

English only

MEETING REPORT

ASIA-PACIFIC REGIONAL FORUM ON HEALTH AND ENVIRONMENT

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NOTE

The views expressed in this report are those of the participants of the Asia-Pacific Regional Forum on Health and Environment and do not necessarily reflect the policies of the conveners and the Secretariat.

This report has been prepared by the World Health Organization Regional Office for the Western Pacific for Member States in the South-East Asia and Western Pacific regions, United Nations Environment Programme Regional Office for Asia and the Pacific and for those who participated in the Asia-Pacific Regional Forum on Health and Environment in Manila, Philippines, from 6 to 8 October 2016.

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SUMMARY

The Fourth Ministerial Meeting of the Regional Forum on Environment and Health in Southeast and East Asian Countries was held in Manila, Philippines, on 6–8 October 2016, as the Asia-Pacific Regional Forum on Health and Environment, reflecting the interest of more than 30 participating countries.

The Ministerial Meeting was preceded by a Scientific Dialogue and the Ninth High Level Officials Meeting of the Regional Forum. The events brought together environment and health sector leaders and officials with the objectives of:

- 1) discussing emerging environmental issues affecting health in Asia and the Pacific, including transboundary concerns;
- 2) providing updates on achievements of the Regional Forum since the Third Ministerial Meeting three years ago in Kuala Lumpur, Malaysia;
- 3) gaining consensus on how the Regional Forum can serve as a platform for cross-sector collaboration within and among countries on commitments to the Sustainable Development Goals (SDGs) and the Paris Agreement on climate change;
- 4) considering expanding membership of the Regional Forum and agree on a new title as appropriate;
- 5) finalizing the 2017–2019 workplan, setting out a viable and effective programme of work for the next three years; and
- 6) drafting and agreeing on a *Manila Declaration on Health and Environment* with updated policy directions of the Regional Forum for endorsement by the ministers of health and environment.

The Scientific Dialogue (6 October) discussed developments concerning climate change and air quality, vector-borne diseases, ecosystem disruption; sound management of chemicals and waste; and environment and health policies for achieving the SDGs. Key outcomes of the session were as follows:

- (1) Air pollution is the key environmental health issue in Asia and the Pacific and includes household air pollution and ambient air pollution. Transboundary air pollution is also significant.
- (2) Climate change is exacerbating existing health and environment problems and causing new ones. Health sector engagement needs further attention focusing on resilient and low-carbon health systems. Reducing black carbon can have significant climate and health benefits.
- (3) Ecosystem disturbance and climate change will unleash vector-borne diseases in previously unaffected areas. Vectors such as mosquitos are evolving and adapting to ecosystem modifications and climate change, while humans are not.
- (4) Scientists and policy-makers must work closely with each other to understand linkages between ecosystems, climate change and health, and to make the economic case for investment in environmental health.

- (5) Dialogue among relevant stakeholders on chemicals needs to continue due to rapid economic growth in the Region and the heavy production and use of chemicals in many sectors such as industries and agriculture. The health sector needs to be more involved in national programmes on chemical safety.
- (6) Countries are encouraged to use the SDGs as their guide in moving the health and environment agenda forward by setting national targets.

The key outcomes of the Ninth High Level Officials Meeting (7 October) were as follows:

- (1) Participants endorsed the minutes of the Eighth High Level Officials Meeting, with no objection by member countries to expanding membership of the Forum to include other countries from Asia and the Pacific.
- (2) Considering the expanded membership of the Forum, participants agreed that the Fourth Ministerial Meeting of the Regional Forum on Environment and Health in Southeast and East Asian Countries would be held as the Asia-Pacific Regional Forum on Health and Environment.
- (3) Participants endorsed the *Progress Report on the Regional Forum on Environment and Health (2013–2016)*.
- (4) Participants took note of the *Environmental Health Country Profiles* and the *Regional Synthesis of the Country Profiles*, with comments and inputs to be finalized by the Secretariat.
- (5) Participants agreed to the draft *Implementation Plan of the Regional Forum (2017–2019)*, with additional inputs and recommendations to the Plan for further discussion at the Fourth Ministerial Meeting.
- (6) Participants drafted and agreed on a *Manila Declaration on Health and Environment* for further discussion at the Fourth Ministerial Meeting.

The key outcomes of the Fourth Ministerial Meeting (8 October) were:

- (1) Participants endorsed the report of the Ninth High Level Officials Meeting, including the expanded membership of the Forum, the establishment of the taskforce to review the Regional Forum and the *Framework for Cooperation of the Regional Forum*, and the *Synthesis Report of Environmental Health Country Profiles*.
- (2) Participants took note of the messages of the keynote speakers and the discussion during the open forums on: (a) SDGs, health and the environment, and the potential for the tremendous co-benefits, including reduction of fuel subsidies, reduced coal-burning and health as a top consideration of almost all policies; and (b) climate change and health – that the issue is a tremendous one of intergenerational and social justice, that the bottom 3 billion should have access to clean energy, faith leaders must ask people to be good stewards, that nations of this region must take an aggressive

advocacy role due to their extreme vulnerability to the Western Pacific warm pool, and that action on short-lived climate pollutants is feasible, vital and rapidly effective.

- (3) Participants endorsed the *Implementation Plan of the Regional Forum (2017–2019)* with specific comments proposed by Thailand and New Zealand to be considered by the Secretariat in the final version.
- (4) Participants endorsed the *Manila Declaration on Health and Environment* with specific recommendations proposed by New Zealand, Thailand, Fiji and Vanuatu to be considered by the Secretariat in the final version along with email comments.
- (5) Regional Forum implementation plans or workplans should not duplicate existing plans, such as the climate change plans of Pacific island countries.

Participants endorsed the *Implementation Plan of the Regional Forum (2017–2019)* and the *Manila Declaration on Health and Environment*.

Recommendations for Member States:

Member States are encouraged to:

- (1) implement the recommendations proposed in the *Manila Declaration on Health and Environment* and *Implementation Plan of the Regional Forum (2017–2019)*.

Recommendations for the Secretariat:

- (1) incorporate the recommendations proposed by ministers or chief delegates during the open forum of the Fourth Ministerial Meeting as guidance for policy priorities of the Regional Forum 2017–2019;
- (2) finalize the *Implementation Plan of the Regional Forum (2017–2019)*;
- (3) incorporate comments and recommendations by Fiji, New Zealand, Thailand and Vanuatu in the *Manila Declaration on Health and Environment*;
- (4) assist the Government of the Philippines as Chair of the Regional Forum in finalizing the *Manila Declaration on Health and Environment* and sending it to all member countries of the Regional Forum; and
- (5) prepare for the meeting of the taskforce to review the Regional Forum and its Framework for Cooperation by the end of the second quarter of 2017.

1. INTRODUCTION

1.1 Organization of the forum

The Fourth Ministerial Meeting of the Regional Forum on Environment and Health in Southeast and East Asian Countries was held in Manila, Philippines, on 6–8 October 2016, as the Asia-Pacific Regional Forum on Health and Environment, reflecting the wider participation of countries from across the two WHO regions of South-East Asia and the Western Pacific.

The Regional Forum included the following events:

1. Scientific Dialogue on Environment and Health at the Centre of Sustainable Development (Thursday, 6 October 2016);
2. Ninth High Level Officials Meeting (Friday, 7 October 2016); and
3. Fourth Ministerial Meeting (Saturday, 8 October 2016).

A total of 36 countries, areas or territories attended the forum, including seven from the WHO South-East Asia Region (Bhutan, Indonesia, Maldives, Myanmar, Sri Lanka, Thailand and Democratic Republic of Timor-Leste) and 29 from the WHO Western Pacific Region (Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Hong Kong (China), Fiji, Guam (USA), Japan, Kiribati, Lao People's Democratic Republic, Malaysia, Marshall Islands, Federated States of Micronesia, Mongolia, Nauru, Macau (China), Commonwealth of the Northern Mariana Islands, New Zealand, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tuvalu, Vanuatu and Viet Nam). Besides country representatives, participants also included observers, speakers, chairs of the Thematic Working Groups (TWGs), and representatives from the Philippine Department of Health and Department of Environment and Natural Resources, bringing the total number of participants to 217.

The list of participants is attached in Annex 1.

1.2 Objectives of the forum

The objectives of the 2016 Asia-Pacific Regional Forum on Health and Environment were:

- (1) to discuss emerging environmental issues affecting health in Asia and the Pacific, including transboundary concerns;
- (2) to provide updates on achievements of the Regional Forum since the Third Ministerial Meeting three years ago in Kuala Lumpur, Malaysia;
- (3) to gain consensus on how the Regional Forum can serve as a platform for cross-sector collaboration within and among countries on commitments to the Sustainable Development Goals (SDGs) and the Paris Agreement on climate change;
- (4) to consider expanding membership of the Regional Forum and agree on a new title as appropriate;

- (5) to finalize the 2017–2019 workplan, setting out a viable and effective programme of work for the next three years; and
- (6) to draft and agree on a Manila Declaration with updated policy directions of the Regional Forum for endorsement by the ministers of health and environment.

2. PROCEEDINGS

2.1 Scientific dialogue on environment and health at the centre of sustainable development, 6 October 2016

In the opening session, welcome remarks were given by Undersecretary Gerardo Bayugo, Department of Health, Republic of the Philippines. He welcomed participants to the Scientific Dialogue of the Asia-Pacific Regional Forum on Health and Environment. He emphasized that this forum was timely to integrate the SDGs into the work of the Regional Forum. He also highlighted that the link between climate change and health has never been more relevant, affecting the determinants of health such as food and water. Health is the most human impact of climate change, poorly understood but real, irreversible and potentially very large, coming on top of many other strains on the health system. The aim is to understand not just the relationship of health and the environment but the actions needed to adapt and mitigate problems. Two major themes related to the transition from Millennium Development Goals (MDGs) to SDGs are in water, sanitation and hygiene (WaSH) and the need for green health-care facilities. Undersecretary Bayugo proposed that the Scientific Dialogue would hear options for policies on achieving the SDGs, which would also include new roles for the TWGs. There are multiple opportunities to improve health and the environment and the Scientific Dialogue should serve as a strong foundation for the discussions to follow.

