



POLICY BRIEF

Charting a Course to Net Zero Emissions for the European Healthcare Sector

February 2025

About this policy brief

[Health Care Without Harm \(HCWH\) Europe](#) developed this policy brief to offer actionable recommendations to national and sub-national health systems, ministries of health, and other governmental organisations derived from developing roadmaps to decarbonise health systems.

Building net-zero health systems

Climate change is the largest public health threat of the 21st century, threatening to undermine the foundations of health systems [1].

The health sector accounts for 4.6% of global net greenhouse gas (GHG) emissions [2], underscoring the imperative for health system decarbonisation. Comprehensive decarbonisation roadmaps present a strategic framework to achieve the alignment between the decarbonisation efforts of health systems, national climate plans, and the Paris Agreement [3].

Furthermore, given the significance of healthcare in European economies, accounting for 8% of the GDP [4], healthcare decarbonisation roadmaps can drive system-wide decarbonisation.

Launched in 2021, [Operation Zero](#) is an HCWH Europe project built upon the vision that every European health system develops a roadmap for its healthcare sector.

Several national and regional health systems have been pioneers in implementing the HCWH Europe methodology [Designing a Net Zero Roadmap Healthcare](#).

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1. Lancet Countdown. (2009) Climate change: The biggest global-health threat of the 21st century. <https://www.ucl.ac.uk/news/2009/may/climate-change-biggest-global-health-threat-21st-century>
 2. Romanello, M et al. (2023) The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(23\)01859-7/abstract#seccestitle120](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(23)01859-7/abstract#seccestitle120)
 3. United Nations, 2015, Paris Agreement, http://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf
 4. Healthcare expenditure accounts for 8% of the GDP in Europe according to the latest WHO data from 2022. World Health Organisation, Current health expenditure (CHE) as percentage of gross domestic product (GDP) (%), [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/current-health-expenditure-\(che\)-as-percentage-of-gross-domestic-product-\(gdp\)-\(-\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/current-health-expenditure-(che)-as-percentage-of-gross-domestic-product-(gdp)-(-))

This methodology provides health authorities with practical guidance and methods to measure GHG emissions and develop decarbonisation roadmaps, charting a course to net zero emissions.

A roadmap for decarbonisation: The Belgian Operation Zero experience

HCWH Europe and Arup - a global sustainable development consultancy - partnered with Belgium's National Environment Health Action Plan (NEHAP) to deliver a decarbonisation roadmap for the country's health sector.

The roadmap included:

- A comprehensive review of the decarbonisation policy landscape.
- An extensive stakeholder engagement strategy.
- A national health sector emission baseline.
- Ambitious decarbonisation targets.
- A detailed projection of future emissions and actions to reduce these emissions.
- A framework for measuring and reporting emissions.

Operation Zero: Key findings, challenges, and lessons learned

Operation Zero's implementation within diverse health systems - varying in size, availability of emissions data, calculation methodologies, services, and political and governance structures - demonstrates its adaptability and potential for replication. These differences have influenced carbon footprint estimates and resulting roadmaps, emphasising the need for flexible and context-specific roadmaps.

Within the project, health systems have encountered distinct challenges in developing baselines and decarbonisation roadmaps. These can be categorised into five areas:

- **Technical challenges** relate to the complexity of health system decarbonisation. Challenges include determining the amount of GHG emissions produced by different activities, finding viable ways to reduce them, and developing a roadmap aligned with the Paris Agreement.

- **Data challenges** have been an obstacle to developing a robust baseline. Difficulties in extrapolating and accessing granular emission data for each type of health provider have led to lower-quality data, incomplete emission data for certain categories, and limited availability of disaggregated emission data for sub-national levels and the different types of health providers.
- **Resource and capacity challenges** can pose obstacles to the development of roadmaps in terms of:
 - Financial constraints: insufficient financial resources for personnel and/or external expertise.
 - Time management: challenges in aligning project timelines with required activities, and resource availability.
 - Technical capabilities: lack of capacity in carbon and data management.
 - Communication barriers: ability to adapt technical information to diverse audiences and languages.
- **Project coordination challenges** have included governmental change and the need for greater alignment of organisational structures, plans, and internal coordination among the different government branches involved.
- **Stakeholder challenges** relate to ensuring timely and inclusive participation. This can hamper access to data and reduce opportunities for feedback and improvements, limiting the potential of the roadmap to support decarbonisation for stakeholders across the whole health sector.

