Systems Approach to Health and Innovation: Towards a Low-Carbon Economy

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In 2018, the World Health Organization (WHO) Western Pacific Regional Committee Meeting decided four key thematic priorities in a policy document called "For the Future": health security, NCDs and aging, climate change and environmental health, and reducing inequity and reaching the unreached.

Indeed, the member states did prioritize on climate change and environmental health with a focus on all the issues that have been discussed here in the context of a low carbon economy, and put that within a systems approach. This systems approach refers to environmental and human health being part of a complex adaptive systems, but also refers to the systems of healthcare delivery and their impact on the climate and the climate crisis. If one looks at the sustainable development goals (Fig. 1) and looks at them from this perspective, we are concerned within the Sustainable Development Goal number three, that aiming for good health and wellbeing. And you relate that to each of the other sustainable development goals. The connection between them, the edges between each of those pairs of nodes in the figure on this slide is a major link with the environment. Either a major contributor to environmental health or a major danger to environmental health. In the context of the United Nations Climate Change Conference (COP26), the WHO convened many organizations and academics and made a special health argument for climate change. And I will summarize the action components within the "For the Future" framework and within those health arguments.

In these times, we must start with the pandemic and end with it. We need to commit to a healthy recovery. We need to align climate and health goals. We need to support a fossil-free recovery. We need to prepare for the next pandemic, which may

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Fig. 1 The Sustainable Development Goals (SDGs) centred on Goal 3: Global Health and Wellbeing

even be starting now. The danger of a pandemic remains with us, and it is not just dealing with the one we have now but always being ready for Disease X, the next pandemic. We need to adopt multi-sectoral approaches with health in all policies. And we need on an immediate basis to commit to vaccine equity.

Our health is not negotiable. As we discuss all these solutions, we need to keep the overall aim in mind. We need to close the 1.5° gap in order to stay alive. This is a step change in ambition, and each country must, as China has done, submit ambitious, healthy climate plans. We need to scale up finance for those vulnerable countries that need to tackle the climate and the health crisis. We need to step up our plans and funding for adaptation and resilience.

There are multiple opportunities for addressing and taking advantage of co-benefits between climate, human health, and animal health, with ecological considerations. The very concept of "One Health" is founded on co-benefits. We must maximize and measure the health co-benefits of climate action at all levels of government, thus honoring every person's right to health, recognizing that the current and future generations have a right to a safe, clean, healthy, and sustainable environment. And in doing so, we need to continue to invest in the science that strengthens the case for co-benefits and develops as we have seen solutions for connecting the benefits to the climate and the benefits to human health. At the same time, we need to build health resilience to the climate risks. This involves a process of regular assessment. The WHO has tools that can assist member states to regularly conduct these vulnerabilities and adapt health vulnerability and adaptation assessments. We need to develop and implement evidence-based adaptation plans for health, and we need to strengthen the climate resilience and environmental sustainability of health systems and facilities.

Jodi Sherman's presentation on this theme has been very impressive and convincing. We need to address the energy systems in ways that protect and improve our climate. We need to phase out polluting fossil fuels. We need to ensure that people in urban and rural environments have access to clean air, adopt WHO's air quality guidelines, do all necessary to adhere to those guidelines, and provide the people of this world with air that is breathable of the highest quality. In doing so, we need to invest in clean solutions for household energy. We have billions of people in the world who do not have clean heating, lighting, and cooking solutions. And at the same time, as we create energy systems in the developed world that is increasingly sustainable, we also need to consider those billions who do not yet have energy security in their household. We need to adapt our food systems to reduce their considerable emissions. As part of the health systems approach, we need to power the health sector with clean energy. And we need to find a just transition for those workers and communities who will be affected by this shift in the industry by providing support, training, and opportunities for those who will be transitioning out of the fossil fuel sector.

