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**DRAFT WHO GLOBAL STRATEGY ON HEALTH, ENVIRONMENT
AND CLIMATE CHANGE**

Draft WHO global strategy on health, environment and climate change

The transformation needed to sustainably improve lives and well-being through healthy environments

Background

1. In decision EB142(5) (2018), the Executive Board at its 142nd session requested the Director-General, inter alia, to develop a draft comprehensive global strategy on health, environment and climate change, to be considered by the Seventy-second World Health Assembly in May 2019, through the Executive Board at its 144th session in January 2019. In addition, in accordance with decision WHA65(9) (2012), the regional committees are asked to comment and provide input on the draft comprehensive global strategy on health, environment and climate change.

Scope

2. **This draft strategy is aimed at providing a vision and way forward on how the world and its health community need to respond to environmental health risks¹ and challenges** until 2030, and ensure safe, enabling and equitable environments for health by transforming our way of living, working, producing, consuming and governing.

The challenge

3. **Known avoidable environmental risks cause about one quarter of all deaths and disease burden worldwide, amounting to 13 million deaths each year.** It is clear that environmental integrity has an important influence on human health and development. Air pollution – one of the largest risks to health – alone causes 7 million preventable deaths per year, with more than 9 out of 10 people breathing polluted air, and almost 3 billion people still depending on polluting fuels such as solid fuels or kerosene for lighting, cooking and heating. More than half the world's population is still exposed to unsafely managed water, sanitation and hygiene, resulting in more than 800 000 preventable deaths each year. A large fraction of malaria cases and other vector-borne diseases are closely linked to aquatic environments that are amenable to environmental management. More than 1 million workers die each year because their workplace is unsafe, and more than 1 million people die due to exposure to chemicals.

¹ Environmental risks to health, in the framework of this strategy, are defined as all the physical, chemical, biological and work-related factors external to a person, and all related behaviours, but excluding those natural environments that cannot reasonably be modified. There is a special focus on the part of the environment that can reasonably be modified.

4. **Climate change increasingly has an impact on people's health and well-being, as have other global environmental changes such as loss of biodiversity.** Climate change is increasing the occurrence of heat waves, droughts, extreme rainfall, storms and severe cyclones in many areas, and modifying the transmission of infectious diseases, resulting in large impacts on health. Populations in vulnerable situations, including those living on small islands, are disproportionately at risk. Wider-ranging potential consequences include water scarcity, forced migration and increased political tensions within and between countries.
5. **Despite substantive efforts to reduce environmental risks to health, "classical" risks persist, worsening health equity.** Important advances have been made to protect people from known environmental risks, by setting norms and guidelines, implementing solutions and monitoring efforts. They provide the basis for environmental health protection and need to be scaled up. Nonetheless, uneven development has left behind large parts of the global population, who still lack access to basic environmental services, such as sanitation and clean household energy. The effects of human actions on the environment are also an ethical and human rights issue, as they will be felt by future generations, and will continue to disproportionately affect populations in situations of vulnerability, across gender, age, ethnic and socioeconomic groups.
6. **New environmental, climatic and health issues are emerging and require rapid identification and response.** The world is changing rapidly, with an increased pace of technological development, new organization of work, increased migration, climate change and increasing water scarcity. The world needs to be able to identify and respond to such changes and emerging issues in a timely manner. Recent examples include the management of electronic waste, nanoparticles, microplastics and endocrine-disrupting chemicals.
7. **The world is missing the opportunity to guide the energy transition, urbanization and other major development trends, so as to protect and promote health.** Large-scale changes include: increasing demand for energy and transport; technological innovation, expanding the range of options to meet such demands; urbanization, with over half of the world's population now living in cities (the proportion will increase to over 70% by 2050); and increased mobility of people, goods and services. Health is rarely central to decisions affecting these trends, resulting in missed opportunities for health protection and promotion. Poorly planned and managed urban settings with unsustainable transport systems and a lack of access to public and green areas increase air pollution and "heat islands", reduce opportunities for physical activity and access to decent jobs and education, and have a negative impact on community life and people's mental health. Because of the close relation between air pollution and climate change, failure to tackle air pollution and climate change mitigation together results in a lost opportunity to gain the health, economic and environmental "co-benefits" of more efficient transport and energy systems. New approaches are needed that consider the consequences of actions in their entirety, taking a longer-term and equity perspective.
8. **The sustainability of health systems is put at risk if the root causes of disease are not seriously tackled.** About 10% of global gross domestic product is being spent on health care, but less than 0.5% goes on primary prevention.² The recurrent and high rates of diarrhoeal diseases, respiratory infections and particularly noncommunicable diseases caused by the environment

² Primary prevention aims to prevent disease or injury before it ever occurs.

weigh heavily on health services and national household budgets. Financial and human resources allocated to health promotion and primary prevention remain inadequate to address the substantial burden of disease caused by environmental risks to health.

