: [www.cites.org](http://www.cites.org); and*
- ensuring that suppliers produce, when applicable, the official authorizations that allow them to collect the plants, animals and/or micro-organisms that have been ordered.

## 2. Biodiversity and Sanofi sites

### 2.1. PLANET MOBILIZATION & BIODIVERSITY



Our objectives	act4nature international	Global Performance 2021
Engage protection programs on all priority sites located near sensitive areas by 2025		Global biodiversity footprint and biodiversity risks at our sites assessed
Foster biodiversity on 100% of our sites by 2030		Various biodiversity initiatives implemented on our sites

In November 2021, Sanofi renewed its commitment to [Act4Nature international](#), a French initiative bringing together companies, public authorities, scientists and environmental associations with the ambition of creating an international collaboration to accelerate concrete business action and promote biodiversity initiatives. Sanofi has signed common commitments and defined [individual commitments](#) based on SMART objectives (Specific, Measurable, Attainable, Relevant and Time-bound) in line with its environmental sustainability program “Planet Mobilization”.

To limit its environmental impacts, Sanofi considers local management of biodiversity. As part of its Planet Mobilization program, Sanofi has set dedicated commitments to manage biodiversity on its sites:

- by 2025: priority sites located near sensitive natural areas shall implement a biodiversity protection program with consideration of local biodiversity risks and in partnership with stakeholders; and
- by 2030: all our sites will foster biodiversity through dedicated initiatives.

### 2.2. PROTECTING BIODIVERSITY AROUND SANOFI SITES AND BEYOND

A first assessment of the biodiversity sensitivity of our non-urban sites has been carried out from 2014 to 2016. In line with the new Planet Mobilization roadmap, Sanofi launched in 2021 an update of this assessment based on new criteria. This analysis is carried out using a tool specially designed for Sanofi, supported by an external consultant, which allows us to have a better understanding of biodiversity risks and challenges for our sites.

The updated biodiversity risks assessment on sites is based on two parameters:

1. **Exposure:** it aims to identify high significance sites, by identifying areas of influence for operating sites which overlap with areas of high biodiversity significance, using global-scale geospatial data. The evaluation is based on six criteria:
  - > proximity to regulated areas of high biodiversity value (e.g. Ramsar sites, IUCN I-IV protected areas, Natura 2000...),
  - > proximity to unregulated areas of recognised biodiversity value (e.g. AZE, IFC Critical Habitat, ZNIEFF...),
  - > proximity to regulated areas of lower or undefined biodiversity value (IUCN other),
  - > number of threatened species with ranges that overlap the site area (IUCN Red List: Critically Endangered, Endangered, Vulnerable),
  - > habitat classification (Habitat Cover: Natural or Modified), and
  - > proximity to water bodies (rivers, lakes, wetlands).

2. **Vulnerability:** it is based on a questionnaire sent to local stakeholders in order to take into account local information which are not available through global-scale geospatial data. The questions are categorized by thematic groups as follows:

- > Habitat,
- > Species,
- > Biodiversity Management at site-level, and
- > Stakeholders Engagement.

The biodiversity risks assessment of our sites has been completed beginning of 2022. A critical review is now ongoing to confirm the list of priority sites. In addition, many sites implemented initiatives to protect and promote biodiversity at local level:

### **At our Csanyikvölgy site in Hungary**

The site, located near the border of a National Park, has been working since 2002 with local experts to regularly survey lichen and plants around the site in relation to sensitivity to air pollution; no negative impacts have been reported. As the region is rich in caves, experts proposed to monitor bats and their predators to assess how these species could be impacted by light and noise from our site activities – and no negative effects were reported. The conclusions of these studies enabled us to establish the site biodiversity risk management plan in relation to a dedicated monitoring program with the third-party experts.

### **At our Waterford site in Ireland, “La Marche”**

Enabling future planning for business development required the creation of a wildlife pond to provide a breeding and hibernation habitat for a protected species, the common frog (*Rana temporaria*), which inhabits a wetland area on site. We took advantage of this opportunity to incorporate a Slí na Sláinte (Path to Health) 1.7 km walking track.

Taking on board the imperative of protecting the frog population in the wetlands within our landbank and the aspiration to develop a pleasant walking route that would encourage daily outdoor exercise, the Waterford Health, Safety & Environmental team developed a project to create a pond and walkway around the frog habitat. This conserves the protected ecosystem and species but also enhances the area and makes it more accessible on a clearly marked pathway. The Irish Heart Foundation-designated Slí na Sláinte (Path to Health) makes walking outdoors simple, satisfying and safe. At Waterford, the route features an eco-friendly “outdoor room” with benches and potted lavender. In developing the model, the team was aware of the need to deliver return on investment and to minimize expenditure. In this context, the idea was developed of delivering the project in partnership with voluntary bodies. These included the Red Cross and Scouting Ireland, both of which had Sanofi personnel involved locally. To further boost employee buy-in, we invited volunteers from the site team to take part in the physical works at weekends. In all, 200 people from the Company and community volunteered at various stages. A naming competition boosted interest and generated the “La Marche” brand. There is a real sense of ownership, and the habitat and related walking route are impeccably maintained year-round. All materials used in the works were environmentally friendly, safe, sustainable and durable.

