

PUBLIC POLICY STATEMENT

ENVIRONMENTAL SUSTAINABILITY IN ANIMAL HEALTH

Our Position

As part of our commitment to ONE HEALTH, we are focused on using resources responsibly as we develop new vaccines, medicines, technologies, and services for existing and unmet animal health needs.

The Animal Health Sustainability goals align and support the corporate goals set by Merck & Co Inc., which in turn are aligned with the **United Nations Sustainable Development Goals** (SDGs). We have committed to:

- Achieve carbon neutrality across our operations by 2025 (Scopes 1 & 2 greenhouse gas (GHG) emissions¹).
- Reduce operational GHG emissions (i.e., Scopes 1 & 2) 46% by 2030, from 2019 baseline²
- Source 100% of purchased electricity from renewables by 2025
- Reduce our value chain (Scope 3) GHG emissions by 30% by 2030, from 2019 baseline
- No more than 20% of our global operational waste will be sent to landfills and incinerators without energy recovery by 2025 At least 50% of our sites will send zero waste to landfills by 2025
- Maintain global water use at or below 2015 levels by 2025

Additional detail can be found in the [MSD ESG 2021/2022 Progress Report](#).

As we strive to advance the health of animals and be a trusted partner to our stakeholders, we are committed to advancing sustainability in the animal health industry. Our commitment extends to protecting our planet through responsible resource management and manufacturing, as well as sustainable development of our products and technologies.

Through our sustainability efforts, we will endeavor to create value for our stakeholders, while also supporting the health of people, the animals they care for, and the natural resources of the environment we all live in. In addition, healthier animals are more productive and efficient, which contributes to the economic livelihood of those in the agriculture community.

As we seek to invest in a sustainable future, we consider the health of our environment - including our role in helping to create a resilient food system - as an important factor in determining which collaborative, multi-sectoral and multi-disciplinary approaches to take to achieve optimal health outcomes. We recognize that responsible investments will be needed to drive sustainable innovation.

Protect the Planet

As an animal health company, we recognize and appreciate the common environment that is shared by both humans and animals, including companion animals, livestock, poultry, and aquaculture. Environmental health is closely linked with human and animal health and the **One Health** approach plays a central role in our sustainability commitment. This underscores the need for interventions to prevent disease transmission as

humans, animals and the environment are increasingly more connected.

Our company supports science-based international and national programs to address environmental health, including environmental risk assessments of veterinary medicines and their production.

We take our responsibility in protecting the environment seriously, as evidenced by our support of the following principals

- Prioritize a One Health approach in development of sustainability policies
- Assess how we contribute to our customers' ESG goals
- Ensure science and rules based decision-making guides policy development at the domestic and international levels
- Recognize it is not a one-size-fits all approach to ensuring sustainability, but a tailored approach to achieve the right outcomes for each situation
- Advocate for reduction of use of animals in the development of veterinary medicines
- Identify and improve policies that can lead to more environmentally friendly veterinary medicine production practices

Promote Healthy Animals

At the heart our business is animal health and welfare. Our portfolio of solutions includes products, vaccines, medications, and technologies.

Products and Technologies

Diseases in food-producing animals result in 20%ⁱ loss of global production. As the impacts of climate change and geo-political conflict continue to disrupt global supply chains, any loss of production will not only carry significant economic consequences for farmers but will also further jeopardize food security in a moment when the highest number of people since 2016 are currently facing a food crisis, according to the **World Food Programme**³ Preventing animal disease through vaccination, monitoring tools and other solutions is critical to ensuring a safe, nutritious sustainable food supply, as well as preventing foodborne diseases and promoting responsible use of natural resources.

Our animal health products, technologies and services help caretakers improve the health and welfare of animals and have a positive impact on sustainability. Healthy animals require fewer environmental resources (water, feed, land), while significantly contributing to social stability⁴. We are committed to partnering with our stakeholders to understand and meet their sustainability objectives by continuing to advance and develop insights to enhance animal welfare parameters or health KPIs. For example:

- Providing products and services that will enable traceability and transparency throughout the food chain
- Reducing our carbon footprint (**MSD ESG 2021/2022 Progress Report**)

Vaccines, Medicines and Technologies

Our vaccines, medicines, and technologies provide our customers with a suite of tools to proactively protect animal health and welfare.

