

## | BACKGROUND

Climate change has complex impacts on people's health that fall into three broad categories: 1) direct impacts such as heat and extreme events; 2) indirect impacts via ecosystems which include impacts on global food supplies and changes in vector-borne disease transmission; and 3) indirect impacts via socio-economic systems exemplified by increased poverty and intensification of existing inequalities and migration. The magnitude of these impacts on health will increase in the future and their severity will depend on the effectiveness of climate mitigation and adaptation actions. All people are exposed to the hazardous effects of climate change, but some groups are particularly vulnerable such as people living in low- and middle-income countries, small island nations and other coastal regions, megacities, and mountainous and polar regions. Other vulnerable groups include children, older adults, and those with underlying health conditions. Many of these groups live in higher rates of extreme poverty with few sources of support to adapt to a degraded, and climate-modified environment, let alone deal with the health consequences of these changes.

Main contributors to global climate change are fossil fuel combustion and industrial processes but also agriculture, deforestation and other land-use changes, transportation, and building energy use. In addition, the health sector is responsible for 4.6% of greenhouse gas emissions, with 70% coming from the health sector supply chain. Addressing this emission source is a critical need to meet carbon neutrality. A variety of co-benefits exist by mitigating emissions from the healthcare sector. Switching to renewable, distributed energy at hospitals and health centers, for example, can reduce GHG emissions, reduce air pollution, and generate money savings. Such a transition increases energy reliability as well, which can help facilities expand health service offerings and refrigerate temperature-sensitive medications.

Evidence suggests that the value of the health benefits of climate change mitigation has the potential to offset most of the initial mitigation costs. Successful policies and practices to address climate change mitigation and health require systematic, well-planned collaboration and decision-making between relevant sectors.

## | OBJECTIVES

The objective of this session is to share practical lessons and innovations for multi-sectoral policies and practices to improve understanding of and strengthen multi-sectoral action on climate change mitigation and health across regions, looking at the impacts of climate on health and the healthcare sector on climate. This session will explore the various potential leverage points, financing mechanisms, and collaborations needed to mitigate climate change, promote human health and well-being, and secure environmentally sustainable healthcare practices, looking toward solutions that enhance justice and equity for vulnerable and underrepresented groups.





## Speaker

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Keisuke Nansai is Research Director of the Material Flow Innovation Research Program (mfi.nies.go.jp) and Head of the Global Resource Sustainability Research Section at the Material Cycles Division at the National Institute for Environmental Studies (NIES), Japan. He is an adjunct professor at the Graduate School of Environmental Studies at Nagoya University in Japan. He is also a panel member of the International Resource Panel (IRP) of the United Nations Environmental Program. He is an editorial board member of Economic Systems Research (Taylor & Francis) and Environmental Research: Infrastructure and Sustainability (IOP publishing), also serving as an editor of Resources, Conservation & Recycling (Elsevier). He was awarded the Leontief Memorial Prize in 2007 and the Sir Richard Stone Prize in 2011 by the International Input-Output Association (IIOA).

Keisuke's expertise is environmental systems analysis based on life cycle thinking, and he has mainly applied input-output analysis, life cycle analysis and material flow analysis to sustainability assessments. Keisuke's current research interest is the nexus of planetary health and sustainable material use, such as material criticality regarding climate change mitigation/adaptation, human health impacts via material consumption, and global material trade harmonised with the planetary health.