



# Pemphis

## NEWSLETTER

### According to climate change related health issues, How Does Climate Change Affect Our Health?

Climate change will affect, in profoundly adverse ways, some of the most fundamental pillars of health: food, air and water. The warming of the planet will be gradual, but the frequency and severity of extreme weather events, such as intense storms, heat waves, droughts and floods could be abrupt and the consequences will be dramatically felt. The most severe threats are to developing countries, with direct negative implications for the achievement of the health-related Millennium Development Goals, and for health equity.



The health risks posed by climate change are global, and difficult to reverse. Recent changes in climate in the South-East Asia (SEA) Region have had diverse impacts on health.

According to IPCC, eighteen heatwaves were reported in India between 1980 and 1998. A heat wave in 1988 caused 1 300 deaths, while another one in 2003 caused more than 3 000 deaths. Heat waves in South-East Asia cause high mortality in rural populations, and among the elderly and outdoor workers. Examples are the reported cases of heatstroke in metal workers and in rickshaw pullers in Bangladesh.

In 2006, Bhutan reported increased loss of life from frequent flash floods, glacier lake outburst floods and landslides. Rises in flood-related diarrhoeal disease have been reported in India and Bangladesh. In 2007,

four monsoon depressions—double the normal number—caused severe floods in Bangladesh, India and Nepal, but also in the Democratic People's Republic of Korea causing death, loss of livelihood and displacement of millions.

In November 2008, tropical cyclone *Sidr* made landfall in Bangladesh, generating winds of up to 240 km/h and torrential rains. More than 8.5 million people were affected and over 3 300 died. Nearly 4.7 million people saw their houses damaged or destroyed, most of them belonging to the poorest of the poor.

“...climate change since the mid-1970's may have caused at least 16,000 additional deaths annually by the year.”

- Changes in climate are likely to lengthen the transmission season of important vector-borne diseases (like dengue and malaria) and to alter their geographic range, potentially reaching regions that lack either population immunity or a strong public health infrastructure.
- Rising sea levels increase the risk of coastal flooding, and may lead to displacements of population. The most vulnerable areas in SEA are the Ganges-Brahmaputra delta in Bangladesh, and the small islands—for example in the Maldives and in Indonesia—as well as the entire coastline of the Indian Ocean. Loss of livelihood will increase psycho-social stress in the affected populations.

The measurement of the impact of climate change on health can only be very approximate. A WHO quantitative assessment concluded that the effects of climate change since the mid-1970s may have caused at least 160 000 additional deaths annually by the year 2000. Many risk factors and illnesses that are currently among the most important contributors to the global burden of disease are sensitive to climate, notably to temperature changes. These include malnutrition

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immediate health benefits. These include the use of cleaner energy and more sustainable transport systems, as well as policies aiming at reducing greenhouse gas emissions.

In addition, WHO stressed the need to strengthen capacity for assessment, research and communication on climate-sensitive health risks. It was also recommended that awareness of the health impacts of climate variability and change needs to be raised among political, financial and community leaders, health practitioners, non-governmental organizations, other sectors and the general public.

At the Twenty-fifth Meeting of Ministers of Health in 2007 (Thimphu, Bhutan) the most important health authorities in the South-East Asia Region concluded that climate change poses a major threat to health security, and requested WHO to “support the formulation of a regional strategy to combat the adverse health impacts of climate change”.

Working towards that goal, WHO SEARO supported four national workshops on human health and climate change in Bangladesh, Indonesia, India and Nepal in late 2007 and organized a regional workshop in Bali, Indonesia, to prepare a regional action plan to protect human health from the effects of climate change. It was held in December 2007, in parallel to the UNFCCC COP13.