After the opening remarks, a keynote address was delivered by Undersecretary Jonas R. Leones, Department of Environment and Natural Resources, Republic of the Philippines. He touched on the major health and environmental issues affecting the Philippines and the region. His keynote address focused initially on air pollution as the single biggest environmental risk. One million of the global 3.7 million deaths from ambient air pollution were in Southeast Asia, principally caused by heart disease, stroke and cancer. Motor vehicles account for 80% of air pollution in Philippine cities, where there was 17% growth in motor vehicles from 2012 to 2015. Another major issue was unsustainable fishing: fish provide 16% of global consumption of animal protein, and depleting stocks threaten future food sources as well as destroy biodiversity, coral reefs and marine ecosystems. The Philippines supports establishing marine-protected areas that create safe havens for fish and increase catch volumes around them, and it has a programme to rehabilitate coastal ecosystems.

Both air pollution and overfishing demonstrate the nexus of environment and health, hence the agreement at the United Nations Environment Assembly (UNEA) to take action to decouple, detoxify, decarbonize and defend ecosystems. The Minamata Convention on mercury and the phasing out of lead are examples of detoxification efforts amid the thousands of toxic substances in our environment. A low-carbon development pathway and decoupling of carbon and the economy seek to alleviate health risks in the food sector, water use, energy consumption and more. But policies, corporate behaviour and consumption patterns must change to support the resilience of ecosystems to secure food security and economic growth for the next generation; 2016 is challenging for all, but all countries share the health risks of rapid urbanization. Undersecretary Leones called for a mindful convergence of experts and continued dialogue to ensure implementation of plans and programmes in the region, and a liveable planet.

After the keynote address, Ms Fanny Demassieux, Environment and Health Coordinator, United Nations Environment Programme (UNEP), presented a paper on *Overview of the Sustainable Development Goals (SDGs) Related to Environment and Health*. She drew attention to what and who would be at stake if the environmental impacts on health were not taken seriously. She referred to a WHO report that in 2012, it was estimated that about 12.6 million deaths were attributed to environmental risks and hazards,¹ and 7.6 million of these deaths occur in the Asia-Pacific region. The main sources are air pollution – causing more than 4.5 million in the Asia-Pacific – inadequate water and sanitation, poor management of chemicals (around 1.3 million deaths globally), poor waste management and natural disasters. She posted some questions to understand the linkages between the environment and health and to produce appropriate solutions: do we have enough science to understand, and what are the gaps? Do we have the right kinds of science – solution-oriented science that can inform political decisions and is conducive to change, or will it remain dialogue between scientists?

She pointed out that the 20% level globally of environment-related deaths has been stable for the last decade, but noncommunicable diseases (NCDs) are now a greater proportion than the traditional risks of exposure to smoke and poor sanitation. Diet, stress and pollution are major pathways, yet there are still crucial gaps in water and energy sources, meaning there is a double burden of NCDs and communicable diseases in most countries. This requires a complex response.

She ended with the question – are we equipped to address the new challenges? The SDGs are the new equipment for countries to address the challenges and offer a much more comprehensive view of the challenges than the MDGs, including health and environment.

UNEP sees four paths: decoupling (industrial efficiency, dietary change); detoxifying (reducing exposure to harmful substances, waste management, sustainable agriculture); decarbonisation; and enhancing ecosystems resilience (resilient cities, sustainable habitat management).

Are we looking at the right drivers of health and environment risk? The Intergovernmental Panel on Climate Change (IPCC) has come up with health risks from a 4 °C rise scenario – taking no health adaptation measures will open up the full spectrum of impacts. We have for centuries taken the environment for granted. Biodiversity is about human health: without a pollination service, it leads to 1.42 million extra deaths per year. Looking at the SDGs on health and environment, we need to look at lots of different targets to improve health. SDGs are about solutions to improve health and well-being. Take the example of cities – there is an SDG target on green space in cities, because it is good for mental and physical health, increase resilience to flooding and reduce pollution from public transportation. Cities must be enabled to take action.

Are we mobilizing the right people? The SDGs are a platform to bring the community together – there are goals for energy and industry, but we need finance, transport, building, agriculture and more. To encourage colleagues in relevant sectors to make better investment decisions, we need economic arguments such as cost-benefit analysis, which we often lack. Evidence on air quality is now available: the World Bank has found that air pollution in East Asia and the Pacific costs 7.5% of GDP, and 7.4% of GDP in South Asia – evidence that it is preventing growth. There are now figures about benefits of

¹ Prüss-Ustün A, Wolf J, Corvalán C, Bos R, Neira M. Preventing disease through healthy environments: a global assessment of the burden of disease from environmental risks. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/204585/1/9789241565196_eng.pdf; accessed 28 August 2017).

actions: by doubling renewable energy share by 2030, jobs will double globally in the sector to over 16 million.

She concluded that all countries are on board to achieve SDGs, but not everything is included, such as the new knowledge on endocrine-disrupting chemicals and marine litter. However, the SDGs are a tremendous potential accelerator to address environment and health. Without succeeding on environment and health, SDGs cannot be achieved. A high-level political forum will look at progress made every year, and this is a promising venue for reporting our progress.

Finally, in this session, Ms Kakuko Nagatani-Yoshida, Regional Subprogramme Coordinator for Chemicals and Waste, UNEP Regional Office for Asia and the Pacific, introduced the programme for the Dialogue and for opportunities to build upon the more technical aspects to make them more relevant to policy.

2.1.1 Changing climate and air quality

In this session, two plenary presentations provided the scientific foundation for the dialogues on changing climate and air quality – (1) Dr Diarmid Campbell-Lendrum, Team Leader, Climate Change and Health, WHO headquarters, presented a paper on *Climate change and health country profiles*; and (2) Dr Rajasekhar Balasubramanian, Associate Professor, National University of Singapore, presented a paper on *Transboundary air pollution in Southeast Asia*.

After the presentation, a panel discussion on climate change, air quality and the SDGs was facilitated by the Chair of the TWG on Air Quality and panellists were the speakers and representatives from the Climate and Clean Air Coalition.

The main points from the presentations and the panel discussion are summarized as follows:

Climate Change and Health:

1. To stabilize the climate and meet the Paris Agreement targets (below 2 °C), the world immediately needs to start to reduce carbon emissions. In 2014, WHO estimated that climate change will cause 250,000 additional deaths, with Asia shouldering a large burden.²
2. Climate change exacerbates existing environment and health problems, and can cause new problems. WHO wants the health sector to take some ownership of the climate response – resilient and robust health systems.
3. The health sector must engage in climate mitigation and adaptation efforts, through opportunities such as the COP 22 Marrakech Health and Environment Ministerial Meeting. This means low-carbon and climate-resilient health systems. The health community should also engage in decisions determining emissions in all sectors, because health is one of the best arguments for cutting emissions and imposing carbon taxes. Governments should use health in the argument.
4. In low-lying island countries, climate change is beyond an environmental health issue – it is an existential threat; therefore, the priority is in protecting these populations and putting pressure on emitting countries to act responsibly. The health community should engage in

² Simon Hales S, Sari Kovats S, Simon Lloyd S, Diarmid Campbell-Lendrum D, editors. Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s. Geneva: World Health Organization; 2014 (http://apps.who.int/iris/bitstream/10665/134014/1/9789241507691_eng.pdf; accessed 28 August 2017).

climate mitigation and adaptation efforts, as well as in decisions determining emissions in all sectors, as one of the best arguments for cutting emissions and imposing carbon taxes is their positive impact on health.

Air Pollution:

1. Air pollutants are carcinogenic. Health effects of exposure are chronic and acute, with these aerosols transported deep in the body and bloodstream. A study of firefighters in Kalimantan, some wearing masks and some not, found that their lifetime cancer risk was well above the tolerable level. Smoke haze is more harmful to cells than conventional combustibles. Fewer antioxidants means more oxygen-reacting cells, leading to less protection.
2. Transboundary air pollution in Southeast Asia is more serious than in other regions. The opportunity to form a cooperation network between ASEAN and the Regional Forum to tackle this issue may be discussed.
3. Reduction of mass concentration of PM_{2.5} and of short-lived climate pollutants (SLCPs), as well as long-lived pollutants, requires international cooperation, but to achieve anything, a few targets should be selected.

Scientific Dialogue Recommendations:

1. The ASEAN haze action plan is in place, but more cooperation to identify causes, health impacts for policy intervention and technological solutions are needed. A cooperation network should be formed between ASEAN and the Regional Forum to tackle transboundary air pollution.
2. Scientists and policy-makers in the region are aware of interactions between climate change and air pollution and have a shared responsibility to identify solutions. The co-benefits of controlling air pollution – in particular, SLCPs – are well-known. Black carbon is not a greenhouse gas but it can be detrimental to health and plants, reducing food production.
3. Dialogue between scientists and policy-makers is useful for creating good policies. The health sector must bring the data to the public and policy-makers, focusing on the nexus of air pollution, health and climate change. For instance, there is promising research being done on SLCPs and cleaner fuel alternatives, requiring concerted effort between industry and governments.
4. Economic arguments must be made by the health sector, as less than 1.5% of climate funding has gone to health. A regional investment initiative would have impact on more than one country.
5. Priorities identified were: scaling up action, outreach and building support through awareness-raising, leveraging financing, and enhancing science and knowledge. These priorities can be addressed by linking awareness to policies through the energy, finance, environment and health sectors.

2.1.2 Vector-borne diseases, ecosystem disruption and climate change

In this session, three presenters provided the scientific foundation for the dialogues on vector-borne diseases, ecosystem disruption and climate change: (1) Dr Rabindra Romauld Abeyasinghe, Coordinator, Malaria, other Vectorborne and Parasitic Diseases Unit, WHO Regional Office for the Western Pacific, presented a paper on *Effect of Climate Change on Ecosystems with Special Reference to Vector Borne Diseases*; (2) Dr Catherine Walton, Senior Lecturer, University of Manchester,

United Kingdom, presented a paper on *Disease consequences of adaptation of mosquitoes to man-altered environments*; and (3) Mr Tom Hughes, Senior Scientist, EcoHealth Alliance, presented a paper on *Habitat protection and prevention of disease emergence*.

After the presentation, a panel discussion on ecosystems and SDGs was facilitated by the Chair of the TWG on WaSH and panellists were the speakers of the session.

The main points from the presentations and the panel discussion are summarized as follows:

Climate Change, Ecosystems and Vector Borne Diseases:

1. Ecosystem disturbance and climate change will unleash vector-borne diseases in previously unaffected areas. Vectors such as mosquitos are evolving and adapting to ecosystem modifications and climate change.

