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Regional Plan of Action for the WHO Global Strategy on Health, Environment and Climate Change

Significant progress has been made in the WHO South-East Asia Region in addressing the environmental determinants of health, particularly relating to improvements in drinking water and sanitation coverage and strengthening advocacy and engagement for addressing the health impacts of climate change. The Region has demonstrated tangible leadership in building health systems resilience to climate change underpinned by the declaration by the health ministers of Member States at the Seventieth session of the Regional Committee for WHO South-East Asia in Maldives in 2017.

A new WHO Global Strategy on Health, Environment and Climate Change was announced by the Seventy-second World Health Assembly in May 2019. Consistent with and amplifying the themes in the Thirteenth WHO General Programme of Work, the Global Strategy sets out an integrated approach covering all relevant environmental determinants and provides the framework for the transformation needed to improve lives and well-being through healthy environments.

A Regional Plan of Action to implement the Global Strategy on Health, Environment and Climate Change has been developed for consideration of the Seventy-second Session of the WHO Regional Committee for South-East Asia. The intention of the Regional Plan of Action is not to duplicate the Global Strategy but to operationalize it focusing on those actions needed from the national and regional perspective of the WHO South-East Asia Region.

The attached Working Paper was presented to the High-Level Preparatory Meeting for its review and recommendations. The HLP Meeting reviewed the paper and made the following recommendations for the consideration of the Seventy-second Session of the Regional Committee:

Actions by Member States

- (1) Renew and implement country plans and priorities in line with the Regional Plan of Action.
- (2) Scale up actions on health, environment and climate change programmes, especially air pollution, ensuring the quality of water supplies and safeguarding vulnerable groups, and promote climate resilient health-care systems.

Actions by WHO

- (1) Include greenhouse gas mitigation in health-care facilities in the Regional Plan of Action.
- (2) Support additional resource mobilization efforts, especially from multilateral environmental mechanisms, for action at country levels.
- (3) Continue to align the workplans of WHO collaborating centres with the needs of Member States and identify additional centres of excellence, where appropriate.
- (4) Update the Regional Plan of Action with the additional inputs from Member States and to submit it to the Seventy-second Session of the WHO Regional Committee for South-East Asia for endorsement.

This Working Paper and the HLP Meeting recommendations are submitted to the Seventy-second Session of the WHO Regional Committee for South-East Asia for its consideration.

Introduction

1. Significant progress has been made in the WHO South-East Asia Region in addressing the environmental determinants of health, particularly relating to improvements in drinking water and sanitation coverage and strengthening advocacy and engagement for addressing the health impacts of climate change. The Region has demonstrated tangible leadership in building health systems resilience to climate change underpinned by the Declaration by health ministers of Member States at the Seventieth session of the Regional Committee for WHO South-East Asia in Maldives in 2017.

2. A new WHO Global Strategy on Health, Environment and Climate change was announced by the Seventy-second World Health Assembly in May 2019.¹ Its aim is to sustainably improve lives and well-being through healthy environments. It provides a vision and way forward on how the world and the global health community need to respond to environmental health challenges in the 10-year period 2020–2030. The Global Strategy sets out a transformational approach for action – switching the focus towards the upstream determinants of health, environment and climate change in an integrated and mainstreamed approach across all sectors.

3. The proposed Global Strategy identifies the following 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 and households, and emergency platforms.

4. The Global Strategy is particularly relevant for Member States in the WHO South-East Asia Region, which continue to face a combination of both long-standing, unresolved, as well as new, environmental health challenges. This “double burden” ranges from a lack of universal access to clean household energy, safe water and sanitation; the consequences of unsustainable development exacerbating air, water and soil pollution; and exposure to hazardous chemicals and toxic pesticides; to more complex, chronic and combined exposures at work and other settings. Such challenges are compounded by a high vulnerability to climate change with impacts on climate-sensitive disease patterns, more frequent heat waves, droughts and floods, and the related impacts on human health.

5. The adoption of the Global Strategy comes at an opportune time for the Organization as it coincides with the new and ambitious Thirteenth WHO General Programme of Work (GPW13) for the period 2019–2023. The focus of GPW13 is on “promoting health, keeping the world safe and serving the vulnerable”. GPW13 is strongly based on the Sustainable Development Goals (SDGs), recognizing that the right to the highest attainable standard of health underpins all WHO work. Addressing the health impacts of climate change, environmental risks and other determinants of health in small island developing states and other vulnerable settings has a clear priority in GPW13, particularly because it recognizes that these challenges erode the prospect of achieving healthier lives, represent existential threats to human growth and development, and require a multisectoral approach to address them. In association with the new GPW13, a new process of planning country support has been initiated, focusing on what the Secretariat will deliver to achieve its priorities and results in line with achieving the SDGs.

¹ World Health Organization. Health, environment and climate change. Doc no. WHA72/15. http://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_15-en.pdf - accessed 18 June 2019.

Current situation, response and challenges

5. A regional consultation was held on 23–24 August 2018 by the WHO South-East Asia Regional Office in New Delhi, India, to consider a draft of the Global Strategy on Health, Environment and Climate Change. A report from this Consultation was provided to the Seventy-first session of the WHO Regional Committee for South-East Asia in September 2018. The Regional Committee, through its decision SEA/RC71(1), requested the Regional Director to submit the report of the regional consultation to the Director-General and to request the Regional Director to develop a draft Regional Plan of Action for the anticipated Global Strategy for submission to the Seventy-second Session of the Regional Committee in September 2019.

6. In its summary report, the Consultation recognized the key importance for the Region of building additional political support for addressing the health-related aspects of the environment, and climate and ecosystem change. It concluded that additional efforts were needed to create awareness and equip the health sector to engage more actively, lead in key areas and guide other sectors in adopting health-based approaches. Creating a healthy and “green” health sector was also regarded as an important action with further integration of approaches so that the main health/disease programmes also embrace the strategic objectives of primary prevention to scale-up action on health determinants. Consistent approaches at all levels – national, regional and international – were called for, with the role of regional partnerships and governance mechanisms being recognized as vitally important, given the nascent stage of progress of on health and environment in many Member States.

7. Several regional strategies, declarations and action plans already exist to guide actions to address the increasing challenges of environment and health. Most significant among these is the Malé Declaration on Building Health Systems Resilience to Climate Change and the accompanying Framework for Action adopted at the Seventieth session of the Regional Committee in 2017.

8. Member States of the WHO South-East Asia Region are not alone in their need to scale up and strengthen their commitments towards and capacities for dealing with health- and environment-related issues. Low- and middle-income countries in the WHO Western Pacific Region also face considerable similar challenges. A new WHO Asia-Pacific Centre on Environment and Health in the Western Pacific Region has been established. Located in Seoul, Republic of Korea, it is an example of a geographically dispersed specialized office contributing to the work of the WHO Western Pacific Region with a focus on three areas: (i) air quality, energy and health; (ii) climate change and health; and (iii) water and the living environment.

9. An expert consultation was held by the WHO South-East Asia Regional Office in New Delhi, India, on 18–20 June 2019 to finalize a proposal for a regional plan of action for implementing the Global Strategy at regional level. The specific objectives of the Consultation were (i) to review the WHO Global Strategy for Health, Environment and Climate Change from the national and regional perspective of the WHO South-East Asia Region; (ii) to review a draft Regional Plan of Action and advise on follow-up processes, including matters that may be considered by high-level officials carrying out preparations for the Seventy-second Session of the Regional Committee for South-East Asia; and (iii) to advise on the specific means of implementing, monitoring and reviewing the proposed draft Regional Plan of Action.

The way forward

10. The attached draft Regional Plan of Action provides a way forward for further scaling-up and building momentum to address the environmental determinants of health. The draft Regional Plan of Action sets out four strategic areas of work:

- i) Scaling-up primary prevention;
- ii) Building cross-sectoral action, governance, political and social support;
- iii) Strengthening the health sector; and
- iv) Enhancing the evidence-base and risk communication.