“WHO has worked with Member Countries around the World to raise awareness of the impacts of climate change on health”

The goal of the regional framework for action to protect human health from the effects of climate change is to build capacity and strengthen health systems in countries and at the regional level to protect human health from current and projected risks due to climate change. SEAR countries are now aiming at implementing the regional action plan with three strategic objectives:

#### 1. To increase awareness of health consequences of climate change. To this purpose, WHO will:

\* Provide specific climate change-related technical guidance for vulnerability and adaptation assessments and surveillance systems, which provide methods for identifying risks to vulnerable groups, quantifying the burden of disease from climate change and quantifying costs and benefits of health adaptation measures to ensure comparability across countries.

\* Support countries develop vulnerability and adaptation assessment and analysis tools, as well as a set of indicators on climate change-related health risks.

Encourage and facilitate regional knowledge-sharing and networking on climate change and human health within the health sector, as well as between disciplines.

#### 2. To strengthen health systems capacity to provide protection from climate-related risks and to substantially reduce health systems greenhouse gas (GHG) emissions. To this purpose, WHO will:

\* Facilitate greater contribution of funds from donor agencies for climate change and health-related programme implementation.

\* Support countries technically and financially to build national capacities to develop and implement national action plans on mitigation and adaptation, including conducting research on the health impacts of climate change.

\* Support countries technically and financially by providing training programmes on methodologies and assisting in the assessment and management of health risks due to climate change.

\* Develop and provide technical guidance on good adaptation and GHG emission reduction practices within the health sector.

#### 3. To ensure that health concerns are addressed in all decisions to reduce risks from climate change taken by the other key sectors. To enable this multi sectoral task, WHO will:

\* Support the establishment of a regional reference center on climate change and health to support countries in the Region with vulnerability and adaptation assessments, providing information on data sources, and with links to hydro-meteorological services at global, regional and national levels. This center will support a regional network of practitioners working on climate change and health, with access to international technical expertise and will facilitate sharing of best practices amongst countries in and outside the Region.

At a global level, WHO has established its position as the leading voice in assembling and synthesizing critical evidence on health risks from climate change.

For over 60 years, WHO has worked extensively with Member Countries supporting programmes that are already protecting health from climate change, from disease surveillance and response to control of vector

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The Editor, Pemphis Newsletter,  
Environment Research Centre  
or email to: [pemphis@erc.gov.mv](mailto:pemphis@erc.gov.mv)





## APRIL IN BRIEF @ ERC

### Community based waste management trip to Laamu Atoll

A team from the Environment Research Centre made a trip to Laamu atoll from 14th to 21st of April 2008. The purpose of the trip was to draft the Island Waste Management Plan, to formulate the Island Waste Management Committee and to aware the community on Community Based Waste Management.

### PoPW Proposal gets formal approval

The International Technical Review Committee (ITRC) has approved the proposal for the implementation of the CBD Programme of Work on Protected Areas (PoWPA) under the Supporting Country Action on the CBD Programme of Work on Protected Areas project funded by Global Environment Facility (GEF). The main objective of the PoWPA proposal is to lay the foundation for planning and establishing a system of protected areas in the Maldives that is fully representative of the nation's marine and terrestrial biological diversity, thus contributing significantly to the implementation of PoWPA.

### Continuation of what is climate change...

*The carbon dioxide level in the atmosphere reached 385 ppm in 2006, unprecedented in the past 650 000 years of climate record.*

Twelve of the last thirteen years (1995–2007) rank among the warmest years in the instrumental record of global surface temperature. Because of the amount of accumulated greenhouse gases in the atmosphere, over the next two to three decades global warming will increase almost independent of global greenhouse gas emissions scenario.

*The IPCC projects that in 2100, the global temperature will have increased by 1.8–4.0 degrees Celsius.*

The warming of sea water leads to sea level rise. Sea levels have risen faster in the last decade than in the previous 30 years. The total rise in sea level during the twentieth century is estimated to be 0.17 m.

*Global mean sea level is projected to rise by 9.88 cm by the year 2100, but much larger increases cannot be ruled out.*

For Bangladesh, for example, the current sea level rise projections would mean that in 150 years from now, sea level would have risen by 1.5 m and 22% of the land would be submerged, affecting 17 million people. The rate at which the planet is warming now is possibly the single biggest challenge humanity has ever faced. The impacts are likely to be devastating, so we need to act decisively and act now.