Adaptation of mosquitoes to man-altered environments

1. *Aedes aegypti* is thriving in man-made environments, even though it originated from African forests. It only evolved to bite humans in the last two centuries. They may now be adjusting to bite at different times of day.
2. Forest cover in Southeast Asia is massively reducing. *Anopheles gambiae*, forest mosquitos from western Thailand to northeast India, breed often in village wells of southern Myanmar only.
3. If this biological basis of adaptation can be understood, we may have ways to prevent the current spread. Evolution will happen, so planning is needed to be preventive rather than reactive, such as in the case of Zika.
4. Malaria transmission peaks when it is rainy season or when droughts result in pooling of water and increased presence of vectors. New vector-borne diseases may also emerge, and old species may return like *Aedes aegypti* in Brazil, responsible for 2 million dengue cases per year, and now Zika. Rainfall and dengue transmission are linked in the Philippines. Zika emerged in the Pacific during El Niño. Warmer conditions contribute to survival and outbreaks. Rainfall was found in Indonesia and Cambodia to be the main predictor of dengue spread and temperature the second.
5. This change is happening in the very short term, with geometric multiplication with wider spread and increased transmission, possibly impacting on achievement of SDG 3 under which all vector-borne diseases fall.

Habitat protection and prevention of disease emergence

1. There is a delicate balance between the ecosystems we live in and the biodiversity of other species present. Changes in climate could affect the dynamics of vector-borne diseases, although Zika is an example of travel-related transmission. Antimicrobial resistance (AMR), nutrition, deforestation, farm development, water projects and urbanization all change the dynamics. Temperature, humidity and rainfall are the most affected by environmental change. They have an impact on the risk of disease transmission, as do many other habitat changes. There is no climate connection made yet to Zika, just to *Aedes aegypti*.
2. Mosquitos are evolved without thermoadaptation, so they rely on certain climatic conditions to survive. Habitat change in the greater Mekong subregion and deforestation are driving adaption to human conditions. Hydropower and irrigation schemes without health impact

assessment (HIA) and preventive measures result in vector-borne disease outbreaks; therefore, preventive measures are needed.

3. Higher temperatures alter lifespan or breeding activity and influence biting habits; more heat can promote multiplication of parasites in vectors and more effective transmission. There is higher survival of mosquitos in warmer temperatures; therefore, with global warming we will see expanded areas of vectors such as in Yoyogi Park, Tokyo – the first observed in 70 years. By 2030, the Asian tiger mosquito may have spread very densely in southern Europe. An outbreak of malaria already occurred in Greece in 2016.

Scientific Dialogue Recommendations:

1. It is refreshing to talk about science with policy-makers. Scientists and policy-makers must work closely to understand linkages between ecosystems, climate change and health. For example, in considering the linkage between irrigation and rice, more rice means more irrigation and more mosquitos. Thinking collaboratively could lead to the proposition that intermittent irrigation could reduce the use of insecticides.
2. Arboviral diseases like dengue and Zika are a challenge. Existing tools require resources and very dedicated implementation, are very expensive and take time. So far, they have been used reactively in dengue outbreaks; however, 80% of infected peoples are asymptomatic, infecting mosquitos in the environment. The solution may be a more proactive approach to reduce vector breeding using eco-friendly techniques. Malaria vector control has had success in dealing with mosquitos spreading disease. Habitat reduction for *Aedes aegypti* is straightforward and Member States are trying new tools with this approach.
3. Another challenge is the lack of treatments. Twenty years ago, dengue was a childhood disease but now it is often found among older people, which could be a result of the genetic diversity of the mosquito. The Mekong region mosquitos, under pressure from malaria drugs, have mutated to the point that few tools remain to combat them. The only solution may be to contain the vectors in this region.
4. The current dengue vaccine is safe for use only in those previously exposed to the dengue virus, i.e. only for populations with at least 70% exposure. Clinical trials show that in those populations that have not been exposed, the vaccine could increase the chance of more severe infection.
5. Planning needs to be preventive rather than reactive, with more focus on vector control and less on disease treatment. If we can predict risk, management would be easier. Control that is not chemically dependent is also the best way forward.
6. Change is happening in the very short term, with geometric multiplication leading to more widespread and increased transmission, possibly impacting the achievement of SDG 3, under which all vector-borne diseases fall. Prevention, with more focus on vector control and less on disease treatment, may be more effective. HIA should be conducted of development projects that involve ecosystem disturbance. Maintaining functioning ecosystems will safeguard human health and more intact biodiversity may also prevent outbreak of zoonoses.

2.1.3 Sound management of chemicals and waste

Two presenters provided the scientific foundation for the dialogues on sound management of chemicals and waste: (1) Dr Noppadon Kitana, Department of Biology, Faculty of Science, Chulalongkorn University, Thailand, presented a paper titled *Invertebrate and vertebrate species as sentinels for herbicide contamination in paddy fields*; and (2) Mr Rifat Hossain, Senior Technical

Officer, Health and the Environment, WHO Western Pacific Regional Office presented a paper on *Water, sanitation and hygiene from MDGs to SDGs*. After the presentation, a panel discussion on sound management of chemicals and waste included panellists from the Swedish Chemicals Agency and the Chemicals and Waste Branch of the UNEP.

The main points from the presentations and the panel discussion are summarized as follows:

Chemicals and Hazardous Substances

1. There is a proliferation of chemical-intensive products and increased use in developing countries. Globally, the growth is 4% and in the Western Pacific, major producers are Japan, the Republic of Korea and Australia, as well as China. Small-scale goldmining, the biggest source of mercury, is rampant in the Philippines and Asia.
2. Agrochemical contamination in rice fields continues, despite the publication of *Silent Spring*. One example is in the Naan Province of northern Thailand, where the Naan River, known as the headwaters of four rivers, contributes over 45% of the water of the Chao Phraya River that runs through Bangkok. The land is very fertile for agriculture and chemical use is inevitable. Ninety percent of the chemicals used are herbicides to control weeds and ensure more crop rotation. However, the impacts can be serious. The lethal dose is very low in animals or humans, and even in small amounts can be stressors. Endocrine-disrupting chemicals are an issue of concern. The sentinel species used in the related study were small vertebrates and small invertebrates, which are a food source in one heavily contaminated district and at a separate reference site with less detected chemicals (from the same tributary, but far enough away to ensure no migration). Contamination with the herbicide atrazine was found in crab tissues at both sites, indicating that even if a farm is organic in this region, there might still be cross-contamination from nearby farms. The level of paraquat found is very concerning because crabs are a staple food, usually boiled down into a concentrate. The level of paraquat was five to 10 times the limit listed in the Codex Alimentarius for crabs. Levels of paraquat in frogs were also well beyond the Codex limit. This puts consumers at risk.

Furthermore, crab body weight was found to be lower in the contaminated site. The male crab, which normally has a larger claw than the female, had a similar or smaller claw in the case of the contaminated area. They also had smaller abdomens. Contaminated frogs had larger livers, and while male reproductive organs were unchanged, females had larger ovaries, even in the dry season. The growth of the ovary is not useful at all, as all the energy is expended on the egg for no reason. Immune systems were suppressed in contaminated frogs. This is an early warning of health problems from herbicides.

Water, Sanitation and Hygiene

1. In the transition from MDGs to SDGs, there are various aspects that countries need to learn: (1) how to increase ownership by countries when moving from MDGs to SDGs; (2) how to make the SDG vision, “Leave no one behind”, a reality; (3) what would be the roles of development partners in SDG; (4) the need for the right mix of leadership, an enabling environment, financing and cross-sectoral cooperation to meet the SDG; and (5) how to improve monitoring.
2. Although the MDG target for drinking water was met, it was estimated that about 663 million people still use unimproved water sources (based on the MDG criteria) and if the SDG definition is considered, about 1.8 billion are using water contaminated with faecal matter.

3. There is a serious problem of equalities to access to improved water supply sources in the Pacific island countries, i.e. disparities between rural and urban populations in terms of access to improved water sources, particularly to piped water.
4. Hence, having improved water sources is not enough to secure safe water. In the SDG, the definition used refers to safely managed drinking-water services:
 - a. Target 6.1: *By 2030, achieve **universal and equitable** access to **safe and affordable drinking water for all**.*
Population using safely managed drinking-water services refers to using an improved drinking-water source that is located on premises, available when needed, and free of faecal and priority chemical contamination (such as *E. coli*/thermotolerant coliforms, arsenic, fluoride).
5. Also for sanitation, Target 6.2 refers to safely managed sanitation and this also includes the management of wastewater:
 - a. Target 6.2: *By 2030, achieve access to **adequate and equitable sanitation and hygiene for all, and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations**.*
Population using safely managed sanitation services refers to access to handwashing facility with soap and using an improved sanitation facility that is not shared with other households and where excreta are safely disposed in situ or transported and treated off-site.
6. Linking SDG for WaSH (SDG 6) to SDG 3 (health and well-being):
 - a. WaSH is directly linked through indicators such as universal health coverage (UHC) and deaths and illness from hazardous chemicals and air, water, and soil pollution.
 - b. WaSH contributes importantly to realizing health gains within SDG 3, as it is related to maternal, infant and neonatal mortality and neglected tropical diseases.
7. Other observations related to WaSH in specific sectors:
 - a. Many health-care facilities still lack basic water, sanitation and hygiene facilities, in particular in labour wards.
 - b. There is a strong link between WaSH and wastewater and AMR.

Scientific Dialogue Recommendations:

1. Dialogue on chemical-related concerns needs to take place between researchers and policy-makers so that a common understanding can be reached on alternatives and accurate risk assessments.
2. Multilateral chemical agreements such as the Basel and Minamata Conventions have been signed and indicators are in place to track progress. Sustainable financing of sound chemical management is crucial.
3. Regional collaboration can be beneficial by sharing the workload and reducing costs to individual countries.
4. There is a need to focus more on promoting alternative and/or less hazardous agrichemicals and physical/non-chemical-dependent interventions, and industry can help by classifying and labelling chemicals, proving their products are safe, and avoiding the most hazardous ones.
5. While cross-sectoral involvement may slow down implementation, it also creates opportunity. Examples include:
 - In the Philippines, an Interagency Committee on Environmental Health was created by order of the President of the Philippines that included 11 government agencies.