### **At our Brazilian headquarters site**

A partnership was established in 2016 with a local NGO which planted 15,000 native trees along the region, a forest that covers much of the country's coast. Internal engagement actions were promoted during the planting period, connecting employees to the project and warning about environmental issues. As of 2017, 10.4 hectares have been restored, equivalent to the area of ten football/soccer fields. In this space, 26,000

seedlings were planted, almost doubling the original commitment, which are currently undergoing growth and maintenance.

### **At our Mount Pleasant (Tennessee, US) site**

As part of the remediation of a former manufacturing site, more than 20 acres have been planted with native wildflowers and trees to enhance the local pollinator environment. In addition, approximately five acres of ponds and 1,000 linear feet of streams have been remediated and restored. There is an ongoing project to evaluate the feasibility of additional tree planting with long-term protection to foster carbon sequestration.

### **At our Aramon site in France**

The site's fences are limited in order to encourage the movement of species and protect the scrubland ("garrigue") areas. 20 hectares out of the 80 are fenced off. The site is located in a suitable area, appreciated by the European Lorient, a protected bird species.

In addition, the SANOLIVE initiative enables olive oil to be produced from the 800 olive trees at the site and to give the proceeds from its sale to local associations.

### **At our Toronto site in Canada**

Since 2019, Sanofi Pasteur in North York, Ontario, has been working with the TRCA and the City of Toronto to develop a stewardship initiative for the 30-hectare ravine bordering their North York campus. As part of a public park, the ravine area is a mix of habitats including woodlands, small wetlands and native grasslands. In line with the Planet Mobilization roadmap, a stewardship plan has been written covering the five-year period that began in 2020. During 2020 and 2021 the activity was limited to establishing a baseline plant inventory due to COVID-19 restrictions.

The team was able to establish a baseline plant inventory, identify invasive plant species and their baseline distribution, and to build recommendation for the next steps implementation. As first results, a good biodiversity has been found in the subject valley lands: 250 species of plants and animals, including some invasive species, were identified, photographed, and documented. Activities are planned to include invasives removal, tree health assessments and bird, small mammal, and insect studies.

### **At our Compiègne site in France**

The site has an area of 22 hectares, half of which is unbuilt. In order to maintain this space of 100,000 m<sup>2</sup>, the site has developed a sustainable green space management program. Phytosanitary treatments have been banned and eco-grazing has been implemented. Today, two cows, four sheep and one goat are present all year long on site! Hay is produced on site during summer to feed the animals in winter. Besides, wasteland and piles of dead wood are present, enhancing biodiversity. Finally, the site joined the "Plan Bee" program and two beehives were installed.



## 2.3. EMPLOYEE AWARENESS ON BIODIVERSITY

More globally, initiatives to raise awareness on biodiversity have already started. These initiatives involve employees located on all our sites.

### World Environment Day

On World Environment Day, Sanofi's employees come out in force with actions to build a safer and greener planet.

In 2021, employees across more than 120 sites in 50 countries used this international day to focus on biodiversity protection. Local initiatives such as tree planting, awareness sessions and webinars, natural sites cleaning-up and beehives installation showed the Company's embedded environmental culture.

### Plan Bee®



Pollinator decline (as well as biodiversity, consequently) is not solely a governmental or individual problem, but one which urgently requires a multi-organizational solution. Starting in 2016, a Sanofi beekeeper employee has decided to have a direct impact on pollinator decline but also have an indirect impact by means of climate change through the **Plan Bee®** initiative.

**Plan Bee®** project consists in setting up beehives on Sanofi's sites according to a calibrated governance and process which embarks volunteers across the world and sponsors.

Plan Bee® is an incubator platform deployed across 24 sites with the participation and strong commitment of 268 volunteers who are going through a learning curve across the seasons.

Year 2021 enabled the production of 403 kg of honey, sold to the employees; income from the sales was donated to an in-house charity "*Enfants de Sanofi*", or reinvested in the initiative. This project contributes to reinforcing the circular economy.



## A Sanofi eco-garden at the heart of Ho Chi Minh City

In 2020, Sanofi manufacturing site in Vietnam started an eco-garden with the ambition to foster both environmental awareness and employee engagement.