11. The draft Regional Plan of Action does not duplicate the contents of the Global Strategy for Health, Environment and Climate Change but aims to complement it and focus on the actions needed from the national and regional perspective in the WHO South-East Asia Region. Consideration of the draft Regional Plan of Action comes at a time of heightened political and policy attention around the world. For example, in September 2019, the UN Secretary-General will convene a Climate Summit to bring leaders of world governments, the private sector and civil society together to support the multilateral process and to increase and accelerate action on the global climate situation.

12. The Regional Plan of Action will thus lend greater visibility to these issues within the South-East Asia Region and set out an integrated mandate for action on health, environment and climate change for the period 2020–2030. The draft Regional Plan of Action proposes a subset of actions to be given particular priority in the first five years, together with a means of reporting on progress which is aligned with reporting on progress of the implementation of the Malé Declaration and the Framework for Action in Building Health Systems Resilience to Climate Change in the South-East Asia Region as well as reporting on progress to the World Health Assembly on the Global Strategy.

Conclusion

11. The draft Regional Plan of Action for implementation of the WHO Global Strategy on Health, Environment and Climate Change was presented to the High-Level Preparatory Meeting in July for review. It is attached as an annex to this Working Paper.

Annex

Regional Plan of Action for Implementing the WHO Global Strategy for Health, Environment and Climate Change, 2020–2030:

Healthy environments for a healthier population

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Acronyms and abbreviations

AMR	antimicrobial resistance
ASEAN	Association of Southeast Asian Nations
CCAC	Climate and Clean Air Coalition
CSD	climate-sensitive disease
DALY	disability-adjusted life year
GPW13	WHO's Thirteenth General Programme of Work 2019–2023
IHR	International Health Regulations (2005)
IPC	infection prevention and control
NCD	noncommunicable disease
SDGs	Sustainable Development Goals
SEA	South-East Asia
UHC	universal health coverage
UN	United Nations
UNE	United Nations Environment
UNFCCC	UN Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WHO	World Health Organization
WMO	World Meteorological Organization
WSP	water safety plan

1. Background

The objective of the World Health Organization (WHO) is “the attainment by all peoples of the highest possible level of health”. One of the stated functions to achieve this objective is “to promote, in cooperation with other specialized agencies where necessary, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions and other aspects of environmental hygiene”. In addition, it states the need “to promote maternal and child health and welfare and to foster the ability to live harmoniously in a changing total environment”,¹ recognizing that environmental factors do not affect everyone equally.

The past few decades have seen important progress in the WHO South-East Asia (SEA) Region in health-related development indices such as increasing universal health coverage (UHC), reducing poverty, increasing life expectancy, and reducing infant mortality rates. Progress in addressing a number of the environmental determinants of health has been demonstrated, notably in relation to improvements in drinking water and sanitation coverage through the sustained and coordinated efforts of WHO and partners. The Region has shown tangible leadership in addressing the health impacts of climate change, particularly through the adoption of the Malé Declaration on Building Health Systems Resilience to Climate Change by ministers of health at the Seventieth Session of the WHO Regional Committee for South-East Asia in Maldives in 2017.

Despite the progress achieved, recent estimates of the environmental impact on health show the considerable number of preventable deaths and morbidity in the Region, which faces a combination of long-standing environment issues together with newer and emerging ones. Household and ambient air pollution now accounts for the largest combined burden of disease of all environmental risks and is a leading contributor to the noncommunicable disease (NCD) epidemic. Emerging global threats, such as inadequate waste management, biodiversity loss, desertification and antimicrobial resistance (AMR) are increasing, posing new challenges to health. Without taking urgent, concerted and cohesive multisectoral preventive health actions, the magnitude of the environmental risks is such that significant health gains achieved in other areas are in danger of being eroded.

The rapid acceleration in human activities and resulting impacts on the environment witnessed since the 1950s in many parts of the world and more recently in the WHO SEA Region, threaten to overwhelm society’s capacity to respond. Such a situation calls for a more holistic approach to environmental health consistent with safeguarding “planetary health”, the interdependence of the health of human civilization and the state of the natural systems on which it depends.² Traditionally, health and environment actions aim to change the conditions that make people sick in the first place. If, for example, the change in climate is beyond the ability to respond and recover, addressing these conditions will not be possible. The recognition that business as usual and acceleration of current initiatives are not sufficient in a changing planet is fundamental to the success of this Regional Plan of Action.

¹ The Constitution of the World Health Organization. Geneva: WHO; 1946(https://www.who.int/governance/eb/who_constitution_en.pdf, accessed 25 July 2019).

² Whitmee S, Haines A, Beyrer C, Boltz F, Capon AG, de Souza Dias BF et al. Safeguarding human health in the Anthropocene epoch: report of the Rockefeller Foundation–Lancet Commission on planetary health. *Lancet*. 2015;386(10007):1973–2028 (<https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2815%2960901-1/fulltext>, accessed 25 July 2019).

The WHO Global Strategy on Health, Environment and Climate Change, approved by the Seventy-second World Health Assembly in May 2019,³ calls for a transformation in the way we live, work, produce, consume and govern, with actions on the upstream determinants of health, and on the emerging threats of climate change. The Global Strategy proposes six strategic objectives for the transformation needed:

- primary prevention: to scale up action on health determinants for protection and improvement in the 2030 Agenda for Sustainable Development;
- cross-sectoral action: to act on determinants of health in all policies and in all sectors;
- strengthening the health sector: to strengthen health sector leadership, governance and coordination roles;
- building support: to build mechanisms for governance, as well as political and social support;
- enhancing evidence and communication: to generate the evidence base on risks and solutions, and to efficiently communicate that information to guide choices and investments;
- monitoring: to guide actions by tracking progress towards the Sustainable Development Goals (SDGs).

The actions proposed in the Global Strategy are themselves aligned to the three strategic priorities of WHO's 13th General Programme of Work 2019–2023 (GPW13): Achieving universal health coverage; Addressing health emergencies; and Promoting healthier populations. Addressing the environmental determinants of health will contribute to all three priorities but is expected to have the biggest impact on promoting healthier populations. GPW13 is itself also strongly linked to the 2030 Agenda on Sustainable Development. The SDGs recognize the central importance of multisectoral action in achieving the 2030 Agenda, because of the broad range of determinants that act on people's health. Several environmental determinants resulting from policies in sectors other than health, notably agriculture and nutrition, climate, transport, housing, finance, education, and water and sanitation, are widely recognized as important for achieving healthier populations.

The WHO South-East Asia Regional Plan of Action for implementing the Global Strategy for Health, Environment and Climate Change is a 10-year set of actions for realizing the Global Strategy at the regional level. It is fully aligned with the Global Strategy but tailored to the priorities, situations and contexts of Member States in the Region. It considers advances made in the Region and the challenges that remain. It draws upon successful interagency initiatives operating at global and regional levels as well as earlier work and the scope for new alliances.

The Plan of Action builds upon the following:

- the Malé Declaration on Building Health Systems Resilience to Climate Change endorsed at the Seventieth session of the WHO Regional Committee for South-East Asia (Maldives, 2017). The Declaration recognizes the adverse impacts of climate change on human health and health systems, the potential for extreme

³ Health, environment and climate change. In: Seventy-second World Health Assembly, 2019. Geneva: WHO; 2019 (http://apps.who.int/gb/ebwha/pdf_files/WHA72/A72_15-en.pdf, accessed 25 July 2019).

weather events to overwhelm the health sector's response capacity, and the health threats that such events pose to vulnerable populations. In the Malé Declaration, ministers of health agreed, inter alia, to continue to raise public and policy awareness of climate change across whole societies and encourage the leading role of the health sector in addressing such impacts;

- the Framework for Action in Building Health Systems Resilience to Climate Change in WHO South-East Asia Region 2017–2022 provides the operational guidance for implementing the Malé Declaration and identifies six building blocks of the health system (leadership and governance, health workforce, health information system, essential medical products and technologies, service delivery and financing) as the important starting points for building resilience to climate change;
- discussions at the Thirty-second Meeting of Ministers of Health of the WHO SEA Region in Dhaka, Bangladesh, 2014, which considered environmental health and climate change, and some of the practical interventions needed to address the current challenges faced in the Region;
- the eight Regional Flagship Priority areas for achieving health imperatives in the Region, particularly those for which there is a strong link to environmental factors. These are NCDs, AMR, UHC; maternal, adolescent and newborn health; emergencies and neglected tropical diseases;
- resolutions adopted at the World Health Assembly, particularly over the past decade, on air pollution, climate change, sound management of chemicals, Minamata Convention, workers' health, water, sanitation and hygiene (WASH) as well as the related resolutions on patient safety, chemicals and radiological safety in the International Health Regulations (2005) (IHR), AMR and global initiatives such as WASH and neglected tropical diseases, WASH and vaccine-preventable diseases;
- the commitment to establish an expanded regional ministerial forum on health and environment agreed upon by the fourth Ministerial meeting of the Regional Forum for Environment and Health in Southeast and East Asian Countries.⁴ The renamed Asia-Pacific Regional Forum on Health and Environment will provide a platform for the health and environment ministers of 51 countries to collectively identify and address health and environment issues that require international actions, and as a forum to facilitate dialogue, and exchange knowledge and best practices to promote sustainable development.