### Maldives participates in MFF Review Forum

Mr. Ahmed Saleem, Director General of the Environment Research centre participated in the MFF Review forum from the 21 - 24 April 2008 which was held in Ahungalla, Sri Lanka. The preparatory studies reviewed during the forum included gap analysis, development of ecosystem valued methods, capacity and training, sustainable financing, and sustainable governance.

### Continuation of WHO is helping...

borne diseases to health action in crises. To raise awareness of health implications from climate change WHO is supporting pilot projects to address a wide range of health threats from climate change, across all Regions. WHO staff includes well skilled health professionals dealing with climate-sensitive diseases, in Geneva, regional offices and in 160 country offices. Through its global network of Collaborating Centers, WHO can draw on health experts, many of them world renowned.

The theme "Protecting Health from Climate Change" puts health at center stage. It is an opportunity to capitalize on the energy and commitment of people, and to achieve a common goal: to attract global and local attention and to galvanize action, so that every person on the planet is less vulnerable to the health impacts of climate change.

## WHAT IS CLIMATE CHANGE?

The term "climate change" generally refers to changes in our climate that have been identified since the beginning of the mid-nineteenth century.

Our planet's climate is always changing. In the past it has altered due to natural causes but at present the changes have accelerated as a result of human behavior rather than natural forces. Indeed, the natural "greenhouse effect"- by which the Earth's atmosphere traps energy from the sun warming our planet to support life-is being heavily disturbed.

The greenhouse effect is the phenomenon by which the Earth's atmosphere acts like the glass roof of a greenhouse, allowing the heat of the sun to enter, and then preventing it from escaping, in effect capturing it. Greenhouse gases, or "GHGs", such as carbon dioxide and methane present in the atmosphere have the ability to trap the infrared rays reflected by the Earth. The greater the quantity of GHGs, the more the atmosphere will heat up. This phenomenon is essential for life on Earth to exist, keeping Earth's average temperature around 14 degrees Celsius.

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**Network** with specialized agencies, non-profit organizations and engaged communities. More at: [http://www.cseindia.org/html/eyou/climate/index\\_climate.htm](http://www.cseindia.org/html/eyou/climate/index_climate.htm)

**Off!** Turn off televisions, videos, stereos and computers when they are not in use—they can consume between 10 and 60% of the power when in "stand-by" mode. Turn off computer screens and photocopiers when you take a break. Also turn off lights when you don't need them, it saves energy after a minute or two. Unplug electronic items when you're not using them.

**Plant trees:** The United Nations Environment Programme (UNEP) has launched a major worldwide tree planting campaign. Individuals, communities, corporate business and industry, civil society organizations and governments are encouraged to enter tree-planting pledges online, aiming at planting one billion trees worldwide. [www.unep.org/billiontreecampaign/](http://www.unep.org/billiontreecampaign/)

**Quit plastic bags.** Carry your own bag with you when going shopping.

**Recycle, repair and reuse materials.** Tips, tricks and ideas for sustainable living. See: [www.ban.org/main/marketplace.html](http://www.ban.org/main/marketplace.html); [www.geda.org.in/e\\_conserv/ec\\_ov\\_tds.htm](http://www.geda.org.in/e_conserv/ec_ov_tds.htm); <http://www.regeneration.org/tips-downloads/>

**Save paper:** Print on both sides of the paper. Proofread documents on screen before printing. Instead of making a copy for each person, route one copy around the office. Do not discard one-sided printed pages; use them to make scratch pads.

**Travel smart: Reduce air travel.** Traveling by plane contributes to significant carbon dioxide emissions leading to climate change. If you have to fly, consider

## WHO is protecting health from Climate Change?

Since global climate change began to emerge as a major issue in the late 1980s, WHO has guided and coordinated the research agenda on this threat, and contributed to major assessments, such as those of the UN Intergovernmental Panel on Climate Change (IPCC). WHO has also assembled and reported the evidence of the links between climate change and human health, quantified past and projected future impacts and identified vulnerable populations. WHO has worked with Member Countries around the world to raise awareness of the impacts of climate change on health and to give guidance on assessing risks and developing national and local responses to specific threats, such as heat waves, floods and vector-borne diseases.

