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### Climate change and social determinants of health: two interlinked agendas<sup>1</sup>

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#### Introduction

The issue of equity should be considered by policy-makers as a significant social mechanism, which can change environment and climate change at country and community level as it reinforces the close link that exists between public and sustainable development. Sustainable development consists of three core pillars, namely an environmental pillar, an economic pillar and a social pillar. The core question posed here addresses those three pillars with a specific focus on integrating physical and social environments as well as how these can influence the health status of populations.

Climate change is indeed a new threat to public health and to the advances that are currently being made by nation-states in achieving and maintaining

their achievements with regard to the Millennium Development Goals (1). Thus, climate change should be considered a priority area when addressing health inequalities (2). This is the main contribution of the CSDH to the 'climate change agenda' as it has the potential to close the gap between the economic and environmental pillars adding the necessary evidence to the social pillar to be integrated in any 'climate change intervention'. Over the last 16 years, since the 1992 Eco Conference, theoretical and action priorities have been focusing primarily upon the environmental and economic pillars. Evidence demonstrates the importance given by the CSDH to the social components and core examples as demonstrated by the knowledge network on 'Urban Settings' are issues of transportation, energy, urbanization and urban infrastructures.

It is worth stressing, that this is not merely a theoretical issue, but indeed a very practical issue. Often the first question raised by governments and communities involved in technical cooperation efforts is aimed at how best to tackle inequities within a practical context.

There is consensus within the scientific community that the global climate is changing and that this change is affecting human health (3). In the Region of the Americas, the main areas of concern are:

- increases in the frequency and intensity of extreme climate events;
- changes in food and water supply, which in turn affect nutritional security;
- modifications in the distribution of the vector-borne diseases and sea level rise.

Evidence demonstrates that half of the population of the world does not have access to quality environmental services such as water and sanitation (4). Yet, the same evidence shows that for each dollar invested in this kind of service will save approximately \$7 to \$9 from the health service (4). In the case of an extreme event, where infrastructures are destroyed the cost of health will grow very fast. Extreme events similarly disrupt family, industry and community life, which in many cases are never restored. Moreover, populations living in Small Island Developing States, in water scarce areas and in coastal areas will be directly affected by these phenomena.

The subject of climate change and public health is not new, and the World Health Organization/Pan American Health Organization (WHO/PAHO) have published documents and held workshops over the last two decades (5), including two sub-regional workshops, one for the Caribbean and one for the Central America Region addressing the effects of climate change on public health. Increasing concerns and evidence on public health impacts led the World Health Assembly in May 2008, to secure a resolution for the WHO and Member States to implement actions to protect public health from climate change (6).

During the celebration of World Health Day in 2008, WHO chose the theme of 'Protecting Health from Climate Change'. As part of the commemoration activities, PAHO prepared a Regional Action Plan to protect the health of climate change, in consultation with Member States, and with National Committees on Climate Change and Human Health. This Plan of Action was presented during the 48th Directing Council, in September 2008, in the form of a Roundtable discussion.

The strategic objectives to be achieved through the implementation of the Regional Plan of Action include:

- promote and support the generation of knowledge on health risks associated with climate change and on the response of the public health sector to this phenomenon;
- create awareness of the effects of climate change on health among both the general public and in different sectors including health sector personnel, by promoting communication and dissemination of information in a multidisciplinary approach;

- promote the strengthening and development of human resources, financial resources, institutional development and policy development;
- strengthen and develop the capacity of health systems to design, implement, monitor and evaluate adaptation measures with the aim of improving response capacity to prepare for and effectively respond to the risks of climate change;
- promote, articulate and establish cross-disciplinary, interagency and inter-sectoral partnerships to ensure that health protection and promotion is central to climate change policies.

The strategic objectives including the activities outlined in order to achieve these are in line with WHO and the Global Plan of Action.

### The articulation between climate change and social determinants of health

Climate change, urbanisation, rural development, agriculture and food security are intertwined determinants of population health and health equity (2). Although, a Knowledge Network was not dedicated to Climate Change and Environment, one can reflect upon the Knowledge Networks with a focus on climate change. A key example is when we look at the process of globalisation, where there is concern about the export of hazards to vulnerable populations in poorer countries; another example is the concern about inequalities in access to 'clean environments', such as that provided by access to clean energy. There is similarly concern about the globalisation of environmental risk factors by poor technological practices and more importantly, the exportation of poor technology, which works against the minimisation of carbon fingerprint which is the most important factor in reverting the current climate change trends.