9. **Approaches that focus on treatment of individual diseases, rather than improvement of determinants of health, will be insufficient to address modern environmental health challenges.** Single-determinant approaches are unlikely to achieve anticipated improvements in health equity and well-being, given the complex interaction of factors at the level of transboundaries, society and the individual. More integrated approaches are required to address the root causes of disease, which are often defined by policies in key sectors other than health. Failing to address the root causes of disease and over-reliance on medicines and insecticides are even leading to increasing problems such as antimicrobial and insecticide resistance, with potentially substantial implications for public health.
10. **Knowledge gaps continue to prevent efficient implementation of health-protective strategies, and more evidence-based and efficient communication is needed.** Evidence on certain risks to health is still incomplete or lacking, such as on ionizing radiation, electronic waste, nanoparticles, and numerous chemicals or their mixtures. The health impact of employment conditions and work-related risks, such as sedentary work, long working hours and labour migration, needs to be better assessed. Equally, more evidence is needed on efficient solutions and strategies and their financial costs, as well as on their effective implementation. Communication of such evidence and public health information is increasingly communicated through new platforms: these need to be used to their full potential.
11. **Current governance mechanisms, including at the local level, are failing to effectively address the cross-cutting nature of environmental health issues.** As policies continue to be set while ignoring the impacts they can have on health and health systems, partly because overarching governance mechanisms are not in place, their overall benefit will be inaccurately represented.
12. **The 2030 Agenda for Sustainable Development is calling for a new approach to health, environment and equity.** By interlinking socioeconomic developments with environmental protection and health and well-being, the 2030 Agenda provides overall support for tackling health determinants as relevant policies are being defined or key choices are being made, in a preventive and sustainable way, rather than repeatedly dealing with adverse impacts and inequalities. The commitment to tackle overuse of natural resources, large-scale waste production, undue influence and vested interests going against public interests should allow more sustainable economic activities to be carried out and the creation of global public goods for health.
13. **The current situation and the challenges ahead are calling for a transformation in the way we manage our environment with respect to health and well-being.** Current approaches have laid the foundations: however, they have not proven sufficient in sustainably and efficiently reducing environmental risks to health and building health-supportive and enabling environments.

Vision

14. A world in which sustainable development has eliminated the almost one quarter of disease burden caused by unhealthy environments, through health protection and promotion, preventive action in relevant sectors and healthy life choices, and which manages new and emerging environmental risks to health. Key sectors fully integrate health into their decision-making process and maximise societal welfare.

Strategic objectives for the transformation needed

15. **To address the challenges in health, environment and climate change, we will need to rethink the way we live, work, produce, consume and govern. The transformation will require switching action towards upstream determinants of health, environment and climate change, in an integrated and mainstreamed approach across all sectors, enabled and supported by adequate governance mechanisms and high-level political will. The health sector needs to play a new role to drive this transformation, using a sustainable and equitable approach.**

A. Primary prevention: to scale up action on health determinants for health promotion and protection in the 2030 Agenda for Sustainable Development

Effective and equitable action will be put in place on the drivers of environmental risks to health.

16. The 2030 Agenda for Sustainable Development calls for tackling environmental risks at their root, that is, through a shift towards primary preventive actions and the promotion of healthy choices. Reducing the 13 million deaths resulting from environmental risks each year requires efficient scale-up of primary preventive action involving all key stakeholders, across all sectors.
 - (i) **Engagement for massively expanded primary prevention.** A scale-up of primary prevention requires a substantial shift of resources towards sustainably addressing major risks to health, to create safe and healthy environments and improve people's lives today and in the future.
 - (ii) **Integration of action on primary prevention in disease programmes.** Integration of preventive environmental health action as a core component of universal health coverage, including through strategies and programmes for specific diseases (noncommunicable and communicable) and risks (antimicrobial resistance, for example) is essential.

B. Cross-sectoral action: to address determinants of health in policies in all sectors and ensure healthy energy, transport and other health-determining transitions

Policies across sectors will systematically consider health perspectives and evidence, and gain the health co-benefits of environmental protection.

17. Responsibility for, and tools to tackle, many environmental determinants of health lie outside the direct control of individuals or the health sector alone (Figure 1). Substantial transitions in energy, transport and other major systems are under way, which can lead to profound impacts, either negative or positive, on population health. Therefore, a wider societal, intersectoral, more holistic and population-based public health approach is needed. Examples of good practice are available, but such integrated approaches are not applied universally, and are seldom directed to upstream environmental and social determinants of health.

- (i) **Systematic consideration of health in the development of health-relevant policies beyond the health sector.** Decisions taken on the drivers of health risks should have the attainment and protection of good health as an explicit aim in key sectors such as energy, transport, housing, labour, industry, agriculture, water and sanitation, and urban planning. Such a Health in All Policies approach includes community engagement, coverage of health in environmental and labour regulations and safeguards, and assessment of the health impact of development projects and policies, which tackle several environmental health issues in a single setting, community or system.
- (ii) **Gaining the health co-benefits of more sustainable policy choices.** The health harms and benefits of policy actions need to be comprehensively evaluated, alongside the financial and environmental implications. Much greater benefits for health could be achieved through seeking health co-benefits and taking health into account at the outset when defining policies.

Figure 1. Key sectors (non-exhaustive) with relevance to health, environment and climate change



C. Strengthened health sector: to strengthen health sector leadership, governance and coordination roles

The health sector will play leadership and coordination roles, working together with other sectors with relevance to health, environment and climate change to improve lives.

18. Incremental changes to deal with individual environmental risks are not sufficient. To address the environmental contribution to the global burden of disease, which has remained almost static for a decade, the health sector needs to be equipped and strengthened to assume its obligations in shaping a healthy and sustainable future. Strengthened capacity of health ministries is key: to engaging other sectors of government through leadership, partnership, advocacy and mediation to achieve improved health outcomes; to building their institutional capacity and skills to implement a Health in All Policies approach; and to providing evidence on the determinants of health and inequity, and on effective responses. This approach would in turn avoid current or future economic costs, allowing reinvestment in health and sustainable development.

(i) Investing in the capacity of the health sector to engage in policies with other sectors.

The development of skills to engage in intersectoral dialogue and in the monitoring of investments and their consequences in other areas of the economy is required. Increased capacity allows the promotion of mutually beneficial measures that simultaneously protect health and the environment. National health ministries – through leadership and intersectoral governance, evidence-based advocacy, operational programmes, and surveillance and monitoring – can drive progress in tackling environmental, social and climatic risks, to obtain short- and long-term benefits. Capacities for health sector policy engagement include related competencies for implementing a Health in All Policies approach.

(ii) Stepping up health sector efforts to reach out to other sectors for health protection.

Because of the wide scope of issues and the broad range of engaged actors, it is important for the health sector to provide guidance and establish regulatory frameworks on the assessment of health risks and impacts, on the implementation of appropriate solutions and on monitoring progress across sectors.

