

A WHO REVIEW

# HEALTH in the Nationally Determined Contributions



**WHO ANALYSIS AND RECOMMENDATIONS  
ON HEALTH-PROMOTING NATIONALLY DETERMINED  
CONTRIBUTIONS (NDCS) TO THE PARIS AGREEMENT**

## **Health in the Nationally Determined Contributions (NDCs): a WHO review**

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## ***Acronyms and Abbreviations***

<b>H-NAP</b>	The health component of a National Adaptation Plan (NAP)
<b>NDC</b>	Nationally Determined Contribution to the Paris Agreement
<b>NAP</b>	National Adaptation Plan
<b>NAPA</b>	National Adaptation Programme of Action
<b>SLCP</b>	Short-lived Climate Pollutant
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>V&amp;A</b>	Climate Change and Health Vulnerability and Adaptation Assessment
<b>WHO</b>	World Health Organization

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## **Introduction - NDCs and the Paris Agreement**

To set the course for a future with net-zero emissions, the Paris Agreement established the international goal of limiting global warming to well below 2 degrees C, and to pursue efforts to limit it to 1.5 degrees C. Every country that has ratified the Paris Agreement thereby also agrees to regularly prepare and communicate a **nationally determined contribution** (NDC) to reflect progress toward its highest possible national climate ambition. Five years after the Paris Agreement was adopted in 2015, countries are now expected to submit updated NDCs by 2020 and on regular intervals thereafter.

Parties to the Paris Agreement are required to include a mitigation contribution in their NDC, and are welcome to add components on adaptation, financial support, capacity building, technology transfer, and transparency.

Ambitious national climate commitments have the potential to translate into significant health co-benefits, defined as additional public health benefits related to the reduction of greenhouse gas emissions that are not directly related to the climate change actions taken, such as air quality improvement, reduced negative health impacts, and increased resilience of health infrastructure.

The opportunity for public health gains from mitigation actions subscribed into NDCs are immense. With the current burden of disease from air pollution - largely caused by the burning of fossil fuels - now accounting for 1 in 8 deaths worldwide, enhanced emission reductions will have immediate benefits to local populations and communities, as well as global public health benefits.

Countries can strengthen their NDCs by developing health-inclusive and health-promoting climate targets and policies. The inclusion of public health considerations in the NDCs provides an opportunity for increased ambition, for example through the consideration of the social co-benefits of climate action, the creation of climate-resilient health systems or through prioritized adaptation actions.

The scope of this paper is threefold. First, this paper provides a snapshot of where health is positioned in current NDCs - submitted up to COP25, in December 2019. The overview thereby outlines countries' current priorities and needs for ensuring healthy people and societies in a changing climate.

Second, this paper provides a set of WHO recommendations for the creation of robust and ambitious health-promoting NDCs, identifying a broad range of public health measures that can benefit national mitigation and, adaptation and implementation priorities and can contribute to increased climate ambition.

Lastly, the paper underscores the need for a tailored and equitable approach to NDC enhancement that is suited to a country's specific circumstances. Some examples from existing NDCs are included to highlight current best practices from nationally determined contributions that promote health.



## ***Health in the NDCs: Key Findings from the WHO NDC Review***

**Public health considerations are already included in most NDCs.** As of December 2019, 70% of NDCs submitted (129 out of 184) included health considerations.

### **Health Co-Benefits of Mitigation in the NDCs**

**The health co-benefits of climate policies are rarely reflected in current NDCs**, with 10% of NDCs (18 out of 184) highlighting the health co-benefits of mitigation actions or policies and 3% of NDCs (5 out of 184) emphasizing the health co-benefits of adaptation actions. Most NDCs that mention health co-benefits refer to the health benefits of general mitigation or adaptation (13 NDCs), but a few NDCs do mention specific sectors, such as energy (3 NDCs), waste management (1 NDC), or forestry (1 NDC).

**When health co-benefits of climate action are mentioned in NDCs, they are rarely measured.** Out of the 18 NDCs that do mention health co-benefits, only 2 indicate they will quantify or monitor these benefits to inform decision making.

**The reduction of air pollution and short-lived climate pollutants (SLCPs) is underrepresented in NDC mitigation actions.** Only 18 NDCs cite the reduction of air pollution and/or SLCPs to be a priority mitigation action.