WHO is now placing a stronger focus on action. Its various programmes, from infectious disease

buying carbon offsets to compensate for the emissions caused by your flight. More at: [www.carboncounter.org/](http://www.carboncounter.org/)

**Use less energy, and conserve more of it!** Do not waste water—close your tap while brushing your teeth, and while soaping clothes, body or dishes. Repair leaky plumbing fixtures; prevent overflowing of tanks. Energy is used for pumping and treating water. Save water to save energy!

**Value wastes!** Do not dump your home wastes everywhere. Heaps of garbage left in the open emit methane and contribute to global warming. Segregate your wastes so they can be recycled and/or reused and where possible use organic waste for composting.

**Write** letters about the health impacts of climate change to the local newspapers. This is a great way to keep the issue in the public mind. It also sparks a debate and allows us all to understand what the real issues are.

**Express your concerns on environmental health issues and solutions and stay informed.** Read widely and understand what we are dealing with.

**Your president, prime minister, parliamentarian or local leader** needs to know about the impacts of climate change on health. Write letters to them asking for policies to ensure greenhouse gas emissions fall by at least 3% each year from now on.

**Zoom in reducing emissions: It is the best way forward!** Our countries need new national legislation and laws to help ensure that we develop cleaner cars and cleaner power plants and to help us get government rebates on installing solar power, solar hot water, or wind power in our homes.

surveillance and control to health action in emergencies, already protect lives from climate-related hazards across the world. WHO is working to ensure that the health community in all its 193 Member States is ready to effectively respond to the additional risks posed by climate change.

At the Sixtieth World Health Assembly in May 2007, Member Countries discussed health protection from climate change. WHO emphasized the importance of strong health systems as the front-line defense from the impacts of climate change on human well-being. Key preventive public health interventions that will improve health now, as well as reducing climate vulnerability in the future, were identified. WHO called upon Member Countries, individuals, communities and corporations to engage in making policy changes that also bring



Continuation of climate change in South East Asia region...

According to IPCC7, global warming will also affect sea temperatures. Increased frequency of El Niño events and future changes in ocean currents, sea level, sea-water temperature, salinity, wind speed and direction, strength of upwelling, and mixing layer thickness as well as predator response to climate change, have the potential to substantially alter fish breeding habitats and food supply for fish, and

ultimately the abundance of fish populations in Asian waters.

Mainly due to the expansion of the warmer sea water, sea levels will rise steadily in the Region, even if greenhouse gas concentrations are stabilized. The risk of flooding in mega deltas is highest. Indeed, IPCC states that “Coastal areas, especially the heavily-populated megadeltas regions in South, East and South-East Asia, will be at greatest risk due to increased flooding from the sea and, in some megadeltas, flooding from the rivers”.

Warmer sea surface temperatures could also increase the frequency and the intensity of cyclones in the Indian Ocean region. Indeed, small islands are under threat of sea level rise—80 percent of island in the Maldives are at less than 1 meter above mean sea level—would also be affected by storm surges and cyclones before they face actual submersion.

Coastal ecosystems could be destroyed (wetlands, mangroves, coral reefs) with an increased coral bleaching, leading to widespread coral mortality due to temperature increases of 1–3 °C. The livelihoods of people who rely on fishing or tourism would be hampered and the protection from storm surges would decrease. Maldives are particularly vulnerable because fish is the primary source of dietary protein and that tourism is a major source of revenue. In 2001, 45% of tourist resorts had reported beach erosion.

Climate change is projected to heavily affect the sustainable development of most South-East Asian countries, as it compounds the pressures on natural resources and the environment associated with rapid urbanization, industrialization, and economic development.

