DNDi CLIMATE AND ENVIRONMENTAL ROADMAP

Reducing our carbon footprint by 50% by 2030

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FOREWORD

Climate change presents the most significant global health threat humanity has ever faced, putting at risk the hard-won advances of recent decades in health, poverty reduction, and development. For those of us focused on neglected diseases, with every passing year we see the growing impact of the changing climate on health, including record-breaking dengue outbreaks around the world, and leishmaniasis and sleeping sickness cases in regions not previously affected.

But in one important aspect, nothing has changed. As with neglected diseases, so too with the many impacts of climate change: the poorest and most vulnerable populations are bearing the greatest burden.

Born on the frontlines of medical action, we now find ourselves on the frontlines of climate adaptation, working with partners around the world to find better treatments for neglected populations affected by climate-sensitive diseases. And as we work to develop safe, effective, and affordable treatments that will enable affected communities to better protect themselves from health threats related to climate change, we must also reduce our own contributions to global carbon emissions.

DNDi has developed a four-pronged strategy on health, climate, and the environment to address the treatment needs of the world's most vulnerable populations; advocate for innovation and investment for neglected patients in the global climate change response; reduce the environmental footprint of our operations; and work with partners to reduce the environmental impact of developing and manufacturing medicines. This DNDi Climate and Environmental Roadmap outlines the steps we need to take in two of those four areas: reducing the emissions we control, from our offices and travel, and the emissions we do not directly control, including from outsourced R&D and treatment access programmes.

We are grateful to the Climate Action Accelerator team, who have guided us in measuring our baseline carbon emissions for 2019 and producing this first DNDi Climate and Environmental Roadmap.

We have committed to reducing our carbon footprint by 50% by 2030, and this roadmap will be our guide as we take our first steps on the pathway to net zero.

Dr Luis Pizarro
Executive Director, DNDi

DNDi's four-pronged approach to climate, environment, and health R&D

Develop treatments for climate-sensitive diseases in LMICs
DNDi will innovate for neglected patients with climate-sensitive diseases and deliver new, adapted, and affordable treatments.

CLIMATE CHANGE ADAPTATION

Green biomedical R&D and manufacturing
DNDi will proactively contribute to the movement for greening R&D and manufacturing practices as we introduce new therapeutic options for neglected diseases.

ENVIRONMENTAL PROTECTION

Advocate for medical innovation for climate-sensitive diseases in the climate change response
DNDi will advocate for increased focus on the pressing need for R&D for health tools to combat climate-sensitive diseases in climate adaptation policies and discussions – and for commitments to ensure that innovation caters to the needs of populations disproportionately impacted by climate change.

CLIMATE CHANGE ADAPTATION

Reduce our carbon emissions and environmental footprint (REEF)
DNDi will halve its carbon emissions and reduce its environmental footprint by revisiting its corporate and project approaches.

CLIMATE CHANGE MITIGATION

OUR AMBITION & WHY WE MUST ACT

Climate disruption and its consequences

Our global environment is undergoing dramatic change at an unprecedented rate as a result of human activities. The reports of the Intergovernmental Panel on Climate Change (IPCC) are consistently clear and unequivocal: climate change and environmental degradation threaten every aspect of our lives and put at risk the lives and livelihoods of future generations. Climate change has already increased sea levels, the likelihood of extreme meteorological events (extreme heat events being particularly deadly), the vulnerability of economically and socially marginalized populations, economic damage in exposed sectors (e.g., agriculture), and the loss of species on land and in oceans.[1]

> **'The climate crisis has arrived and is accelerating faster than most scientists expected. It is more severe than anticipated, threatening natural ecosystems and the fate of humanity.'** *- William J. Ripple et al.World Scientists' Warning of a Climate Emergency 2021*[2]

The IPCC states with confidence that a strong and rapid reduction in global greenhouse gas emissions has the potential to stabilise global warming by mid-century and improve atmospheric quality within just a few years.[3]

> **"The choices and actions implemented in this decade will have impacts now and for thousands of years."** *- IPCC Climate Change 2023 Synthesis Report: Summary for Policymakers*

With the Paris Agreement's urgent call to limit global temperature rise to well below 2°C in mind, we have a responsibility to do our part to reduce our greenhouse gas emissions, and to maximise the long-term sustainability of our current and future activities.

1   IPCC. Climate Change 2023 Synthesis Report: Summary for Policymakers. Accessed on 4 July 2023 (https://www.ipcc.ch/report/ar6/ syr/downloads/report/IPCC_AR6_SYR_SPM.pdf)
2   Ripple WJ et al. World Scientists' Warning of a Climate Emergency 2021. BioScience, 2021;71;9:894-898. https://doi.org/10.1093/biosci/biab079
3   IPCC, op. cit.

Links between climate, health, and drug development for vulnerable populations

Climate change threatens to undo the progress made over many years in development, global health, and poverty reduction. Mortality and morbidity from climate-sensitive infectious diseases are expected to rise globally. For example, dengue outbreaks are now occurring worldwide with an 85% increase in the global number of dengue cases from 1999-2019. According to a study estimate, the number of people exposed to leishmaniasis, which is also climate-sensitive, may double by 2080.[4]

11 out of 25 of the vector- or waterborne diseases[5] listed by the World Health Organization (WHO) are also classified as neglected tropical diseases (NTDs)[6] and affect 1.65 billion people, mostly in the least developed economies and most impoverished communities, almost half of them children. Current tests and treatments for most climate-sensitive NTDs, where they exist at all, have serious limitations that hamper the provision of lifesaving medical care and impede disease control and elimination efforts. The world lacks tools for the prevention, diagnosis, and treatment of these diseases that are simple, safe, and effective – and that can be easily integrated into already overburdened health systems.[7]

Most of these diseases historically affecting the poorest communities in low- and middle-income countries are not lucrative for the global biopharmaceutical private sector, due to limited profit potential. To counter the lack of investments in this area, not-for-profit product development partnerships such as ours now play a crucial role in innovation for these infectious diseases. DNDi develops medicines focusing on the needs of neglected populations, using a collaborative partnership model and is currently developing new treatments for five vector-borne diseases (sleeping sickness, leishmaniasis, river blindness, dengue, and Chagas disease) that are likely to be impacted by climate change. Developing urgently needed new medicines to treat climate-sensitive diseases is an essential component of climate adaptation for affected communities.

DNDi focuses on the pressing need for R&D for health tools to combat climate-sensitive diseases and on equitable access to the tools developed, ensuring that innovation caters to the needs of those who will be hardest hit by climate-sensitive infectious diseases.

