

**Inputs for OHCHR's Analytical Study on the Impacts of Climate Change on the Enjoyment
of the Right to Health (Human Rights Council Resolution 29/15)**

Contribution by Saudi Arabia

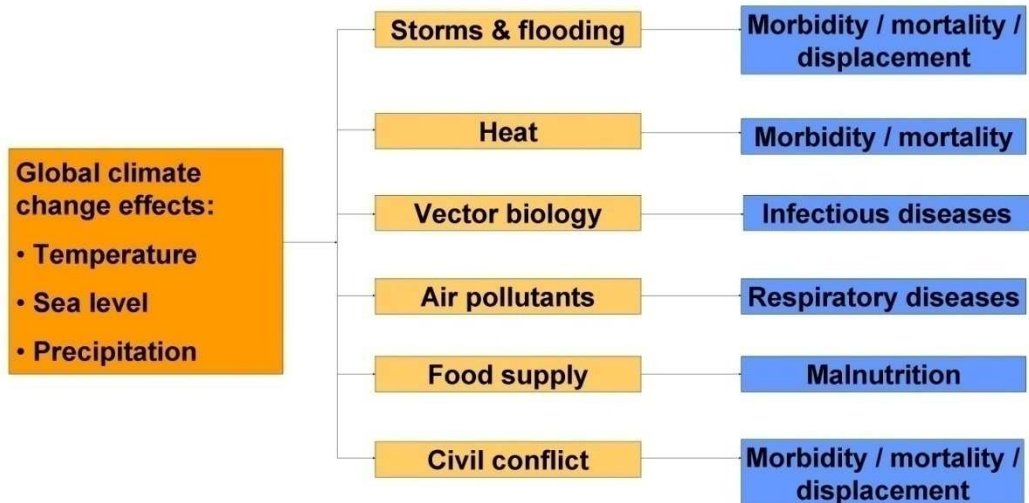
CLIMATE CHANGE QUESTIONNAIRE

- 1- Please describe in your view the relationship between climate change and the enjoyment of the right to health and any human right obligations to mitigate and adopt to climate change that can be derived there from
- 2- please share summary of any relevant data on the impact of climate change on the enjoyment of human right to health including its underlying determinants(education water and sanitation food housing) disaggregate to the extent possible

Answer Q1 and Q2 :

Although global warming may bring some localized benefits, such as fewer winter deaths in temperate climates and increased food production in certain areas, the overall health effects of a changing climate are likely to be overwhelmingly negative on human. Climate change affects social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter.

Potential Impacts of Global Climate Change on Human Health



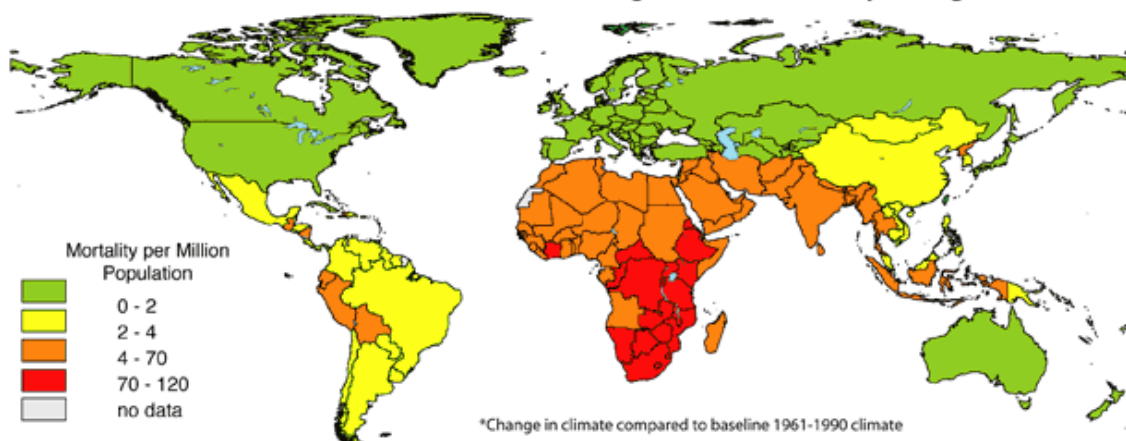
Extreme heat

Extreme high air temperatures contribute directly to deaths from cardiovascular and respiratory disease, particularly among elderly people. In the heat wave of summer 2003 in Europe for example, more than 70 000 excess deaths were recorded².

High temperatures also raise the levels of ozone and other pollutants in the air that exacerbate cardiovascular and respiratory disease. Urban air pollution causes about 1.2 million deaths every year.

Pollen and other aeroallergen levels are also higher in extreme heat. These can trigger asthma, which affects around 300 million people. Ongoing temperature increases are expected to increase this burden.