### **Health Impacts from Climate Change in the NDCs**

**The negative health impacts of climate change are recognized by close to half of all NDCs.** Forty-seven percent (86 out of 184) of NDCs highlight the negative health impacts from climate change. References to the health impacts of climate-related health hazards (e.g. floods, storms etc.) show up in 24 NDCs.

**Vector-borne diseases and food and nutrition insecurity are the negative health impacts of largest concern in NDCs.** Vector-borne diseases were highlighted in 33 NDCs, while food and nutrition insecurity were emphasized in 27 NDCs.



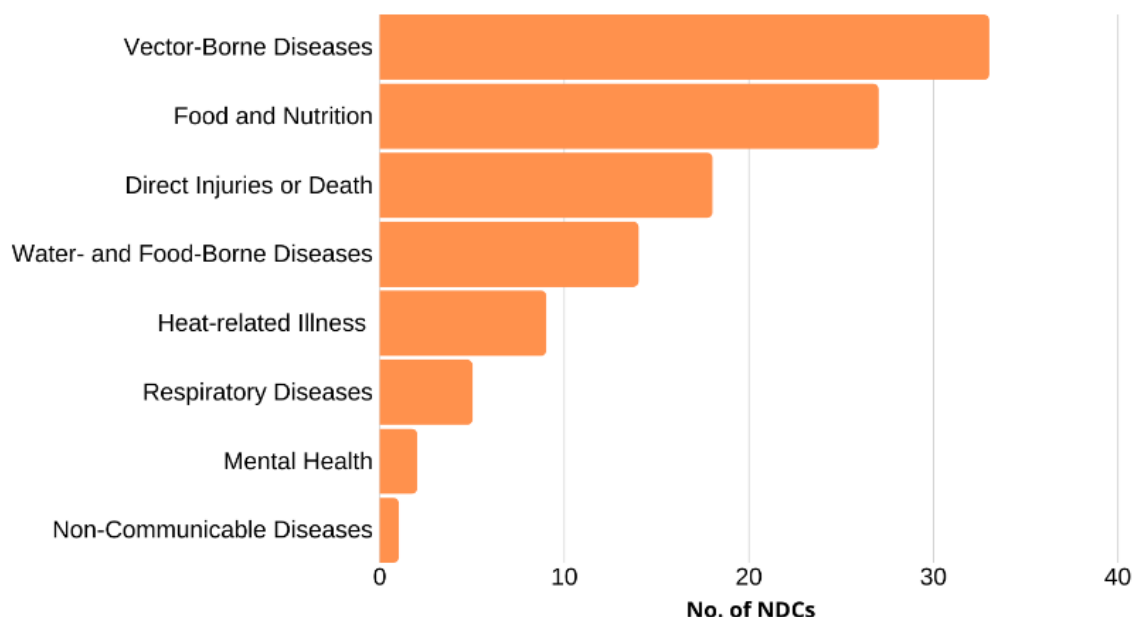


Figure 1: Number of current NDCs highlighting climate-sensitive health impacts. As of December 2019, 86 out of 184 NDCs highlight one or several negative health impacts of climate change.