4   Short EE, Caminade C, Thomas BN. Climate Change Contribution to the Emergence or Re-Emergence of Parasitic Diseases. Infect Dis (Auckl). 2017. Available at: https://doi.org/10.1177/1178633617732296.

5   WHO. Vector-borne diseases. 2020. Available at: https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases

6   WHO. Neglected tropical diseases. Available at: https://www.who.int/health-topics/neglected-tropical-diseases#tab=tab_1

7   Hotez PJ et al. Control of Neglected Tropical Diseases. N Engl J Med. 2007 Sep 6;357(10):1018-27. Available at: https://doi.org/10.1056/NEJMra064142

Our vision and key commitments

Vision

DNDi will respond to the health challenges posed by climate-sensitive diseases, simultaneously addressing the health impacts of climate change and reducing our environmental footprint.

Key commitments

1. Research and development (R&D)

We will factor in climate and environmental risks and consequences as a cross-cutting issue in the design, planning, implementation, manufacturing, and commercialisation of our research and development activities. By 2027, a comprehensive footprint reduction framework and monitoring system will be in place and implemented by DNDi and a majority of our R&D and access partners.

2. Greenhouse gas emissions

We will reduce our carbon emissions by 50% by 2030 compared to 2019, without purchasing carbon offset credits.

3. Travel

We will reduce air travel mileage by 40% by 2030 and promote the use of trains instead of European short-haul flights. By 2030, 80% of our flights will be made using sustainable travel choices.

4. Energy

We will switch to fossil-free energy by default in our offices wherever possible and make efforts to limit our consumption. By increasing the share of renewable sources in the energy we use, 80% of the electricity we consume will be fossil-free by 2030.

5. Offices

Our offices will lead by example, implementing eco-practices at work, optimizing space, and managing our waste responsibly to reduce our footprint. We will ban the purchase of single-use plastic items by early 2024 in all our offices.

6. Procurement

By the end of 2024, we will implement an Environmental Charter for responsible purchasing, setting out the criteria that guide us in each of our direct purchasing decisions. By 2026, sustainability criteria will be embedded in our outsourced contracts, notably encompassing supply and waste management.

7. People

We will ensure that our staff understand the environmental impact of our activities and have the opportunity to contribute to change and the implementation of environmentally friendly practices. We will invest in their training, giving them the tools and the means to act.

8. Collaboration and alliances

We will endeavour to inspire our international, national, and local partners to follow the path of a credible environmental commitment and will actively share our experience, achievements, and challenges in doing so. We will collaborate actively with like-minded peer organizations to help accelerate the deployment of sustainable solutions in the field of research and development.

A COLLABORATIVE APPROACH TO FOOTPRINT REDUCTION

Greening R&D and treatment access activities as a cross-cutting institutional priority

DNDi's leadership prioritizes sustainable R&D as an urgent, integral focus, leveraging the ingenuity of its medical experts and scientists. Aligned with our core mission of addressing the needs of underserved communities, DNDi concentrates on three key areas: development of new medicines and regimens tailored to the needs of neglected populations, strengthening of research capabilities in countries endemic for neglected diseases, and advocacy for policy change that supports equitable access to medicines and a public health focus in biomedical R&D. For DNDi, adopting green practices in R&D is fundamental to upholding our mission with integrity. Approaches such as green chemistry and the UK's National Institute for Health Research (NIHR) Carbon Reduction Guidelines[8] support DNDi's agenda for process enhancement.

DNDi takes its moral and fiscal responsibility seriously, ensuring donor funds are used responsibly and effectively. By investing in environmentally-friendly practices, the organization not only enhances fiscal accountability but also contributes positively to the environment. As part of its commitment to sustainability, DNDi places an emphasis on having clear and explicit indicators and targets in its environmental roadmap. These benchmarks provide a structured framework for learning, continuous improvement, and achieving measurable environmental impact.

Our mission to serve neglected populations is inseparable from our dedication to environmental responsibility. The organization's commitment to greening our R&D and access activities, aligned with our moral and fiscal responsibilities, ensures coherence across strategic pillars and fosters innovation. Through measurable impact and leadership-driven change, DNDi strives to bring hope and health to vulnerable communities and contribute to a more sustainable future for all.

Starting with ourselves, and then working with our partners and suppliers

Adopting a climate and environmental roadmap means first and foremost working on emissions under our direct operational control, linked to the functioning of our offices, the supplies we procure, and business travel. This challenge must be addressed principally through internal policies on air travel and procurement, upgrading to more energy-efficient infrastructure, and adopting greener energy sources. Being mindful of our consumption is central to this effort, as is choosing suppliers and products that have lower greenhouse gas emissions and less environmental impact.

Taking responsibility for our environmental footprint also extends to our research and development and treatment access programmes and implies a review of the relationship with our closest partners who implement them. The aim here is to integrate a climate and environmental lens in every activity we undertake together. Building sustainable practices will be a collaborative effort, touching every stage from R&D to product commercialisation, distribution, training, and other aspects of ensuring treatment access. This will require a step-by-step strategy developed in partnership, as well as increasing awareness, capacity building, and meaningful alliances to support the transformation.

Finally, enhanced dialogue and experience-sharing with stakeholders such as the pharmaceutical industry, manufacturers, and service providers will play a critical role. This will accelerate the identification and deployment of sustainable requirements into contracts, ensuring that all outsourced activities are conducted in as environmentally responsible a manner as possible.

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8   UK National Institute for Health Research. NIHR Carbon Reduction Guidelines. Available at: https://www.nihr.ac.uk/documents/nihr-carbon-reduction-guidelines/21685
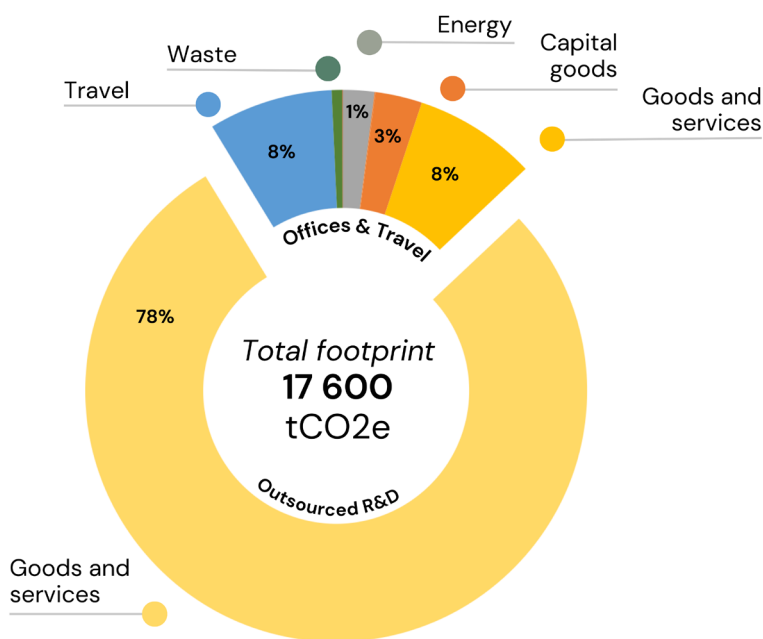
CUTTING OUR FOOTPRINT IN HALF BY 2030

Our baseline footprint in 2019

To reduce our footprint successfully, we need to know our current footprint. An organization's carbon footprint measures the total amount of greenhouse gas (GHG) emissions caused by its operations, and helps identify which carbon emission sources need to be tackled.