When assessing early childhood development, evidence demonstrates that deprivation of food and water as well as an unsafe environment will interfere in the development of a child if the necessary environmental provisions are not guaranteed.

Within the area of employment conditions, a key concern is the very large informal sector, which lacks any form of social protection or occupational health services. Thus, specific groups within populations are vulnerable to any change

in the environment, particularly migrant workers and poor populations.

An analysis of the health system demonstrates the risks of poor infra-structures and illustrates how health services suffer when demand is increased upon the service as a result of climate change such as heat waves or poor quality of water and food.

There is an urgent need to recognise and address environmental protection factors such as the community approach to control vector borne diseases including malaria, Chagas disease and dengue, as well as water borne diseases such as diarrheal. Recent programmes implemented in Central America and Mexico, utilising a methodology developed by the National Public Health Institute in Mexico to control malaria without the use of DDT proves that the use of community and environmental interventions are cost-effective and similarly increase community resilience and safety, which are fundamental factors for mitigating the possible effects of climate change for health.

Interventions on other priority public health conditions such as road traffic and work-related injuries, also favor the decrease in carbon dioxide emissions, as well as the decrease of respiratory diseases.

With regards to measurement and evidence, one should not forget that nearly a quarter of the disease burden is due to environmental risk factors, which can be controlled. The fraction is much larger, over a third in children aged 0 to 14 years. Thus, any extra stress within the environment will affect any measure of advances in the social determinants of health. In the area of environmental justice, gender equity continues to be a challenge as evidence suggests that in some countries women and girls miss out on educational opportunities due to their responsibilities to collect water and wood for fuel. Urban settings, as already indicated, are of greatest importance for both social determinant and climate change. From the perspective of environmental justice a key concern is the urban poor, the increasing challenge of transport and health as well as the provision of essential services such as water, sanitation and energy.

Many countries in the Americas are committing politically and taking practical steps in creating platforms for implementing policies to tackle health inequities by:

- implementing Commissions, or high-level groups, in order to advocate for social determinants in public policies;
- facilitating the participation of professionals in the nine Networks of Knowledge convened by the CSDH;
- organising joint consultations with civil society on the social determinants of health;
- organising educational processes based on the approach of social determinants of health;
- carrying out joint meetings with partners in the public and private sectors, civil society and academies;
- recognising ethnic diversity in the region by supporting a regional meeting on 'Social Determinants of Health and Indigenous People'.

### Final observations: climate change as reflected in the CSDH final report

Climate change is a common concern for every sector of society and interventions addressing public health and climate change can strengthen inter-sectoral collaboration, which is needed to tackle such a complex issue. The social determinants of health agenda calls for strong cooperation and collaboration between all actors within society and reinforces the social pillar of climate change. In order to highlight the links between these pillars, we conclude by reiterating the messages in the CSDH report, namely:

- Firstly, we need to ensure that economic and social policy responses to climate changes and other environmental degradation take into account health equity (2).
- Secondly, there is widespread recognition of the disruption and depletion of the natural environmental system, climate change included. It is not a technical discussion between environmental experts, and should concern large portions of people affected by their consequences (2).
- Thirdly, underpinning the call for global human justice, the inescapable evidence of climate change and environmental degradation have set clear limits to a future based on the status quo and are prompting and increasing global willingness to do things differently (2).
- Fourthly, international agencies and national governments building on the Intergovernmental

Panel on climate change (IPCC) recommendations, consider the health impact of agriculture, transport, fuel, buildings, industries and waste strategies concerned with adaptation to and mitigation of climate change (2).

- Fifthly, much more analysis of the relationship between social determinants of health, environmental change and health inequities is needed to inform policy and practice (2).

Last but not least, as all authors on social policies have stressed the agenda for climate change should not be seen as one more silo in the social determinant of health framework but a bridge to be connected to other agendas in an articulated and integrated manner to reinforce the claims for social justice and health as a human right.

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#### *Note*

1. These introductory remarks were presented at a panel session in which the first author participated, at the conference 'Closing the gap in a generation: health equity through action on the social determinants of health', 6–7 November 2008, London.