From day one, a clear charter and governance has been set-up around three main ambitions: 100% organic, eco-friendly, and circular. The project started with a mere plot gardening activity. Progressively the site employees contributed massively; new initiatives flourished, making the eco-garden a very special place:

- build a sunroof protection and water dispensing to limit water consumption;
- make compost from employee cafeteria organic waste to avoid use of chemical fertilizers;
- designed an aquaponics system to grow circularly fishes and lettuce powered by solar panel;
- set-up a chicken's coop providing eggs to employees (the site even got chicks!);
- plant flowers, cactus, lotus all around the garden including an orchid corner;
- grow a self-service therapeutic garden to promote Vietnamese traditional medicines;
- install a dovecote in response to the passion around birds in Vietnam and welcome rabbits and ducks; and
- plant a forest around the garden, many tropical fruit trees.

The eco-garden is now a land of passion and freedom where all employees are invited to bring new ideas and volunteer. Half of the total site staff are now directly involved in the garden care and events are regularly organized with children to raise awareness on environment protection. Everyone is enjoying the harvest which is shared between employees: vegetables, eggs and fishes are distributed. In addition, among the 65 species of tropical fruit trees popularly grown in Southern Vietnam, 55 species have been collected and successfully grown.



## A global awareness program around Planet Mobilization

Promoting and sharing a common environmental culture with our employees at all Sanofi sites around the world is a key element in the success of our Planet Mobilization program. By sharing the main environmental challenges, including on biodiversity, its objectives and best practices, Sanofi multiplies the impact of its efforts.

An ambitious program of engagement and collective intelligence was launched in November 2020. Initiated by volunteers on the enterprise social network of the Company, a community of active ambassadors supports this program, which enables everyone to better understand the issues and to share initiatives and best practices all around the world. An international call for ideas was launched to select the best projects to incubate in order to design new solutions for the environment in a collaborative and agile manner. *For more information, see our [Document Center](#): Employee Engagement on Environment Factsheet.*

## A training in biodiversity protection

An employee training in environmental topics was launched in 2021. The objective of the training is to strengthen the environmental culture by providing basic knowledge in each of the environmental pillars covered by the Planet Mobilization program, including biodiversity protection.

Accessible to all, it is an opportunity given to all employees to take a closer look at today's environmental challenges and to better understand Sanofi's environmental ambitions.

## 3. Biodiversity and value chain

### 3.1. SANOFI'S BIODIVERSITY GLOBAL FOOTPRINT

In 2021, Sanofi has undertaken a first assessment of its biodiversity footprint and associated risks. An identification and analysis of its dependencies and pressures on biodiversity has been conducted, based on recognized tools of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). This footprint was supplemented using a measurement tool to quantify the pressures exerted by the Company on biodiversity. Based on this assessment, an initial mapping of Sanofi's biodiversity risks has been carried out. This work provided preliminary results and confirmed the relevance of the Planet Mobilization strategy and will be refined in the next years.

### 3.2. NATURAL SUBSTANCES USED IN R&D AND PRODUCTION

Sanofi is committed to respecting the Convention on Biological Diversity (CBD) and the Nagoya Protocol, as well as with Sanofi's position on biodiversity, focused on the use of natural substances to develop new drugs.

The compliance with local regulations resulting from the Nagoya Protocol requires coordinated efforts between all Sanofi entities.

The actions implemented focus on the use of natural substances to develop new drugs. They entail:

- limiting the quantities of genetic resources used for research;
- identifying protected natural substances (CITES list) and finding alternative solutions;
- contracting with suppliers who comply with international conventions and national regulations on preserving biodiversity; and
- adhering to the Nagoya Protocol principle of sharing benefits generated with countries that give access to their natural resources, as well as with local populations having specialized know-how, whenever products made from natural substances are commercialized.

To facilitate these actions, Sanofi has developed and adapted process and tools to manage biological samples and ensure compliance with the Nagoya Protocol.

#### 3.2.1. Adhering to the principles of biodiversity preservation

##### Recognition of the Convention on Biological Diversity (CBD) and the Nagoya Protocol

The Convention on Biological Diversity (CBD) entered into force on December 29, 1993 (and has now been ratified by almost all countries except the United States). It has three main objectives:

- the conservation of biological diversity;
- the sustainable use of the components of biological diversity; and
- the fair and equitable sharing of the benefits arising from the utilization of genetic resources.

The *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization* is a supplementary agreement to the Convention on Biological Diversity. It was designed to contribute to the conservation and sustainable use of biodiversity.

The Nagoya Protocol objective is to create greater legal certainty and transparency for both providers and users of genetic resources by:

- establishing more predictable conditions for access to genetic resources; and
- helping to ensure benefit-sharing when genetic resources leave the country providing the genetic resources.

The legal framework will ensure fair and equitable sharing of benefits arising from the utilization of genetic resources, directly addressing one of the three objectives of the CBD.

The Nagoya Protocol entered into force on October 12, 2014 and has been ratified in March 2022 by 136 countries including the European Union. National legislations are being adapted to ensure compliance with this protocol.