Vaccines for preventable diseases are not only critical to animal health, but they are also a tool to help reduce the use of other important resources. For example, proper vaccination results in fewer sick animals who need additional care and other health treatments – including antibiotics – while also preventing unnecessary death from avoidable sickness. In the agricultural sector, this results in reduced food waste and helps industry produce food with fewer animals.

We are committed to finding new antibiotics and refining the usability for existing antimicrobials, making them even more fit for purpose. Our commitment also extends to the responsible use of antibiotics (**Global Antimicrobial Resistance Action Plan**).

Through our precision livestock monitoring and identification technologies and our smart companion animal tools, we support farmers and pet owners with technology solutions to prevent food and water waste, while helping to ensure animal health and welfare. Our portfolio of connected technology helps farmers to produce more product with less resources.

In the development of our veterinary products, we are also committed to the **3 Rs (Replacement, Reduction and Refinement)** for animal-based research. We are committed to replacement of animal-based research with nonanimal systems. We are committed to reducing the minimum number of research animals necessary to obtain valid scientific data, and we refine our approach by minimizing distress or discomfort. **MSD ESG 2021/2022 Progress Report**

Manufacturing and Production

We are working hard to make our manufacturing and production processes more sustainable. As a leader in animal health, we produce tens of thousands of vaccines and medicines in markets around the world. As a result, we are bound to strict regulatory and licensing rules and regulations, and we are committed to reducing our environmental footprint.

We have identified three specific areas – as defined in the SDGs – within manufacturing to support and improve our sustainability footprint:

- **Products and Packaging/Supply Chain:** We have increased our use of recycled packaging materials from 0% to 15% (to be completed by the end of 2022).
- **Energy and Carbon Emissions:** Animal Health reduced overall GHG emissions by 12% since 2015. We (AH) continue to work towards the corporate goal to reduce operational GHG emissions 46% by 2030 (from a 2019 baseline). **Waste and Water:** 48% of our manufacturing sites are zero waste to landfill and many others are close to becoming zero waste. And we meet and exceed local regulatory requirements for wastewater globally.

One example of our focus on sustainable manufacturing is our Sphereon® technology, which is a revolutionary alternative to vaccines in vials. Sphereon® freeze dries viral vaccines into small, highly soluble spheres, making it easier and faster to prepare the vaccine. Sphereon® comes in a 100% recyclable aluminum container, avoiding unnecessary glass waste while still providing the same protection against disease.

We believe our commitment to animal health makes our company the partner of choice not only when it comes to products, technologies, and services we provide, but also as a result of our commitment to environmental sustainability.

Supporting the Veterinary Community

Our work aims to make the world a better, more sustainable place through supporting veterinarians' mental health and wellbeing with resources and programs, promoting a diverse, engaged and inclusive workforce, investing in the future leaders of the veterinary profession and volunteering efforts in communities. We recognize the important role veterinarians have in advancing animal health that make a positive impact on sustainability. Each year globally, we invest in veterinary scholarships, donations, partnerships, as well as in local

community outreach.

Through these efforts, we contribute to preserving the health, well-being and performance of animals and the people who care for them – and in creating stronger partnerships to advance shared goals on sustainability.

¹ Scope 1 emissions are direct emissions that result from sources that are owned or controlled by the organization (boilers, furnaces, fleet). Scope 2 emissions are indirect emissions that result when energy that is purchased is used (such as purchased electricity, steam, heat, or cooling).

² Our 2019 baseline reduction was developed based on the Paris Agreement protocol of the emissions reduction required to keep global warming to 1.5 degrees or less.

ⁱ [OIE-WAHIS: A new era for animal health data - World | ReliefWeb](#)

³ [World Food Program](#)

⁴ Tricarico, J. M., Kebreab, E., & Wattiaux, M. A. (2020). MILK Symposium review: Sustainability of dairy production and consumption in low-income countries with emphasis on productivity and environmental impact. *Journal of dairy science*, 103(11), 9791–9802.

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