(iii) Essential environmental services in health care facilities, and greening the health sector.

In low- and middle-income countries, it is necessary to address the major deficit in equipping health care facilities with safely managed water, sanitation and hygiene, as well as reliable energy supplies, and ensuring their resilience to extreme weather events and other emergency situations. The health sector also needs to lead by example when it comes to procurement policies and services, waste management and energy-related choices in order to limit any negative impact on health, the environment and climate change.

D. Building support: to build mechanisms for governance, and political and social support

*Governance mechanisms and political support at high level
will enable work across sectors and maintain public goods for health.
Citizens' demands for healthier environments will shape policy choices.
Multilateral and other high-level agreements will tackle major driving forces and global
threats.*

19. Currently, sectors are mainly driven by their sector-specific goals. Few incentives are in place to evaluate costs and benefits beyond each sector, such as impacts on health, the health system and accordingly on society. Governance mechanisms, agreements and political need to be based on more holistic approaches that avoid silos. This would lead to policy choices based on their overall impacts, including health impacts, on society.

- (i) **Strengthening of governance mechanisms to allow sustainable health-protective action.** Efficient and overarching governance mechanisms are required to facilitate cross-sectoral work, and take into account costs and benefits in a comprehensive way. More holistic approaches and the protection of public goods for health are required, in coordination with the health sector. As returns from environmental health action are rarely aligned with political timetables, it is important that such mechanisms can accommodate environmental action with long-term health co-benefits and returns. Such mechanisms have a higher sustainability than repeated health care.
- (ii) **Stepping up demand and leadership for health.** Broad engagement and action of intersectoral stakeholders, the health sector and the community to implement health-supportive policies, and healthy design and management are required. Health impacts from environmental risks are substantial: conventional health care systems alone cannot sustainably address them. Society is less and less prepared to bear the entirely avoidable health impacts. Adequate institutional mechanisms need to be in place to provide a framework and platform for such cooperation in an integrated way, by including health in intersectoral policy-making at all levels. Health in All Policies and whole-of-government approaches are useful in this process.
- (iii) **Building high-level political movements and agreements.** Long-term global efforts to address environmental risks to health have generated critical evidence and tools. Evidence on solutions to critically reduce the disease burden from unsafe environments has accrued: these notable successes are showing high returns on investments. Recent high-level political forums, commitments, such as the Paris Agreement on Climate Change (2015), and alliances, in addition to the 2030 Agenda for Sustainable Development, are likely to support this change.

E. New evidence needed: to generate and provide the evidence base on risks and solutions, and efficient communication to stakeholders to guide choices and investments

Sufficient evidence-based information will be available in all critical areas to support choices in health-protective actions based on health impacts, economic implications of solutions, their effectiveness and co-benefits.

20. Enhanced cross-sectoral action, high-level support and scaled-up primary prevention will all require a solid and expanded evidence base on health impacts, costs, effectiveness and wider societal benefits of solutions to reduce such impacts, and will need to be informed by regular monitoring and tracking. Strengthened and intensified advocacy, broad communication and awareness raising through expanded networks and partners on the health co-benefits from action on health, environment and climate change are essential to trigger and sustain action.

- (i) **Continued integration of environmental monitoring and health surveillance to evaluate the health impacts from environmental risks and services.** Global and local trends of impacts will continue to provide evidence on how the environment is influencing human health and development, and identify the areas where action matters most.
- (ii) **Continued development of evidence-based guidance to support effective action at the national and subnational levels.** The health sector has the responsibility to inform policy-makers on health impacts and economic evaluation of interventions, including legal instruments, to tackle environmental root causes of disease. Interaction with implementers is necessary to optimize subsequent implementation. For example, targeted tools will need to be available for key stakeholders, such as mayors, to guide action for health.
- (iii) **Interpretation and targeted communication of data and evidence.** Evidence-based public health information on evidence and trends, messages, advocacy initiatives and campaigns will aim at informing stakeholders at various levels, supporting policy decisions, and triggering high-level political action and support.
- (iv) **Mechanisms and capacity for early identification of and response to emerging threats to health.** Capacity must be built and mechanisms developed to deal with the rapidly emerging environmental health issues, linked to new technologies, organization of work or global environmental changes. This requires authoritative reviews of evidence and assessment of the effectiveness of control measures to address emerging but uncertain issues such as those relating to microplastics, endocrine disruptors, nanoparticles and electronic waste.
- (v) **Shaping research and driving innovation.** Research is the foundation of strategic shifts, which will be necessary to accelerate attainment of the Sustainable Development Goals. To advance the 2030 Agenda, research needs must be identified and knowledge translated to fill critical knowledge gaps through the coordinated facilitation of research. Research connected to policies in health-relevant areas and in implementation science will be of particular interest for improving health through safer and healthier environments.

- (vi) **Building the case for adequate funding allocation and influencing investments.** Scaling up health-protective action for safer environments requires adequate funding and reorientation of investments. Funding allocation should be guided by evidence-based assessments, where available, taking into account all costs and all co-benefits. The full societal costs of inaction over short and long time frames, and the implications of health-relevant policies in all sectors, need to be fully and systematically taken into account to prevent the hidden transfer of costs to the health sector and the undermining of environmental sustainability. Where health and economic impact evaluations are not yet available, for example, on endocrine disruptors, new work processes, nanoparticles or numerous chemicals, a precautionary approach should be taken.

F. Monitoring: to guide actions by monitoring progress towards the Sustainable Development Goals

Actions will be guided by monitored progress in the implementation of primary prevention through healthier and safer environments.

21. Monitoring will aim at closely tracking determinants of health, as well as their distribution across and within population groups. It will thereby inform progress made in order to adjust policies, as well as to ensure environmental justice.