- A regional chemicals management forum hosted by the Swedish Chemicals Inspectorate KEMI involved five countries from the Mekong region focusing on chemicals and heavy metal management. They meet regularly and include health, environment, agriculture, finance and science sector officials.
6. There is a need to address new emerging issues on WaSH in health-care facilities, and WaSH for infection prevention control and combatting AMR.
- Water and sanitation should be mainstreamed in AMR concerns and AMR reflected in WaSH concerns.
 - Strengthen knowledge and evidence base through surveillance and research.
 - Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures.
 - Optimize the use of antimicrobial medicines in human and animal health.

2.1.4 Green health-care facilities and SDGs

In this session, a presentation was given by Dr Josh Karliner, Director, Health Care Without Harm (HCWH), on green health-care facilities and the SDGs. A question-and-answer session followed his presentation. The main points from the presentation and the panel discussion are summarized as follows:

1. Dr Karliner introduced the background of HCWH and its objectives.
2. The main points he raised in his presentation were that the goal of the 2020 Minamata Convention is that all mercury-based devices be eliminated and a framework was developed for green hospitals that includes ten focus areas, including substitution of harmful chemicals with safer alternatives; reducing, treating and safely disposing of health-care waste; supporting green and healthy hospital design and construction; and buying safer and more sustainable products and materials.
3. Eleven of the 17 SDGs are relevant to green hospital initiatives, key among them being SDGs 3, 12 and 13. Besides saving money, low-carbon health care also increases resilience to extreme weather events and powers access for the poor and most vulnerable populations.
4. There is a growing network of hospitals committed to this work, and the 2020 challenge was launched to mobilize the network to address climate issues, based on mitigation, resilience and leadership.
5. As a small organization, the HCWH network was designed to have a strong online support for remote members such as those in the Pacific.
6. Dr Karliner proposed a new TWG under the Regional Forum – TWG for Green Health Care.

2.1.5 Environment and health policies for achieving SDGs

This session was facilitated by Dr Thaksaphon Thamarangsi, Director, Noncommunicable Diseases and Environmental Health, WHO Regional Office for South-East Asia. The panel members were the Chairs of TWGs who attended the meeting and the Health Minister of the Federated States of Micronesia to speak from the perspective of Pacific island countries.

The main points from the discussion were as follows:

1. Unlike the SDGs, MDGs did not take into account the sustainability of human development gains, environmental or otherwise. The SDGs have indicators that reflect more reachable

goals and focus on progressive improvement in services and monitoring. For instance, in 2010 a United Nations resolution recognized the right to accessible and safe water and sanitation; related SDGs now include the whole waste stream.

2. Because only a fraction of the cost of SDG implementation can be covered by international development aid, new ways of financing are needed.
3. Countries are encouraged to use the SDGs as guidelines, with setting national targets being the first step.
4. The health minister of the Federated States of Micronesia called for very good data and analysis on health impacts in our region so that our future can be sustainable, and looked forward to working with many groups. The impact of evidence is real, but it needs to come at the right time and be convincing to other sectors (trade, industry and others).
5. The outcomes of this Regional Forum could benefit from clearer linkages with the decision-making processes of WHO regional committees and the UNEA in order to further promote country action. National-level engagement of ministries beyond those of environment and health is also needed, such as with the ministries of agriculture, labour, industry and trade.

In the panel discussion, Dr Thaksaphon also asked the Chairs of the TWGs who attended the meeting to provide their overviews on the operation of the TWGs in the Regional Forum. He summarized that seven TWGs were set up in 2007 as a technical platform and mechanism to discuss and develop plans for the seven priorities identified by the Regional Forum. These seven TWGs are: (1) Air Quality; (2) Climate Change; (3) Contingency Planning, Preparedness and Response in Environmental Health Emergencies; (4) Health Impact Assessment (HIA); (5) Solid Waste Management; (6) Toxic Chemicals and Hazardous Substances; and (7) Water, Sanitation and Hygiene (WaSH).

The main outcomes from the discussion on the TWG operations are as follows:

1. The TWG on Air Quality has members from only seven countries in the Region. The next three-year plan was determined in the 2016 Seoul meeting with a grand goal to intensify monitoring, air pollution reduction, and health burden reduction in line with the SDG. Lessons were that concrete outputs such as scientific publications and reports are vital; challenges include quick turn-over of government officials as TWG members. In addition to air pollution reduction, the health sector can contribute a lot to reduction of exposure. What is the message for individuals for reducing their exposure to air pollution?
2. The TWG on HIA provides a platform to share information and knowledge on HIA in countries and has proposed that a permanent mechanism is needed to sustain its function, such as a website.
3. The TWG on WaSH wants to strengthen the skills of countries in reporting progress on SDG 6, including data management and application, promotion of knowledge exchange, and compatibility of information systems. The TWG also wants to focus on linkages among existing networks, address threats to global health such as water crisis and climate and the need for WaSH in all health-care facilities.
4. The TWG on Toxic Chemicals and Hazardous Substances raised the issue of sustainability when chairs switch and has suggested that TWG can be a powerful networking mechanism amongst countries of the Regional Forum and also with international experts.
5. In summary, Dr Thaksaphon made the following recommendations:
 - a. TWGs could be guided by the “seven Cs”: commonality of interests across sectors; continuity; capacity; context relevancy; comprehensive review and comprehensive strategy (the Manila Declaration can serve this purpose); coordination across sectors; and consistency.

- b. SDGs open a good opportunity for working together. It was agreed that TWGs must be context-relevant, and any global mechanisms need to be tailored to the region and compatible with existing mechanisms. Resources are an issue for the Regional Forum. Hence, TWG operation has to be flexible to deal with emerging issues as needed, because the environmental health field is very dynamic.
- c. To make the TWGs of the Regional Forum useful, they should avoid overlap with work ongoing in other organizations, synergize with similar networks and maximize opportunities, considering this is a platform for health and environment sectors.

Finally, Dr Thaksaphon highlighted that a document on intersectoral action on environmental health was published by WHO in 1992. Just talking without action may result in only rhetoric such that in 30 years we may have the same findings but still have no action. After 10 years of the Regional Forum, there is a new intention to make things happen in the future. There is a need for a very specific and achievable plan, and we must all work together to make it happen.

- 6. Under the draft *Implementation Plan of the Regional Forum (2017–2019)*, the work of existing TWGs is to be reviewed. New or enhanced TWGs may be required by the Regional Forum (e.g. to study low-carbon and climate-resilient health systems). The Regional Forum is asked to indicate their “policy demands” clearly to TWGs. TWGs in return are to offer scientific evidence that is useful for proactive policy actions.

2.1.6 Closing and Reception Dinner

The closing of the Scientific Dialogue was delivered by **Undersecretary Jonas R. Leones** Department of Environment and Natural Resources, Republic of the Philippines.

The Department of Environment and Natural Resources, Republic of the Philippines, also hosted the Reception Dinner.

2.2 Ninth High Level Officials Meeting, 7 October 2016

2.2.1 Opening session

Dr Isabelle Louis, Representative Director and Representative, *a.i.* UNEP Regional Office for Asia and the Pacific, expressed her gratitude to the hosts of the Forum and for the foresight of its founding members. All member countries have achieved advances in managing environmental risk and improving health, but the scale of the challenge is huge and the region is vulnerable to environment-related disaster. The spirit of cooperation among all sectors of government and beyond is a vital foundation for the Forum. New partnerships are needed, including with the private sector, financiers and insurers. The new ASEAN economic community, the call of the Pacific for climate resilience, the accreditation of small nations to access Green Climate Fund (GCF) financing and China's pledge to support South-South cooperation are among the many partnership opportunities to integrate environment and health issues. Dr Louis pledged continued support from the United Nations for the work of the Regional Forum

Dr Thaksaphon Thamarangsi, Director, Noncommunicable Diseases and Environmental Health, WHO Regional Office for South-East Asia, underscored the importance of the High Level Officials Meeting in providing a transition between the informal Scientific Dialogue held a day earlier and the Ministerial Forum later in the week. He acknowledged the increasing commitment and interest in collaboration between ministries of health and ministries of the environment, as well as the increased number of participating countries, recognizing, among the WHO Region for South-East Asia, the countries of Bhutan, Maldives, Sri Lanka and the Democratic Republic of Timor-Leste who were participating for the first time, as well as the sustained high-level support by Indonesia, Myanmar and Thailand over the past decade. Referring to the agenda of the High Level Officials he suggested further consideration be given to further streamlining and strategizing efforts while taking advantage of the recently adopted SDG framework as providing context for improved environment and health actions in the years ahead. .

Dr Takeshi Kasai, Director of Programme Management, WHO Regional Office for the Western Pacific, welcomed the new member countries. He reviewed the major achievements of the Forum member countries since 2004, focusing on National Environmental Health Action Plans (NEHAP) and Environmental HIA – the best tool for ensuring that health and environment have a voice in development plans. He emphasized the potential of the Forum as a platform for dialogue across borders on intractable transboundary environmental health issues in the Region, such as forest fire haze, hazardous waste dumping and El Niño drought.

Dr Paulyn Jean B. Rosell-Ubial, Secretary, Department of Health, Republic of the Philippines, made her welcome address, stating that health cannot be improved without addressing the environment – water, air and food are social determinants of health. She noted that the Philippines had been the fourth-worst affected by climate disasters in the last decade, recalling Typhoon Haiyan of 2013 that devastated the central Philippines and its health-care facilities, taking away the homes of 4 million people. A two-storey government hospital was completely submerged. The disaster was a wake-up call for all health systems, and as the health official in charge of the Central Visayas at the time of the typhoon, she explained that the Philippines has built back better – hospitals now have back-up power supplies and water sources, and are located in places that are not vulnerable to storm surges or landslides. As new Health Secretary, she shared the urgency to gain attention and resources for environmental health concerns. She restated the Philippines' commitment to achieving the SDGs,

including climate change resilience, calling for the Regional Forum to be a mechanism for members to work together on shared concerns such as clean fuel for families, active or public transport, and water and sanitation.

2.2.2 Adoption of the agenda

The Chair presented the agenda of the meeting and it was adopted without objection.

2.2.3 Adoption of the Eighth High Level Officials Meeting report

The report of the Eighth High Level Officials Meeting held on 21 June 2016 by videoconference was reviewed and adopted without objection, including the key agreement that the 2016 Ministerial Regional Forum would be opened to the other countries of the WHO South-East Asia and Western Pacific regions.