Estimated Deaths Attributed to Climate Change in the Year 2000, by Subregion*



Data Source: McMichael, JJ, Campbell-Lendrum D, Kovats RS, et al. Global Climate Change. In Comparative Quantification of Health Risks: Global and Regional Burden of Disease due to Selected Major Risk Factors. M. Ezzati, Lopez, AD, Rodgers A., Murray CJL. Geneva, World Health Organization, 2004



Maps produced by the Center for Sustainability and the Global Environment (SAGE)

Natural disasters and variable rainfall patterns

Globally, the number of reported weather-related natural disasters has more than tripled since the 1960s. Every year, these disasters result in over 60 000 deaths, mainly in developing countries.

Rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. More than half of the world's population lives within 60 km of the sea. People may be forced to move, which in turn heightens the risk of a range of health effects, from mental disorders to communicable diseases.

Increasingly variable rainfall patterns are likely to affect the supply of fresh water. A lack of safe water can compromise hygiene and increase the risk of diarrhoeal disease, which kills 2.2 million people every year. In extreme cases, water scarcity leads to drought and famine. By the 2090s, climate change is likely to widen the area affected by drought, double the frequency of extreme droughts and increase their average duration six-fold³. Floods are also increasing in frequency and intensity. Floods contaminate freshwater supplies, heighten the risk of water-borne diseases, and create breeding grounds for disease-carrying insects such as mosquitoes. They also cause drownings and physical injuries, damage homes and disrupt the supply of medical and health services.

Rising temperatures and variable precipitation are likely to decrease the production of staple foods in many of the poorest regions – by up to 50% by 2020 in some African countries⁴. This will increase the prevalence of malnutrition and undernutrition, which currently cause 3.5 million deaths every year.

Patterns of infection

Climatic conditions strongly affect water-borne diseases and diseases transmitted through insects, snails or other cold blooded animals.

Changes in climate are likely to lengthen the transmission seasons of important vector-borne diseases and to alter their geographic range. For example, climate change is projected to widen significantly the area of China where the snail-borne disease schistosomiasis occurs⁵.

Malaria is strongly influenced by climate. Transmitted by Anopheles mosquitoes, malaria kills almost 1 million people every year – mainly African children under five years old. The Aedes mosquito vector of dengue is also highly sensitive to climate conditions. Studies suggest that climate change could expose an additional 2 billion people to dengue transmission by the 2080s⁶.

Climate change and food safety?

Climate change is also predicted to impact food safety, where temperature changes modify food safety risks associated with food production, storage and distribution

Who is at risk?

All populations will be affected by climate change, but some are more vulnerable than others. People living in small island developing states and other coastal regions, megacities, and mountainous and polar regions are particularly vulnerable.

Children – in particular, children living in poor countries – are among the most vulnerable to the resulting health risks and will be exposed longer to the health consequences. The health effects are also expected to be more severe for elderly people and people with infirmities or pre-existing medical conditions.

Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond.

- 3- Please describe existing national commitments legislation and policy frameworks related to climate change mitigation and adaptation including any specific measures intended to prevent the worst impact of climate change on the right to health to ensure access to information transparency

participation and other procedural rights of persons affected by climate actions to promote protect and fulfill all human rights particularly those closely linked to the underlining determinates of health such as food water and sanitation housing and to ensure that climate related actions respect promote protect and fulfill human rights please share any relevant information on the implementation of existing commitment to address climate and its impact

Efforts of KSA in dealing with climate change

- putting health issues as the most important agenda in sustainable development policies
- our products are compatible with market regulations and relevant laws
- implementation of industrial projects, including the petroleum industry in accordance with the development vision focused on the use of the best technologies that contribute to the reduction of harmful gases. this is regulated by the National Committee for the Clean Development Mechanism(CDM) which is the Designated National Authority (DNA) for CDM in KSA
- Rationalization of electricity consumption rate and improve it efficiency
- Kingdom's commitment to all the clauses of the agreement (Kyoto) and the Clean Development Mechanism

Ministry of Health strategies to adapt to climate change

To reduce the negative consequences on health these Strategies include the following:

- MOH is member of clean development mechanism following updates about Current evidence regarding climate change and health, and adopting WHO recommendations related to adaptation strategies
- strengthening of surveillance systems for diseases that are climate sensitive, such as malaria, dengue fever and leishmaniasis and schistosomiasis. Where there are national programs to control all these diseases and the indicators of such programs can be used to predict the extent of the impact of climate change on vector-borne diseases. Also we do disease mapping, which pinpoints areas where people have the highest risk of contracting such kind of diseases

For example, there is observed increase in the number of cases of malaria in the KSA in the last year by 22 percent from what was observed in 2012.

