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REGIONAL STRATEGY FOR THE MANAGEMENT OF ENVIRONMENTAL DETERMINANTS OF HUMAN HEALTH IN THE AFRICAN REGION 2017–2021

Report of the Secretariat

EXECUTIVE SUMMARY

1. In the African Region, the burden of disease attributable to environmental determinants and the consequent socioeconomic impact is substantial. Environmental risks account for 23% of the burden of disease in the African Region. Vector-borne, diarrhoeal and cardiovascular diseases, as well as lower respiratory infections are significantly attributable to environmental determinants. Air pollution, water, sanitation and hygiene are the main drivers of these diseases.

2. In response, African Ministers of Health and Environment adopted the Libreville Declaration on Health and Environment in Africa (2008) in which they committed themselves to jointly address environmental determinants of human health and ecosystems integrity. However, progress made across the Region in the implementation of the Declaration has been slower than anticipated. The adoption of the Sustainable Development Goals (SDGs) also generated renewed impetus in addressing environmental determinants of health.

3. Addressing the environment and health nexus therefore requires an up-to-date and integrated strategy, rooted in the Libreville Declaration and aligned with the SDGs. Therefore, the proposed strategy seeks to strengthen an integrated approach to the management of environmental determinants of human health in order to accelerate the implementation of the Libreville Declaration. Its implementation will contribute to the attainment of the SDGs.

4. The principal areas of focus of the strategy include safe drinking-water and sanitation and hygiene, air pollution and clean energy, chemicals and wastes, climate change, vector control and health in the workplace. Its implementation will require reviewing and reinforcing existing institutional arrangements, establishing a sustainable financing mechanism, strengthening national capacities for research, advocacy and communication, and integrated surveillance, monitoring and evaluation.

5. The Regional Committee is invited to review and adopt this strategy.

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INTRODUCTION

1. Environmental determinants of health are physical, chemical and biological agents that affect the health status of individuals and communities. In the African Region, health and environment issues include the provision of safe drinking-water; sanitation and hygiene services; management of water, soil and air pollution; vector control and management of chemicals and waste; children's environmental health; and health in the workplace.[1] These issues are influenced by socioeconomic conditions including: agriculture and food production; education; living and working conditions; unemployment; access to health-care services; housing; unplanned urbanization and urban migration; transportation, and uncontrolled, rapid population growth. All of these determinants of health outcomes are diversely affected by climate change.

2. Recognizing the importance of environmental factors as determinants of human health, African Ministers of Health and Environment adopted the Libreville Declaration on Health and Environment in Africa in 2008.[2.] This Declaration represents the overarching policy framework within which African countries coherently address environmental determinants of human health and ecosystems integrity. Since the adoption of the Libreville Declaration, the wider policy landscape has changed. Greater emphasis is now placed on protecting the environment, promoting transparent energy markets and facilitating low-carbon development policies.

3. In 2015, a set of Sustainable Development Goals (SDGs) was adopted to end poverty and pursue sustainable development over the next 15 years. The SDGs define the collective orientation to the economic, social and environmental dimensions of global development. Human health and well-being are cross-cutting themes in all the 17 SDGs. For instance, four targets[3] for Goal 3[4] relate directly to health and environment. Five other SDGs[5] directly address health and environment linkages. The 2030 Agenda provides an ideal platform for catalysing intersectoral engagement and action on environmental determinants of health. It also provides an important opening to reposition primary prevention as an approach and a prerequisite for sustainable development.

4. This regional strategy builds on progress made in implementing the Libreville Declaration, and provides guidance to Member States on addressing health and environment linkages within the context of the SDGs.

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1 World Health Organization, République Gabonaise & United Nations Environment Programme. New and Emerging Environmental Threats to Human Health. *in* First Interministerial Conference on Health and Environment in Africa: Health Security through Healthy Environments 6 (2008).

2 WHO/UNEP, the Libreville Declaration on Health and Environment in Africa, Brazzaville, World Health Organization, 2008.

3 Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases; Target 3.4: By 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and promote mental health and wellbeing; Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination; Target 3.d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

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

5 Goal 6: Ensure availability and sustainable management of water and sanitation for all; Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all; Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable; Goal 13: Take urgent action to combat climate change and its impacts; Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

SITUATION ANALYSIS AND JUSTIFICATION

5. In the African Region, 23% of premature deaths are attributable to unhealthy environments,[6] at the same time as the Region is facing a double burden of communicable and noncommunicable diseases.