The 2030 Agenda for Sustainable Development provides the important context and driver for tackling the environmental determinants of health and for monitoring progress. All the SDGs directly or indirectly impact on health and are essential to achieving SDG 3, Ensure healthy lives and promote well-being for all at all ages. The following are particularly relevant to health, environment and climate change in the Region:

- SDG 1: End poverty in all its forms everywhere.
- SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

⁴ All Member States of the WHO South-East Asia Region and Western Pacific Region and all Member States of the United Nations Environment (UNE) Asia-Pacific Region.

- SDG 6: Ensure availability and sustainable management of water and sanitation for all.
- SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all.
- SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
- SDG 12: Ensure sustainable consumption and production patterns.
- SDG 13: Take urgent action to combat climate change and its impacts.

2. Regional situation analysis

The 11 Member States of the WHO South-East Asia Region (Bangladesh, Bhutan, Democratic People’s Republic of Korea, India, Indonesia, Nepal, Maldives, Myanmar, Sri Lanka, Thailand, Timor-Leste) have a combined population of just over a quarter of the world’s total, i.e. 1.9 billion or 26.2%. They vary in size and population. Life expectancy at birth ranges from 68.9 to 79.9 years for females and 64.6 to 77.2 years for males, and the regional average for the Region for both sexes is 69.5 years. Healthy life expectancy for both males and females ranges from 58.4 to 69.8 years, with a regional average of 60.4 years. The average under-five mortality rate (per 1000 live births) is 38.9, with large differences among countries, ranging from 8.5 to 50.8.⁵

The most recent estimates of the environmental impact on health in the Region come from the WHO report *Preventing disease through healthy environments: a global assessment of the burden of disease*.⁶ Globally, 12.6 million deaths, or 23% of all deaths, and 22% of all disability-adjusted life years (DALYs) are attributable to environmental risks each year. This fraction is higher in children under 5 years, at 26%, with an estimated 1.7 million deaths. In summary, it is estimated that in the WHO SEA Region, 3.8 million deaths (representing 28% of all deaths and 24% of all DALYs in the Region) could be averted by tackling environmental risks.

By far the largest set of diseases impacted by the environment are NCDs, which account for approximately 62% of all deaths, including from ischaemic heart disease, stroke and chronic obstructive pulmonary disease, all related to ambient and household air pollution, as well as some occupational risks and specific cancers related to environmental and occupational exposure. Environmental risks contributing to infectious, parasitic, neonatal and nutritional conditions are estimated to be accountable for 21% of the total proportion of deaths. The infectious diseases responsible for the largest number of deaths are diarrhoeal diseases, related to WASH; and lower respiratory tract infections, related predominantly to household air pollution. The remaining 17% is linked to injuries for which the largest death toll comes from road traffic accidents.

⁵ World Health Statistics: monitoring for the SDGs. Geneva: WHO; 2019 (https://www.who.int/gho/publications/world_health_statistics/2018/en/, accessed 25 July 2019).

⁶ Preventing disease through healthy environments: a global assessment of the burden of disease. Geneva: WHO; 2016 (https://www.who.int/quantifying_ehimpacts/publications/preventing-disease/en/, accessed 25 July 2019).

2.1 Air pollution

Awareness of the pervasive impact of air pollution on health and its significant contribution to NCDs has grown significantly, particularly over the past five years. Air pollution affects all settings, urban and rural areas, and all socioeconomic and age groups. The most vulnerable groups are children, the elderly and those with underlying disease. Substantial inequities in impact are seen, with women and children disproportionately affected, particularly from household air pollution. This has a significant bearing on the fact that acute respiratory infection remains the biggest single cause of death in under-5 children in the WHO SEA Region.

WHO burden of disease estimates released in 2018 show that the WHO SEA Region is the most highly impacted of all regions from the combined effects of household and ambient air pollution, with 165.8 age-standardized deaths per 100 000 population, and 2.4 million deaths overall. By country, estimates of age-standardized deaths from air pollution per 100 000 population range widely, from 25.6 to 207.2. Household air pollution predominates in the majority of countries in the Region but ambient air pollution is also growing, such that 99% of people in the Region breathe air at concentrations higher than that recommended in WHO guidelines; in a number of cases, many times greater. Sixty per cent of urban populations in the WHO SEA Region are witnessing increased air pollution trends.

Almost two thirds of the population (63%) still rely on polluting fuels for cooking, resulting in the predominant household air pollution problem in the Region with only two Member States largely using clean fuel for cooking purposes – Thailand and Maldives. While some important gains have been made and commitments have been included in all multisectoral action plans to reduce NCDs, trends in reduction of use of polluting fuels in households across the Region have not shown a convincing or dramatic decline over the past 15 years. Accelerating conversion to clean energy and improved cooking technologies is the single most important action that could be taken to address air pollution in the Region, which would contribute to lowering ambient air pollution by up to 30% in some situations.

The main sources of ambient air pollution include emissions from the burning of coal and other carbon fuels, industrial facilities, deforestation, motor vehicle exhausts, and the open burning of waste material. These are the same sources responsible for accelerating climate change. Urgent combined actions on air pollution and climate change are therefore warranted.

Following the landmark adoption of resolution WHA68.8 on addressing the health impacts of air pollution, WHO has been at the forefront of increasing actions to reduce air pollution. Member States in the Region participated strongly at the First WHO Conference on Air Pollution and Health held in October 2018, and many made commitments to strengthen their actions. The UN Secretary-General will host a Climate Action Summit in September 2019, which will further advocate for action on air pollution and health. Within the Region, countries belonging to the Association of Southeast Asian Nations (ASEAN) are developing plans or collective action on climate change and air pollution, the Asia Pacific Regional Forum on Health and Environment has identified the significance of transboundary air pollution in the Region, and several Alliances such as the Climate and Clean Air Coalition have committed to protecting the climate and improving air quality.

2.2 Water, sanitation and hygiene

Experience has shown that to successfully address widespread environmental problems, large investments of social and financial capital and coordinated multisectoral action over many years are needed. Efforts to improve WASH over the past decade have been possible only because of such commitments. Success has led to the lowering of the mortality rate to 15.4 deaths per 100 000 population in the Region, ranging from 0.3 to 19.8.⁵ Major improvements have been seen in access to basic water services, which increased from 80% in 2000 to 92% in 2017.⁷ Access to basic sanitation also increased significantly, from 27% in 2000 to 63% in 2017. Despite these improvements, some 163 800 diarrhoea deaths were estimated in 2016 due to inadequate drinking water, 153 000 deaths due to inadequate sanitation and 56 400 due to inadequate handwashing practices.⁸ The decline in diarrhoeal deaths in the Region attributable to causes related to WASH between 1990 and 2012 was 55%.⁹ Despite these improvements, significant challenges still remain to developing safely managed water and sanitation services in the Region.

The Regional Office has provided notable support to Member States on drinking water safety through the institutionalization of water safety plans (WSPs) and by developing the capacity to implement them. More than five thousand urban and rural WSPs have been implemented in the Region over the past 12 years, with sustainability of achievements backed by improvements in regulatory frameworks and technical capacity.¹⁰ Sanitation and hygiene promotion has continued through the support provided by WHO in developing national sanitation policies, sharing good practices, building capacity, and through regional sanitation forums such as the South Asian Ministerial Conference on Sanitation and the East Asian Ministerial Conference on Sanitation.