Sanofi recognizes the CBD and the Nagoya protocol principles for obtaining and using natural resources. Collaboration contracts set out conditions for sharing the benefits arising from the use of these resources.

*For more information, see: [www.cbd.int](http://www.cbd.int) and <https://www.cbd.int/abs/>.*

### **3.2.2. Internal implementation to comply with The Nagoya Protocol**

Compliance with the local regulations stemming from the Nagoya Protocol requires coordinated efforts across all Sanofi entities.

Since the entry into force of Nagoya protocol, Sanofi has adapted its processes, created appropriate documents and policies to comply with the protocol. A dedicated intranet site designed for all Sanofi employees has been launched, aiming to raise general awareness about the Nagoya Protocol.

Key departments receive regular and specific employee awareness/training to ensure compliance with the Nagoya protocol.

To continue the internal rollout and ensure compliance, a Nagoya expert group reports to our Bioethics Committee. The Nagoya expert group mission is to:

- maintain appropriate level of knowledge within the Company by organizing regular training;
- work on issues arising from internal implementation of the protocol;
- assist team as appropriate to ensure compliant use of genetic resources; and
- follow international implementation and arising issue of implementation in the signatory states.

Sanofi recognizes the importance to monitor how practices are changing considering the reaction of stakeholders. For example, the use of digital sequence information on genetic resources is an issue still under review. Timely access to certain genetic resources such as emerging human pathogens is of paramount importance for public health to allow rapid development of diagnostic, therapeutic and vaccine products. Sanofi shares the concern expressed by IFPMA regarding inclusion of human pathogens into the Nagoya protocol (<https://www.ifpma.org/global-health-matters/its-time-to-put-an-end-to-pathogen-protectionism/>) and is following carefully current pathogen-sharing practices and WHO recommendations to access pathogens in emergency situations.

The actions taken by Sanofi relate to the use of genetic resources to develop new medicines and vaccines.

### **3.2.3. Biopiracy**

Biopiracy refers to the commercial utilization of endemic resources and local know-how without sharing the profits with the communities or countries that are the source. The CBD and the Nagoya Protocol describe the principles governing such utilization, although national regulations vary to a great extent.

From now on, each time Sanofi investigates the use for R&D purposes of a new product isolated from natural sources, a due diligence is performed to comply with the CBD and the Nagoya Protocol. This commitment aims to safeguard against biopiracy.

### 3.2.4. Raw materials scarcity

As per the TCFD Recommendations, Sanofi has identified several specific climate-related risks and opportunities for each time horizon identified in its risk management process. Raw material scarcity is one of these risks.

Indeed, climate change threatens natural resources such as biodiversity. A reduction in biodiversity could affect research & development potential when it comes to identifying new pharmaceutical molecules. According to a survey carried out by the EFPIA, from 1981 to 2006, of more than 1,184 new molecules brought to market, only 30% were totally synthetic drugs. The rest were derived from natural products or their derivatives, which risk being impacted by a loss of biodiversity.

Mitigation plans are already in place to address identified risks related to our supply chain or to the sourcing of biomaterials, chemicals, or plastics.

*For more information, see our [Document Center](#): Climate-related Financial Disclosures on Risks and Opportunities related to Climate Change (TCFD) Factsheet*

## 3.3. INVENTORY OF NATURAL SUBSTANCES AND RESPONSIBLE SOURCING

Sanofi has a standard defining rules for managing the quality and safety of materials used in the manufacturing of its products. This document describes for example the level of information to obtain from the suppliers in order to clarify the nature of the material and to ensure the traceability on material origin.

To ensure this traceability, we ask our suppliers to provide:

- botanical information, location and crops of origin for plant-based materials and to state that their materials are not from endangered or protected species; and
- information on the origin of animal-derived materials (animal species, tissues used, country of origin) and to state that they are not from endangered or protected species.

To avoid the use of materials originated from recognized protected or endangered species (according to CITES list), Sanofi has issued a position notifying that materials of animal or vegetal origin from species in CITES lists (endangered or recognized protected) are not authorized in Sanofi products.

In addition, Sanofi is developing processes to protect and preserve biodiversity that call for:

- monitoring suppliers responsible for collecting natural resources used in research projects to discover new medicines; and
- sourcing biological materials and related services from suppliers who apply appropriate environmental and biodiversity protection standards.

In alignment with the Planet Mobilization program, Sanofi is reinforcing the responsible procurement policy.

*For more information, see our [Document Center](#):*

- *HSE Policy*
- *HSE Management System factsheet*
- *Sustainable Procurement Factsheet*
- *Soil and Groundwater Remediation Factsheet*
- *Employee Engagement on Environment Factsheet*
- *Climate-related Financial Disclosures on Risks and Opportunities related to Climate Change (TCFD) Factsheet*