- (i) **Monitoring of progress towards the Sustainable Development Goals and other indicators.** Countries, in cooperation with WHO and other relevant agencies where relevant, will monitor progress towards the health-related Goals and other relevant indicators in the area of health, environment and climate change, to comprehensively address environmental root causes of disease. Strategic disaggregation of data will ensure the identification of health inequalities and their drivers. Strategic compilation of data, on social and environmental determinants to understand the drivers of health inequalities, will contribute to the development of policy coherence at all levels of government.
- (ii) **Monitoring change and implementation of relevant strategies at the country level.** Relevant impact and outcome indicators need to be monitored to measure change at the country level in order to assess progress and guide policies.

Implementation platforms

Specific entry-points will be used to deliver scaled-up action on environmental root causes of disease using integrated approaches.

22. The response to the challenges of persistent and emerging health risks goes beyond the formal health sector. The response can only meet the scale of the challenges if it is led by the health community, working with others to implement health-promoting multisectoral policies, in key settings. This needs to be underpinned by public support, and an enabling policy environment, informed and tracked with the best available evidence. A range of implementation mechanisms and platforms are required to achieve this vision.

An empowered health sector

23. The formal health sector represents a significant and growing fraction of the global economy, is one of the world's largest employers, with a unique position of trust and integration into communities. It is therefore ideally placed: to implement environmental health interventions at the community level (either directly or in partnership with civil society organizations); to lead by example in demonstrating good practice in sustainability, by reducing the environmental impact of health care practice; and to act as leaders and advocates for health and sustainable development. This will require: a rebalancing of health sector expenditure towards primary prevention rather than treatment; a global reinvigoration and broadening of the discipline of environmental health officers to address the scale and complexity of modern environmental health challenges; and health sector leadership to promote a vision of health with a longer-term, and health determinants, perspective.

Stronger national and subnational platforms for cross-sectoral policy-making

24. A small number of countries have formal institutional structures that provide direct policy guidance on health and environment challenges, or that mandate intersectoral assessment of the health implications of decisions taken in other sectors. Such a Health in All Policies approach need to have broader coverage, wider scope in addressing upstream policies (that is, strategic assessments) rather than individual projects, and more direct policy influence (for example, a legal rather than only advisory status). High-level regional forums have also been greatly contributing to advancing the health and environment agenda.

Key settings as sites for interventions

25. The following key settings present opportunities to address environmental health risks and reduce health inequalities, while responding to demographic, social, economic, technological and lifestyle changes.
 - **Households.** Ensuring shelter: is structurally sound; has adequate indoor temperatures; provides adequate water, sanitation, illumination and sufficient space; is equipped with clean, affordable and reliable energy for cooking, heating and lighting, and ventilation; and protects from indoor contaminants, injury hazards, mould and pests.
 - **Schools.** Ensuring a safe environment for education; and using schools as centres to generate awareness about the linkages between health and environment, and to facilitate the inclusion of best practices in the wider community.
 - **Workplaces.** Ensuring coverage of occupational health services that address the full range of physical, chemical, biological, psychosocial and ergonomic risks at the workplace, and contribute to prevention and control of modifiable risk factors, in particular for noncommunicable diseases, and that are adapted to the new forms of work, migration and organization of workplaces.
 - **Health care facilities.** Ensuring: provision of essential environmental health services including access to clean and reliable energy and safe water, sanitation and hygiene; resilience to

extreme weather events and climate change; and protection of health care workers and the wider community, through chemical safety, infection control and waste management.

- **Cities.** Addressing the particular challenges of cities as a concentration of environmental exposure to risks, including ambient air pollution, poor sanitation, wastes or occupational risks, while making use of the opportunity presented by having a single authority under a city mayor who is empowered to take cross-sectoral decisions, for example on urban planning, supply of energy, water and sanitation, and waste management.

26. This list is not exhaustive: additional relevant settings may include agricultural development areas, concentrated economic zones, refugee camps including temporary shelters and shelters for migrants, markets, villages and small islands.

Partnerships for a social movement for healthier environments

27. An essential requirement for action is political will. This can only come about through broad societal awareness of the fundamental health threats posed by environmental risks and climate change, and potential solutions. Individual champions, health professional associations and civil society organizations are critical in mobilizing public support for more sustainable and health-promoting development choices.

Multilateral environmental, health and development agreements

28. Most global environmental agreements (such as the United Nations Framework Convention on Climate Change and the Paris Agreement, the Convention on Biological Diversity, the Minamata Convention on Mercury) and regional environmental agreements (including the Convention on Long-Range Transboundary Air Pollution) cite health as a major concern. However, health expertise and concerns are not always well represented in their implementation mechanisms. Stronger engagement of the health sector would promote synergies, minimize unintended negative consequences and optimize any necessary trade-offs between health, environmental and economic objectives. Similarly, ensuring that environmental risks are fully covered and supported in international health instruments, such as the International Health Regulations (2005), would particularly enhance capacities to address environmental emergencies. Such cross-integration would advance the holistic approach articulated in the 2030 Agenda for Sustainable Development.

Platforms for the Sustainable Development Goals

29. The 2030 Agenda has led to the development of high-level political forums that are strengthening the means of implementation and follow-up on commitments made. Many of the Goals are entirely supportive of and in line with the actions to be taken to create healthy environments. Such forums therefore constitute key platforms for triggering progress towards acting on upstream environmental causes of disease and equitable health promotion. Key goals for health, environment and climate change, in addition to Goal 3 on good health and well-being, include Goal 6 on clean water and sanitation, Goal 7 on affordable and clean energy, Goal 8 on decent work and economic growth, Goal 11 on sustainable cities and communities, Goal 12 on responsible consumption and production, and Goal 13 on climate action.

Evidence and monitoring platforms

30. A limited number of countries have advisory bodies with the mandate and capacity to set national research agendas, generate syntheses of available evidence, track national progress on health and the environment, and provide this information directly to policy-makers. At the international level, this function exists through the Intergovernmental Panel on Climate Change, including coverage of the implications of climate change for health, but a similar function does not exist across the range of environmental challenges. Greater coverage, in terms of the numbers of countries with such mechanisms, and the range of environmental risks addressed, either individually or together, would greatly advance evidence-based policy-making. All such efforts should be aligned with and contribute directly to the monitoring of the Sustainable Development Goals at the national and international levels.