Health-care settings are environments with a high prevalence of infectious disease agents and the inclusion of WASH as an integral part of patient safety initiatives is recognized as a key part of achieving UHC. The first-ever global assessment jointly conducted by WHO and the United Nations Children's Fund (UNICEF) in 2015 found that of 60 000 health-care facilities, 40% lacked water, 19% were without adequate sanitation and 35% lacked materials for hand hygiene. Furthermore, 40% did not safely manage health-care waste.¹¹ Patients, staff, carers and neighbours at health-care settings face increased risks of infection if environmental conditions such as safe and sufficient water, basic sanitation, adequate management of waste, and appropriate knowledge and application of hygiene are not available. In 2018, the United Nations Secretary-General issued a global call for action on WASH in health facilities to call attention to this issue of fundamental importance to health and development.

Improving WASH in health-care facilities is a core component of the Framework for Action in Building Health Systems Resilience to Climate Change in South-East Asia. In collaboration with partners, the Regional Office has started to implement the Water and Sanitation for Health Facility Improvement Tool (WASH FIT), a capacity-building

⁷ Updated estimates available for household drinking water, sanitation and hygiene. In: WHO/UNICEF. JMP [website] (www.washdata.org, accessed 25 July 2019).

⁸ Global Health Observatory. In: World Health Organization [online database] (<https://www.who.int/gho/en/>, accessed 17 July 2019).

⁹ Preventing diarrhoea through better water, sanitation and hygiene: exposures and impacts in low- and middle-income countries. Geneva: WHO; 2014 (https://www.who.int/water_sanitation_health/publications/gbd_poor_water/en/, accessed 25 July 2019).

¹⁰ Sutherland D, Payden. Observations and lessons learnt from more than a decade of water safety planning in South-East Asia. WHO South-East Asia Journal of Public Health. 2017;6(2) (<http://www.searo.who.int/publications/journals/seajph/issues/seajph2017v6n2p27.pdf?ua=1>, accessed 25 July 2019).

¹¹ WASH in health care facilities: global baseline report 2019. Geneva: WHO and UNICEF; 2019 (https://www.who.int/water_sanitation_health/publications/wash-in-health-care-facilities-global-report/en/, accessed 25 July 2019).

instrument to help health facilities assess and plan improvements to reduce potential drivers of infection and AMR. Nationally representative data on WASH in health-care facilities is not yet available in all Member States of the Region and efforts are needed to improve the inclusion of WASH information in health management information systems (HMIS).

2.3 Urbanization

The WHO South-East Asia Region is a hub of social and economic development and is becoming increasingly urbanized. In 2015, 53.9% of the world's population lived in cities. In the Region, the urban population ranges from 18.3% to 61.3%, with Indonesia and the Democratic People's Republic of Korea having the highest proportion of urban population. Although the proportion of city dwellers in the Region is still relatively small by global standards, it is rapidly increasing and is expected to reach more than 970 million by 2030. The size and speed of change is remarkable.

Of the expected 30 largest cities in the world in 2020, six are in the SEA Region with a combined population of 109 million.¹² Five of the largest agglomerations in the world can be found in the Region, with Delhi ranked second only to Tokyo. Rapid and increased urbanization poses enormous challenges for the continued provision of water, sanitation, energy, transport and health care. Unplanned and lopsided development of towns and cities pose additional challenges for waste management and air quality. Cities are generally huge consumers of energy and producers of emissions that lead to climate change. Internal migration of people to towns and cities from rural areas can create additional environmental pressures due to overcrowding and lack of affordable housing.

Waste management is a growing and largely unaddressed challenge facing the Region and its rapidly urbanizing metros. Solid waste is commonly haphazardly disposed of at dumpsites within or outside city boundaries with limited systems for sorting and segregation into different waste streams. Fires at these dumpsites are commonplace, adding considerably to poor air quality in and around cities, and pollution of water courses. People scavenging on dumpsites for materials to recycle face considerable health risks.

In addition to municipal solid waste, the Region's rapid economic growth has led to the production of "niche" wastes such as electronic waste, construction and demolition waste, and plastic waste, each with its own health risks to those people handling it, who are often among the most impoverished and vulnerable groups in society. Seven SEA Member States have a dedicated policy on biomedical waste management; however, safe disposal of health-care waste remains low in practice, with less than half of health-care facilities reporting having a system for safely collecting, disposing of and destroying the waste they generate.

2.4 Work settings

The work setting is one of the most important sources of exposure to environmental risk factors, particularly in South-East Asia, where almost two thirds of workers are engaged in agriculture and an estimated 60% are employed in the informal sector. These situations can expose people to a wide and severe range of risk factors, including exposure to highly hazardous pesticides, high temperatures, poorly regulated working conditions and limited

¹² UN DESA 2018; World Urbanization Prospects 2018. In: Un DESA/Population Division [website] (<https://population.un.org/wup>, accessed 25 July 2019).

access to basic needs such as safe drinking water and sanitation. Although a large proportion of workers in the Region work outdoors, the impact of occupational exposure to air pollution outdoors remains largely unaddressed. Most Member States in the Region have developed policies and regulations for occupational health and safety; however, these are generally implemented in larger and more formalized workplaces. Workers in the informal sector are generally reliant on the public health system for meeting their occupational health needs. Accordingly strengthening health systems so that they can provide essential interventions and basic health services for the prevention and control of occupational and work-related diseases is being increasingly considered as a necessary part of UHC in many Member States of the Region. Policies and programmes to improve the occupational health and safety of health-care workers are missing in many Member States of the Region.

2.5 Sound management of chemicals

Employment in the Region is still predominantly in the agricultural sector, but industrial growth is increasing. The chemicals industry is one of the world's fastest-growing and largest industrial sectors globally. Countries in Asia in particular are rapidly increasing their production and use of chemicals. At the same time, awareness about the dangers of exposure to toxic chemicals and pesticides remains low. Many Member States lack the necessary capacity for conducting chemical risk assessment and risk management. Attainment of the capacity to deal with chemical events of public health significance, as defined by the IHR (2005), remains one of the lowest of all core capacities in the Region. Continued high use of chemicals considered obsolete and no longer used in most countries of the world is a concern in the Region. The high and still growing rate of asbestos use, the use of lead in decorative paints and continued use of pesticides classified as highly hazardous are notable examples.

Resolution WHA67.11 passed by the Sixty-seventh World Health Assembly on the public health impacts of exposure to mercury and mercury compounds focuses attention on the role of WHO and ministries of public health in implementing the Minamata Convention, which will see the phasing-out of all medical instruments containing mercury, such as thermometers and sphygmomanometers by 2020. Four Member States are currently Parties to this Convention and eligible for financial and technical support to assist implementation. Several Member States in the Region have established multisectoral coordination mechanisms among the relevant ministries to address the sound management of chemicals but more remains to be done.

WHO continues to support Member States in understanding and strengthening the evidence for action, enhancing the role of the health sector in the sound management of chemicals, establishing and strengthening poisons centres and accelerating the implementation of regional and international priorities by working with other sectors and United Nations (UN) agencies through existing instruments such as the Strategic Approach to International Chemicals Management (SAICM).

The WHO Chemicals Road Map¹³ approved by the Seventieth World Health Assembly identifies the actions where ministries of health have a lead or key role to play in the sound management of chemicals. The Road Map is accompanied by a workbook, which facilitates the development of national implementation and engagement plans

¹³ Road map to enhance health sector engagement in the Strategic Approach to International Chemicals Management towards the 2020 goal and beyond. Geneva: WHO; 2017 [WHO/FWC/EPE/17.03] (<http://www.saicm.org/Portals/12/Documents/WHO%20-%20Chemicals%20Roadmap%20Brochure%20Final%2031Aug%202017.pdf>, accessed 25 July 2019).

depending on national circumstances. The WHO Global Chemicals and Health Network has been established to facilitate implementation of the Road Map. Increasing the participation of SEA Member States in this Network would help build and strengthen networks and partnerships within and beyond the Region.