2.2.4 Discussion of the Regional Forum title and simplification of membership requirements.

The proposal to name the title of the Fourth Regional Forum as the “Asia-Pacific Regional Forum for Health and Environment” was formally presented for discussion and adoption. This is to reflect the participation of an increased number of countries to the Forum. A Pacific island country official acknowledged and expressed gratitude for the invitation to be part of the Forum.

A taskforce was proposed to review the Framework for Cooperation that includes, but is not limited to, the following matters:

1. Title of the Regional Forum: in this regard, the Lao People’s Democratic Republic proposed to retain the word “Ministerial”, i.e. “Asia-Pacific Ministerial Regional Forum for Health and Environment”, to honour the fact the ministers of health and environment are the key leaders of the event. There was also a discussion on the order of “health” or “environment” in the title. The Department of Natural Resources Philippines and representatives from Thailand and Republic of Korea all have “environment” appearing before “health” in the title.
2. Simplification of membership requirements and acceleration of the membership process.

Officials from Cambodia, Indonesia, Kiribati, Republic of Korea, Malaysia, Palau, Philippines, Thailand, Tuvalu and Vanuatu volunteered to join the taskforce.

The proposal to name the title of the Fourth Regional Forum as the “Asia-Pacific Regional Forum for Health and Environment” was adopted.

2.2.5 Updates and reports on Regional Forum activities (2013–2016)

On behalf of the outgoing Chair of the Regional Forum, Datuk Dr Noor Hisham Bin Abdullah, Director General of Health, Malaysia, thanked the Forum for its support and assistance since 2013. At the Third Regional Forum, members agreed to implement NEHAPs to further put environment and health at the centre of development and to develop environmental health country profiles and data sheets to enable more effective information sharing among sectors. NEHAPs are now in place for 12 of the 14 original member countries, and environmental health country profiles have been completed by almost all countries.

Ms Kakuko Nagatani-Yoshida, Programme Officer, UNEP Regional Office for the Asia-Pacific, reported that a number of regional workshops have been held under the aegis of the Regional Forum, including the first biregional training on climate change and health (26–30 January 2015 in Jogjakarta, Indonesia) and the first regional training on health, environment and development (December 2015 in Incheon, Republic of Korea). Issues raised in countries included biodiversity, nature conservation, antibiotics, child health and housing. Common issues were WaSH, climate change, waste management, chemicals and hazardous materials management.

Ms Nagatani-Yoshida provided an overview of the TWGs. Considering the progress being made, it was requested that TWGs maintain cooperation on technical issues while the Framework for Cooperation was being discussed by the taskforce to avoid losing momentum in critical areas, including work with scientists who provide critical evidence-based approaches. It was proposed that the workplans of the TWGs on Air Pollution and HIA be considered an important part of the 2017–2019 Regional Forum Implementation Plan. The Secretariat suggested that the TWGs for Climate Change and Environmental Health Emergencies might be reconsidered in light of changes to the Framework for Cooperation and considered for disbanding due to inactivity over the past three years. Funding and resources, capacity building and coordination across TWGs were mentioned as ongoing challenges. Some suggestions to address these included use of teleconferencing and rotation of the position of chair. It was agreed that the taskforce would review the terms of reference of each of the TWGs to strengthen their role in the Regional Forum. A new TWG was proposed by Health Care Without Harm on green, resilient and low-carbon health care.

2.2.6 Updates on the European environment and health process

Dr Srdan Matic, Coordinator, Environment and Health, WHO Regional Office for Europe, gave an update on the environment and health process in Europe, which includes 53 Member States. In 2015, a high-level forum on the future of the process decided that cross-border collaboration should focus on unfinished business and emerging issues, address governance, and examine environment and health under the SDGs. Major themes were the promotion of system-focused thinking about how to manage our habitats in a sustainable manner, how to prevent disease from environmental change and degradation, and how to use health-promoting characteristics of mostly human environments. Management of waste and resources in a circular economy emerged as a crucial and ambitious issue and research agenda. High-level commitments were made by Member States in the Paris Agreement and UNEA resolution on air quality; actions taken now need to be linked closely to national implementation and change. Governance arrangements were under review with a current option plan to have a body with nominated focal points to communicate with countries, and with non-state actors like academics and NGOs on an equal footing. This would be supplemented by a Bureau consisting of 12 Member States, UNEP, WHO and the United Nations Economic Commission for Europe (UNECE), with stronger ties between WHO and the UNECE to bolster political support.

2.2.7 Discussion of the draft *Implementation Plan of the Regional Forum (2017–2019)*

The draft Implementation Plan for the Regional Forum was presented by the Secretariat. The rationale for focusing additional effort on SDGs for the next three years is that environment and health are at the centre of the SDGs. Measurable and realistic targets are needed, along with follow-up. The logical framework is output-based, with clear objectives and deliverables or “means of verification (MOV)”, complete with indicators, and risks and assumptions laid out. The Forum can be a catalyst for long-term resource plans, a means of breaking silos, and a platform for new approaches to meeting

technology, data collection and sharing, and capacity-building goals. The Secretariat can assist in development of a resource mobilization bridging proposal for the next year, followed by a comprehensive proposal. The cycle of implementation – identifying and setting targets, implementing workplans and monitoring or evaluation, and determining directions for resource mobilization – can be repeated every three years, at least until 2030.

It is crucial to have strong TWGs as working mechanisms of the Forum. A comment was made that a review of the current structure of TWGs is needed, focusing more on environment and health linkages. Only those active, contributing TWGs should continue, and new TWGs created if necessary. A serious proposal was put forth to formalize TWGs in the Regional Forum. This will be discussed and more information gathered up to July, when a specific and practical three-year plan can be devised.

In response to a question about WHO's access to climate-related financing, Dr Diarmid Campbell-Lendrum, Coordinator, Climate Change and Health Team, WHO headquarters, stated that WHO works with ministries of health on strengthening health resilience to climate change, through bilateral donors and multilateral funds such as the GCF and the Global Environment Facility (GEF), and runs many projects with the United Nations Development Programme (UNDP) as a United Nations Framework Convention on Climate Change (UNFCCC) funds-accredited agency. At the same time, Dr Campbell-Lendrum appreciated the request by member countries for WHO itself to be accredited by UNFCCC and will convey this request to WHO headquarters for consideration.

In response to a suggestion for linking air quality with the TWG on climate change, Dr Helena Molin Valdes, Head of the Secretariat, Climate and Clean Air Coalition (CCAC), described two World Health Assembly and UNEA resolutions highly relevant to building capacity, awareness-raising and monitoring of air pollution. UNEP can help identify gaps with its regional assessment on air pollution and climate, including SLCPs. It is currently working with WHO on a campaign, Breathe Life, about air pollution and PM_{2.5} and is a means to share good practices.

Singapore's proposed insertion of SDG 15 in paragraph six of the Implementation Plan was accepted. Singapore also drew attention to a background paper it had prepared on transboundary haze and sought discussion on this issue at the Asia-Pacific Regional Forum.

It was agreed that the review of the Framework for Cooperation would recognize existing networks and initiatives and that the draft Implementation Plan would be finalized by the taskforce for adoption by the Regional Forum/High Level Officials.

2.2.8 Discussion of the *Synthesis Report of Member Country Environmental Health Profiles*/environmental health data sheets

Dr Carlos Corvalan, WHO consultant, presented the *Synthesis Report of Member Country Environmental Health Profiles* with additional references to linkages of SDGs to health and the environment. From the information contained in member country environmental health profiles, charts and infographics had been created for each of the most relevant SDGs to show advances and challenges. A set of individual infographics was shared for each of the original 14 Regional Forum member countries.

The conclusions of the synthesis highlighted that Forum countries had advanced in many indicators but there remained urban–rural differences, intra-urban and intercountry differences that needed to be

addressed, in particular in recognition of the principle of leaving no one behind. Future efforts were advocated to focus on implementing adaptation measures for changes that cannot be avoided and protecting the most vulnerable, particularly in view of the fact that climate and other environmental changes worsen inequalities, and the concern that emerging global threats would likely worsen environment and health and further disrupt ecosystem disruption.

Myanmar and the Lao People's Democratic Republic raised the issue that in the Synthesis Report, the PM_{2.5} situation is presented as very serious in urban areas in Myanmar, yet the data were from 2014, even though at that time the country had no means to measure PM_{2.5}. Therefore, the data must be from nongovernmental organizations (NGOs) or voluntary study, and PM_{2.5} only began to be studied in 2015 in Mandalay. How do we know this represents the situation accurately? The Lao People's Democratic Republic called for country names to be specified in all graphics of the report, in order to enhance sharing of the findings with other sectors. The Secretariat agreed that country names could be restored.

In response to concerns raised about the accuracy of the data, Dr Corvalan explained that the data were obtained from the WHO Global Observatory, with some from UNDP, from a 2014 dataset. The data were not sourced from the countries themselves. Links to the publicly accessible information were provided to each country in a USB and countries were requested to advise of any errors in the report before it was finally published. A proposal was made to prepare a further regional synthesis in the next intersessional period of the Forum.

2.2.9 Discussion of the agenda and programme of the Ministerial Meeting

The programme for the Ministerial Meeting was reviewed and agreed upon.

2.2.10 Discussion of the draft Manila Declaration

The Secretariat presented the *Manila Declaration on Health and Environment* and all comments and suggestions were incorporated into the declaration as agreed on in the meeting. Additional time was needed to identify a host country for the Regional Forum in 2019.

2.3 Fourth Ministerial Meeting, Asia-Pacific Regional Forum on Health and Environment, 8 October 2016

2.3.1 Opening

Welcome remarks were delivered by Dr Shin Young-soo, Regional Director, WHO Regional Office for the Western Pacific, acknowledging the invaluable cooperation of the Philippines as host, WHO South-East Asian Regional Office and UNEP. He welcomed 36 countries that attended the Forum – seven were Member States of the WHO South-East Asia Region and 29 were countries, areas and territories of the WHO Western Pacific Region, namely Australia, Brunei Darussalam, Cambodia, China, Cook Islands, Hong Kong (China), Fiji, Guam (USA), Japan, Kiribati, Lao People’s Democratic Republic, Malaysia, Marshall Islands, Federated States of Micronesia, Mongolia, Nauru, Macau, Commonwealth of the Northern Mariana Islands, New Zealand, Palau, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Solomon Islands, Tuvalu, Vanuatu and Viet Nam. Overall, there were 217 participants, including country delegates, chairs of the TWG, observers (Asian Development Bank, ASEAN), speakers, Secretariat (UNEP, WHO South-East Asia and Western Pacific Regional Offices) and representatives from the Departments of Health and Environment and Natural Resources of the host, the Government of the Republic of the Philippines. The Asia-Pacific Regional Forum on Health and Environment provides a platform that brings together the ministries of environment and ministries of health for sharing knowledge and experiences, improving policy and regulatory frameworks at the national and regional level, and promoting the implementation of integrated environmental health strategies.