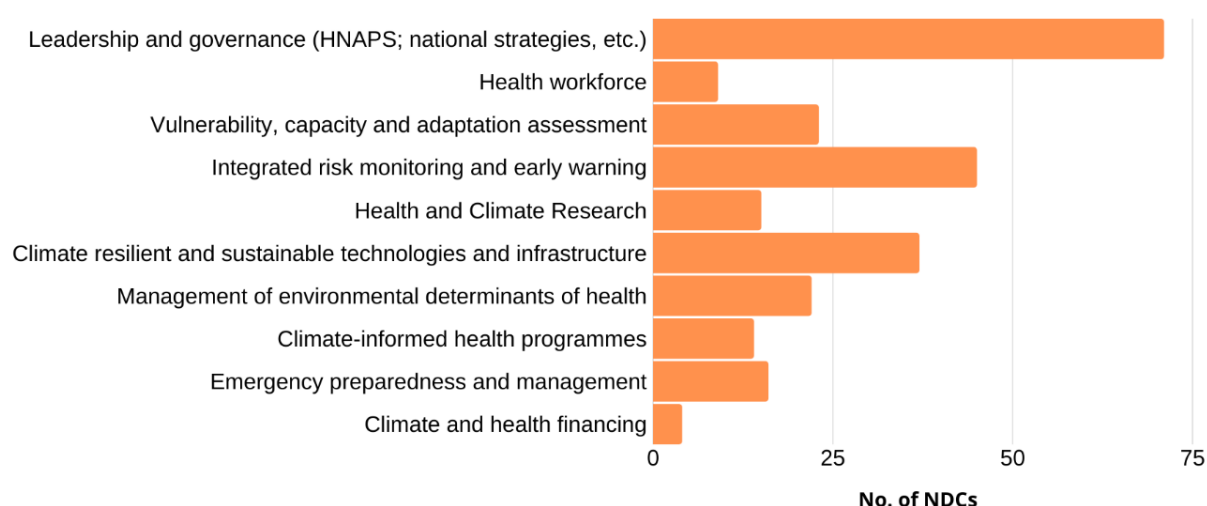
**Current NDCs rarely relate the health impacts of climate change to evidence or national policies.** Despite the high occurrence of references to health impacts in the NDCs, most of these references are descriptive. Only 10% of NDCs (18 out of 184) refer to evidence or policies on health impacts from climate change. This despite 48 countries recently reporting to have conducted a vulnerability and adaptation assessment for health in relation to climate change (based on a WHO survey of 101 countries) <sup>1</sup>.

<sup>1</sup> WHO health and climate change survey report: tracking global progress. Geneva: World Health Organization; 2019 (WHO/CED/PHE/EPE/19.11).

## Health and Adaptation in the NDCs

**When referencing health, NDCs most often associate health considerations to adaptation actions.** 84% of NDCs that include health considerations refer to health in relation to adaptation priorities and actions (108 NDCs).

**Health adaptation commitments in current NDCs often lack the comprehensive range of actions needed to build climate resilient health systems.** Most NDCs (100 out of 184) refer to health-adaptation actions that correspond with one or several components of WHO's Operational framework for building climate resilient health systems, which provides the necessary building blocks for comprehensive health adaptation in the NDCs. Only 1 current NDC considers all 10 components of the framework.



*Figure 2: Number of current NDCs including adaptation components to build climate resilient health systems. As of December 2019, 100 out of 184 NDCs include one or several health-promoting adaptation actions.*

**Health adaptation actions are not always linked to existing national adaptation policies or action plans in current NDCs.** Despite the inclusion of public health considerations in adaptation actions in over half of NDCs (59%), only 1 in 5 (21%) refers to National Adaptation Plans (NAPs) or National Adaptation Plans of Action (NAPAs) in relation to public health, even though 70 countries have reported to have a national health and climate strategy or plan in place or under development<sup>2</sup>.

<sup>2</sup> WHO health and climate change survey report: tracking global progress. Geneva: World Health Organization; 2019 (WHO/CED/PHE/EPE/19.11).

### Health and finance in the NDCs

**Only 6 NDCs currently assign concrete finance for health-promoting climate actions.** Just 6 NDCs thus far provide a specific amount and/or timeline for financing health actions, all of which are in relation to adaptation actions.

**Less than 1 in 6 NDCs indicate the need for financial support to health-promoting climate action.** Despite the inclusion of health in 70% of NDCs, only 28 NDCs (15% of NDCs) link health to climate finance, the majority of which (20 NDCs) make health-promoting climate action conditional to receiving additional finance.

## **WHO Recommendations for Health-Promoting NDCs**

### **Health Co-Benefits of Mitigation in the NDCs**

**Measure and monitor the health co-benefits of mitigation actions in NDCs.** The health co-benefits of mitigation measures often outweigh the implementation costs of their respective climate policy. Health co-benefits should be (1) identified, (2) measured, (3) monitored over time, and (4) included in cost-benefit analyses and policy-making processes for all mitigation actions included in the NDC.

**Prioritize the reduction of air pollution and Short-Lived Climate Pollutants in NDCs.** The combustion of fossil fuels has a direct and significant negative impact on public health through indoor and outdoor air pollution. Short-lived climate pollutants (SLCPs) - including methane, black carbon and tropospheric ozone – make up a significant portion of premature air pollution deaths and have a significantly higher global warming potential. The reduction of these pollutants represents sizable and immediate health gains and mitigation potential.