2.6 Climate change

Perhaps nowhere is the interlinkage and interdependence of health and environment more dramatic than when considering the impact of climate change on health. Climate change is a significant and emerging threat to public health. WHO has an active and long-standing programme on protecting health from climate change, guided by a World Health Assembly resolution (WHA61.19) and a resolution of the Sixty-second session of the Regional Committee for South-East Asia (RC62/R2).

Despite the work of the UN Framework Convention on Climate Change (UNFCCC), the evidence from the Intergovernmental Panel on Climate Change, and growing concerns for the health of the people and the planet, greenhouse gas emissions have not yet decreased sufficiently to limit global warming and avert severe consequences to public health in the Region. Although there has been an overall increase in emissions in all SEA Member States, they are all still below the world average at the capita level. In 2017, the world emitted 4.91 tonnes of CO₂ per capita. Member States of the Region had emissions ranging from 0.28 to 4.07 tonnes per capita in the same year. Total emissions for the Region were 9.25% of the total. This represents a substantial increase from 1990, when this fraction was 4.48%.

In the 50 years between 1966 and 2015, there were 8518 climate-related disasters (floods, storms and droughts) globally, which resulted in over 1.8 million deaths. The number of events in the eleven Member States of the SEA Region accounted for 14% of all global events, and 10% of all economic costs. They had a much larger human cost, however, with 44% of all deaths, 37% of all injured persons and 40% of all affected persons recorded for the SEA Region.¹⁴

Member States of the Region are particularly vulnerable to extreme weather events and climate change. Dependence on agriculture, with a preponderance of small-scale and marginal farmers, large rural populations, expanding urban populations including slum dwellers, large proportions of the population living in mountainous and low-lying coastal areas and island communities are particular factors influencing the climate vulnerability of the Region. The pre-existing and high burden of climate-sensitive diseases, including malnutrition, vector-borne and air pollution-related diseases creates additional vulnerability. Awareness of the impact of climate change and health is at a mature level in all Member States.

All Member States of the Region have identified the key health vulnerabilities to climate change and have started work to integrate these into national climate change programmes. However, much remains to be done and at a faster pace. The Malé Declaration is a bold initiative by health ministers of the Region to help achieve this, putting emphasis on building health systems resilience to climate change, greening the health sector, strengthening health information systems and developing health national adaptation plans. Further work needs to be done to integrate the surveillance of climate-sensitive

¹⁴ EM-DAT: The International Disaster Database [online database] (<https://www.emdat.be/>, accessed 25 July 2019).

diseases, development of early warning systems, climate-resilient WSPs and tools for the integrated monitoring of air quality and health data; inclusion of climate risks in planning and implementing disease programmes and greater mobilization of resources for adaptation and mitigation measures.

Freshwater depletion, land degradation and desertification, biodiversity loss and climate change are some of the environmental changes that are already starting to impact human health. These changes magnify existing risks such as from zoonoses and vector-borne diseases; flood, droughts, heatwaves, storms and other extreme climate events may reduce agricultural yields and cause displacement of populations and result in further health consequences from loss of livelihoods.

In summary, the threats to health from climate change are different, more varied, more complex and larger than encountered by the health sector in its normal day-to-day activities, requiring the sector to rethink the way it responds to environmental determinants and the way it scales up its actions. Considering the enormity of the challenge, the health sector must also effectively advocate for actions to mitigate climate change, while working to build resilient health systems and health-care facilities.

3. Vision and objectives

The Regional Plan of Action for WHO South-East Asia Region is guided by the vision of the Global Strategy of “a world in which sustainable development has eliminated almost one quarter of the disease burden caused by unhealthy environments, through health protection and promotion, good public health standards, preventive action in relevant sectors and healthy life choices, and which manages environmental risks to health. Key sectors fully integrate health into their decision-making process and maximize societal welfare.”

From a regional perspective, we adopt the same vision. Our goal is:

Healthy environments for a healthier population

4. Strategic areas

The goal calls for actions in four strategic areas:

1) *Scaling up primary prevention*

Primary prevention aims to prevent disease or injury before it occurs by preventing exposure to the hazards that cause disease or injury or by altering unsafe behaviours. A transformation in the way we address health determinants is essential to reduce one quarter of the deaths and substantial morbidity linked to the environment. To address the current challenges, there should be a focus on addressing the root causes of the problems rather than treating individual diseases, or merely reducing exposure. Better integrated approaches, including embedding environmental health actions in key policies and approaches used by sectors other than health, are needed to ensure health protection.

2) *Building cross-sectoral action, governance, and political and social support*

It is clear that the health sector can never resolve the problems that result from other sectors by acting alone. There must be strong commitment to work across sectors to systematically address health risks through approaches such as “health in all policies”, health impact assessment and community engagement. Cross-sectoral action is also needed to encourage investments in common goods for health, such as clean air and water, and for evaluation of the health benefits of policy actions across governments.

The 2030 Agenda for Sustainable Development calls for working across sectors and building partnerships to address complex problems. Governance mechanisms, agreements and political will should include interdepartmental and intersectoral cooperation as well as political movements and enabling agreements. New and existing partnerships and collaborations that enable an increased and sustainable response to current and emerging problems and reduce health impacts and inequities should be put in place.

3) *Strengthening the health sector*

Health leaders need to play a pivotal role in driving transformation towards an equitable and sustainable world, a world where the health of the environment and the health of people are jointly prioritized and addressed with full political and social support. To achieve this, the capacity of the health sector needs to be strengthened. It should have the skills and resources to engage in cross-sectoral dialogue and provide guidance to establish the necessary frameworks for the assessment of health impacts and health benefits. Ensuring that essential environmental services are provided in health-care facilities, that the occupational health of health-care workers themselves is protected and that initiatives and movements such as “greening the health sector” are promoted are critically important to ensure that the health sector leads by example and ensures that its own actions do no harm. Building health systems resilience to climate change by understanding, monitoring, anticipating, communicating and preparing for climate-related health risks is vital.

4) *Enhancing the evidence base and risk communication*

Sufficient evidence-based information should be available to act on all critical environmental health problems. There may be knowledge gaps and incomplete evidence regarding some risks to health, particularly those regarded as new or emerging such as electronic waste, nanoparticles, microplastics and mixtures of different chemicals and these will need to be resolved through ongoing research. Knowledge gaps regarding the best, most efficient and cost-effective interventions should be prioritized for filling.

Communication gaps need to be addressed urgently, in areas where knowledge of environmental health problems may not be acted upon because of insufficient information and awareness, and there are difficulties in compiling relevant information at the national level. In many SEA Member States, the infrastructure for monitoring and health surveillance should be strengthened and linked with environmental monitoring systems. All channels of communication and information provision, including social media, should be utilized. Monitoring of progress towards the health-related SDGs and other relevant indicators of health, environment and climate change will help to prompt timely availability of data and assessments for action.

5. Strategic actions

For each strategic area of the Regional Plan of Action, two sets of actions are identified: “Actions by Member States” and “Actions by WHO”. The first set contains recommended interventions, mostly at the national level, for consideration by Member States. The second set covers activities to be conducted by WHO, with contribution from all three levels of the Organization and in collaboration with Member States and partners.

5.1 Area 1: Scaling up primary prevention

Under this strategic area, the actions of the health sector will be scaled up to tackle the environmental determinants of health, with specific attention to ambient and household air pollution, WASH, chemicals, radiation and climate change. This will take place in several settings, including workplaces, schools, cities, housing and health-care facilities.

Strategic Action 1.1: Enhance the implementation of a culture of disease prevention to target the environmental determinants of health

Reducing the 3.8 million deaths, which represent 28% of all deaths linked to the environment in the Region, will require a shift in actions, human resources and financing towards the reduction of environmental risks. This transformational change in the health sector will result in reduced morbidity and mortality with reduced costs to the sector.