According to the Saudi Ministry of Health and the World Health Organization, Statistics for the 2012 which show good control of schistosomiasis successfully in the past twenty years. But for leishmaniasis fluctuations in the number of cases year after year has been observed . In addition it began to appear in some areas with no reported cases in the past

- Capacity building in the field of climate change.
 - Develop an awareness program about the potential health effects of climate change
 - epidemiological surveillance of food borne diseases as diseases transmitted through food pose a threat to public health, especially in light of climate change and this occupies the problem of global concern; what the resulting human and economic losses.
 - investigation of food borne disease outbreaks (food poisoning) take place in Kingdom of Saudi Arabia since (1395 -1975 AD), in which there is program coordinator in each health Directorate who is responsible for reporting of food borne diseases outbreaks to the central level
 - Strengthening of emergency health systems and early warning systems to cope with emergency health threats which may be caused by climate change such as floods and other crises that may worsen due to climate change through the General Administration of health emergencies

- Protection of workers, any type of injuries resulting from working in high temperatures through the enactment of legislation to prohibit labor under the sun during the period from 12 afternoon until three o'clock pm during July and August

The efforts of the General Administration of Environmental and Occupational Health in the field of climate change:

• In April 2008, The Ministry of Health celebrate the occasion of World Health Day in collaboration with the World Health Organization titled Protecting health from climate change, in Riyadh . the logo which that was chosen for World Health Day that year is to protect health from climate change as a result of the big changes that have occurred in the climate in the world, and the climate issue has become more pressing environmental issue and raise the attention of the international community to the serious implications that surround the future of humanity.

And we find that the leading killer diseases are affected by climatic conditions where the rates of occurrence and spread can change with weather patterns and this requires further efforts to address the health problems associated with the climate in addition to strengthening the monitoring and control of infectious diseases, and ensure the use of water supplies safely and coordinating health action in disaster and emergency.

MOH Has been developed plans and programs to provide protection from climatic changes in addition to the issuance of many environmental laws that protect the environment and humans, but this must be accompanied with the mobilization of all community sectors so as to consolidate the ethics of conserving and promoting the health and protection of the environment and to support the efforts of the ministry in this area.

MOH calls to harden in the application of some of the important steps in other governmental sectors and non-governmental and private sector, for the reduction of pollution from factories and industrial facilities and traffic and controlling disease vectors more effectively and to raise the awareness of the local community about climate change and environmental sanitation.

There is a need to protect the health from the adverse impacts of climate change because heat waves and severe storms, floods and droughts kill tens of thousands every year, and that the climate-sensitive diseases such as diarrhea, malaria and malnutrition end the lives of more than three million people in the world and that climate change threatens the progress that has been achieved in the fight against diseases caused by poverty.

And must issue of human health and well-being must be in the heart of the climate change policies and more efforts must be done to protect health through achieving the Millennium Development Goals.

• our department in collaboration with the Regional Centre for Environmental Health Activities CEHA conduct seminar and workshop on the health effects of climate change under the auspices of Assistant Undersecretary for Preventive Medicine during the period from 05/28/1430 H to 03/06/1430 AH corresponding to 23 - May 27, 2009 with the participation of each of the following sectors:

1-SABIC

2 King Abdul Aziz City for Science and Technology

3 King Saud University

4 Department of Trade and Industry

5 King Abdul Aziz University

6 Aramco

7 Ministry of Petroleum and Minerals

8 General Presidency of Meteorology and Environment Protection

9 Ministry of Interior represented in civil defense

4- Please describe any relevant national accountability and oversight mechanisms designed to ensure access to remedy for those who suffer human rights harm as a result of climate change. please highlight any relevant jurisprudence on this subject and indicate

what measures regulatory or otherwise (impact assessment) are in place to prevent harms caused by third parties

Ministry of Health (MOH) is the major KSA government agency entrusted with the provision of free of charge preventive, curative and rehabilitative health care for all population of the Kingdom. The Ministry provides primary health care (PHC) services through a network of health care centers (comprising 1,925 centers) throughout the kingdom. It also adopts the referral system which provides curative care for all members of society from the level of general practitioners at health centers to advanced technology specialist curative services through a broad base of general and specialist hospitals (220 hospitals).

5- Please describe any concrete mitigation and adaptation measures being taken to address the impact of climate change on the human right to health and good practices in this regard including those related to international corporation, local and community based initiatives private sector initiatives development, application and diffusion of technologies practices and process that control reduce or prevent anthropogenic emissions or green house gases and the exchange of relevant scientific technological technical socioeconomic and legal information related to the climate system and climate change and the economic and social consequences of various response strategies

Ministry of Health (MOH) follows and adopt any intentional health response strategies that recommended by world health organization

WHO response

Many policies and individual choices have the potential to reduce greenhouse gas emissions and produce major health co-benefits. For example, promoting the safe use of public transportation and active movement – such as cycling or walking as alternatives to using private vehicles – could reduce carbon dioxide emissions and improve health. In 2009, the World Health Assembly endorsed a new WHO workplan on climate change and health. This includes:

Advocacy: to raise awareness that climate change is a fundamental threat to human health.

- Partnerships: to coordinate with partner agencies within the UN system, and ensure that health is properly represented in the climate change agenda.
- Science and evidence: to coordinate reviews of the scientific evidence on the links between climate change and health, and develop a global research agenda.
- Health system strengthening: to assist countries to assess their health vulnerabilities and build capacity to reduce health vulnerability to climate change.