6. The Region fell short of the Millennium Development Goals (MDG) target of 74% of the population with access to safe drinking-water. Access to drinking-water increased from 48% to 68% over the MDG era.[7] However, this figure hides huge social inequities, particularly between urban and rural communities, with 87% and 56% coverage, respectively.[7]

7. The Region also did not meet the MDG target of 62% access to sanitation. The proportion of the population using improved sanitation facilities increased only from 24% to 30% during the MDG period.[7] As of 2015, about 700 million people (70%) did not have access to improved sanitation facilities.[7]

8. In 2014, about 38% of Member States had legislation and policies on chemical management.[8] In addition, 32% had developed chemical events surveillance capacity, 50% had established reference laboratories for chemical detection, and only 25% had poison control centres.[8] Illegal dumping of chemicals remains a prevalent issue in their management in Africa.

9. In 2012, 4.3 million deaths globally were attributable to indoor pollution, with 580 000 of those deaths occurring in Africa, principally as a result of domestic use of solid fuel for heating, lighting and cooking.[9] The figures for outdoor air pollution were 3.7 million deaths globally, with an estimated 176 000 deaths in the Region.[10] The principal sources of ambient air pollution are energy and power generation, transport, solid waste burning, agriculture and industry. Air quality monitoring also remains a challenge. In 2016, only 39 towns and cities in 10 Member States[11] had data on ambient air quality.

10. A high proportion of the burden of NCDs is associated with air pollution, tobacco smoke and chemicals. This includes 20% for cancers, 31% for cardiovascular diseases, 31% for chronic obstructive pulmonary diseases, and 44% for asthma.[6]

11. Regarding vector-borne diseases, 90% of global malaria cases (212 million) and 92% of the deaths (429 000) in 2015 occurred in the Region.[12] Since 2014, outbreaks of arboviruses such as dengue, Rift Valley fever, Zika virus disease and yellow fever have occurred at an unprecedented pace. To date, 26 Member States[13] have integrated vector management strategies, most of them targeting only malaria as opposed to multiple vector-borne diseases.

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6 WHO. Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks, Geneva, World Health Organization, 2016.

7 UNICEF, World Health Organization. Progress on sanitation and drinking water: 2015 update and MDGs assessment. 2015.

8 WHO. Chemicals of public health concern in the African Region and their management: regional assessment report. Brazzaville, 2014.

9 WHO. Burden of disease from Household Air Pollution, 2012. http://www.who.int/phe/health_topics/outdoorair/databases/HAP_BoD_results_March2014.pdf, accessed 9 February; 2017)

10 WHO. Burden of disease from Ambient Air Pollution for 2012. http://www.who.int/phe/health_topics/outdoorair/databases/AAP_BoD_results_March2014.pdf?ua=1

11 WHO's Urban Ambient Air Pollution database -Update 2016 version 0.2 http://www.who.int/phe/health_topics/outdoorair/databases/AAP_database_summary_results_2016_v02.pdf

12 WHO, World Malaria Report 2016, Geneva, World Health Organization 2016.

13 Angola, Botswana, Cameroon, Congo, Côte d'Ivoire, DRC, Eritrea, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, South Sudan, Swaziland, Gambia, United Republic of Tanzania, Zambia and Zimbabwe.

12. The health impact of climate change includes increased vulnerability to air, water and vector-borne diseases as well as malnutrition. In 2011, the Sixty-fourth session of the WHO Regional Committee for Africa adopted the Framework for Public Health Adaptation to Climate Change through Resolution AFR/RC61/R2.[14] To date, 10 Member States[15] have completed assessments of vulnerability and adaptation to climate change and 11[16] have developed national health and climate country profiles.[17]

Justification

13. The Luanda Commitment (2010)[18] stipulates that all Member States complete situation analyses and needs assessments (SANAs) and prepare national plans of joint action (NPJAs) by 2012. However, as of 2016, only 34 Member States had finalized SANAs and only 17 of them had NPJAs.[19]

14. In addition, today, international environmental health priorities have evolved considerably with the adoption of the SDGs, the Paris Agreement on climate change (2015) and the Sendai Framework for Disaster Risk Reduction 2015-2030. Global Health Security along with antimicrobial resistance has also emerged as a top priority on the global public health agenda. The realization of all these international agendas requires a paradigm shift and a new business model based on an integrated approach to programming and service delivery.