In mountain regions such as the Hindu Kush-Himalaya, warmer ambient temperatures will change the altitudinal distribution of vegetation. The impact on biodiversity may lead to the extinction of certain species of flora and indigenous fauna. As the ecological zones shift, land use patterns will be altered. This will trigger the need to gradually change lifestyles and livelihoods.

Mountain communities are particularly vulnerable, due to high exposure to hazards, remoteness, poor infrastructure and marginalization. While trying to cope, nomad populations may need to become sedentary—already occurring with some groups in the Northern Himalaya<sup>10</sup>—and traditional ethnic groups may thus face social tensions and eventual loss of their identity. The psychosocial stress may result in depression, leading to misuse of alcohol, domestic violence and other dramatic and negative behavioral changes.

The most vulnerable people in the Region will be the poor because they have fewer resources to adapt to the rapid changes of the natural environment on which their livelihoods depend. In rural areas, women are increasingly becoming household heads and have to bear the double burden of social reproduction and

agricultural work, as their husbands leave the rural areas in search of work in urban centers.

Mountain people, communities living in remote areas, slum dwellers in and around mega-cities, islanders and fisherfolk will be deeply affected. But it is women, elderly groups, poor communities, children, disabled people and ethnic minorities who have the least coping and recovering capacity and who will be the most physically, socially and psychologically vulnerable.

“Coastal ecosystems could be destroyed (wetlands, mangroves, coral reefs) with an increased coral bleaching, leading to widespread coral mortality due to temperature increases of 1-3 °C”

Human-induced climate change is an emerging threat that rightly commands widespread policy and public-

attention. Along with other rapid changes associated with global population and economic growth, climate change strains existing weak points in health protection systems and calls for reconsideration of public health priorities.

The most effective responses are likely to be strengthening of the key functions of environmental management, surveillance and response to safeguard health from natural disasters and changes in infectious disease patterns, and a more pro-active approach to ensure that development decisions serve the ultimate goal of improving human health.

The Committee is currently incorporating health concerns and actions related to health implications from climate change into the new Five Year National Development Plan. At provincial and district levels, these concerns are being streamlined into the Healthy Cities Programme.

Sri Lanka is focusing on a series of activities that will benefit human health in the long run. Among these are the promotion of energy efficient technologies, incentives to public transport systems and use of railways to reduce greenhouse gas (GHG) emissions. The country is also promoting intermittent irrigation in rice cultivation to reduce methane emissions from paddy fields, as well as integrated approaches to control pests so as to secure good yields and reduce the need for pesticides.

Thailand is taking action to reduce GHG emissions in absolute terms by incorporating state-of-the-art technologies and a careful adoption of energy-efficiency measures. The specific policy instruments to reduce GHG emissions include (1) regulations; (2) fiscal incentives; (3) information; and (4) research, development and demonstration, and will contribute to health gains in terms of air quality, physical activity and reduction of road injuries.

While promoting the concept of healthy islands and healthy buildings, Maldives envisages strengthening the capacity for healthcare delivery and medical emergency. The country will prioritize campaigns to promote better nutrition and integrated vector management. More research on climate change related diseases is also planned.

“In December 2007, SEA countries, with the support of WHO, prepared a regional action plan to protect human health from the effects of climate change.”

In December 2007, SEA countries, with the support of WHO, prepared a regional action plan to protect human health from the effects of climate change. The goal of the regional action plan is to build capacity and strengthen health systems. The first step will be to increase awareness of health consequences of climate change by:

1. Undertaking studies on the health implications of climate change and sharing information to understand how to promote changes in individual and corporate behaviors that mitigate climate-related health risks, while protecting and promoting health.

2. Facilitating national working groups, non-governmental organizations and civil society to develop coordinated mitigation and adaptation plans, including relevant sectors, regions and disciplines.

3. Developing awareness-raising programmes and learning materials to educate and engage a broad range of stakeholders, including local communities, health and other professionals and the media on the potential health impacts of climate change and on appropriate measures to reduce climate-sensitive risk factors and adverse health outcomes.