WHO's role and leadership in global health

31. Three strategic priorities and goals will drive WHO's contribution to ensuring healthy lives and promoting well-being for all at all ages.
 - (i) *Promoting healthier populations*. Conditions for healthier populations include: healthier cities; sustainable and provision of safe water, sanitation and hygiene; healthy transport solutions; clean energy policies; sustainable food; and sustainable agriculture.
 - (ii) *Addressing health emergencies*. Improved resilience of the health sector and communities to climate change, reduced vulnerabilities and enhanced preparedness, surveillance and response to health emergencies will prevent and reduce the health impacts of environmental emergencies.
 - (iii) *Advancing universal health coverage*. Essential environmental health services, knowledge and capacities need to constitute an integral part of universal health coverage.
32. WHO will contribute to the agenda on health, environment and climate change through its six core functions.³ These can be further grouped into: (a) leadership and policies; (b) evidence synthesis and advocacy, including the Organization's normative function, development of tools, monitoring of implementation and shaping the research agenda that will support public goods for health; and (c) provision of direct country support (Figure 2).

³ Providing leadership on matters critical to health and engaging in partnerships where joint action is needed; shaping the research agenda and stimulating the generation, translation and dissemination of valuable knowledge; setting norms and standards and promoting and monitoring their implementation; articulating ethical and evidence-based policy options; providing technical support, catalysing change, and building sustainable institutional capacity; and monitoring the health situation and assessing health trends.

Figure 2. Outline of WHO’s role and leadership in health, environment and climate change

Impact

All people attain the highest possible level of health by substantially reducing the environmental burden of disease, and addressing climate change and other emerging environmental health threats.

Outcomes

Governance mechanisms and capacity of the health sector are strengthened for intersectoral action and the Health in All Policies approach	Norms, standards and legal instruments are in place and enforced to protect people’s health through primary prevention	Policies are implemented and regularly adapted through monitoring, evidence-supported solutions and coordinated research	Populations in vulnerable situations are protected from environmental and climate change risks in an equitable way, including during emergencies
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Outputs

Adequate governance mechanisms have been supported and leadership has been provided on policies, strategies and plans	Evidence-based norms and information on solutions are developed and disseminated, and change is monitored	Relevant actors are fully informed about risks and engaged in solutions, and can access relevant tools and technical cooperation	Outputs and implementation are multiplied through effective communication and strategic partnerships
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Key activities

Leadership and policies

Provide leadership on health, environment and climate change
Support governance mechanisms for integrated and cross-sectoral action
Build global alliances for advancing global agendas
Engage in intersectoral policy dialogue in cooperation with partners
Foster development and implementation of legal instruments
Provide platforms for high-level global and regional forums

Evidence synthesis and advocacy

Shape the research agenda
Identify, assess and respond to emerging environmental threats to health
Synthesize the evidence base to develop and update norms and guidance on interventions
Provide tools for estimating costs and benefits from policy action
Monitor health risks, impacts and implementation of solutions, and communicate progress to adapt strategies
Scale up communication to raise awareness of health impacts, costs to society, and solutions

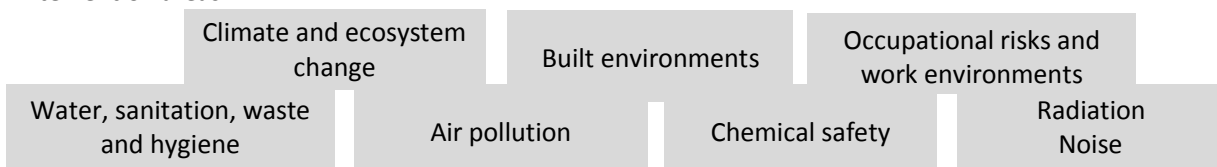
Direct country support

Catalyse action and influence sectoral choices and provide platforms for key stakeholders
Build capacity of national institutions and other implementing partners
Provide assistance with implementation of norms and solutions
Implement special initiatives for vulnerable populations
Support expansion of universal health coverage through essential environmental health services
Provide environmental and occupational health response in emergencies
Develop strategic partnerships at the country level to multiply effects

Key platforms for implementation

Multilateral, regional and global policy platforms	Partnerships for social movements	Evidence and monitoring platforms	Health sector support	Settings such as cities, workplaces, households	Emergency platforms
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Intervention areas



33. While WHO's core functions continue to provide the foundation of its work, important shifts need to be made to respond to evolving requirements. The main focus of the work in the area of health, environment and climate change focuses on promoting healthier populations.

Promoting healthier populations

Provide leadership

- (a) **Provide leadership** in guiding **healthy energy transitions**, and **healthy transport** and **urban design** solutions, and other ongoing transformations, by combining WHO's evidence-based guidance and enhanced advocacy. Foster high-level political support, in interactions with Member States and civil society.
- (b) **Coordinate regional policy processes** by providing or scaling up regional **platforms** for environment and health governance, bringing together key sectors and stakeholders.
- (c) **Stimulate urban governance** to develop **healthy** and **sustainable cities**.
- (d) **Ensure that the "health voice" is heard** and ensure that health is placed at the heart of **instruments**, such as the Minamata Convention on Mercury and the Paris Agreement on Climate Change.

Evidence synthesis and advocacy for building global public goods

- (e) **Ensure knowledge generation** by catalysing and coordinating the expansion of the evidence base on **efficient solutions**, research steered towards **policy relevance**, and **emerging** environmental threats to health. Evidence-based information on policy impacts will be key to support cross-sector action and provide convincing arguments for seeking out co-benefits. Generated knowledge will then be synthesized into normative guidance to maintain public goods for health, such as safe water and clean air.
- (f) **Monitor change** in **risks to health** and **implementation of solutions** – in terms of implementation rate, impacts, financial costs and cost-effectiveness. Continuous monitoring to realign priorities and implementation strategies in countries is needed. WHO will continue to expand its work in convening partners to develop **data platforms** that integrate the diversity of data needed to monitor progress. WHO is also reporting on several indicators on health and the environment (within Goals 3, 6, 7 and 11).