15. Addressing the environment and health nexus therefore requires an up-to-date and integrated strategy, rooted in the Libreville Declaration and aligned with the SDGs as articulated in this strategy. This strategy will also serve as a framework for accelerating the implementation of the Libreville Declaration.

THE REGIONAL STRATEGY

Aim, objectives, milestones, targets

16. **Aim:** To reduce the burden of disease attributable to environmental determinants through safe, sustainable and health-enhancing human environments.

17. **Objectives**: The general objective is to provide guidance to Member States on addressing health and environment linkages for achieving the SDGs.

The specific objectives are:

(a) To promote synergies and coordination between the health and environment sectors in support of implementing the Libreville Declaration.

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[14] Resolution AFR/RC61/R2, Framework for Public Health Adaptation to Climate Change in the African Region. In: *Sixty-first session of the WHO Regional Committee for Africa, Yamoussoukro, Côte d'Ivoire, 29 August–2 September 2011, Final Report.* Brazzaville, World Health Organization, Regional Office for Africa, 2011 (AFR/RC61/14.), pp.8-10.

[15] Benin, Burkina Faso, Ethiopia, Ghana, Guinea, Madagascar, Malawi, Mali, United Republic of Tanzania, and Zambia.

[16] Algeria, Botswana, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Nigeria, South Africa, Uganda, and United Republic of Tanzania.

[17] Health and Climate country profiles, Geneva, World Health Organization, 2015 http://www.who.int/globalchange/resources/country-profiles/en/; accessed on 05 February 2017.

[18] WHO/UNEP. The Luanda Commitment; Brazzaville, World Health Organization, 2010.

[19] WHO/UNEP, Continental Challenges and Change. Environmental Determinants of Health in Africa: Second Synthesis Report on the Situation Analysis and Needs Assessments for the Implementation of the Libreville Declaration on Health and Environment in Africa; Brazzaville, World Health Organization, 2015.

(b) To facilitate the development and implementation of national plans of joint action for the management of environmental risk factors of human health and ecosystem integrity.

(c) To strengthen national and regional capacity for integrated monitoring and surveillance of environmental determinants of health and ecosystem integrity.

18. **Milestones and targets:**

Milestones by 2019:

(a) All Member States have established a multisectoral country task team (CTT) and developed national plans of joint action (NPJAs).

(b) At least 20 Member States have developed health national adaptation plans (HNAP) to climate change.

(c) At least 20 Member States have developed a national framework for water safety plans (WSP).

(d) At least 16 Member States have implemented water safety plans.

(e) At least 30 Member States have conducted or updated vector control needs assessment.

Target by 2021:

(a) Increase by 15% the population using safely managed drinking-water sources compared to 2016.

(b) Increase by 10% the population using safely managed sanitation services compared to 2016.

(c) At least 20 countries have data on ambient air quality.

(d) All countries have at least one functioning poison control centre or toxicology unit that meets WHO minimum requirements.

(e) At least 15 countries have developed national policy instruments for action on workers' health.

Guiding principles:

19. Implementation of the strategy will be guided by the following principles:

(a) **Country ownership and leadership:** National authorities spearhead the development of national plans of joint action in line with the SDGs.

(b) **Integration:** Integrating delivery of proven interventions for tangible progress through optimizing synergies, minimizing duplication and transaction costs.

(c) **Win-win partnership and intersectoral collaboration:** Coordinating and acting across sectors, as many different sectors play a crucial role in determining environmental risks and conditions.

(d) **Equity and human rights:** Integrating the rights to life, health, food, water and sanitation with special attention to people disproportionately affected and disadvantaged.

(e) **Community engagement:** Mainstreaming and embedding community systems within health service planning and addressing environmental health determinants.

Priority interventions

The following core interventions will be planned and implemented within the context of national plans of joint action and national programmes to develop the health and environment sectors.

20. **Strengthening the policy framework and institutional mechanisms for integrated environment and health interventions:** In line with the arrangements of the Health and Environment Strategic Alliance in Africa (2010),[20] a country coordination committee or multisectoral and multidisciplinary country task team (CTT) should be established. The CTT should reflect representation from all interested ministries, inter alia health, environment, agriculture, industry, urban planning, infrastructure, land, transport and energy, academia and research institutions, development partners and civil society.