Actions by Member States

- C1.1.1 Systematically engage with relevant sectors to integrate action on the environmental determinants of health into key health programmes.
- C1.1.2 Establish effective systems for surveillance of the health impacts of priority environmental determinants of health, particularly air pollution, chemicals and climate-sensitive diseases.
- C1.1.3 Advocate for co-benefits to health by promoting climate change mitigation strategies.
- C.1.1.4 Reduce vulnerability to climate change by providing early warning systems for heat waves, disease outbreaks and natural disasters.
- C.1.1.5 Ensure that infrastructure, such as water supply and sanitation systems, and health-care facilities are resilient to floods, cyclones and earthquakes.
- C.1.1.6 Systematically engage with relevant sectors to integrate action on the environmental determinants of health into key health programmes.
- C.1.1.7 Establish effective systems for surveillance of the health impacts of priority environmental determinants of health, particularly air pollution, chemicals and climate-sensitive diseases.
- C.1.1.8 Advocate for co-benefits to health by promoting climate change mitigation strategies.
- C.1.1.9 Reduce vulnerability to climate change by providing early warning systems for heat waves, disease outbreaks and natural disasters.
- C.1.1.10 Ensure that infrastructure, such as water supply and sanitation systems, and health-care facilities are resilient to floods, cyclones and earthquakes.

Actions by WHO

- W.1.1.1 Develop tools to monitor and raise awareness on climate change risks in various climate-sensitive disease programmes and support Member States in developing/updating health risk maps for climate-sensitive diseases.
- W.1.1.2 Develop and promote the use of tools for linking data from monitoring of the environmental determinants with health data.
- W.1.1.3 At the regional level, strengthen inter-programmatic coordination, dialogue and activities to accelerate the integration of climate action in all health/disease programmes.
- W.1.1.4 Support climate change mitigation efforts by promoting actions that reduce carbon emissions and simultaneously yield co-benefits to health.
- W.1.1.5 Develop roadmaps specifically to guide Member States on actions to reduce air pollution.

Strategic Action 1.2: Urgently renew and revise programmes and policies on health and environment and accelerate action towards the SDGs for health protection

This action will assist Member States in systematically identifying the health and environment issues that need sustaining, accelerating or innovating and will support capacity-building within and outside the health sector.

Actions by Member States

- C1.2.1 Review and update the mandate of environmental health programmes as necessary to ensure integrated coverage of health, environment and climate change, and strengthen governance and coordination with the relevant sectors.
- C1.2.2 Promote universal access to safely managed water and sanitation and basic handwashing facilities in all settings.
- C1.2.3 Promote the adoption of clean household energy solutions, including through innovations in financing and business models; and prioritize fuels and technologies that offer substantial health benefits during the transition to clean energy.
- C1.2.4 Scale up and innovate actions to reduce and substantially eliminate household air pollution under multisectoral NCD action plans.
- C1.2.5 Support the relevant sectors to develop or strengthen and implement regulations to control the environmental determinants of health.
- C1.2.6 Develop or strengthen capacity to monitor progress towards the health and environment-related SDG targets.
- C1.2.7 Strengthen programmes to address work-related environmental risks such as heat, cold, air pollution, chemicals and pesticide exposure and solar radiation among vulnerable groups, such as workers and children.

Actions by WHO

- W1.2.1 Provide policy, strategy, technical support and training to Member States to build national capacity to accelerate and sustain environmental interventions addressing air pollution, WASH, chemical and radiation safety, workers' health, environmental emergencies and others.
- W1.2.2 Support Member States in monitoring and reporting on the SDG health- and environment-related indicators and strengthen national capacities to track progress towards relevant national targets.
- W1.2.3 Provide guidance to protect vulnerable groups from environmental hazards.
- W1.2.4 Support Member States in sustaining and accelerating health and environment interventions based on settings such as workplaces, cities, housing and health-care facilities through tailored intervention packages.

5.2 Area 2: Building cross-sectoral action, governance, and political and social support

Actions in this area will support Member States in building partnerships and implementing work across the different sectors whose actions impact on health. They will also assist in monitoring and implementing actions in the context of the 2030 Agenda for Sustainable Development and the SDGs.

Strategic Action 2.1: Support current partnerships and build new ones where required to ensure all sectors and stakeholders are active participants in the implementation of health protection actions

This action requires the development of strategies to strengthen engagement with all relevant sectors. This includes developing mechanisms to share information between ministries in Member States, between local and national governments, and among countries. Important work can be achieved through the full participation and engagement of all Member States in the Asia-Pacific Regional Forum on Health and Environment.

Actions by Member States

- C2.1.1 Scale up training and education and develop competencies to address the environmental determinants of health in collaboration with cross-sectoral partners.
- C2.1.2 Actively contribute to national monitoring and reporting on the SDG indicators beyond SDG 3 that are most relevant for health, environment and climate change in collaboration with cross-sectoral partners.
- C2.1.3 Scale up the use of practical tools for addressing the environmental determinants of health in health-service delivery (e.g. WASH FIT for health-care facilities and the HealthWISE tool for improving work conditions, occupational health and safety for health workers¹⁵).
- C2.1.4 Integrate workers' health into national health security plans, including the IHR (2005).

¹⁵ HealthWISE – Work Improvement in Health Services. In: International Labour Organization [website] (https://www.ilo.org/sector/Resources/training-materials/WCMS_250540/lang--en/index.htm, accessed 25 July 2019).

Actions by WHO

- W2.1.1 Together with partners, scale up the availability of norms, guidance, tools and materials for implementing actions to protect health within and outside the health sector.
- W2.1.2 Together with partners, scale up training, education and competency development to support implementation of actions to protect health within and outside the health sector.
- W2.1.3 Engage with cities and other local government bodies to stimulate and support cross-sectoral actions to protect health at the local level.
- W2.1.4 Support Global Health Cluster partners in monitoring and improving WASH in health-care facilities in emergencies.

Strategic Action 2.2: Strengthen cross-sectoral action based on the implementation of the health and environment-related SDGs, targets and indicators

This action aims to support Member States in implementing health protection actions in key SDGs, targets and indicators relevant to health, environment and climate change. This requires interagency and intersectoral arrangements, given that those SDG indicators in health, environment and climate change are collected by sectors other than health.

Actions by Member States

- C2.2.1 Strengthen governance mechanisms to promote health in all policies relating to health, environment and climate change.
- C2.2.2 Promote transdisciplinary research on the environmental determinants of health and relevant policy solutions.

Actions by WHO

- W2.2.1 Support implementation at country level of global and regional initiatives such as the roadmap for enhanced global response to the adverse health effects of air pollution, the WHO Chemicals Road Map, the Global Action Plan for Pneumonia and Diarrhoea, the Global Strategy on Neglected Tropical Diseases, the Global Action Plan on Antimicrobial Resistance and initiatives on patient safety, infection prevention and control and improving the quality of care for mothers and newborns.
- W2.2.2 Develop, update and disseminate norms, guidance, packages, tools and training materials on ambient and household air pollution, water, sanitation and hygiene, and other risk factors.
- W2.2.3 Build health sector capacity at country and regional levels to facilitate the use of clean household energy, implement climate-resilient WSPs, improve WASH in health-care facilities, scale up sanitation safety planning, and strengthen air and water quality surveillance and monitoring programmes.
- W2.2.4 Monitor and report on the health and environment-related SDGs and strengthen Member States' capacities to track progress towards national targets.

- W2.2.5 Improve sharing and access to knowledge and information through mechanisms such as global knowledge platforms, health observatories and databases.
- W2.2.6 Raise awareness of the risks of ambient and household air pollution to health through global communications campaigns, such as BreatheLife, and provide support for national awareness-raising programmes.

5.3 Area 3: Strengthening the health sector

This area will support health leadership in Member States, and build the necessary political and social support to effectively respond to environmental determinants of health.

Strategic Action 3.1: Implement strategies to strengthen health systems in Member States to build the required expertise, including through innovative ways, to address current and emerging health and environment risks

This action will improve information for health leaders, particularly on subjects in which the health sector is less engaged, such as climate change, equipping them with the latest evidence to better influence the policies of other sectors and effectively contribute to high-level engagements and participation in international conventions and agreements.