Enhance WHO's direct impact in countries

- (g) **Catalyse action for safer environments** and **influence sectoral choices**, for example, through engaging in policy dialogue, providing **guidance** on healthy policies and governance mechanisms, and **assistance** in implementation of standards, and **monitoring**. The type of multisectoral and health-sector engagement will be tailored to countries' needs, and may vary in focus between upstream actions (policy-related, strategic) and downstream actions (such as technical cooperation).
- (h) **Enhance capacity of the health sector** to fulfil its increasingly crucial functions of stewardship, **leadership**, and **coordination** in health matters with cross-sectoral scope. Provide

support on greening the health sector, that is, lead by example in order to limit impacts of the health sector on health, the environment and climate change.

- (i) **Provide platforms for key stakeholders** in shaping healthy choices related to the environment and climate change. Provide data, information and advocacy material to **civil society** to support their **engagement** in matters concerning healthy choices in policies of concern. **Support mayors** and other local key actors in shaping health-supportive environments by providing tools and information on healthy choices.
- (j) **Develop special initiatives for populations in situations of vulnerability.** Provide enhanced support to **populations in vulnerable situations** (such as children, workers in the informal economy, populations living in emergency situations, poor communities, populations of small island developing States, and populations in other vulnerable geographical settings) by strengthening health systems' resilience to climate risks, and promoting climate change mitigation measures around the world, to ensure the long-term future of the most vulnerable populations.
- (k) **Provide emergency response.** Support countries in developing systems to **build preparedness** for environmental disasters and emergencies, provide normative and technical guidance, and strengthen global and regional networks of experts to provide **support to countries in responding** to environmental emergencies. Responding to environmental health emergencies and delivery of environmental health services represent additional important activities in countries.

Addressing environmental health emergencies

- 34. Man-made conflicts, technological incidents and natural disasters take a toll on people's lives and health around the world, with climate change and forced migration being likely to further intensify such emergency situations. The number of displaced people fleeing emergencies is increasing, with the greatest effects being felt in countries with the worst environmental health conditions and the least capacity to respond to environmental health emergencies.
- 35. A systematic approach to addressing environmental emergencies, such as a chemical or nuclear release, and the environmental health aspects of all types of emergencies requires the Secretariat to work with all countries to invest in assessment of vulnerability and risk, as well as planning for preparedness, response and recovery. The International Health Regulations (2005) provide a readily available vehicle to build national and regional capacities in core competencies pertinent to the detection of, preparedness for and response to chemical, zoonotic and nuclear events.
- 36. The objectives for environmental health management in emergencies are as follows.
 - (i) Identify, assess and map environmental and occupational health risks and vulnerabilities in countries susceptible to crisis.
 - (ii) Improve capacities to effectively prepare for and manage the environmental and occupational health aspects of emergencies.
 - (iii) Ensure that health care facilities have access to basic environmental health services, such as water, sanitation and hygiene, and have in place systems for managing occupational health and safety.

- (iv) Protect people’s health from environmental risks throughout the phases of the management cycle of the disaster or emergency.

37. Suggested priority actions for environmental health management in emergencies are outlined in the table.

Table. Suggested priority actions for environmental health management in emergencies

Strategic response	Action by countries	Action by the Secretariat
Developing the capacities of the health sector to manage environmental and occupational health services throughout the life cycle of emergencies	Develop environmental health emergency profiles and establish or update environmental health plans for emergencies	Develop systems for the prediction and early warning of, and preparedness for, environmental disasters and anthropogenic emergencies
	Operationalize policies, programmes and management systems pertinent to environmental health services in health care facilities, including the assessment, provision and restoration of services	Establish a global and regional network of qualified environmental and occupational health specialists and sanitarians who can be mobilized and deployed in a timely manner to provide support to countries in need
	Integrate the protection of occupational health and safety into national health security plans	Build countries’ capacities to protect occupational health and safety in public health emergencies
Providing adequate environmental health services in health care facilities during emergencies	Strengthen the health sector capacity to develop and operationalize policies, programmes and management systems pertinent to environmental and occupational health services in health care facilities, refugee camps and other areas hosting internally displaced persons	Provide normative and technical guidance
Developing national capacities for responding to chemical, and nuclear events for implementation of the International Health Regulations (2005)	Strengthen national capacities for responding to chemical and nuclear events. Leverage capacity-building in core capacities required by the International Health Regulations (2005)	Provide normative and technical guidance Strengthen global and regional thematic networks of experts to provide support to countries in monitoring and responding to chemical and nuclear events

Advancing universal health coverage by providing environmental health services

38. One of WHO’s strategic priority is to provide support to countries in making progress towards universal health coverage. This includes ensuring that all people have access to and can use promotive and preventive health services appropriate to their needs, while not exposing the user to financial hardship. Essential environmental services with the main aim to improve health are an integral part of universal health coverage. Such services include, for example, provision of drinking water of safe quality, safely managed sanitation services, clean energy and technologies, and workforce protection, both within health care facilities and within communities.
39. Essential health services will be key for reducing outbreaks of infectious diseases (resulting, for example, in a reduction in the number of individuals with diarrhoeal diseases, following improved water and sanitation services) and noncommunicable diseases (for example,

cardiovascular and chronic respiratory diseases through clean energy and technologies in households).

