

# DIABETES AND CLIMATE CHANGE:

## INTERCONNECTED GLOBAL RISKS TO HEALTH AND DEVELOPMENT

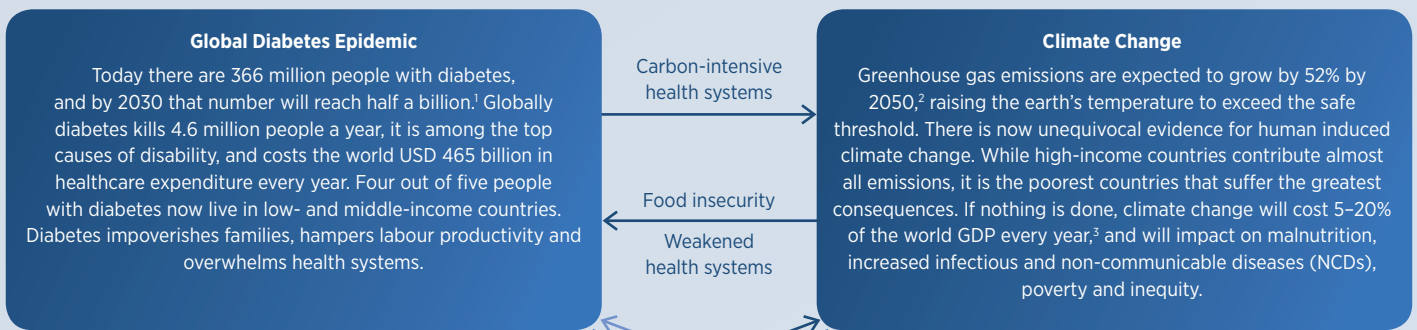
Global trends in demography, migration, urbanisation, consumption and production are creating new challenges that threaten to derail human development and economic growth.

Two of these urgent challenges in the 21st century are the global diabetes epidemic and climate change. Recognition of the immense human, economic, and environmental cost of these two problems, particularly for low- and middle-income countries, is increasing and a multitude of political commitments for action has followed. But what has been missing in policy dialogue is recognition of the connection between climate change and type 2 diabetes, and approaches capable of jointly mitigating their risks and repercussions.

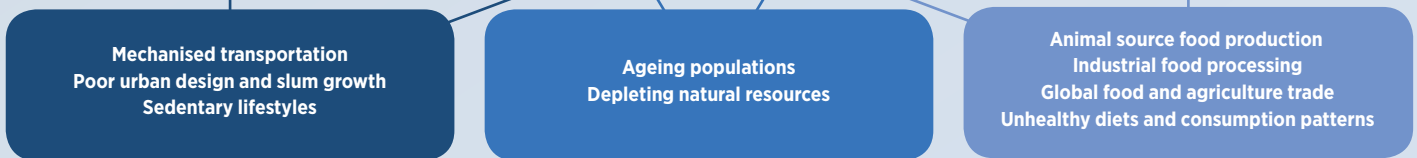
This handout provides a summary of the interconnections and key messages.

### MAPPING THE INTERCONNECTIONS: TYPE 2 DIABETES AND CLIMATE CHANGE

#### Direct Impact



#### Pathways



#### Global Vectors



# EXPLAINING THE INTERCONNECTIONS

**Global vectors:** Type 2 diabetes and climate change share global vectors – rapid urbanisation, changing population demographics, and a globalised food system. These vectors are contributing to high-carbon ‘obesogenic’ societies.

**Shared pathways:** The global vectors are forging common pathways towards poor human and planetary health:

- Rapid urbanisation → mechanised transportation, poor urban design and slum growth, and the adoption of sedentary lifestyles. Urbanisation can lead to lifestyle change, with an increase in car and motorbike use and decline of walking, cycling and physical activity – both increasing transport emissions and diabetes risk.
- Demographics → increasing size and changing demographics of populations, and their impact on natural resources.
- The Global Food System → the overproduction and consumption of animal products and processed foods high in calories, sugar and saturated fat is increasing diabetes risk and threatens the environment. The global food trade is driving a rapid ‘nutrition transition’ to these foods in low- and middle-income countries.