Delivering opening remarks, Hon. Paulyn Jean B. Rosell-Ubial, Secretary of Health, Republic of the Philippines, called on the health sector to advocate upstream determinants such as clean air and good housing. She reflected on her attendance at the previous Ministerial Forum in Kuala Lumpur and that the Regional Forum may need to be reviewed for better ways to work together. She drew parallels between the Forum’s thrust and the battle cry of the Philippine agenda to 2022: “all for health, towards health for all”.

Hon. Regina Paz L. Lopez, Secretary of Environment and Natural Resources, Republic of the Philippines, hoped the conference would lead to measures nurturing the integrated nature of life. She proposed that people’s quality of life should be the number one performance indicator. Biodiversity must be valued at a high premium as it has the potential to improve health and quality of life. Hon. Lopez reiterated that health is not just about hospitals and nurses – medicines derive from biodiversity. A scientist had discovered that the venom of a fish-eating snail in the Philippines, which darts out a tooth to kill its prey, works better than morphine as a painkiller. The biodiversity of the Philippines and Asia has the potential to improve health and quality of life. In making choices, such as permitting mining, which kills wildlife, biodiversity must be valued at a high premium. To achieve this, communities must be able to benefit economically from biodiversity so they can take care of their environment and one another.

Mr Ibrahim Thiaw, Deputy Executive Director, UNEP, Assistant Secretary-General of the United Nations, described progress that has been made since the first Forum was established in 2004. In the past, it would have been difficult to imagine a global consensus on the impact of climate change. Mr Thiaw reminded participants of their responsibility to ensure the success of international agreements like the Minamata Convention and the Montreal Protocol. He encouraged the prevention of problems at their source by anticipating with research and by engaging the private sector more. This includes

not just investing in new technology but also ending the exploitation of developing nations by stopping e-waste dumping and sale of substandard fuels. The Forum represents the kind of joint cooperation we need between WHO and UNEP, and between sectors.

Dr Poonam Khetrapal Singh, Regional Director, WHO Regional Office for South-East Asia, drew attention to the role of the environment in shaping health and well-being over history and the remaining challenges that remain. She drew attention to air pollution as the single greatest concern and its significant contribution to climate change. The Forum is an opportunity to further forge a common environment and health agenda and to promote a whole-of-government approach. She highlighted three issues requiring attention at the forum: mitigating air pollution, combatting climate change, and making health and environmental impact assessments a routine part of development projects. The SDGs provide ministers with a compelling framework for addressing these issues and in redefining joint approaches for action.

The opening address was delivered by the Guest of Honour from the Government of the Philippines, Senator Risa Hontiveros, Head of the Committee on Health and Demographics. She recalled her experience as a student activist opposing nuclear power, weapons and ships, and the need to learn from those with experience in clean, renewable energy technology, including geothermal and tidal power. She had worked as a journalist for 15 years and documented changes in the Philippines and on the planet – how negligent resource extraction has destroyed communities and habitats and how rapid, unplanned urbanization has affected built environments. Natural disasters affect vulnerable people most, including those with disabilities. The destruction of ecosystems extinguishes health gains and potential medicines. As countries develop, they face the triple burden of disease: persistent infectious diseases, NCDs and health impacts from climate change such as stronger typhoons. She urged all to join in the fight to ensure that the air is clean, the land free from chemicals and the water safe – over 3 billion people are represented in this Region and people place their faith in our ability to overcome our differences. The Philippines invited all to harness with new vigour the Sustainable Development Agenda and with many other sectors, to create a better environment and to synergize by learning from each other.

2.3.4 Remarks by the outgoing Chair of the Regional Forum

On behalf of the Minister of Health, Malaysia, H.E. Dato' Raszlan Abd Rashid, Ambassador of Malaysia to the Republic of the Philippines, thanked the Secretariat and host for the success of the Regional Forum, recalling the 2013 Ministerial Regional Forum and two High Level Officials Meetings in 2014 and 2016. To address the health and environmental issues in the region, alternative resource mobilization and modes of meeting such as teleconferences must be considered. Achieving the SDGs will require planning, inclusive participatory government, sound institutions and effective cooperation and partnership. He wished the Philippines the best in its chairmanship over the next three years.

2.3.5 Remarks of the incoming Chair of the Regional Forum and adoption of agenda

Dr Rosell-Ubial, representing the Republic of the Philippines as Chair, thanked Malaysia for its leadership and support on the Manila Declaration. She noted that the Forum could strengthen its voice and convert its dialogue into synergistic action, and must be able to create models to halt the pollution of air, soil and water. The SDGs are ambitious and require working together to achieve success. It is natural for health and environment sectors to find synergy, and this joint power could shape history.

She looked forward to bringing the outcomes of the Regional Forum to the Regional Committee Meeting the following week.

The Ministerial Forum agenda was accepted.

2.3.6 Report of the Ninth High Level Officials Meeting

The Chairperson of the Ninth High-Level Official Meeting reported on the outcomes of their meeting held the day before.

1. The officials had accepted the title of “Asia-Pacific Regional Forum on Health and Environment” for this meeting. The existing Charter would be reviewed in the first half of 2017 by a taskforce made up of 10 countries, and the review would include streamlining of the membership process. Meeting informally over lunch, the taskforce had also agreed that national priority-setting is urgent and could be the basis for regional health and environment SDG priority setting. They agreed to start with a small number of priorities and move to full implementation later.
 2. Despite a period of inactivity, it was agreed that the TWGs on Climate Change and Environmental Health Emergencies would be maintained. The TWGs were not directly linked to the Regional Forum and are seen as a loose organization by the current charter. It was proposed that the taskforce would review the terms of reference to strengthen their role as the working mechanism of the Forum. There had been a suggestion to form a new TWG on green, resilient health-care facilities, but it was concluded that this could be included in the existing TWG on Climate Change, along with a focus on PM_{2.5} awareness.
 3. With respect to the *Implementation Plan of the Regional Forum 2017–2019*, it was noted that some Pacific island countries already had plans on climate change, so any new plans should not duplicate these.
 4. It was agreed that WHO would be encouraged to seek accreditation from the GEF and GCF, given its unique knowledge of the health sector and its convening power on health issues, including environmental health.
 5. Regarding the Country Profiles and Regional Synthesis Report, members agreed to submit comments within a month’s time. Some countries were not yet collecting data requested, e.g. PM_{2.5} levels. Further data collection was encouraged as capacity improves. Several infographics maps were erroneous and would be corrected.
- The Manila Declaration was revised extensively. The next host country (2019) was not yet selected, but would be added once identified.

Concluding the session, Vanuatu expressed its gratitude to member countries in extending the invitation to all Pacific countries. It felt that this Forum would promote South-South cooperation, and welcomed the new title. As the health of a nation is very much determined by the environment, the drive for development must be sustainable and preserve health and the environment.

2.3.7 Open Forum 1: Sustainable development goals, health and the environment

The first keynote address was delivered by Professor Peng Gong, Tsinghua University, Beijing, China on “Health and the environment at the centre of sustainable development.”

Summary of keynote address

Western literature like *Silent Spring* in the 1960s has led to much progress on environmental health, yet there is also a long history of Chinese respect for nature. From Lao Tzu 2500 years ago who wrote about learning from nature, to Confucius, who said that life is about achieving “harmony between humans and the heavens” (nature) (~500 BC), these doctrines influence Chinese and other Asian people, supporting ideas of precise food management and recycling, for example. These promoted sustainable farming, but also constrained the exploration of nature. Han Yu (~1000 BC) commented that humans on earth are like parasites on a melon, and that “our future ends when we empty the melon”. The traditional system was indeed a sustainable agricultural society with little waste. Now, following the industrial revolution, health gains are being made at the expense of the environment.

The 2015 *Lancet* planetary health report found that global trends in the Anthropocene include domesticated land now accounting for 40% of total land area and that we are reaching the limits and exceeding Earth’s operating boundaries on fertilizer use, ocean acidification, overfishing, climate change and forest loss. These factors influence health, food security and more. The effects of multiple environmental changes on food, water and global health are clear. A 50% loss of pollinators will mean 700 000 excess annual deaths (now at over 25% loss). Consequences for food production are very serious if 100% are lost. From 1990 to 2000, one third of China’s marshland was lost. The shrinkage of water bird habitat is causing more intense spread of pathogens.

Planetary health links human health with the health of the planet. A key factor is maintaining a manageable and sustainable population size. Over 200 million women still lack access to safe contraception. Remedying this alone would reduce maternal death by 30% and cost just \$5.3 billion per year globally. We could develop healthy and sustainable cities. However, only 27% of U.S. urban planners report learning about health in urban master planning, and only 3% about sustainable development. Cross-sector efforts and a systems approach are needed as in practice, everything is interrelated.

There is enough food, if we reduce food waste, which could save up to a third of the population in some countries. Recent reports from the International Monetary Fund (IMF) show that post-tax energy subsidies are much higher than previously estimated – projected to reach \$5.3 trillion, which is more than all medical spending combined.

Uncoordinated, segregated planning has led to ghost cities in China. In some places more housing is needed, but in some places too much is built. If this money were saved, much more could be spent on health and environmental improvement.

It has been found that by reducing coal burning in China, the health co-benefits will outweigh the costs of the Paris Agreement national intended contributions by 2030. Some of the *Lancet*’s recommendations include placing health at the centre of response to climate change and improving transdisciplinary research. Monitoring is not enough – major processes need modelling. The Earth system needs to be modelled, not just the climate. This would incorporate social and economic

activities, including disease transmission, and is being developed at Tsinghua University. This will require increased multi-agency collaboration as well as the promotion of public participation.

Additionally, populations cannot grow indefinitely. The government is responsible for healthy communities, including culture. Everything is interlinked and we need to understand them through more research, followed by modelling for forecasting. Health should be the top consideration in making most government policies and decisions.