The methodology used to assess the climate impact of DNDi's activities complies with international standard ISO 14064 as international standard, follows the GHG Protocol, and includes both direct and indirect emissions.

Our footprint is estimated at 17 600 tons of carbon dioxide equivalent (tCO2e) in 2019, before our activities were impacted by COVID-19. It quantifies the sources of GHG for which DNDi is accountable. The scope includes all of our offices except South Africa, due to the very limited size of the office and impacts, and it encompasses 247 employees and a budget of EUR 63M.

DNDi's 2019 Carbon Footprint

So as to understand DNDi's footprint better and hence design the most relevant possible solutions, the footprint and subsequent solutions are separated into two categories:

- Emissions from DNDi's offices (22%)
- Emissions from outsourced R&D and access (78%)

The four following components are responsible for 98% of the total footprint (≈17 480 tCO2e or 98% of the total emissions):

- Purchased goods & services (R&D and access, and offices): 86% or ≈ 15 200 tCO2e
- Capital goods: 3% or ≈ 530 tCO2e
- Travel: 8% or ≈ 1 400 tCO2e
- Energy: 2% or ≈ 350 tCO2e

Capital goods and *Goods and services* are both official categories of the GHG protocols. *Capital goods* are final products that have an extended life and are used by the organization to operate and provide services. *Goods and services* is a category that includes emissions from all purchased goods and services not otherwise included in the other categories of indirect ("scope 3") emissions that result from outsourced activities.[9]

For more details, read the full DNDi Carbon Footprint 2019 report.

Our reduction strategy to 2030

To reduce our global footprint, we have designed two complementary pathways with the support of the Climate Action Accelerator: one for our offices and related travel, to reduce emissions that we control directly; and another for our outsourced R&D and access, which need to involve the partners and suppliers with whom we implement our programmes.

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9   Greenhouse Gas Protocol. https://ghgprotocol.org/

For each of these pathways, we identified specific solutions and actions based on their impact, the efforts required to implement them, and their compatibility with our mission and programmes. Those solutions, described below, are the main levers actionable by DNDi and the building blocks of a decarbonization trajectory which will help us halve our carbon emissions by 2030 and put us firmly on the path to net zero, in line with the Paris Agreement to limit global temperature rise.

Our decarbonization strategy and trajectory for office activities

The carbon footprint of DNDi's offices
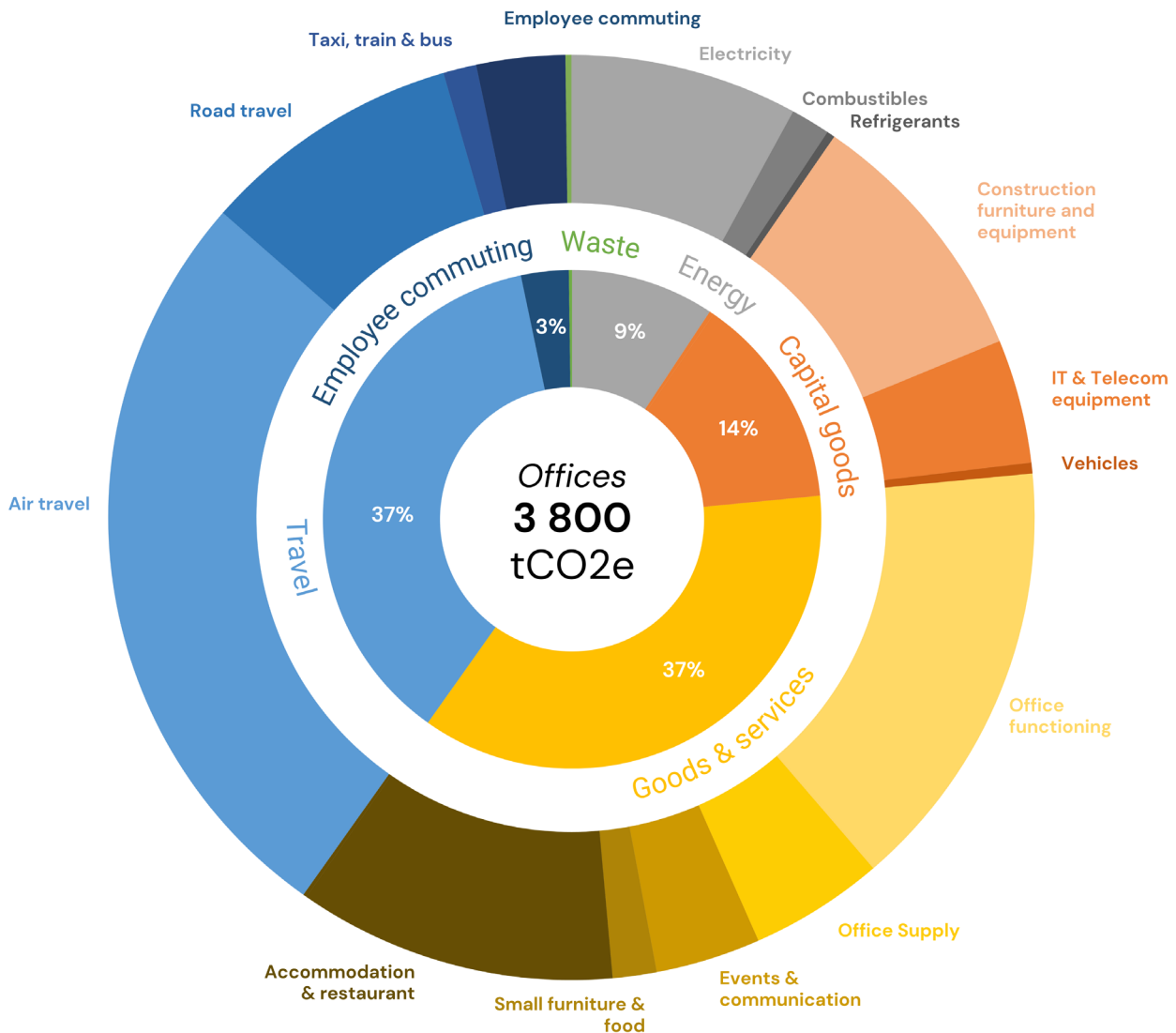
DNDi's offices together account for 22% of the overall footprint. Five emissions categories represent 70% of office-related emissions:

- Air travel: 27%

- Office functioning, mainly IT services (e.g., cloud-based services): 15%

- Accommodation & restaurants: 11%

- Car travel: 9%

- Electricity: 8%

Our offices in Switzerland, Democratic Republic of the Congo, and Brazil account for 84% (3,200 tCO2e) of total office emissions, with the Geneva office being the largest emitter, accounting for 52% (2,000 tCO2e) of total office emissions.