Recommendations to develop a health system decarbonisation roadmap

Operation Zero has included diverse approaches to engaging stakeholders, collecting data, calculating carbon footprints, and identifying carbon reduction targets and actions. Based on this experience, the following recommendations aim to address the identified challenges and contribute to the development of feasible and actionable roadmaps in the health sector:

1. Conduct a diagnostic assessment

Objective: Gain a clear overview of the starting point, including potential data, stakeholders, project resources, and technical challenges.

Action: Conduct an initial diagnostic assessment before starting the project to determine the feasibility of developing and implementing the roadmap. Use the results to improve the content of the roadmap, including calculation methods, data collection, and the goal of the exercise, and invest in the resources required to develop the roadmap.

2. Tailor the content of the roadmap to the health system

Objective: Align the content of the roadmap to the specific needs of the health system, other emission reduction activities, and the national or regional climate action plans and policies, such as Nationally Determined Contributions.

Action: The roadmap development process should incorporate a climate policy landscape review and actively engage key stakeholders and experts to inform and customise the roadmap.

3. Enhance the data collection process

Objective: Obtain high-quality, representative, and comprehensive data on healthcare emissions.

Action: Develop and implement a data collection plan, engaging technical experts, senior management, and data owners at the beginning of the exercise to reduce data collection issues and GHG inventory gaps.

4. Adaptive and strategic project coordination

Objective: Secure collaboration and consensus among governmental actors and other stakeholders.

Action: Develop a comprehensive project plan with a well-defined timeline, regular team meetings, clear roles and responsibilities, and defined reporting structures. Allocate the needed capabilities and leadership for each area in the roadmap.

5. Cultivate stakeholder partnerships for roadmap development and implementation

Objective: Active engagement of key stakeholders to foster consensus, generate innovative ideas, provide opportunities to give feedback, and promote collaboration in roadmap development and implementation.

Action: Develop and implement a stakeholder engagement strategy, including an outreach and a communication plan. The plan should enable feedback and stakeholder meetings with relevant stakeholders (including health, environmental, and energy ministries, medical associations, sub-national governmental bodies, NGOs, and the medical industry) to ensure progress and continuous improvements and address challenges.

6. Invest in core competencies

Objective: Secure the skills and knowledge necessary to develop and implement the roadmap.

Action: Identify current capabilities, provide targeted training for internal staff, and engage experts to address any gaps in skills or knowledge in communication, data and carbon management, health and climate policy.

Conclusion



The impact of climate change on public health, coupled with the healthcare sector's significant GHG emissions, is a clear call to action: health systems must take immediate measures to achieve net zero emissions.

The development of emission profiles and actionable roadmaps with measures aligned to reach net-zero emissions is fundamental to decarbonising European healthcare. Disseminating the knowledge and insights gained from Operation Zero is crucial for this progress, empowering health systems to take action and adopt best practices and supporting the creation of comprehensive and feasible decarbonisation strategies for the health sector.

Addressing decarbonisation challenges collaboratively - the only viable way for Europe - is key to creating health systems that minimise the negative impacts on both the planet and people's health while achieving the climate objectives laid out by the Paris Agreement.



HCWH Europe
Rue de l'Industrie 10, 1000
Brussels, Belgium
europe@hcwh.org

 [Health Care Without Harm Europe](#)
 [@hcwheurope](#)

Health Care Without Harm (HCWH) Europe is the European arm of a global not-for-profit NGO whose mission is to transform the healthcare sector so that it reduces its environmental footprint, becomes more resilient, and establishes itself as a leader for sustainable development in Europe. HCWH's vision is that healthcare mobilises its ethical, economic, and political influence to create an ecologically sustainable, equitable, and healthy world.

AUTHOR:

Andreas Ekvall - Senior Climate Officer - HCWH
Europe

EDITOR:

Chiara Vona, Climate Communications Officer -
HCWH Europe

DESIGN

Chiara Vona, Climate Communications Officer - HCWH
Europe
Yasmim Pessoa, Digital Engagement Coordinator,
HCWH Europe

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