21. **Undertaking baseline risk and capacity assessments:** A situation analysis and needs assessment (SANA) should be undertaken by Member States as a prerequisite for the development of national plans of joint action. The SANA will address the full array of environmental health determinants, the drivers that determine their associated risk levels and the management of these risks. The SANA will also address national policies and legislation, technical and institutional capacities, existing and potential intersectoral coordination mechanisms and available human and financial resources.

22. **Building infrastructural, technical and institutional capacities:** Joint capacity building of national experts operating in relevant sectors such as health, environment and meteorology on the use of environmental data, including climate information in disease surveillance and early warning should be addressed as a priority. Long-term human capacity building should focus on the integration of health education and environmental health promotion in the curricula of training institutions. National environmental health legislation, policies and frameworks should be developed or updated and aligned with the 2030 Agenda for Sustainable Development. The institutional and technical capacity of national environmental health services should be strengthened in the use of use economic analysis and methodologies such as the cost of inaction, to inform decision-making.

23. **Establishing integrated health and environment surveillance systems:** This integrated approach will help track trends in indicators that focus on environmental risk factors most relevant to health, health outcomes most influenced by the environment, and policy action deemed to reduce and prevent the risks. Member States should strengthen national monitoring capacities and data collection, including integrated surveillance capacities and early warning systems that enable health systems to anticipate, prepare for and respond to public health threats resulting from environmental degradation.

24. **Shaping the research agenda:** Member States should set research agendas, and generate adequate funding to advance them. Mechanisms should be established for consolidating scientific evidence and sharing experiences and lessons learned to guide policies and practice on environmental health at regional and national levels.

25. **Raising awareness and undertaking social mobilization**: Member States should ensure engagement of communities through reinforcing existing community systems for leadership and stewardship roles. Community literacy on health and environment linkages, climate change, social and behavioural change should also improve. Emphasis should be put on community empowerment for effective adoption and deployment of simple, cost-effective interventions.

[20] WHO/UNEP. Arrangements of Health and Environment Strategic Alliance, Brazzaville, World Health Organization, 2010.

26. **Scaling up cost-effective primary prevention interventions:** Principal areas of focus should include safe drinking-water and safe sanitation, air pollution and clean energy, chemicals and wastes, climate change and health, integrated vector management, and health in the workplace.

(a) *Improve access to safe drinking-water, sanitation and hygiene (WASH):* The necessary measures should be taken to further implement the actions agreed in resolutions WHA64.24 and WHA64.15. In line with WHO guidelines for drinking-water quality,[21] efforts should focus on scaling up existing initiatives such as water safety plans (WSP), Sanitation Safety Planning (SSP), household water treatment and safe storage (HWTS), and WASH in specific settings, including health facilities and schools. WASH should be further mainstreamed in health programming, including into nutrition, neglected tropical diseases, maternal, child and newborn health within the context of Infection Prevention and Control. Member States should ensure that their strategies are aligned with and contribute to the realization of SDG 6.

(b) *Manage air pollution and promote clean energy:* National legislation and regulatory instruments on public health should be harmonized and enforced to promote the use of clean energy sources for cooking, heating and lighting. The health sector should promote access to sustainable and clean/renewable energy in health-care facilities, and enhance sustainable urban policies in energy, transport, waste management and industry in order to reduce the emission of short-lived climate pollutants. Member States should promote air pollution monitoring and consolidate evidence on its impact on human health, in line with resolution WHA68.8[22] and SDGs 7 and 11.[5]

(c) *Manage chemicals and waste*. This will be conducted in line with the WHO road map to enhance health sector engagement in the strategic approach to international chemicals management towards the 2020 goal and beyond,[23] the Strategic Approach to International Chemical Management, the Minamata Convention on mercury and other Multilateral Environment Agreements[24] ratified by Member States, and the International Health Regulations (2005). Member States should develop national frameworks for chemical and waste management, establish and strengthen poisons centres, and surveillance alert and response mechanisms for chemical incidents.

(d) *Integrated vector management (IVM)*: Within the context of the global vector control response (Document A70/26 Rev.1.),[25] Member States should plan and implement evidence-based vector control by promoting integrated vector management (IVM) to reduce or interrupt the transmission of vector-borne diseases. Scaling up existing vector control interventions such as long-lasting insecticidal nets and indoor residual spraying; vector surveillance, including management of insecticide resistance as well as vector control operations during emergencies, should be addressed as priorities.

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21 WHO, Guidelines for drinking-water quality: Fourth edition incorporating the first addendum. Geneva, World Health Organization, 2017.