Our decarbonization trajectory for office activities

A greenhouse gas emission pathway to 2030 has been established and reduction targets have been set. The vast majority of reductions will originate from DNDi's organizational policies and practices in the areas of travel, energy, and procurement.
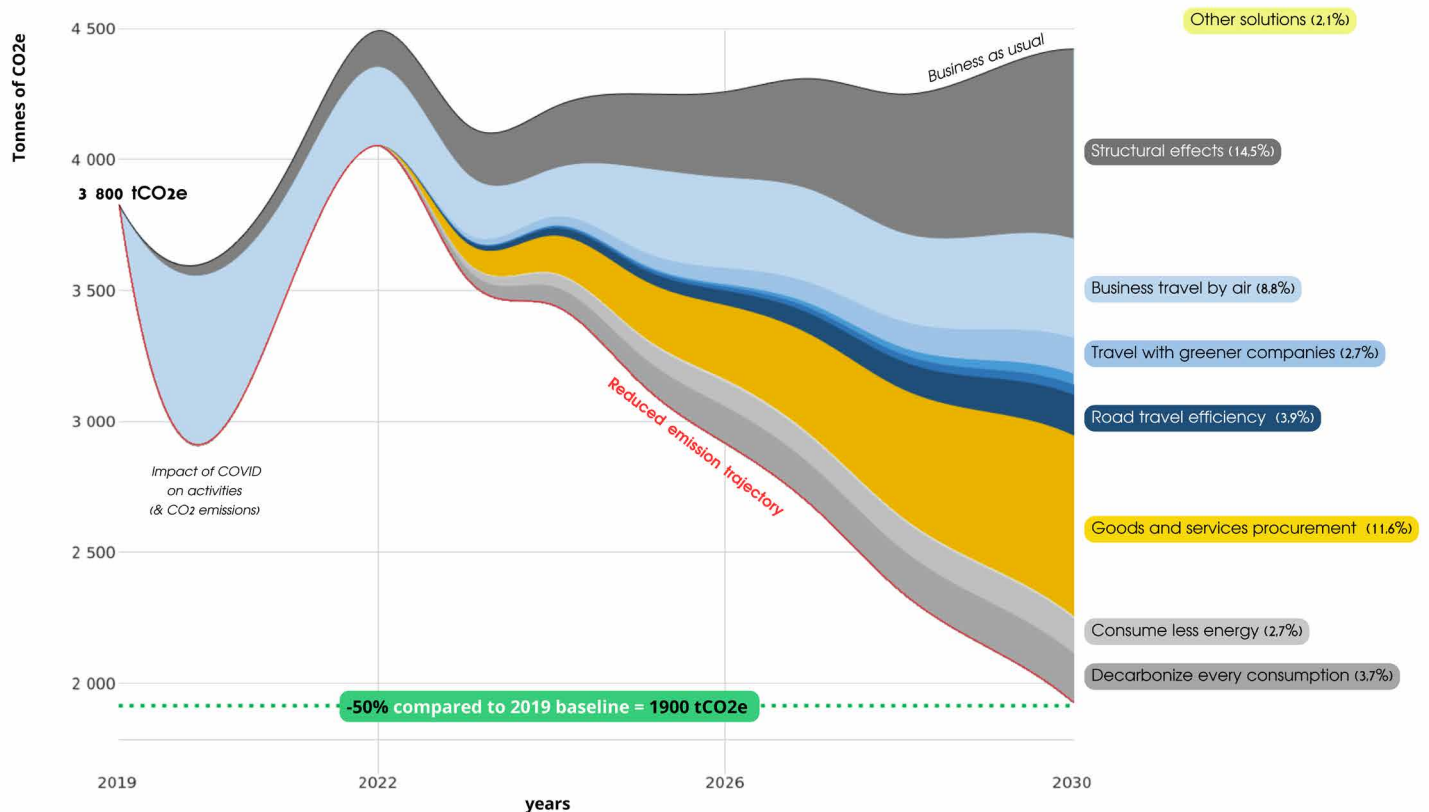
For DNDi's offices, six solutions are especially important, as they account for more than 95% of the emissions reduction efforts:

- Environmental criteria for procurement of goods, services, and capital goods (33%)
- Reduce passenger kilometres travelled by air and travel with greener air companies (33%)
- Reduce vehicle fuel consumption with lower-emission models (11%)
- Reduce electricity consumption in facilities (7.7%)
- Purchase and produce renewable energy (10.5%)

To make significant progress in reducing office carbon emissions, these solutions will need to be implemented as a matter of priority alongside efforts to promote staff awareness, commitment, and ownership of DNDi's climate and environmental roadmap.

It is important to note that any decarbonization roadmap spanning multiple years includes many uncertainties. Growth in the volume of DNDi programmes, structural effects of national decarbonization policies on energy production and manufacturing, and the pace of deployment of renewable electricity in the regions where we operate are some of the factors that may impact planned carbon emission reduction efforts. In five to ten years, sustainable product innovations may significantly impact decarbonisation strategies and solutions. Our trajectory therefore includes 'structural effects' to take into account advancements occurring globally that may have an emissions-reducing effect on our footprint, in addition to our own efforts.

What are structural effects

Structural effects are applied to carbon reduction trajectories in order to account for the fact that regardless of the individual choices of a given organization, societies as a whole are decarbonizing. The energy mix in many parts of the world is evolving towards more carbon-free sources; gains in fuel efficiency impact the emissions of transportation; and industry and manufacturing are adopting lower-emission production. These factors were taken into account when calculating DNDi's projected carbon reduction trajectory.

TRANSPORT

1520 tCO2e
2019 Emissions

810 tCO2e
2030 Emissions

Why it matters

Transport is one of the main sources of our direct carbon emissions. The global health sector relies on transport, whether for staff travel, commuting or freight, contributing to the 24% of direct CO2 equivalent emissions for which global transportation is responsible worldwide. Furthermore, three of the six most impactful solutions identified in DNDi's climate roadmap address transport emissions, representing 42% of the total reduction efforts of DNDi offices.