**Include mitigation plans for the health sector in NDCs.** The global healthcare system represents close to 10% of global GDP and contributes 4.4% to global net emissions<sup>3</sup>. Health sector mitigation measures in the NDCs should aim to reduce healthcare's climate footprint without inhibiting the critical services it provides.

**Include health in the cost-benefit analysis of current and future climate policies.** Improvements in public health and other social benefits should be a measure of success for NDCs, with the potential to drive increased ambition and broad acceptance of climate policies.

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<sup>3</sup> Health Care Without Harm; Health care's climate footprint: How the health sector contributes to the global climate crisis and opportunities for action; 2019; Reston; USA.

### Health co-benefits in NDCs - excerpts

#### **Bangladesh**

*“The shortlist of mitigation options analysed for the INDC was created from a longer list by applying certain criteria, one of which was co-benefits. All the measures are expected to therefore have some co-benefits. These include improved air quality (e.g. from increased renewables or reduction in traffic congestion), improved road safety (from modal shift to public transport and reduced traffic congestion), economic benefits from developing green jobs, cost savings to families (e.g. from lower running costs of cars and from energy efficient appliances) and improved access to energy (e.g. from localised biogas production).”*

#### **Trinidad and Tobago**

*“Building climate resilience through the reduction of carbon emissions and reducing climate vulnerability in all sectors will create green jobs and have significant co-benefits from an air quality and associated public health costs perspective, as well as enhance the coping ability and capacity to the adverse impacts of climate change.”*

#### **Mexico**

*“Unconditional Reduction: Mexico is committed to reduce unconditionally 25% of its Greenhouse Gases and Short Lived Climate Pollutants emissions (below BAU) for the year 2030. This commitment implies a reduction of 22% of GHG and a reduction of 51% of Black Carbon (footnote: mandate established in Mexico’s Climate Change Law to prioritize cost-effective mitigation actions with social benefits such as the improvement of public health).”*

### Health Impacts from Climate Change in the NDCs

**Include the health impacts of climate change in NDCs.** As stated in article 1 of the UNFCCC, negative impacts on health are one of the key adverse effects of climate change. The World Health Organization has defined climate change one of the greatest threats to global public health in the 21st century. Countries referencing climate change impacts in their NDCs have the opportunity to include any available evidence on health impacts of climate change at country level such as those included in the WHO/UNFCCC Country Profiles on Health and Climate change and in national climate change and health vulnerability and adaptation assessments (V&A's). Current and future negative health impacts should inform government policies and priority actions not only in the health sector but also in health-determining sectors such as energy, food and agriculture, water, sanitation, hygiene and urban planning.

**Identify the health sector as vulnerable to climate impacts.** Vulnerability analyses play a key role in identifying national adaptation priorities in dealing with climate change. By identifying which sectors, population groups, and regions are most vulnerable, NDCs can adopt appropriate adaptation measures.

**Quantify the negative health impacts from climate change and include both the current and projected health burden.** When available, NDCs should incorporate

quantitative estimates of current and future health impacts of climate change, including vector-, water- and food-borne diseases; direct injuries or death; mental health; non-communicable diseases; respiratory diseases; heat-related illness; occupational health and others.

### Health Impacts in NDCs - Excerpts

#### **Morocco**

*“Vulnerability of the Health Sector: Vulnerability to climate change of the health sector is explained by the presence of endemic illnesses such as malaria, schistosomiasis, typhoid and cholera, likely to be made worse by climate change. Even though resources are dedicated to combat the spread of these illnesses, resurgence as a result of the impacts of climate change.*

*According to the World Health Organization (WHO), climate change would increase deaths by 250,000 annually between 2030 and 2050 due to malnutrition, malaria, diarrhea and heat-related stress. According climate change scenarios, the vector capacity of the dengue virus would increase from 0.29 to 0.33 in 2070 relative to a reference value of 0.22. Diarrheal deaths attributed to climate change in children 15 and under would reach 10.5 %, or 1,600 deaths, in 2030.*