To strengthen health systems capacity to provide protection from climate-related risks, and to substantially reduce health systems GHG emissions, SEA countries will:

1. Develop and implement national action plans for health that are integrated with existing national plans on adaptation and mitigation to climate change.

2. Develop integrated strategies to incorporate current and projected climate change risks into existing health policies, plans and programmes to control climate-sensitive health outcomes, including integrated vector management, and disaster risk management.

3. Strengthen existing infrastructure and interventions, including human resource capacity, particularly surveillance, monitoring and response systems and risk communication, to reduce the burden of climate-sensitive health outcomes. Key concerns vary by country; common concerns include vector borne diseases, air quality and food and water security.

4. Strengthen public health systems and disaster/emergency preparedness and response activities, including psychosocial support, through increased collaboration and cooperation across sectors. This should include documentation, sharing and evaluation of the effectiveness of local knowledge and practices.

5. Provide early warning systems to support prompt and effective responses to current and projected health burdens. To achieve this end, national and regional climate forecasting information, including climate change projections, should be fully utilized.

6. Implement adaptations over the short, medium or long term; be specific to local health determinants and outcomes of concern; and facilitate the development of community-based resource management. The costs and benefits of different interventions should be determined.

7. Establish climate change focal points or mechanisms within the national health institutions to ensure the implementation, monitoring and evaluation of health mitigation and adaptation actions and ensure that health issues are adequately addressed in these actions.

8. Establish programmes to substantially reduce GHG emissions by the health sector which could also serve as a best practice model for other sectors.

To ensure that health concerns are addressed in decisions to reduce risks from climate change in other key sectors, the following activities will be carried out:

1. Develop integrated strategies to incorporate current and projected climate change risks into existing policies, legislation, strategies and measures of key development sectors to control climate-sensitive health outcomes.

Examples include the promotion of public and non-motorized transportation, clean energy and disaster risk management.

2. Facilitate the health sector to actively participate in national communications to the United Framework Convention on Climate Change (UNFCCC), and include health issues as the core elements in the negotiation process.

3. Ensure active health participation in the national climate change team.

## What can I do to help reduce the adverse health impacts from climate change



### Act Now!

**Buy energy efficient appliances:** Make informed choices. If you're buying a washing machine, refrigerator, dish-washer or oven, buy the most energy-efficient model you can afford. They might be more expensive but they pay for themselves through lower energy bills. The same is true for procurement of office equipment, such as computers, photocopiers and printers.

**Calculate your personal carbon footprint** and cut your greenhouse gas emissions. Take it at [3w.earthday.net/footprint/info.asp](http://3w.earthday.net/footprint/info.asp) or at <http://www.carbonfootprint.com/>

**Debate, discuss, and distribute** leaflets, brochures and posters on climate change and environmental health issues. Useful information is available at: [3w.unep.org/wed/2007/english/](http://3w.unep.org/wed/2007/english/); <http://unfccc.int/>; [3w.who.int/globalchange/climate/en/index.html](http://3w.who.int/globalchange/climate/en/index.html); [www.climatecrisisnet/](http://www.climatecrisisnet/)

**Enjoy the sun!** Fit solar panels on the roof of your home. Why not turn your home and/or office into a clean power station! Solar power is renewable and plentiful!

**Fridge:** Don't leave fridge doors open for longer than necessary; let foods cool down fully before placing it in the fridge or freezer; defrost regularly and keep the appliance at the right temperature. Where possible, don't place cookers and fridges/freezers next to each other.