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The moderator, Mr James Chau, WHO Goodwill Ambassador for the Sustainable Development Goals, opened the discussion by inviting comments from participants on the theme of SDGs, health and the environment. The SDGs represent an opportunity for all countries, with a cross-cutting design that brings sectors together, and the process is moving three to four years ahead of where the MDGs were at the same time. In addition, the Paris Agreement will have 55% of countries responsible for 55% of emissions ratified by November, so it will come into force very soon. Mr Chau asked for a spirit of thinking beyond national borders but about what sustainable development is, and called for ideas and solutions.

Main comments/opinions from the panellists were as follows:

1. Sustainable development is linked with environment and health
 - How are we going to protect the interests of future generations? Sustainable development is like a garden that should be able to be enjoyed continuously today and in the future.
 - Health and environment are key for better lives.
 - Amid scarce resources, development must continue for the generations to come. All resources rely on biodiversity.
 - For low-lying land nations like the Maldives that are no more than one metre above sea level, preparedness is crucial, whether for tsunami or sea level rise.
 - The Yanuca Healthy Island Vision of 1995 still holds. In order to achieve sustainability, an all-of-country approach and multiple arms of government need to work together for sustainable development of health, economy, environment and society.
 - The World Trade Organization (WTO) demolished the legal framework for nutritious food proposed by Samoa, despite NCDs being the major cause of death. This health trend will take decades to reverse, but requires international cooperation in forums like this to fend off trade objections.
 - Treat the cause, not the symptoms, from the family level, and re-educate people on disaster preparedness. Parents and grandparents can be much stronger influencers with their children than external people or media.
 - International cooperation is needed because domestic actions are insufficient.
 - It takes years for countries and governments to realize the impact of their development.

2. How we react to climate change
 - People act without heed to consequences; if people cannot see the future, there should be a way to give people a vision of the future. The media can inform, but people do not learn the lesson as keenly as when they experience it themselves.

- The way people act changes when they have to wade through dirty water following typhoons; people have become more aware of weather forecasts and cyclone paths since Typhoon Ondoy in 2009. The Philippine experience, learnings and ideas on how to better address disasters should be widely shared.
 - People's mentality needs to transform, given that for quenching thirst, coconuts have been replaced by plastic bottles. Every individual is responsible for what they do and they need to think of their children and their children's children. Cabinet reports do not reach the people. Awareness programmes are needed but personal contact trumps these. An army is needed for the villages; therefore, ministries should increase their focus on this.
3. Air pollution, food security and climate
- In China, health has been a top priority for sustainable development since 2014 and great importance is placed on environment, health and climate change. Young people want better quality of life even as they live amid pollution. Laws are in place to protect the environment and for clean air, clean water and reducing soil contamination. Green development was a key concept in the National Action Plan on Environment and Health 2007–2015. Ministries of health and environmental protection are formulating a new action plan to 2020 focusing on health.
 - Lanzhou City used to have some of the worst air pollution in China but now has an award for air quality. High-speed trains are very popular in China. The efforts come from both government and the people, including specific courses at all levels of school. All villages have waste management systems.
 - Returnees from overseas can educate people by sharing experiences to help people understand sustainable development. Such an initiative began in Tuvalu in 2014 in every village.
4. Political incentives to invest in future
- Tuvalu instituted reforms and the country is working on a health trust fund to sustain activities even if the main government budget shrinks, given the vulnerability of the health-care system to cyclones.
 - Tackle the source and not the symptoms, e.g. implement the road map in ASEAN countries for air quality.
 - Regional forums like this are very important, and should do more research to improve understanding on the impact of air pollution on health. Resulting evidence would help to influence bad companies, for example.
5. Using media to touch people without people having to experience disaster first:
- Mass media and social media are very important in Indonesia. The ministry is better connected to mass media than NGOs. Facebook is one of the tools to help people understand climate change and its relationship with health.
 - Young people today are key in sustainable development and are talking about sustainable development and disasters in a whole new way, so we can think about how to use these tools like Weibo and Vine more effectively.

2.3.8 Open Forum 2: Climate change and health

The second keynote address was delivered by Dr Veerabhadran Ramanathan, Professor of University of California, San Diego, and UNESCO Professor of Climate and Policy, TERI University, Delhi, India.

Summary of the keynote address

Dr Ramanathan, as a 43-year veteran of climate science, warned that climate change would get a lot worse, sooner than we think. The actions contemplated by the Paris Agreement were nowhere close to what was needed to prevent catastrophes. For broader support he sought the help of two communities: health-care professionals, because every doctor and every nurse deals with so many people; and faith leaders, because the lack of action has made climate change a huge ethical and moral emergency, leading to intergenerational inequity. The main source of air pollution – fossil fuel burning – contributes around 7 million deaths every year and is the major cause of global warming. The message that fossil fuel-based technologies are outdated is likely to be embraced by young people, and health professionals must play a decisive role in the journey away from fossil fuels.

As of 2010, 2 trillion tonnes of CO₂ had been dumped into the air. Half of it will stay for 100 years or more. By 2030, another trillion tonnes will be in the atmosphere, committing the planet to 2 °C of warming. In 1980, Dr Ramanathan published an article stating that global warming would be detected by 2000. What does 1.5–2°C of warming mean? The last time the planet was that much warmer was 130 000 years ago. The sea level was higher by 3 to 6 metres. To find the equivalent of 2°C warming (on track for 2050), you need to go back millions of years. And with the largest “warm pool” on the planet, people in the Western Pacific are “sleeping next to a huge gorilla”.

Fortunately there is still time to solve the problem. There are two levers to bend the curve. First, we must decarbonize by 2060. However, that CO₂ lever takes a herculean effort and the effect will not be seen for 30 to 40 years. Under business as usual we are on track for a 2°C rise by 2050, racing to the 4°C cliff. Cutting CO₂ emissions to zero today would not bend the curve until 2060. However, the other lever is SLCPs and these get an instant response – methane, black carbon, ozone and hydrofluorocarbons (HFCs) contribute to about 40% of climate change. We have the technologies to drastically cut SLCPs, which California has begun – the state now has the most stringent SLCP policies in the world. This can cut warming by up to 50% and keep the rise under the crucial 2°C mark. Island nations seek to keep the rise under 1.5°C, which at this point would require actually taking carbon out of the air.

Looking at the SLCPs, HFCs are 3000–4000 times worse than carbon, but under the Montreal Protocol these replaced ozone layer-damaging chlorofluorocarbons (CFCs), used as refrigerants, which have 15 000 times the greenhouse effect of CO₂. HFCs are to be phased out under the 2016 Kigali agreement.

Each tonne of diesel soot has the same effect as 2000 tonnes of CO₂. We need to switch to low-sulfur diesel, but even a black carbon filter available off the shelf gets immediate benefits. The Clean Air Coalition estimates this would save 2.4 million of the 7 million deaths from air pollution globally. Moving to renewables would prevent the rest of the deaths.

A report on reducing air pollution in India found that transportation, residences, agriculture, industries and construction all pollute (ammonium sulfate is a deadly air pollutant, the ammonia coming from agriculture and sulfate from coal or diesel). The Philippines gets ammonia pollution from Viet Nam, and Viet Nam gets it from further west. Analysing Delhi's pollution, only 25% comes from local sources; the rest is from regions outside the city, from eight to 10 different states, so coordination is needed nationally, regionally and multisectorally. There is a myth that spending time and effort to cut air pollution slows your growth, yet each dollar invested in cleaning the air in the state of California has returned \$30.

Fifty academics from the University of California came up with ten solutions for making the planet carbon-neutral. The first is cutting SLCPs, which would cool the planet by 1.2°C. This is not a question of top-down edicts but societal transformation – market mechanisms, then regulations and technology measures. Six of the ten measures are already in place in California.

Air pollution and climate problems are solvable, but Dr Ramanathan questioned where the support would come from. The bottom three billion people in the population are stuck in the 18th century and contribute under 5% while the wealthiest billion contribute 60% to the problem. He asked who would suffer from the mega-droughts and floods. People need access to clean energy. For instance, cook stoves are easy but unaffordable, while firewood emits black carbon and CO₂. A woman would save 5 tonnes of CO₂ per year with an improved cook stove. If carbon were valued at \$10/tonne, a woman with an improved cook stove should be given \$50 a year for offsetting her climate impact. On this huge equity issue, Dr Ramanathan told the Pope in 2014, “Ask your people to be good stewards”. The solution requires a fundamental change in attitudes to each other and toward nature – like knowing that driving a car has an impact on the next generation. If this can be taught in every mosque, church and temple, we might get that public support.

The climate is very concerning for the Philippines. The Western Pacific warm pool is the largest body of warm ocean water anywhere on the planet. Each degree of warming of the ocean increases the thermodynamic energy by 15–20%. This is added to sea level rise of 1–2 metres. However, the degree of uncertainty is large: it could be as small as °C and as large as 4–5°C. The Pacific Rim countries should take an aggressive role because actual warming could be twice as big as we think.

Health impacts can play a transformative role. California changed its law because of health effects, not climate. Dr Ramanathan emphasized that the health sector has a huge role in climate actions.

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1. Use of existing resources

- In Papua New Guinea, with 800 languages, 56% of health services are provided by faith communities. Amid the diversity and rugged topography – one person can speak six or seven languages, and walk three weeks to the nearest health post – it is hard to communicate a message. The churches are already there and the government taps them.
- SDGs enable health and environment sectors to lean on each other as never before, to address pollution in order to reduce silent killers, for example.
- The Democratic Republic of Timor-Leste has had an action map since 2010 to be implemented by each ministry, with very close coordination.

2. Use of social media
 - Internet is slow on the outer islands of the Pacific; however, social media such as Facebook and Internet-based radio are still used.
 - Malaysia managed to transform its flood disaster response by using social media, with increased participation of communities.
 - Social media champions work in tandem with, not as a replacement for, government.
 - How can information be converted to health-seeking behaviour? Through social media and NGOs, it has been done for other issues.