40. The goals to be achieved by the transformational approach are highlighted in Box 1.

Box 1. Goals to be achieved by the transformational approach

To sustainably improve lives and well-being through healthy environments

1. **People.** People live longer and healthier lives due to the reduction of environment-related diseases. People are aware of the environmental exposures harming their lives and of the benefits of more sustainable choices and make their voice heard by policy-makers. This ultimately **leads to better health and well-being.**
2. **Universal health coverage.** People benefit from **primary prevention** measures, such as essential environmental and occupational health services and health promotion, as an integral part of universal health coverage.
3. **Air pollution.** Countries and major cities have set health-based **air-quality targets** and have put in place policies to achieving the targets by **involving relevant sectors.** Polluting **fuels** and inefficient **technologies** are no longer used. Emissions have been significantly reduced.
4. **Climate change.** Health systems and communities around the world are **resilient** to climate variability and change. Carbon emissions are meeting the targets of the **Paris Agreement on Climate Change.** Cleaner **energy systems** are built, and efficient **public transport systems** promoting **active movement** are in place.
5. **Water, sanitation and hygiene.** All countries have incorporated the pillars of the **Water and Sanitation Safety Planning** into their strategies and have integrated adequate hygiene. Sanitation and waste-water barriers to **combat antimicrobial resistance** are in place.
6. **Chemical safety. Health impacts** from exposure to chemicals are reduced, as the health impacts from exposure to chemicals and their mixtures are **better known,** the use of chemicals is well regulated, national institutions have the **capacity** to address chemical threats, including incidents and **emergencies,** and are involved in chemicals **management activities.**
7. **Radiation safety.** Health impacts from **ultraviolet radiation** are **decreasing** through better awareness of risks, and better personal protection. Unnecessary exposures from **medical imaging techniques** are eliminated. Lung cancers from exposure to **radon** are reduced through efficient preventive measures. **Nuclear incidents** are adequately responded to and managed.
8. **Health care settings.** All health-care facilities and services are environmentally sustainable: using **safely managed water and sanitation services and clean energy;** sustainably managing their waste and procuring goods in a sustainable manner; are **resilient** to extreme weather events; and capable of protecting the health, safety and security of the **health workforce.**
9. **Workplaces.** All workplaces have systems in place for the management of **occupational health and safety** and for **promotion** of health at work. All workers have access to essential interventions for the prevention and control of occupational and work-related diseases and injuries.
10. **Global and regional setting.** International agreements and policies are in place that efficiently deal with **global and regional drivers of health,** such as climate and ecosystem change.
11. **Emergencies.** All countries have the capacity to **manage environmental health services** effectively throughout emergencies. Countries have the capacity to **respond** to chemical and nuclear events and to **protect** the occupational health and safety of emergency responders.
12. **Governance.** National and local governments (for example, of cities) have mechanisms in place that facilitate **cross-sectoral cooperation** and integrate **health in all relevant policies** and ensure that they deliver their obligations to provide safe environments for their citizens.

41. More detailed information on supporting documents and activities in the Secretariat's priority intervention areas is available.⁴

Measuring progress towards the Sustainable Development Goals

42. The main targets measuring progress, aligned with WHO's general programme of work,⁵ are listed below.

Within Goal 3

- Reduce the mortality rate from air pollution by 5%.

Within Goal 6

- Provide access to safely managed drinking water services for 1 billion people.
- Provide access to safely managed sanitation services for 0.8 billion people.
- Reduce by 40–50% the number of people in low- and middle-income countries served by hospitals without reliable electricity, basic water, and sanitation services.

Within Goal 13

- Double the amount of climate finance for health protection in low- and middle-income countries.
- Reduce by 10% mortality from climate-sensitive diseases.

43. Additional and more detailed indicators are being monitored within each of the environmental health areas. The main health-related Sustainable Development Goals and indicators are listed in Box 2.

⁴ See <http://www.who.int/media/embargo/en/> (accessed 3 July 2018).

⁵ The Thirteenth General Programme of Work, 2019–2023 initially.

Box 2. Key Sustainable Development Goals and their indicators linked to health and the environment

Goal 3. Ensure healthy lives and promote well-being for all at all ages

- 3.9.1 Mortality rate attributed to household and ambient air pollution
- 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
- 3.9.3 Mortality rate attributed to unintentional poisoning

Goal 6. Ensure availability and sustainable management of water and sanitation for all

- 6.1.1 Proportion of population using safely managed drinking water services
- 6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
- 6.3.1 Proportion of wastewater safely treated
- 6.a.1 Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
- 6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management

Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

- 7.1.2 Proportion of population with primary reliance on clean fuels and technology

Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- 8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status

Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

- 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)

Goal 12. Ensure sustainable consumption and production patterns

Goal 13. Take urgent action to combat climate change and its impacts

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Systemic issues: Policy and Institutional coherence

- 17.14.1 Number of countries with mechanisms in place to enhance policy coherence of sustainable development

Indicators in grey are those for which WHO is the custodial agency. Note that this list is not exhaustive: many more Goals and their indicators are linked to health.

ACTION BY THE REGIONAL COMMITTEE

44. The Regional Committee is invited to review and provide comments on the draft WHO global strategy on health, environment and climate change. This will inform the text of the document that will be submitted for consideration by the Executive Board at its 144th session in January 2019.

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Annex

A. WHO Regional strategies in health, environment and climate change

Earlier WHO strategies in the area of health and environment include the WHO global strategy for health and environment, 1993,¹ and the WHO public health and environment global strategy overview, 2011.² These strategies have been reinforced by recent additional global and regional WHO strategies in various environmental health areas, including those indicated below.