22 WHO, Health and the environment: addressing the health impact of pollution. Geneva, World Health Organization, 2015

23 WHO, The role of the health sector in the Strategic Approach to International Chemicals Management towards the 2020 Goal and beyond, May 2017, Geneva, World Health Organization, http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_36-en.pdf (accessed 3 July 2017).

24 (a) Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989); (b) Bamako Convention on the ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa (1991); (c) Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (1998); (d) Stockholm Convention on Persistent Organic Pollutants (2001). (d) Strategic Approach to International Chemicals Management (2006), and (e) Minamata Convention on Mercury (2013).

25 WHO Global vector control response, Geneva, World Health Organization, 2017: http://www.who.int/malaria/global-vector-control-response (accessed 3 July 2017).

(e) *Manage the impact of climate change on health:* Member States that are yet to conduct assessments of vulnerability and adaptation to climate change and those without health national adaptation plans (HNAP) should finalize these processes. Those with HNAP should fast-track implementation of their plans. Climate resilience should be mainstreamed in health plans and programmes in order to enhance early warning and surveillance of climate-sensitive diseases.

(f) *Promote occupational health and healthy setting initiatives:* Based on the WHO Global Plan of Action on Workers' Health,[26] national plans on workers' health should be developed and implemented. Member States should develop and implement national programmes for protection and safety of workers in the health sector. They should also scale up the protection of workers in other sectors. Particular attention should be paid to scaling up cost-effective social protection schemes and promotion of healthy settings initiatives.

Roles and responsibilities

27. Member States should:

(a) Provide stewardship and leadership; forge partnerships with donors, multilateral agencies, the private sector and civil society.

(b) Increase allocation of resources and scale up domestic investments on platforms, initiatives and programmes that address the impact of environmental factors on health.

(c) Promote intercountry stakeholders' dialogue and public–private partnerships including with intergovernmental organizations, development banks and regional economic communities, research institutions and the academia.

(d) Set the research agenda; consolidate scientific evidence and share experiences and lessons learned on managing health and environment in the African Region.

28. WHO and partners should:

(a) Set and disseminate norms and standards, policy advice and implementation guidance, including methodologies and protocols to support country actions.

(b) Facilitate capacity building and technical assistance for the development and implementation of national plans of joint action.

(c) Catalyse mobilization of domestic and external resources, and support development of national business cases for investment in priority health and environment interventions.

(d) Advocate for heightened commitment, increased visibility, prioritization, and understanding of health and environment linkages within and beyond WHO.

(e) Promote regional stakeholders' dialogue and public–private partnerships including with intergovernmental organizations, development banks and regional economic communities, research institutions and the academia.

[26] Resolution WHA60.26, Workers' health: Global Plan of Action. *In*: Sixtieth World Health Assembly. World Health Organization, 23 May 2007. http://www.who.int/occupational_health/WHO_health_assembly_en_web.pdf, accessed on 4 May 2017.

Resource implications

29. Sustained financial resources are needed to support intersectoral coordination mechanisms and to scale up investment in priority interventions. Assuming that half of the Member States will receive technical support every year at the cost of about US$ 25 000 each, the total financial implication for the Secretariat over the five-year period is projected to be US$ 2.5 million. Member States should mobilize domestic and external resources to implement the strategy, for example, through the development of national business cases for investment in priority health and environment interventions.

Monitoring and evaluation

30. Member States should establish a national integrated framework for joint monitoring and evaluation of priority intersectoral interventions on an annual basis. Member States should also continue to participate in existing global monitoring initiatives. A progress report on the implementation of this strategy should be presented to the WHO Regional Committee every two years starting in 2019.

CONCLUSION

31. Currently, environmental change and challenges, including extreme weather events, are occurring at an unprecedented pace. The Region, with highly vulnerable populations, is experiencing high burdens of both communicable and noncommunicable diseases. These include vector-borne, diarrhoeal and cardiovascular diseases, as well as lower respiratory infections that are significantly attributable to environmental determinants. Ambient and household air pollution, water, sanitation and hygiene are the environmental drivers of these diseases. These factors are now being exacerbated by the negative consequences of climate change, unplanned urbanization, rapid, uncontrolled population growth and urban migration.

32. This strategy therefore intends to better leverage the progress made in implementing the Libreville Declaration and proposes new approaches to addressing environmental determinants of human health and ecosystem integrity. Its implementation by Member States is expected to significantly contribute to the attainment of the SDGs.

33. The Regional Committee is invited to review and adopt the strategy.