Our cities are increasingly attracting large parts of the population. Cities already are home to more than half of the world's population. And within those cities, multiple opportunities exist for reimagining our urban environments, transport systems, and mobility. We need to phase out the internal combustion engine and reduce private car use. We need to prioritize walking, cycling, and public transport, and we need to create people-centered cities, not least using the zoning and virtual systems that can create communities within communities, reducing the need for mobility, taking advantage of everything from telecommunications to the modern digital solutions that we are seeing and discussed at this meeting. We have heard the appeal both from academia and the private sector today that we should be using nature as the foundation for our health. And this includes several actions. We need to halt the destruction of nature, preserve biodiversity and carbon-rich ecosystems, halt the depredation of virgin forests, for example, protect and restore ecosystems. We need to recognize

that there are deep interconnections between human, animal, and ecosystem health, and we need to promote nature-based solutions.

We have heard a discussion at this meeting, which I can only reinforce of the circular economy. We need to look at an important component in sustainability and that is resilient food systems. I think of food in terms of food quality, food security, and food safety. And the agricultural, industrial, and trade practices that guarantee security, quality, and safety of the food have great impact on the environment. We need to nourish our future by improving access to sustainable and affordable diets. Removing harmful agricultural subsidies, supporting a just agricultural transition away from unsuitable farming practices that damage the environment and risk human health, mainstreaming biodiversity for nutrition and health. We need to look at the way we finance all this our health systems, food systems, and energy, and change our, or at least address our financing in a transition towards what is increasingly being called a wellbeing economy. We need to stop funding pollution and end harmful subsidies for fossil fuels domestically in each country and in our development assistance programs abroad.

We need to close the health financing gap for environmental health programs. Within the health sector, this refers not only to the health financing gap between richer and poorer countries, but also to financing gaps between, or at least financing imbalances between the high-tech hospital-based systems that we see in so many countries in favor of more community-based primary care, such as was mentioned by Mark McClellan earlier on. Like we do in medicine, we have a do-no-harm policy for public finance. We need to prevent investments in unsustainable and polluting activities that can threaten communities' wellbeing. And many nations are vulnerable and feeling the effects of climate change. Not least in our region, the climate crisis is affecting very strongly and already very dramatically the member states in the Pacific. We need to provide financial and debt relief to those countries facing the impact of the climate crisis and that are at the forefront. And we need to both prepare a population of healthcare professionals that are aware of these issues and listen to them and work with them, prescribe and implement urgent climate action.

This basically means that we need to be looking at the curriculum of development for the health workforce. We need to update them to take issues of co-benefits of "One Health" and a health systems approach. We need to bring climate action into the healthcare sector. We need to enable health professional advocacy and use the energy of the young upcoming generation of health professionals to help protect the health of future generations. Within these very brief few minutes, I am shoehorning a large amount of actions. If we look at each of them and the connections between them, we see that the health risks and the health systems and health services are parts of large complex adaptive systems. And therefore, whatever area of important action and prevention or care that we look at within the health sector, we see deep connections between that and the environment.

Here is an illustration on tobacco and its environmental health impacts. Many tend to think of smoking as a behavioral or personal health concern, but indeed it is very much also an environmental concern. It is a health concern in terms of policies such as pricing and marketing that facilitate or encourage smoking or tobacco use. It is also

an environmental concern, looking at the supply side, including the way that tobacco-growing affects the livelihoods of the farmers and the impact it has on the land. These are all parts of the unsustainability of the tobacco industry, even at the production and the supply side. I've already spoken, and other speakers at this meeting have also talked about the food system's impact on the entire sustainability spectrum. Our meat production has an impact on greenhouse gas emissions. Our agriculture impacts land use and its sustainability on the using of scarce water resources. Everything is connected in complex systems. And others have spoken in detail about the impact of the health sector itself. Our buildings and our healthcare facilities have a very direct impact on emissions, on using of disposables, and unsustainable investments and behaviors.

And in this illustration, the panoply of actions that are needed to make our health systems walk the talk and adopt national environmental sustainability policies, ranging from sustain procurement to utilizing innovative models of care, such as shifting to primary healthcare and using more telemedicine as opposed to the highly resource intensive high-tech care, that is in the centers, so-called centers of excellence, the disease palaces that are our hospitals. Hoping that this very rapid overview of the interaction between our health systems' sustainability and the One Health principles, the co-benefits that lie between them, and a focus on the core actions that we need to be taking with urgency. I hope you have at least tied together many of the threads that other speakers have so eloquently presented.