Cross-cutting issues

- Ostrava Declaration of Environment and Health (2017)³
- Regional Strategy for the Management of Environmental Determinants of Human Health in the African Region 2017–2021
- Arab Strategy on Health and Environment and Strategic Action Guideline 2017–2030
- Meeting of Ministers of Health and Environment of the Americas. Declaration of Mar del Plata (2005)
- PAHO resolution CD50.R16 (2010) on Health, Human Security, and Well-Being
- PAHO resolution CD51.R4 (2011) on Strategy and Plan of Action on Urban Health
- PAHO resolution CD53.R2 (2014) on Plan of Action on Health in All Policies
- United Nations General Assembly resolution 70/1 (2015): Transforming our world: the 2030 Agenda for Sustainable Development
- Resolution WHA69.11 (2016) on Health in the 2030 Agenda for Sustainable Development (multisectoral approach to the Sustainable Development Goals)
- Resolution WHA67.14 (2014) on Health in the post-2015 development agenda (multisectoral action to address environmental determinants of health)
- Regional strategy on health and the environment and plan of action 2014–2019 (Eastern Mediterranean Region).
- Health 2020 – the European policy framework for health and well-being (European Region, adopted in resolution EUR/RC62/R4 (2012))
- Resolution WHA66.11 (2013) on Health in the post-2015 development agenda
- Resolution EUR/RC60/R7 (2010) on the future of the European environment and health process
- Resolution WHA66.10 (2013) in which the Health Assembly decided to endorse the global action plan for the prevention and control of noncommunicable diseases 2013–2020

Air quality

- Regional plan of action to implement the global roadmap on air pollution and health 2017–2021 (Eastern Mediterranean Region, document EM/RC65/INF.DOC.3)

¹ WHO global strategy for health and environment, endorsed in resolution WHA46.20 (1993).

² WHO Public Health & Environment: Global Strategy Overview 2011 (http://www.who.int/phe/publications/PHE_2011_global_strategy_overview_2011.pdf?ua=1, accessed 11 June 2018).

³ The outcome document of the Sixth Ministerial Conference on Environment and Health, held in Ostrava, Czechia, on 13–15 June 2017.

- Inequalities in access are reduced by targeting WASH in disease-endemic areas and among vulnerable groups and by tailoring interventions to better interrupt disease transmission.
- Small community water supplies and sanitation waste management services are enhanced, particularly in respect of water scarcity and climate change, and with small island developing States receiving special attention.
- Health benefits from sanitation policies are achieved and interventions enhanced through integration of new WHO sanitation and health guidelines and updated wastewater use guidelines into national policies.

Problem statement/opportunity

Safe drinking water, sanitation and hygiene are crucial to human health and well-being. Not only are they a prerequisite for health, they also contribute to livelihoods, school attendance and dignity and help to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminate groundwaters and surface waters that are used for drinking water, irrigation, bathing and household purposes, creating a heavy burden on communities. Deaths from diarrhoea as a result of inadequate WASH were reduced by half during the period of the Millennium Development Goals (1990–2015), with the significant progress on provision of water and sanitation playing a key role. Overall, improvements achieved over the period of the Millennium Development Goals had a positive impact on the livelihoods of many and reduced the burden of disease related to unsafe WASH.¹

However, poor WASH conditions still account for 842 000 deaths from diarrhoea every year² and constrain effective prevention and management of other diseases and conditions including malnutrition, neglected tropical diseases and cholera. Evidence suggests that improving service levels towards safely managed drinking water or sanitation (indicators for Sustainable Development Goal targets 6.1 and 6.2) such as regulated piped water or connecting to sewers with wastewater treatment can dramatically improve health. Access to sustainable WASH services is a critical aspect of equity, is an essential element of quality Universal Health Care and is recognized by the United Nations as a fundamental human right.

The Sustainable Development Goals offer unprecedented opportunities to improve health by dramatically increasing availability and use of WASH services. WHO can contribute by supporting countries to improve policy, governance and monitoring. The Goals also present increased demands for WHO's technical assistance related to formulation of national targets, effective regulation and surveillance systems, risk management and WASH indicators. This work is supported by WHO's traditional role of monitoring, which will encompass establishing robust baselines for achievement of the Goals and tracking progress towards national and international WASH targets.

¹ WHO and UNICEF. Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines. Geneva: World Health Organization; 2017 (http://www.who.int/water_sanitation_health/publications/jmp-2017/en/, accessed 12 June 2018).

² Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries. Geneva: World Health Organization; 2014 (http://www.who.int/water_sanitation_health/publications/en/, accessed 12 June 2018).

Implementation

- Provision of a comprehensive programme of policy and technical support to Member States, based on WHO's operational framework for building climate-resilient health systems.¹
- Country led design and implementation of the WHO/UNFCCC/Conference of the Parties Presidency initiative on "Climate change and health in small island developing countries".
- Expansion of WHO's coverage of large-scale country projects on health adaptation to climate change, to reach over 30 low- and middle-income countries.
- Improved access of national health ministries to the main international climate funding streams, to triple the current level of investment of international climate finance for health by 2023.

B3. Air pollution

The objectives outlined draw upon the structure and outputs provided in the road map for an enhanced global response of to the adverse health effects of air pollution, which was welcomed by the Sixty-ninth World Health Assembly in 2016.² Building upon the priorities and support for mitigating the health impacts of air pollution, WHO's air pollution activities are built on the following set of objectives.

Global leadership and coordination

- Leveraging health sector leadership and coordinated action at the global, regional, country and city levels in order to enable an appropriate and adequate response to this major public health problem, and ensuring synergies with other global processes (e.g. 2030 Agenda for Sustainable Development, Paris Agreement).

Expanding the knowledge base

- Building and disseminating global evidence and knowledge relating to the health impacts of air pollution, the effectiveness of policies and interventions (in health terms), including self-protection to address air pollution and its sources that has been undertaken by different sectors.

Monitoring and reporting

- Enhancing systems, structures and processes needed to support monitoring and reporting on health trends associated with air pollution and its sources and fulfilling the requirements of the resolution, while contributing to the monitoring of progress with respect to the Sustainable Development Goals (i.e. Goal targets 3.9, 7.1 and 11.6).

¹ WHO operational framework for building climate-resilient health systems. Geneva: World Health Organization; 2015, and Lessons learnt on health adaptation to climate variability and change. Geneva: World Health Organization; 2015.

² See decision WHA69(11).