Actions by Member States

- C3.1.1 Develop the capacities of the primary health workforce to better identify, assess, monitor and manage environmental and work-related injury and disease.
- C3.1.2 Strengthen national institutional capacities within ministries of health to address the environmental determinants of health, including incident and emergency response.
- C3.1.3 Integrate health and environment issues in the curricula of medical and allied health sciences and periodically update and include these in continuing professional education.
- C3.1.4 Establish and strengthen poison centres for the prevention and control of poisoning.
- C3.1.5 Build national capacity to implement the IHR (2005), specifically to respond to chemical and radiation incidents and emergencies.

Actions by WHO

- W3.1.1 Provide policy, strategy and technical support to Member States to build national capacity to promote innovative solutions such as integration of clean household energy interventions in public health programmes, implementation of risk-based approaches to water quality management, sanitation safety planning, mitigation and adaptation to climate change.
- W3.1.2 Provide training to national climate change and health focal points.
- W3.1.3 Identify experts to support Member States in analysing health, environment and climate data for developing and strengthening early warning systems.

Strategic Action 3.2: Promote health-care facilities that are climate-resilient, green and healthy

This area focuses on environmental health services as a part of achieving UHC. Health-care facilities must be properly equipped with safely managed WASH services and facilities and reliable energy supplies. Actions to green the health sector, support low-carbon health care, mitigate greenhouse gases and make the health sector environmentally sustainable and climate-resilient are mutually supportive. WHO and partners have developed extensive methods and tools for implementing climate-informed health early warning systems, building climate resilience, and strengthening the environmental sustainability of health-care facilities. There is a need to strengthen the role of the health sector in promoting health co-benefits of climate change mitigation and present the evidence for action to those sectors most responsible for global warming.

Actions by Member States

- C3.2.1 Periodically monitor improvements in climate resilience and in reducing the environmental impact of health-care facilities.
- C3.2.2 Implement climate-resilient and sustainable health systems by ensuring that health-care facilities have reliable energy and WASH services, are resilient to extreme weather, and reduce their environmental impact, including their carbon footprint, and mitigating the production of greenhouse gases.
- C3.2.3 Improve chemical and radiation safety measures and medical waste management in health-care settings.
- C3.2.4 Institutionalize systems of occupational health and safety and well-being for health-care workers.

Actions by WHO

- W3.2.1 Provide policy, strategy, technical support and training to Member States to build national capacity for climate resilience in the health system and to promote climate resilience in health-determining sectors.
- W3.2.2 Document and disseminate good practices in the SEA Region on promoting climate-resilient health-care facilities and reducing carbon emissions by the health sector.
- W3.2.3 Support Member States in strengthening and implementing standards for WASH in health-care facilities, and in accessing and using tools for assessing and improving WASH services in these facilities.
- W3.2.4 Assess gaps in WASH services and ensure access to clean and sustainable sources of energy in health-care facilities.
- W3.2.5 Include climate risks in the risk reduction plans and programmes of the Regional Office.
- W3.2.6 Stimulate action at regional and country levels to respond to the UN Secretary-General's global call to action for WASH in all health-care facilities.
- W3.2.7 Develop a guidance tool for assessing the vulnerability of health-care facilities to climate change.

- W3.2.8 Provide advice and guidance on electrical power demands for essential health-care services and energy-efficient medical devices for resource-constrained settings.

5.4 Area 4: Enhancing the evidence base and risk communication

This area seeks to enhance the evidence base on health, environment and climate change by fully leveraging existing information and generating new evidence where needed and by creating additional infrastructure for monitoring and health surveillance. A platform will be created for risk communication and awareness-raising.

Strategic Action 4.1: Estimate and communicate the burden of disease, cost of inaction and the benefits of policy-based options based on a co-benefits approach

This action promotes the use of evidence-based norms and guidance to support action at the national level. This includes supporting Member States to perform risk assessment, burden of disease estimates and strengthen communication for the environmental determinants of health. Where knowledge of the national burden of disease from environmental risks is lacking, decision-making on priority actions can be challenging, impeding the availability of accurate cost estimates of interventions and hindering action.

This action also seeks to improve the presentation of information on health, environment and climate change in a more easily accessible form for decision-makers. WHO will work with Member States to produce information for communication both within and beyond the health sector, including for awareness-raising. The best use will be made of new and emerging communication technologies. Greater availability of health, environment and climate profiles for Member States with the aim of triggering action and investment are needed. Support will be given to Member States to strengthen the monitoring of health, environment and climate change within national policies as well as with international conventions and agreements on the environment.

Actions by Member States

- C4.1.1 Compile and improve the availability of existing data and evidence on burden of disease estimates, particularly for high-priority issues such as air pollution and WASH.
- C4.1.2 Implement effective communication strategies to raise awareness among the public and among decision-makers and stakeholders on the health benefits of policy interventions.
- C4.1.3 Develop national guidelines for estimating the burden of disease, costs of inaction and the benefits of policy-based interventions based on a co-benefits approach to environmental risk factors.
- C4.1.4 Harness new technology to help the public visualize environmental health problems and increase dissemination of information, including to mainstream social media and other interactive platforms.

Actions by WHO

- W4.1.1 Strengthen national capacities to estimate the burden of disease and costs due to environmental risks to health in air pollution and WASH.

- W4.1.2 Conduct global communications campaigns and support their implementation at national and local levels to raise awareness among the public and at political levels on the health and economic impacts of environmental risks to health, including climate change.

Strategic Action 4.2: Strengthen the network of WHO collaborating centres and other centres of excellence for building capacity in Member States, conducting research, and national and regional health, environment and climate change assessments

This action seeks to continue the strong contributions made by WHO collaborating centres and other centres of excellence. Strengthening existing centres and identifying new ones in health, environment and climate change will help the generation and dissemination of evidence, including on the effectiveness of interventions. These centres could assist in developing and implementing a regional research agenda; estimating the costs of climate change impacts on health; building health systems resilience to climate change; identifying and addressing knowledge gaps, and helping to build research capacity; and strengthen health- and environment-related information and surveillance systems.

Actions by Member States

- C4.2.1 Establish and sustain networks of research centres and centres of excellence that address the environmental determinants of health.
- C4.2.2 Engage in the Asia-Pacific Regional Forum on Health and Environment to share information, and advocate for stronger support for policies and actions on environment and health issues, including those of a transboundary nature.
- C4.2.3 Engage centres of excellence and other relevant institutions to conduct research to fill gaps in knowledge and evidence on the environmental determinants of health.

Actions by WHO

- W4.2.1 Develop and promote a regional research agenda and support Member States in developing national research agendas in support of regional and national health, environment and climate change objectives.
- W4.2.2 Facilitate collaboration among WHO collaborating centres, national centres of excellence, extra-regional research centres, and global networks such as the WHO Chemical Risk Assessment Network and the WHO Radiation Emergency Medical Preparedness and Assistance Network (REMPAN).
- W4.2.3 Develop at least one institute in the Region as a WHO collaborating centre on climate and health.
- W4.2.4 Develop and support an SEA Region climate change and health research network.
- W4.2.5 Facilitate regional cooperation on climate and health research and exchange of experiences.
- W4.2.6 Encourage WHO collaborating centres to support the filling in of gaps in knowledge and evidence on the environmental determinants of health.

6. Implementation

The success of this Regional Plan of Action for Implementing the WHO Global Strategy on Health, Environment and Climate Change will depend in large part on strengthening collaboration with new and existing partners and increasing inter-programmatic collaboration within the health sector itself.

6.1 Working with partners, including new alliances

Strengthening long-standing alliances between WHO and key UN partners, and new WHO–UN alliances will provide additional support and momentum for implementing the Regional Plan of Action. There are many examples of new initiatives at both the global and regional levels reflecting the interest of partners in supporting work on health and environment. WHO and UN Environment (UNE), for example, have long collaborated on a range of health and environment issues and, in 2016, formalized a new collaboration to step up joint actions to combat air pollution, climate change and AMR as well as improving coordination on waste and chemicals management, water quality and food and nutrition issues. WHO, the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) are spearheading action against AMR, speaking as one voice and taking collective action.