▶ SOLUTIONS & ACTIONS	▶ EXPECTED OUTCOMES
Regulate air travel needs to travel less • Reduce the number of trips by implementing a clear travel policy defining clear criteria, leadership by example, and promoting travel consciousness within the organization • Encourage virtual meetings • Encourage grouped and multipurpose trips • Review locations for trainings and large meetings • Develop internal incentive mechanisms (for example, a carbon budget by department)	• Mileage related to business travel by air is reduced by 35% by the end of 2026 and 40% by 2030. • All European trips with less than three hours' travel time difference (city centre to city centre) between plane and train OR less than 8 hours of total travel time are made by train by 2026. • By 2026, 60% of corresponding flights through relevant European hubs (with less than 3 hours' travel time difference from city centre to airport) are made by train.
Develop sustainable travelling practices • Favour the least carbon-intensive mode of travel or itinerary • Favour direct flights • Favour economy class • Consider airline and aircraft choices • Discourage individual loyalty schemes	• 30% of trips are made with companies that have a lower environmental impact by the end of 2026 and 80% by 2030. • Number of business class trips is reduced by 80% by the end of 2026.
Reduce the carbon impact of home-office commuting • Incentivize public or collective transport, car sharing, and soft mobility in all offices where context and security allow it • Encourage home and remote working based on commuting criteria	• The kilometres travelled by staff coming to the office with individual transport means using fossil fuels is reduced by 30% by the end of 2026 and 70% by 2030. *(Note: will need contextualisation according to location)*
Use the lowest emission vehicles adapted to the needs • Optimise fleets of owned/used vehicles (lower weight, more fuel-efficient engines, better adaptation to needs)	• The forecasted emissions related to vehicle fuel consumption is reduced by 15% by the end of 2026 and 50% by 2030.
Select transport options or service providers using means and routes with a lower carbon footprint • Include sustainability criteria in the selection process of transport companies used by partners • Authorize price increases for greener options in contracts with partners	• The emission factors of tkm* transported is reduced. **A tonne-kilometre (tkm) is a unit of measure of freight transport, representing the transport of one tonne of goods*

GOODS AND SERVICES

1860 tCO2e	1000 tCO2e
2019 Emissions	2030 Emissions

Why it matters

Reducing emissions from procurement can make a critical difference, as emissions from goods are associated with extraction, production, and processing, as well as packaging, storage, and transportation. Implementing environmental criteria for goods and service purchases represents will impact 39% of DNDi's office emission reduction efforts.

▶ SOLUTIONS & ACTIONS	▶ EXPECTED OUTCOMES*
Optimize supply processes to limit purchases • Improve demand planning, forecasting, and supply chain management to avoid over-consumption and surplus stocks and losses, and increase use of more efficient transportation where possible • Consolidate an internal logistics unit to set up procedures and provide support where necessary	• We buy only what is needed. • We reduce local pollution and waste volume. • We reduce our waste emission factor.
Adapt R&D and access contracts to integrate green requirements and limit local environmental degradation • Exercise due diligence on environmental practices in the review of partners and suppliers • Include general sustainability criteria in drug research, development, manufacturing, and commercialization contracts • Favour the use of lower-carbon or lower waste-generating alternatives, notably by including specific criteria for the procurement of laboratory, medical, and non-medical supplies • Reduce the use of single-use plastic consumables by partners • Support the implementation of quick environmental impact analyses and best achievable options in each partner R&D site	• The GHG emissions of purchased goods and services is decreased through a reduction of their emission factors.
Purchase other goods and services with a lower carbon and environmental impact (DNDi and partners funded by DNDi) • Request visibility on carbon value and life cycle information to better inform orders of relevant items • Define and include environmental sustainability criteria for products, services, and events • Authorize price increases for greener options in contracts with partners • Optimize the packaging, switch to reusable packaging, and use alternative packaging material (e.g., recycled) for most important items • Prioritize local or regional purchases for heavy or large items if quality can be assured at the same level as international purchase and if carbon reduction impact can be confirmed	• The projected emissions related to the lifecycle of goods and services purchased are reduced by 15% by 2026 and by 35% by 2030.

Engage with partners and suppliers

- Inform partners and suppliers about the organization's carbon strategy and invite them to work on the decarbonization of their operations
- Provide incentives for suppliers that measure their emissions and put concrete measures in place to reduce emissions
- Prioritize and enable long-term agreements with suppliers that have a robust carbon reduction plan in place
- Create a pool of suppliers for selected high-impact or high-risk items to facilitate due diligence and to create long-term relationships with greater influence

- We decrease partners' and suppliers' emissions through a reduction in their emission factors.

* For some elements, notably waste, we do not yet have a quantitative baseline. We will therefore develop a waste monitoring plan and quantitative targets.

PREMISES AND ENERGY

420 tCO2e
2019 Emissions

90 tCO2e
2030 Emissions

Why it matters

The two solutions on energy represent a little more than 18% of the total office carbon emission reduction efforts. In addition, all building and energy solutions have knock-on effects in reducing negative effects on the natural environment.

▶ SOLUTIONS & ACTIONS	▶ EXPECTED OUTCOMES
Favour sustainable infrastructure rehabilitation and construction - Systematically implement sustainable design standards when constructing or renovating buildings and infrastructure	- Best sustainable practices are defined by 2025. - By 2026, 80% of building rehabilitation and construction works comply with the best.
Reduce energy consumption - Improve energy performance of existing buildings through relevant and feasible passive measures, including insulation - Adopt an energy efficiency policy and rating system - Mainstream the installation of connected energy sensors across all DNDi premises - Redefine room temperature standards - Purchase energy-efficient equipment	- The forecasted consumption of kilowatt hours is reduced by 30% by the end of 2026, and 50% by 2030.
Decarbonize electricity and energy production - Replace generators with solar panels - Switch electricity contracts to green energy suppliers where available	- 50% of the electricity consumed by DNDi is provided by non-fossil fuel sources by the end of 2026, and 80 % by 2030.
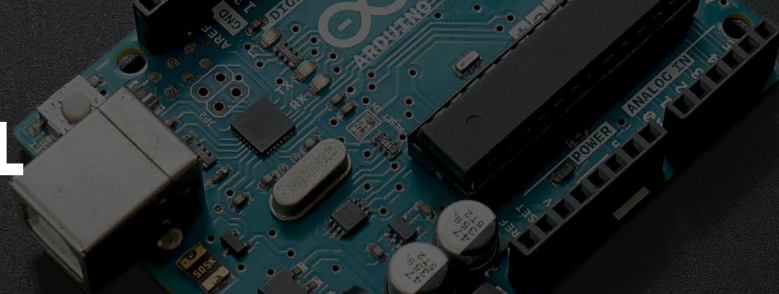
DIGITAL

Why it matters

Reducing the emissions associated with digital equipment will positively impact the environmental impact and emissions linked to the procurement of goods (IT equipment) and services (IT maintenance) as well as energy (data storage). This domain primarily has a bigger impact on DNDi's overall environmental footprint and a smaller impact on emissions. As use of digital tools continues to increase, amplified by changing travel practices, it is critical to implement eco-friendly digital practices.