3. Climate change concerns that keep you up at night
 - The Potsdam Institute presented a graph in 2012 that was different from that developed by the IPCC, alarming Pacific island countries because it showed that the figures are negotiated. The threat posed to low-lying islands in the Pacific by climate change is existential and amid increasing inundation, the assistance of other countries will be required for continued habitation.
 - New Zealand has already faced severe challenges to farming communities from droughts.
 - Frequent cyclones are one of the anticipated risks to the Cook Islands; five cyclones in the space of three months in 1985 devastated vegetation, especially coconut palms.
 - Floods, haze and heatwaves – one of the worst floods in Malaysia’s history occurred at the end of 2015.
 - In the Lao People’s Democratic Republic, the north has floods and the south has drought and flooding.
 - In Vanuatu, most low-lying islands are sinking and people are moving to higher ground.
 - If the climate warms by 2°C there will be no Marshall Islands or Maldives – peoples, culture, language and identity will be gone. It is not just quality of air and water but the existence of nations.
 - The only hope left is to bend the curve on climate change. Without bending that curve, the low-lying islands will be gone in 50 years and rebuilding would not be possible.

4. Working together as ministries
 - A national environmental committee was set up to coordinate work in the Lao People’s Democratic Republic. The Ministry of Health is reviewing the HIAs required of projects in the country. Ministries work very closely on climate emergencies through the taskforce.
 - The Papua New Guinea Ministry of Health works with oil, mineral and other non-renewable resource partners to ensure that these one-off revenue streams translate into services for the people.
 - All ministries must work closely to optimize scarce resources. Environment and health are two tracks of the same railway.
 - In China’s 2008 Sichuan earthquake, government workers succeeded because they did not stick rigidly to their respective ministries and boundaries and mobilized quickly through the functional mechanism set up by the central government, transforming the province in three years. Outside provinces provided support to chosen districts, and sectors to fellow sectors.
 - The SDGs provide a framework where environment and health colleagues can work together in a manner that was less obvious before.
 - In Singapore, all ministries work very closely in cross-ministry taskforces on dengue and haze pollution. For example, the environment ministry receives information on vector-

borne disease cases immediately to begin containment measures. During haze periods, a haze assistance package offers cheaper health care. AEDs are installed in housing estates.

5. Climate change and health

- It is very important to strive to achieve the SDGs on health and environment, and the Republic of Korea is aiming to establish partnership with international agencies and expand official development assistance in this Region. The country follows a master plan on environmental health and a project with the WHO Western Pacific Region on climate change and safe asbestos management. Fifteen countries are training on environmental health for vulnerable people.
- In the 1970s, Japan faced many environmental health problems such as Minamata disease caused by marine heavy metals pollution. The country tackled the causes and improved health.
- New Zealand has a long track record of supporting geothermal energy and promoting renewable energy.
- As for leadership under climate change, non-political and non-government people such as well-known doctors and celebrities are probably needed to deliver the message about climate change, since young people especially seem to trust them more than politicians. Celebrities are followed by millions of people – a single tweet from Kim Kardashian or Beyoncé can reach them.
- Vanuatu believes the Korean Climate Fund will help to deal with the climate health issues in the Pacific.

6. “Business as usual” and climate

- More concrete actions are required as “business as usual” does not keep us within the 2°C threshold.
- Alma Ata in 1978 was a similar push for the environment and health. We are now bringing health and environment back together, out of their silos.
- Environmental health is always last in the funding queue in the Pacific. It takes a big emergency to get attention, and there are so many competing priorities, ministers of health and environment are reduced to begging. Forums like this are a highlight. Prevention always gets marginalized.

7. How WHO can help the survival of countries

- We have to act fast and concretely. We need to stop everything contributing to carbon pollution. It is going to take the comprehensive collaboration of every sector, not just health and environment.
- WHO as a technical organization can bring all countries together and establish partnerships, like this Forum, thus bridging gaps.

8. Economic development and SDGs

- Part of sustainable development is economic development and ambitious GDP targets like 10% per year are pursued at the expense of the environment and natural resources.
- We need to consider not just economic but also social and environmental development, in line with the three pillars of development under the Thai King. No sector can stand alone on climate change.

Comments by Dr Shin Young-soo, Regional Director, WHO Regional Office for the Western Pacific

Dr Shin summarized that: (1) every country has a different situation, many life-threatening and others with awareness but a different sense of danger; however, human beings have great difficulties learning from history and learn best from our own mistakes; (2) this is about advocacy to change mindsets and behaviour; (3) the main purpose of this open forum is to be fully aware of our needs and to strengthen our commitment by turning the Manila Declaration into action in our countries; (4) the target should not only be about achieving SDG 3 but all of the SDGs, and tremendous collective efforts will be required.

2.3.9 Review of the draft Implementation Plan of the Regional Forum (2017–2019)

Dr Nasir Hassan, WHO Western Pacific Region, presented the Implementation Plan, integrating the comments made by the High Level Officials. He noted the two major drivers behind the plan: first, the need to revise the Framework for Cooperation of the Regional Forum; and second, finding a convergence between the Forum and SDGs linked to health and the environment.

Dr Rifat Hossain, WHO Western Pacific Region, further elaborated on the proposed implementation plan and highlighted the importance of taking into account collective targets devising workplans and developing a monitoring framework to track progress. Mr Hossain presented the purpose of the plan to turn the vision of the Regional Forum, based on the SDGs, into reality. Health and environment are at the centre of SDG formulation, and SDGs are the overarching framework. SDGs 2, 3, 6 and 13 are dedicated goals, and there are targets throughout the SDGs on health and environment. They reflect a bottom-up approach negotiated by all countries and sectors, including civil society. Unlike the MDGs, there is a dedicated goal on partnership; therefore, the interlinkages are key, beyond even the health and environment ministries. There is a specific role of regional agencies to take the global targets and goals and translate those into national targets, and they must be measurable and realistic, hence the need for monitoring frameworks.

This Regional Forum can be a catalyst for achieving this, and resources are needed for sharing, translation, breaking silos of development, creating a platform for new approaches to capacity building and policy formulation.

To achieve the objectives of the Implementation Plan, coordination with health, environment and other ministries is needed depending on the national setting, commitment of development partners to achievement of targets through commitment to monitoring, extending resources and more. The implementation cycle was presented, including milestones such as meetings, setting of targets and a collective regional target or vision of the Regional Forum. Not all targets are shared across all countries. The cycle can continue every three years.

It is very rational to implement through a logical framework. Each sector has deliverables, which is where the vision starts to become reality, and these are means of verification. The first objective is to assess and review the charter of the Forum and to determine what is important to the 48 countries. Once the targets are set, workplans should be developed, followed by a monitoring framework to track progress. This will all require resources, so plans will be needed beyond our ministries. WHO and UNEP can develop strategies and a smaller bridging proposal for the next year, followed by a better proposal for the next couple of years.

As the Chair of the TWG on Air Quality, Dr Yun-chul Hong explained the structure and function of the TWG: the group is the knowledge network and an essential mechanism for translating evidence into policy and action. Also, TWGs are not just for country issues but also deal with cross-border issues for harmonization among member countries and thus are important for the future of the Regional Forum. TWGs were launched in 2007 and currently there are seven, but just a few are active. Since each group is supported by a country, the chair country ought to support the activities of TWGs, which is key to the taskforce review seeking the best structure for TWGs. In order to achieve the common environmental health goals, TWGs are looking for science communities as well as international partners to work with. This is an important chance to restart and reboot the TWGs.

Next, New Zealand noted that its officials were able to provide comments only in the last few days. It supported SDG 3 at the centre of the other 16 SDGs and that there are links with environmental health, but narrowing to just nine limits the scope. It considered the greatest transboundary concerns in the region to be air pollution and climate change impact. While AMR, waste management, marine pollution and marine biodiversity must not be neglected, they were not as significant as, or may arise as a consequence of, sea level rise and climate change. Actions to improve and protect the environment and the health of communities must be undertaken in full cooperation and collaboration. The conditions of the Implementation Plan need to be aligned with other plans, not to have additional monitoring and reporting requirements.

Thailand noted that the table in the Implementation Plan should have three objectives – the first stays the same, but the second could change to “support SDGs” and include 2–6, while the third objective might include other initiatives, including TWG workplans. It also noted that the word “illegal” should be inserted before “shipment and dumping of waste” as mentioned at the High Level Officials’ meeting for the Manila Declaration.

The Chair emphasized that the plan was still in preparation, and all comments received after this meeting would be incorporated by the Secretariat.

The Secretariat agreed to include the requested changes received and to circulate the revised plan for adoption following the meeting

2.3.10 Review and adoption of the *Manila Declaration on Health and Environment*

Dr Rosell-Ubial read aloud the Manila Declaration and solicited any further comments and additions to the document.

Recommendations from New Zealand that had not been incorporated would be considered later.

Fiji, mindful of the impassioned interventions from the Pacific, called for more explicit reference to a threat to the existence of small-island states from climate change. This concern was also supported by Tuvalu.

Tuvalu reiterated concerns that the financial issues that countries are facing in addressing SDGs had not really been reflected. In addition, WHO is not accredited for GCF financing and countries were again urged to lobby for WHO to become accredited and access these funds. WHO understands health and environment issues. This should be included in the Declaration.

The Declaration was agreed upon, on condition of consideration of the inputs from New Zealand, Thailand, Fiji and Tuvalu.

Papua New Guinea moved that the Declaration be approved with the inputs included. It was seconded.

The next Ministerial Forum is in 2019; the deadline for submitting hosting proposals is December 2016. Dr Shin commented that it would be a very important decision requiring consultation to submit hosting proposals, and the Secretariat will continue to communicate with the countries.

The Chair closed the session by thanking everyone for their comments.

2.3.11 Close of the meeting

Closing remarks were delivered by Mr Ibrahim Thiaw and Dr Shin Young-soo.

Mr Thiaw reminded the ministers of health and environment that they have a fundamental role to play in joint advocacy, awareness-raising and reporting back to their cabinets about the situation. Climate change can be viewed not just as a problem but as a wonderful opportunity for investment in better lighting, air conditioning, cleaner cars and cleaner industries. More data-sharing is needed, more scale-up of clean technology and best practices, and improvements in air, water and waste management, especially on transboundary issues. He urged the inclusion of financial institutions in the Regional Forum 2019 to ensure large investments.

Dr Shin reiterated the historical nature of this Forum and thanked the Government of the Philippines for being gracious hosts. He described the partnership with UNEP as essential and stressed the importance of nurturing relationships with experts. He thanked the speakers and ministers for their active participation and encouraged everyone to sustain the momentum in keeping health and environment at the centre of sustainable development. Dr Shin repeated WHO's commitment to helping countries in their implementation of the Manila Declaration and to leave no one behind.

The Chair then declared the meeting closed.