**Go Green!** If you have to buy a car, buy a fuel-efficient, environmentally friendly one. This will save you money and keep more CO2 from going into the atmosphere. Make sure that your tires are inflated correctly—this can save you 5% on the cost of your petrol. Share car journeys with your work colleagues or friends. Make more use of public transport, such as metro, and train for longer journeys. For short trips and local shopping, try walking or use a bicycle. It keeps you fit and is fun too! More at: [3w.worldwildlife.org/climate/involved/individuals.cfm](http://3w.worldwildlife.org/climate/involved/individuals.cfm)

**Half your emissions** moving your air conditioner thermostat up by 5 degrees Celsius in summer. Almost half of the energy we use in our homes goes to cooling. Maintain the filters on your air conditioners cleaning them regularly. A clean air filter can save pounds of carbon dioxide a year. More at: [3w.greenpeace.org/international/campaigns/climate-change/take\\_action](http://3w.greenpeace.org/international/campaigns/climate-change/take_action)

**Involve your family,** friends, children and neighbors!

**Join an environmental group.** Find out what action groups are doing around your locality or region; if there are no groups, start one!

**Kick start an environmental campaign** in your neighborhood.

**Lamps:** Replace the bulbs you use most with compact fluorescent lamps or CFL bulbs. They cost more than ordinary lamps but you end up saving money because they use only about one-quarter of the electricity to provide the same light. And they last four times longer than normal light bulbs! More information on CFL at: [http://www.energystar.gov/index.cfm?c=cfls.pr\\_cfls](http://www.energystar.gov/index.cfm?c=cfls.pr_cfls)

**Minimize** the use of toxic chemicals. Use non-toxic, biodegradable, water or plant based paints, cleaners and pest repellents.



Minister of Environment, Energy and Water

## Ministers Message 'Protecting Health from Climate Change'

Climate change is here, and it is here to stay, unless we tackle it appropriately. The Intergovernmental Panel on Climate Change (IPCC) – co-winner of the 2007 Nobel Prize has provided the necessary scientific evidence. Greenhouse gas emissions – mainly man made – have already increased the temperature of the atmosphere with no parallel in the pre-industrial period.

While more attention is being given to the impacts of climate change on natural ecosystems and biodiversity, it is paramount that we recognize the effects on human health. Climate change already contributes to the global burden of disease and is responsible for an estimated 160,000 deaths annually. Extreme weather events such as heat waves, floods and draughts produced as a consequence of climate change can cause death and disease. Scarcity of water and food (as a result of receding glaciers, irregular rains and sea water intrusions in coastal areas like the case of Maldives) can result in malnutrition.

According to concerned authorities, climate sensitive diseases like Scrub Typhus, Dengue and Chikungunya are already occurring in the Maldives. It is a matter of concern that diseases that have been eradicated such as Malaria, along with water-borne diseases (Cholera and others) may thrive as a result of Climate Change.

On the other hand, increasing energy demands by greater use of fossil fuels will add to air pollution which will contribute to worsen a number of respiratory diseases like asthma and others.

In addition to the above diseases, Maldives is witnessing an increase in the conditions of the skin, subcutaneous tissue and eyes that has close linkages to climate change with resulting increase exposure to ultraviolet radiation (UVR).

In the light of this scenario, it is vital for all concerned sectors and stakeholders to work even more closely with the health sector, to prepare for the challenges posed by climate change. The health impact of climate change is dependant on the vulnerabilities of the populations and on the ability of the population and the systems to respond and adapt. Effective action to protect human health from climate change can be only achieved with a stronger and well coordinated national health system that gives priority to climate-sensitive diseases, notably at the primary health level (island level).

The challenge of "Protecting Health from Climate Change" is one of the biggest that humanity has ever had to confront. This challenge has been selected as the theme for the 2008 World Health Day which is commemorated every year on the 7<sup>th</sup> of April, and in order to raise awareness and public understanding of the health consequences of climate change, PEMPHIS has decided to devote its April issue on this theme and include a series of fact sheets produced by the World Health Organization (WHO) South-East Asia Regional Office (SEARO) with the objective of sparking commitment and change among government agencies, international organizations, donors, NGOs, business and communities in the Maldives to collaborate in putting health at the heart of the climate change agenda and to remind us of the need to act now.

7 April 2008

Ahmed Abullah  
Minister of Environment, Energy and Water