**Direct impact:** The connections between type 2 diabetes and climate change go beyond shared vectors and pathways. There is now evidence that these two global challenges exacerbate and directly impact upon each other.

Climate Change → Diabetes:

- The effects of climate change, including climactic extremes, may increase risk of diabetes in populations by curtailing physical activity, disrupting traditional food supplies, and increasing food insecurity.
- Extreme climactic events such as heatwaves increase morbidity and mortality in people with underlying conditions such as diabetes, and damage healthcare infrastructure and its capacity to deliver essential care for people with diabetes.<sup>6</sup>

Diabetes → Climate Change:

- There is an association between obesity (a major risk for diabetes) and greenhouse gas emissions from transport and food production.<sup>7</sup>
- Failure to prevent and manage diabetes can lead to complications, acute care, and increased health system utilisation. This threatens the financial and environmental sustainability of health systems, particularly in countries where health systems are energy intensive and have a large carbon footprint.<sup>8</sup>

# KEY MESSAGES

## Diabetes and climate change affect everyone and require urgent attention:

The magnitude of both challenges are immense. They are both truly global phenomena, impacting on both high-income and low- and middle-income countries and have intergenerational effects.

## Risk of type 2 diabetes and climate change can be mitigated through concerted action:

Evidence and solutions exist to curb both of these global challenges. Investment in prevention and mitigation makes economic and human sense.

## End the era of silos:

There is an urgent need to end silos between health and environmental communities and combat global risks together. Diabetes and climate change are fundamentally intertwined and require coordinated thinking and multi-sectoral action.

## Promote and align policies to foster ‘win-win’ outcomes:

Opportunities exist to unite climate change mitigation strategies with those promoting population health and NCD prevention, including:

- Transport policy designed to reduce carbon emissions, increase active travel (distances walked and cycled) and prioritise pedestrians and cyclists will increase physical activity and prevent diabetes.
- Urban design policy which integrates ‘active design’ into streets and workplaces will increase physical activity, reduce carbon use and result in environmental benefits.
- Ensuring the global food system has the incentive to increase fruit and vegetable consumption and slows the rapid growth in consumption of animal produce and processed foods will reduce carbon emissions and diabetes risk.
- Funding integrated models of prevention and management to reduce diabetes complications and the human, environmental and financial impact these create.

**Adopt health equity as the core of policies and interventions:** Social conditions determine vulnerability and impact of diabetes and climate change on populations. Policy alignment on these issues needs health equity at the core to improve overall population and environmental health, and reduce the impact on disadvantaged populations.

## Sustainable development must include health and diabetes/NCDs:

The prism of diabetes and climate change reinforces the broader interconnections between health, environmental and economic issues. As political momentum builds towards the United Nations Conference on Sustainable Development (Rio+20) – which is likely to have a major impact on future global development priorities – health, diabetes and NCDs must figure prominently to ensure sustainable human development for generations to come.

1 International Diabetes Federation, Diabetes Atlas Fifth Edition, 2011

2 OECD, Environmental Outlook to 2050, 2008

3 Stern Review on the Economics of Climate Change, 2007

4 United Nations Population Fund, State of the World Population, 2007; UN Habitat, Global Report on Human Settlements 2003

5 UNFPA, State of the World Population, 2011

6 M McGeekin and M Mirabelli, Potential impacts of climate variability and change in temperature-related morbidity, Environmental Health Perspectives, Vol 109 (May 2001)

7 P Edwards and I Roberts, Population adiposity and climate change, International Journal of Epidemiology, Vol 38 (2009)

8 World Health Organization and Health Care Without Harm, Healthy Hospitals, Healthy People, Healthy Planet, 2009

*The International Diabetes Federation (IDF) is an umbrella organisation of over 200 national diabetes associations in over 160 countries. The Federation has been leading the global diabetes community since 1950. IDF's mission is to promote diabetes care, prevention and a cure worldwide.*

*Bupa is a leading international healthcare group who offers personal and company health insurance, runs care homes and hospitals, and provides workplace health services, health assessments and chronic disease management services. With no shareholders, Bupa invests profits to help people lead longer, healthier and happier lives.*