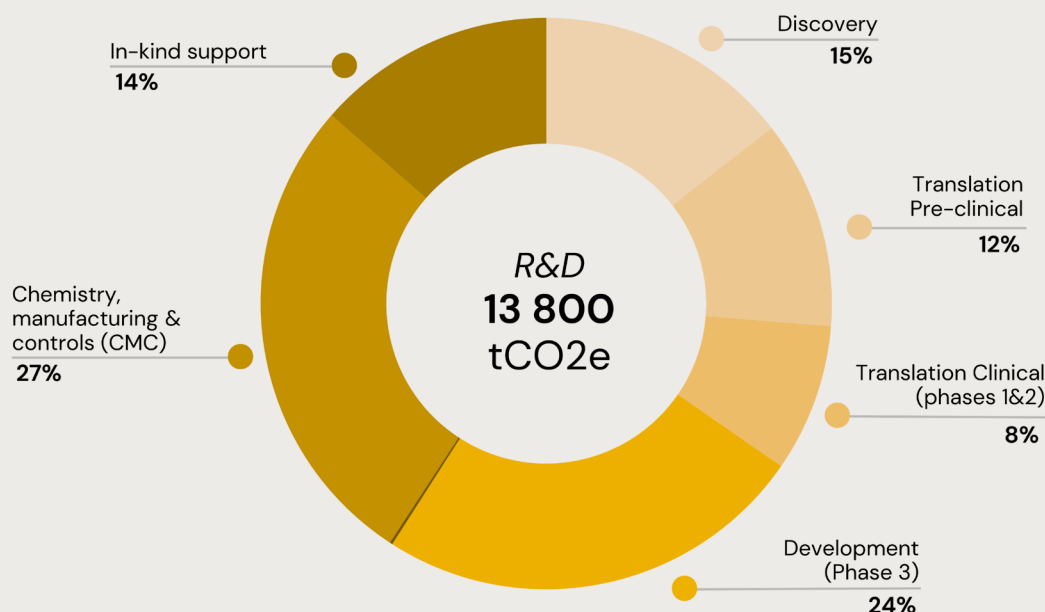| ▶ SOLUTIONS & ACTIONS	▶ EXPECTED OUTCOMES
Rationalize amount of data storage and transfer • Set environmental criteria for the procurement of services and cloud-based solutions (e.g., eco-friendly data centres) • Include carbon footprint considerations in a data retention policy • Consolidate best practices at the user level (e.g., eco-friendly search engines) • Develop eco-friendly web and document design in communication practices	The data storage emission factor is reduced and a data retention policy is set up.
Reduce carbon intensity related to digital equipment • In clinical study designs consider the minimisation of devices deployed to clinical sites and envisage mutualisation with other partners • Set environmental criteria for procurement, purchase easily repairable equipment, and repair locally • Consider alternative ways to provide IT equipment to reduce procurement (e.g., renting) and promote use of a single mobile device • Ensure systematic recycling of waste from electrical and electronic equipment (WEEE) in all DNDi geographies.	• Number of smartphones used by employees reduced by 70% by 2030. • By 2030, all employees will be equipped with soft phone solutions (in countries where cost-effective solutions exist). • By 2026, one partner is identified per office to recycle equipment that cannot be donated. • By 2026, where feasible, data has been moved to less carbon-intensive places (data centre or service providers).

TRANSVERSAL

Why it matters

Reduction of emissions linked with transversal office practices positively impacts the environmental footprint of goods procurement and energy. It also contributes to increased awareness and responsibility of staff, supporting the deployment of all other solutions. Transversal office practices primarily impact DNDi's broader environmental footprint, as they have a minor carbon footprint.

▶ SOLUTIONS & ACTIONS	▶ EXPECTED OUTCOMES
Promote good office and facility practices and responsible behaviour • Produce a guide to best practices for offices and facilities (a "playbook") encouraging staff to implement key measures in the following areas: energy and resources consumption, teleworking regulations, waste management plan, office procurement, food catering, promotion of flexitarian menu, digital user best practices • Leverage the DNDi Green Team and other communities of champions to advocate for and stimulate good practices • Create a dashboard to enable monitoring of the implementation of environmentally friendly measures	• By the end of 2024, a good environmental practices playbook is applied in DNDi's offices. • By 2026, a new building allows DNDi to reduce Geneva office space by 30%.
Organize low-carbon events • Produce a good practices playbook to reduce the environmental footprint of events	
Select sustainable buildings • Integrate environmental criteria in the choice of DNDi buildings for all offices (high-energy performance, blue energy providers, insulation)	
Limit growth of office space in Geneva • Reduce Geneva's office space by 30% as a consequence of new co-working and home-working practices	

Our plan to decarbonize R&D and treatment access activities

Footprint from outsourced R&D

In-kind support
14%

Discovery
15%

Translation
Pre-clinical
12%

Chemistry,
manufacturing &
controls (CMC)
27%

Translation Clinical
(phases 1&2)
8%

Development
(Phase 3)
24%

R&D
13 800
tCO2e

DNDi's outsourced R&D and treatment access activities account for 78% of DNDi's global carbon footprint which measured 13,800 tCO2e in 2019.[10] By 2030, our aim is to reach 7,150 tCO2e.

This study of the emissions of DNDi's R&D service providers and partners was the object of three successive and different approaches to try to reduce the uncertainty as much as possible. Our analysis of budgets and in-kind contributions was based on a selection of representative R&D projects, and the results were then extrapolated to the whole portfolio, with 55 types of project cost and 21 emission factors included. These results are a first step to better understanding and determining missing or insufficient information that will need to be followed by several life-cycle analyses.

This challenge is not unique to DNDi but concerns the entire medical research sector, which has not yet developed standards that can be easily applied to assess its climate impact more accurately. Studying diverse research profiles and gaining experience will pave the way for continuous improvement.

These first results therefore have a high level of uncertainty.

Our pathway for decarbonizing outsourced R&D and access activities

DNDi's efforts to decarbonize our R&D and treatment access activities requires us to engage in a multiyear transformational journey, informed by better data and within a continuous improvement approach. In summary, this ambition relies on three critical components:

- Synergize ongoing efficiency improvement that also decrease environmental impact, principally by reducing unnecessary consumption and waste.