*According to a high GHG emissions scenario, deaths in elderly populations as a result of heat should reach 50 for every 100,000 people by 2080, based on an estimated baseline of five deaths for every 100,000 people between 1961 and 1990. The impacts of climate change on agriculture will also disproportionately impact those most vulnerable to hunger and malnutrition.”*

### Health as a Priority Adaptation Sector in the NDCs

**Measure and monitor the health co-benefits of adaptation actions across all sectors in NDCs.** The health co-benefits of adaptation measures implemented in other sectors (e.g. water, sanitation and hygiene) can promote large health co-benefits. Health co-benefits should be (1) identified, (2) measured, (3) monitored over time, and (4) included in cost-benefit analyses and policy-making processes for all adaptation actions included in the NDC.

**Prioritize health as a key climate-sensitive sector.** In order to be able to deal with the increased pressures and demands posed by climate change, health systems will need to be strengthened to ensure their climate resilience. Climate resilient health systems will continue to protect the most vulnerable in society from a changing climate. Prioritized health adaptation actions also have positive effects on other health-determining sectors, such as agriculture, water and sanitation, and emergency management.

**Ensure policy coherence between climate change and health policy processes at national level.** Since the health sector is already highly invested in efforts to tackle the adverse health effects from climate change in most countries, governments should ensure that these efforts are properly represented in overall climate change policy

processes at a national level (e.g. NAPs, National Communications, and NDCs). The health components of National Adaptation Plans (H-NAPs) should be complementary to the health adaptation actions outlined in the NDCs, in order to avoid duplication of work, to ensure national climate policy processes are aligned, to guarantee adaptation targets and timelines are set, and to ensure health adaptation actions are informed by policy and research.

**Ensure health adaptation actions in the NDCs are comprehensive enough to effectively build climate-resilient health systems.** In order for health systems to systematically and effectively address the challenges increasingly presented by climate change, they need to prescribe a comprehensive range of adaptation actions around the building blocks of health systems<sup>4</sup>.

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<sup>4</sup> The WHO framework for building climate resilient health systems suggests adaptation plans should cover 10 components, namely: (1) Leadership and governance (HNAPS; national strategies, etc.); (2) Health workforce; (3) Vulnerability, capacity and adaptation assessment; (4) Integrated risk monitoring and early warning; (5) Health and Climate Research; (6) Climate resilient and sustainable technologies and infrastructure; (7) Management of environmental determinants of health; (8) Climate-informed health programmes; (9) Emergency preparedness and management; (10) Climate and health financing.



## Health Adaptation Measures in NDCs - excerpts

### **Jordan**

*“Health sector adaptation actions: ...The health sector’s adaptation strategy, plan of action for the period 2013-2017, and EWS would have long-term potential for delivering improved health outcomes. The Strategy provides a roadmap to the health sector, as well as the many involved public agencies and organizations, to work jointly to improve the health of the Jordanian population, in particular the vulnerable groups (infants and children < 5 years, the elderly > 65 years, and pregnant women) in rural, desert, remote areas, and poverty pockets, and the environments in which they live, work, and play.*

*The health sector’s adaptation to climate change focuses on the adequate intervention measures required to reduce the impact of climate change on six climate-sensitive health issues, namely: o Heat waves (health impacts of temperature related events); o Water and food-borne diseases; o Vector-borne diseases; o Air-borne and respiratory diseases; o Nutrition and food security; and o Occupational health.*

*The Action Plan (2013-2017) listed 24 proposed adaptation projects that fall under seven main categories as follows: Regulatory/legislative; Capacity building; Public education and communication; Surveillance and monitoring; Medical intervention; Infrastructure development; and Research and further information. ...The proposed adaptation measures and projects are: — Strengthening the preparedness and resilience of the health sector and increasing emergency rooms (ER) capacities; — Building the needed capacities to conduct health vulnerability assessments; — Educating and informing the public of the needed measures to protect health from the adverse impacts of climate change; — Establishing an early warning system to trigger prompt public health intervention when certain variables exceed a defined threshold; — Developing climate-informed disease control programs and surveillance systems using meteorological services to target vector control in time and space; — Adopting more effective and rapid electronic exchange of surveillance data for rapid intervention, and establish, with the relevant ministry(ies), access to real-time air quality monitoring data to establish the link between respiratory diseases and air pollution and climate change; — Introducing new indicators that are useful for protecting health, such as Air Quality Index, UV index, in cooperation with the relevant institutions; and — Utilizing effective tools (e.g. GIS or Health Mapper) to link environmental and climatic factors to health outcomes.*