In 2018, WHO, UNE and WMO launched a global coalition on health, environment and climate change, focusing initially on air quality. Together, the Climate and Clean Air Coalition, WMO, WHO, the World Bank and UNE support the global communications and networking campaign for BreatheLife, aiming to mobilize cities and individuals to protect health and the planet from the effects of air pollution.¹⁶ WHO and the International Labour Organization (ILO) also share a long history of collaboration on occupational health and safety issues.

At the regional level, priorities for WHO–ILO collaboration include occupational exposure to toxic chemicals and other hazardous substances and strengthening occupational health services in primary care settings. WHO and UNICEF have worked in partnership for many decades through the Joint Monitoring Programme on Water Supply and Sanitation, WASH in schools and health-care facilities, and other WASH initiatives. More recently, UNICEF has initiated efforts to implement a cross-cutting strategy on environmental sustainability that opens new opportunities for collaboration on research and data analysis to expand knowledge and deepen understanding of priority issues, needs, policy options and interventions.

At the regional level, a newly launched ASEAN–UN joint activity “Using Environmental Health Data and Tools to Advance the SDGs in ASEAN” can also be an additional vehicle for supporting the implementation of the Regional Plan of Action. This vehicle should be used to demonstrate the effectiveness of policies and preventive actions; the importance of cross-sectoral cooperation; and the need for integrated solutions.

New initiatives at the highest levels of the UN, such as those emanating from the UN General Assembly resolutions on NCDs, the Secretary-General’s Climate Action Summit in September 2019, the launch of a new Health and Energy Platform and the Secretary-General’s global call to action on WASH in all health-care facilities provide further political momentum and a sense of urgency for action, particularly on air pollution, WASH and climate change.

¹⁶ BreatheLife: a global campaign for clean air (www.breatheLife2030.org, accessed 25 July 2019).

6.2 Working with the Asia-Pacific Regional Forum on Health and Environment

The Asia-Pacific Regional Forum on Health and Environment provides a platform for health and environment ministries to jointly identify and address priority health, environment and climate change issues that require regional action and to share knowledge, information and best practices that promote sustainable development, to engage in policy discussions on critical cross-sectoral issues, and to collaborate in capacity-building activities. Proceedings of ministerial and high-level official meetings stimulate and support policy development and joint programme planning at the national level, with WHO and UNE jointly providing secretariat support.

The Regional Forum advocates for continued strengthening of interministerial collaboration and outreach to health-determining sectors such as agriculture, energy, industry, housing, transport, urban development, and others. The new WHO Global Strategy on Health, Environment and Climate Change may be an agenda item for discussion in upcoming high-level and ministerial meetings. The present Regional Plan of Action can be an important activity to follow up and report on in the Forum's 2025 and 2030 ministerial meetings.

6.3 Mainstreaming into health programmes

Increasingly, evidence points to environmental risk factors as major causes of disease and injury, but much remains to be done to fully integrate such evidence into health programmes. In 2016 in the SEA Region, 3.8 million total deaths (representing 28% of all deaths and 24% of all DALYs) were linked to environmental risks. Heart disease, stroke, chronic obstructive pulmonary disease, and lower respiratory tract infections – all related to air pollution – are among the leading causes of preventable death and illness in the Region.

Exposure to certain chemicals in air, food, water and in workplaces contributes to some cancers, another leading cause of preventable death and illness. Meanwhile, lack of access to safely managed drinking water and sanitation, and adequate handwashing facilities contributes to diarrhoeal disease, the Region's leading cause of preventable deaths due to infectious disease. Climate change is expected to exacerbate disease trends in the Region and is already thought to be contributing to increases in extreme weather events and resulting injury, illness, loss of life and damage to property. Implementation of this Regional Plan of Action will improve the integration of environmental interventions and embed them in key disease prevention health programmes.

To mention a few examples, interventions to reduce air pollution and those to prevent exposure to harmful chemicals will be integrated in programmes for the prevention and control of NCDs, WASH interventions will be integrated into UHC, interventions to strengthen climate resilience of the health sector will be integrated into emergency preparedness programmes and the elimination of neglected tropical diseases. The strengthening and integration of environmental monitoring and disease surveillance will be a key transformative action, allowing health authorities to monitor the impact of environmental interventions on health and to better target interventions.

7. Monitoring and reporting on progress

Progress on the implementation of the Regional Plan of Action will be monitored against indicators defined for each strategic action and targets, as shown in Annex 1, and incorporate those of relevant SDGs. During 2020, WHO will work with Member States to identify the baseline for each indicator.

Recalling the decision of the World Health Assembly (WHA72/9) to request the Director-General to report back on progress in implementing both the WHO Global Strategy on health, environment and climate change and the Plan of Action on Climate Change in Small Island Developing States to the Seventy-fourth World Health Assembly in 2021 and also recalling the decision of the Regional Committee for WHO South-East Asia (SEA/RC70/R1) requesting the WHO Regional Director for South-East Asia to report on progress in implementing the Malé Declaration on Building Health Systems Resilience to Climate Change to the Seventy-fifth session of the WHO Regional Committee for South-East Asia in 2022.

It is suggested that a progress report on implementation of the present Regional Plan of Action also be made to the Seventy-fifth session of the WHO Regional Committee for South-East Asia in 2022, synchronized with the progress report on implementation of the Malé Declaration. Setting priorities for action by focusing on those to be achieved over five years by 2023 could be subjected to a mid-term evaluation of progress, with further periodic reporting. WHO will continue to regularly disseminate information and work to support Member States to access available financial resources and grants to support implementation of this Regional Plan of Action.

Annex 1. Proposed indicators for each strategic action

	Strategic action	Indicator
1. Scaling up primary prevention		
1.1	Enhance the implementation of a culture of disease prevention to target the environmental determinants of health.	<p>Percentage reduction of the burden of disease based on the following SDG indicators:</p> <ul style="list-style-type: none"> • SDG 3.9.1 Mortality rate attributed to household and ambient air pollution • SDG 3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe WASH for all services) • SDG 3.9.3 Mortality rate attributed to unintentional poisoning
1.2	Urgently renew and revise programmes and policies on health and environment and accelerate action towards the SDGs for health protection.	Number of countries with health, environment and climate change action plans or equivalent developed and implemented
2. Building cross-sectoral action, governance, and political and social support		
2.1	Support current partnerships and build new ones where required to ensure all sectors and stakeholders are active participants in the implementation of health protection actions.	Number of countries with established functional health and environment partnerships with health-determining sectors
2.2	Strengthen cross-sectoral action based on the implementation of the health and environment-related SDGs, targets and indicators.	<p>Number of countries reporting on the following SDG indicators:</p> <ul style="list-style-type: none"> • SDG 1.4.1 Proportion of population living in households with access to basic services • SDG 2.2.2 Prevalence of malnutrition • SDG 6.1.1 Proportion of population using safely managed drinking water services • SDG 6.2.1 Proportion of population using safely managed sanitation services, including a handwashing facility with soap and water

	Strategic action	Indicator
		<ul style="list-style-type: none"> • SDG 8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status • SDG 7.1.2 Proportion of population with primary reliance on clean fuels and technology • SDG 11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing • SDG 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted) • SDG 12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment • SDG 13.1.1. Number of deaths, missing persons and persons affected by disaster
3. Strengthening the health sector		
3.1	Implement strategies to strengthen health systems in Member States to build the required expertise, including innovative ways to address current and emerging health and environment risks.	Number of countries where the health sector is an active participant in national and international platforms for health, environment and climate change
3.2	Promote health-care facilities that are climate-resilient, green and healthy.	Number of countries reporting nationally representative data on WASH in health-care facilities

	Strategic action	Indicator
4. Enhancing the evidence base and risk communication		
4.1	Estimate and communicate the burden of disease, cost of inaction and the benefits of policy-based options based on a co-benefits approach.	Number of countries with completed burden-of-disease assessments on ambient and household air pollution, water and sanitation, which are effectively used for advocacy
4.2	Strengthen the network of WHO collaborating centres and other centres of excellence to support capacity-building in Member States, conduct research and national and regional health, environment and climate change assessments.	Number of assessments on health, environment and climate change performed by WHO collaborating centres or other WHO partners