- Better understand the key emission sources of DNDi's outsourced R&D and treatment access activities to refine and prioritize our actions and solutions.

- Identify networks working towards shared outcomes and coordinate to favour joint investments, avoid duplication, and accelerate collective impact.

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10   Additional life cycle analyses of the different R&D phases will help refine our understanding of DNDi's footprint linked to outsourced R&D and to identify levers of change.

Our pathway to sustainable R&D

In the next four years, DNDi plans to assemble the following building blocks to roll out a meaningful decarbonisation pathway inclusive of its partners and like-minded peers.

▶ FIRST PHASE: 2024–2025

STEP 1 **Build understanding** (2024 – 1st semester)	Collaborate, where possible, with other groups on: • Lifecycle analysis of R&D phases based on selected representative projects • Mapping of external verification initiatives
STEP 2 **Conduct initial dialogue with outsourced R&D and treatment access partners** (2024 – 2nd semester)	• Explanation and sharing of analysis • Consultation on possible levers of action and priorities
STEP 3 **Identify and refine solutions** (2025 – 1st semester)	• Identification of physical R&D levers based on lifecycle analyses • Targets per solution or action • Long-term monitoring framework

▶ SECOND PHASE: 2025–2026

STEP 4 **Conduct follow-on dialogue with outsourced R&D and treatment access partners** (2025 – 2nd semester)	• Consultation on proposed framework, equity challenges, and advocacy and policy approaches for country partners and service providers • Support implementation needs, where feasible
STEP 5 **Form strategic collaborations and alliances** (2026 – 1st semester)	• Develop a playbook on sustainable practices • Staff capability training/upgrade on sustainable practices • Pooling of information/audits on suppliers
STEP 6 **Move towards stronger compliance** (2026 – 2nd semester)	• Revision of clauses • Partner selection criteria • Reporting and accountability on implementation

SUSTAINABLE R&D SOLUTIONS

A preliminary framework

Beyond the building blocks and steps described above, an internal collective intelligence exercise has already identified the following sustainable research solutions to help reach our goals. They will need to be further refined, quantified and prioritized based on the results of life cycle analysis, expert consultations, and dialogue with partners. The aim is to bring down emissions from outsourced R&D and treatment access programmes from their estimated level in 2019 (13,800 tCO2e) to our target of 6,900 tCO2e in 2030.

▶ SOLUTIONS & ACTIONS

Product design and decision-making
- Revisit R&D processes with particular consideration of their environmental footprint and induced waste
- Select candidate drug compounds with greater weight given to synthetic tractability

Research planning
- Train staff to increase their engagement, awareness, and skills on sustainable R&D practices
- Optimize sample size calculations, fit-for-purpose inclusion and exclusion criteria, and choice of equipment, e.g., following NIHR Carbon Reduction Guidelines[11]
- Improve forecasting and supply chain management, integrating greener sourcing policies
- Pursue efficient application of ethics review processes (clinical and pre-clinical) and regulatory processes regarding research on animals
- Favour localization, including building expertise locally
- Develop risk-based remote monitoring and support plans
- Reduce consumption across all aspects of sample management (including type, transport, cold chain, archiving)

Data management
- Revisit data retention, storage, and destruction policies
- Minimize use of paper and favour electronic data entry

Study management and implementation
- Improve site management, including facility upgrades, where feasible (e.g., insulation, energy use, and patient flow)
- Optimize field stock management and ordering
- Favour lower carbon travel modes for visits
- Minimize cold chain transport
- Ensure responsible waste management plans are in place

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11   UK National Institute for Health Research. NIHR Carbon Reduction Guidelines. Available at: https://www.nihr.ac.uk/documents/nihr-carbon-reduction-guidelines/21685

Partners and service providers

- Conduct due diligence on environmental practices in the review of partners and service providers
- Include environmental criteria in partner and service provider selection
- Encourage best-practice "green" certification
- Ensure respect of phase-specific best practices by development and manufacturing partners, e.g., Green Chemistry Principles[12]

Product commercialization and use

- Favour selection of commercialisation partners that are innovating in responsible distribution, delivery and packaging

Leverage momentum, share resources, and accelerate progress

DNDi aims to collaborate with a growing number of peers and like-minded organizations to accelerate carbon footprint reduction in R&D, including through joint investments and coordinated efforts across key areas of common interest such as:

- Life cycle analyses, methods, and publications
- Mapping of certification opportunities and labels
- Capability training on sustainable research practices
- Equipping R&D and treatment access partners with best practice playbooks and tools
- Monitoring and evaluation frameworks
- Pooling of supplier audits and information
- Supplier and partner engagement

DNDi will also integrate in its strategy a willingness to collaborate and join forces with others to contribute to help accelerate the deployment of sustainable solutions in the field of pharmaceutical research and development. DNDi's strategy includes working jointly with others to develop and amplify a body of evidence that furthers the adoption of sustainable solutions in the field of pharmaceutical R&D.

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12 US Environmental Protection Agency. Basics of Green Chemistry. Available at: https://www.epa.gov/greenchemistry/basics-green-chemistry

DRIVING CHANGE: OUR JOURNEY OF TRANSFORMATION AND IMPACT

Our levers of transformation

Leadership

DNDi's commitment to meet our reduction targets must be unambiguous and strongly anchored throughout our organization. To reach this goal, our climate and environmental roadmap will encourage each staff member to take actions that contribute to DNDi's decarbonization efforts. DNDi's leadership will drive our decarbonization efforts, regularly reporting on progress and mobilizing the resources necessary to achieve our emission reduction targets.

Investing in people and skills

A clear understanding and ownership of the impact of our carbon footprint and adequate human resources with the right tools and competencies are key success factors. With the right skills and knowledge, each staff member will be empowered to contribute to the individual and organizational behavioural changes needed to achieve DNDi's objectives to reduce our carbon footprint as outlined in the roadmap.

Integration into research and development programmes

Climate and environmental considerations will be systematically and fully integrated within our programme planning cycle and grant proposals, not addressed as a separate issue.

Partnerships and alliances

DNDi will endeavour to work with other product development partnerships and organizations managing similar R&D and treatment access activities to coordinate and accelerate decarbonization efforts, sharing resources when feasible. During the roadmap development, DNDi received valuable inputs from Novartis volunteers[13] and will aim to find other opportunities to continue this collaboration, potentially also with other pharmaceutical companies.