*The estimated total cost for implementing the above mentioned projects and measures is USD 15,000,000. The information of portions of funds secured by the involved sector’s (government) own means versus amount of funds not secured is not available at the time of preparing this document and could be obtained from the health sector’s involved officials.”*

## Means of Implementation for Health in the NDCs

**Involve health ministry representatives in the development of NDCs and other relevant climate change policies, plans or communications.** Climate change policy-making processes should include all relevant sectors, including the health sector, and rely on consultative multi-stakeholder processes when updating and enhancing the NDC.

**Ensure the health sector has the financial means to deal with the increasing health impacts and adaptation needs from climate change.** When health is prioritized as a climate-sensitive sector climate finance should flow to the health sector so as to effectively increase health system resilience by implementing health adaptation plans.

Financial needs and contributions need to be regularly updated and communicated in the NDCs.

**Address the barriers to a climate-resilient health system and health promoting mitigation actions in other sectors.** The needs for capacity building, technological transfer, climate finance and other means of implementation to address, minimize and avert the increasing health impacts of climate change, as well as the adaptation needs of the health sector, need to be clearly defined and communicated in the NDCs.

### Means of Implementation for Health in NDCs - excerpts

#### **India**

*“Besides these targeted [adaptation] programmes, India has also implemented a series of schemes which strengthen adaptive capacities of the vulnerable communities. India’s expenditure on programmes with critical adaptation components has increased from 1.45% of GDP in 2000-01 to 2.82% during 2009-10. Expenditure on human capabilities and livelihoods viz. poverty alleviation, health improvement and disease control and risk management, constitutes more than 80% of the total expenditure on adaptation in India.”*

#### **Mauritania**

*“Les moyens de mise en oeuvre des mesures d’adaptation: Outre les besoins en renforcement des capacités, transferts technologiques et institutionnels, la réalisation des projets et mesures d’adaptation nécessite un financement sur les deux périodes de: 2015 – 2020 et 2020-2030...Sante: Besoins financiers (en Million de dollar U S ): 221.”*

#### **Mexico**

*“Regarding mitigation, the LGCC sets a clear obligation to give priority to the least costly mitigation actions, that at the same time derived in health and wellbeing co-benefits to the Mexican population.”*

#### **Seychelles**

*‘Cost of priority Adaptation Actions: The threats caused by climate change will have significant impacts on... human health and well-being. Health: Adaptation Action: Health sector able to respond to population increase and its additional climate-related health burden e.g dengue fever, leptospirosis etc; Exploration of relevant potential science and technology innovation; Cost: 30 Mill USD.’*







# HEALTH in the Nationally Determined Contributions

Ambitious national climate commitments have the potential to translate into significant health co-benefits, such as air quality improvement, reduced negative health impacts, and increased resilience of health infrastructure.

The opportunity for public health gains from mitigation actions subscribed into the Nationally Determined Contributions (NDCs) to the Paris Agreement are immense. Enhanced emission reductions will have immediate benefits to local populations and communities, as well as global public health benefits.

Countries can strengthen their NDCs by developing health-inclusive and health-promoting climate targets and policies. The inclusion of public health considerations in the NDCs provides an opportunity for increased ambition, for example through the consideration of the social co-benefits of climate action, the creation of climate-resilient health systems or through prioritized adaptation actions.

The scope of this paper is threefold. First, this paper provides a snapshot of where health is positioned in current NDCs, thereby outlining countries' current priorities and needs for ensuring healthy people and societies in a changing climate.

Second, this paper provides a set of WHO recommendations for the creation of robust and ambitious health-promoting NDCs, identifying a broad range of public health measures that can benefit national mitigation and, adaptation and implementation priorities and can contribute to increased climate ambition.

Lastly, the paper underscores the need for a tailored and equitable approach to NDC enhancement that is suited to a country's specific circumstances by providing a range of examples of health considerations in existing NDCs.

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