Mobilizing resources

In order to ensure strong implementation, monitoring, and management of our decarbonization efforts, DNDi will need to invest in human resources. Financial modelling provides an initial estimate of the personnel costs of implementing the roadmap. The net cost over the first three years is estimated at 0.15% of the yearly budget or CHF 300,000. This net cost is made of investments of CHF 500,000, extra running costs of CHF 1 million, and HR costs of CHF 600,000, offset by savings estimated at CHF 1.8 million. While these estimates may be affected by the way implementation projects are rolled out, our roadmap has the potential to generate net savings by 2025 until 2030.

It will be important to engage in strong institutional dialogue with donors to facilitate the transformation and to ensure that the additional costs incurred in some areas are covered by grant agreements. The target dates of the different activities and outcomes are indicative, depending on many factors, including availability of funding and human resources.

Influencing our peers

We will encourage our partners and peers to work towards accelerating decarbonization in the pharmaceutical R&D sector. Conscious of our social responsibility, we are committed to encouraging partners and actors in our ecosystem to adopt a far-reaching environmental agenda, and to play a leading role in coalitions working on carbon emission reductions across all aspects of medical R&D.

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13   Novartis. Giving & volunteering. Available at: https://www.novartis.com/about/strategy/people-and-culture/giving-volunteering

Assembling the means to success

Roadmap governance

From the launch of this roadmap onwards, implementation will be coordinated by an environmental roadmap project manager (or sustainability project manager) reporting to the executive direction of DNDi, supported by a project team. A transversal Steering Committee will ensure involvement, ownership, and accountability of all departments. In addition to ensuring that our monitoring mechanisms for carbon emissions and waste are in place, the project team will lead, disseminate, guide, and monitor actions with support from:

- Core and ad-hoc team members with specific technical competencies and responsibility for turning solutions into actionable projects and activities;

- External experts associated with the action plan, notably those from the Climate Action Accelerator; and

- A coordinator of the sustainable research initiative to manage the lifecycle assessments, and prepare for implementation of solutions for reducing our R&D and access footprint.

Each staff member will have a role to play. In addition, DNDi intends to continue to invest in and mobilize external networks and partnership opportunities in order to encourage collaborations, sharing of best practices, and resource pooling where possible.

Our priority projects in 2024–2026

The key to success for DNDi's footprint reduction implementation targets over the next seven years lies in seven priority workstreams or projects:

- Travel policy

- Carbon emission and waste monitoring framework for offices

- Procurement policy and analysis

- Facility assessments and upgrade plans

- Design of best practice playbooks for offices

- Lifecycle analyses of select R&D and treatment access programmes

- Sustainable research practices identified in line with the adopted framework

A specific investment and project management effort will take place over the period 2024–2026 to accelerate the deployment of these key projects in order to achieve the first step towards lower emissions by 2026.

Expected impact and results

COMMITMENT	EXPECTED OUTCOMES
Greenhouse gas emissions	Tonnes of CO2e emissions for offices and travel are as close as possible to 2900 t in 2026 and below 1900 t in 2030 (- 50% from 2019 baseline)
Travel	Tonnes of CO2e emissions for offices and travel are as close as possible to 2900 t in 2026 and below 1900 t in 2030 (- 50% from 2019 baseline)
Procurement	Tonnes of procurement-related CO2e emissions are close as possible to 1600 t in 2026 and below 1040 t in 2030 (<- 54% from 2019 baseline)
Offices	The Geneva office space is reduced by 30% by 2030
Energy	Tonnes of energy-related CO2e emissions are as close as possible to 200 t in 2026 and below 70 t in 2030 (< - 21% from 2019 baseline). In 2030, 80% of the energy consumed in our offices outside Geneva is of renewable origin.
Transversal and digital	A best practices playbook has been published and is implemented in all offices.
Research & development	By 2027, a comprehensive footprint reduction framework and monitoring system are in place and implemented by a majority of our R&D partners.
People	100% of DNDi's staff has been offered a chance to participate in an implementation workshop, essential training courses are provided for targeted staff, and the best practices playbook is given to all new staff.
Collaboration and alliances	The number of projects, publications, and events linked to climate change and environmental security increases each year.

Monitoring framework

Ensuring that our monitoring mechanisms for both carbon emissions and waste are in place by mid-2024 will enable us to report transparently on our progress in our yearly activity report, to adjust our actions accordingly, and ensure continuous mobilization of resources and staff.

ACKNOWLEDGEMENTS

About DNDi

The Drugs for Neglected Diseases initiative (DNDi) is an international non-profit R&D organization that discovers, develops, and delivers safe, effective, and affordable treatments for neglected patients. DNDi uses the power of innovation, open science, partnerships, and advocacy to find solutions to the lack of medicines for life-threatening diseases that disproportionately impact poor and marginalized people.

DNDi was launched in 2003 when the Indian Council of Medical Research (ICMR), the Oswaldo Cruz Foundation in Brazil, the Kenyan Medical Research Institute (KEMRI), the Malaysian Ministry of Health, and the Institut Pasteur of France, with the participation of the World Health Organization Special Programme on Research and Training in Tropical Diseases (WHO/TDR), teamed up with Médecins Sans Frontières (MSF), after MSF dedicated a portion of its 1999 Nobel Peace Prize award to exploring a new, alternative, not-for-profit model for developing drugs for neglected populations.

Since our creation in 2003, DNDi's R&D partnerships have delivered 12 field-adapted and affordable treatments for six deadly diseases, saving millions of lives.

About the Climate Action Accelerator

The Climate Action Accelerator, a not-for-profit initiative, aims to mobilise a critical mass of community organisations in order to scale up climate solutions, contain global warming below 2°C and avoid the risk of dangerous runaway climate change. The aim is to help shift the aid, health and higher education sectors towards a radical transformation of their practices, pursuing emissions reduction targets (-50% by 2030) and a 'net zero' trajectory, in line with the Paris Agreement.

ROADMAP AT A GLANCE: OUR OFFICES

| 2019 | 2022 | by 2026... | by 2030... |

KICKING OFF

DELIVERING

SCALING OFF

4 500

4 000

3 800 tCO₂e

3 500

3 000

2 500

2 000

A playbook is applied in DNDi's offices

100% of european trip with less than 3H difference between plane and train are made by train

80% of rehabilitation and construction work comply with the best sustainable practices

The forecasted consumption of kW H is reduced by 50%

80% of the electricity used is provided by non-fossiel fuel sources

Air travel mileage is reduced by 40%

100% of employees are equipped with soft phone solutions

Forecasted emissions related to vehicle fuel consumption are reduced by 50%

Projected emissions related to the life cycle of goods and services purchased are reduced by 35%

2030 target : 1 900 tCO₂ eq

1 900 tCO₂e

...and more than 15 other commitments will have been met

DNDi Best Science for the Most Neglected

Climate Action Accelerator