

# Towards Reducing Global Warming

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The world is spinning in a vicious cycle of demand and supply, both the cause and effect of global warming. If the situation continues, health hazards will increase which is all about adverse climate change caused by the trapping of green gases (like carbon dioxide) in the earth's atmosphere that affects biodiversity and poses serious health hazards. Counter measures to facilitate living in hotter temperatures like air-conditioning and refrigeration will unfortunately consume more electricity from power plants that burn coal, releasing carbon dioxide. This will further increase global warming.

Several major health organizations are calling attention to the devastating toll that climate change will take on the health of our children, families and communities in the world over.

The theme of World Health Day in 2008 was "Protecting Health from Climate Change". The National Public Health Week 2008, was themed "Climate Change: Our Health in the Balance".

## Causes of global warming

- Abnormal increase of "green house gases" due to human activities like burning of solid waste, wood, fossil fuels like oil, natural gas and coal, and deforestation
- The release of hydrofluorocarbons (HFCs), Perfluoro Carbons (PFCs) and Sulfur hexafluoride (SF<sub>6</sub>) from industrial processes cause more than normal heat to be trapped in the atmosphere.



## Consequences of global warming

Climate changes triggered by global warming can bring in their wake extreme conditions such as

- Abnormal storms, drought
- Floods that can be of immediate threat to life.
- Harvard Medical School doctors have reported that recent outbreaks of malaria, dengue fever ("breakbone fever"), Hanta virus and similar diseases are due to climate change.

## Time running out

- A United Nations report on rising green house gas emissions has reminded world governments that their efforts to fight climate change are far from enough to meet their stated goal of limiting global warming to 2 degree Celsius.
- The report by the UN environmental programme, released at a major climate conference said the concentration of heat trapping green house gases like carbon dioxide in the atmosphere is up about 20% since 2000.

- Emission levels, driven by the burning of fossil fuels need to come down by 14% by 2020 for the world to reach a pathway that could keep the global temperature rise below 2 degrees Celsius compared with pre-industrial levels. UNEP said that the stated goal of UN climate negotiations which resume in Doha, Qatar.

- The UN agency said if no swift action is taken, emissions are likely to hit 58 gigatone, in 2020, 14 gigatone too much to have a chance of limiting warming to 2 degrees celsius.



The projected gap is now bigger than it was in 2010.

- The Kyoto Protocol, the only international agreement to reduce the greenhouse gases.

### GW-Mission 2020

- 2°C – targeted rise in global average temperature
- 5°C- projected rise in temperature

### The implication

- Lowering green house gas emissions by 14% to 44 billion tonnes.
- At the current rate, emissions are likely to be at 58 gigatonnes in 8 years
- If all countries adhere to their most ambitious promises, the gap could still be 8 billion tonnes.

### GW facts

- Extreme temperatures caused by climate change can directly cause death as in heat strokes especially in the old and the young.
- Adverse impact of climate stress on agriculture worldwide may add 300 million victims of malnutrition to the existing numbers.
- Warm temperatures will aggravate air and water pollution and pose health hazards.
- Some researchers predict algal blooms could occur more often, especially in polluted sea water and cause infectious diseases like cholera.
- It can soon become a risk factor for heat strokes, cardiovascular and respiratory problems. People with an ailing heart are vulnerable because the cardiovascular system has to work harder to cool the body in very hot weather. A heat wave in July 1995 killed more than 700 people in Chicago area alone.
- GW can cause at ground level ozone a harmful pollutant that damages lung tissue and aggravates asthma and other breathing diseases. Even in healthy individuals, exposure to modest levels of ozone can cause nausea, chest pain and pulmonary congestion
- Scientists warn that if the globe continues to sizzle unchecked, extreme weather conditions will cause infectious diseases and death worldwide.
- Health experts believe that GW is a convenient scapegoat for putting the blame on increasing incidence of infectious diseases. They list other factors that are contributing to this increase that include.
  - ❖ Increasing disregard for public health practices
  - ❖ Overcrowding of cities
  - ❖ Rise in population of vectors such as mosquitoes and ticks due to inadequate control measures. Increased international travel by people that can take virus across the hemisphere.
  - ❖ Genetic mutation in bacteria and viruses

Rising temperatures and varying rainfall patterns could affect the food production and food security. Farmers in the tropical developing world will likely see decreases in production. Such changes could be devastating to people in poor countries, even while some cold climate nations.

- Researchers estimate that higher temperatures and more dehydration, the crystallized calcifications that must be passed often painfully through the urinary tract could plague an additional 2.2 million people a year by 2050. The current “kidney stone belt” which includes southern states like Florida, the Carolinas and Arkansas could extend up in to Kentucky and Northern California.
- Eleven of the past 12 years rank among the hottest on record and the Centre for Disease Control reports that heat waves already account for more deaths annually in the UN than hurricanes, tornadoes, floods and earthquakes combined.
- Research has suggested that itchy cases of poison ivy appears to become more potent as carbon dioxide levels rise.
- Harvard scientists says cool breeze coming down could diminish driving up ozone pollution at ground level resulting in irritated lungs, especially in people with respiratory illness.
- In the year 2007, Greece suffered a massive heat wave and record wild fires
- By 2050, a one-foot rise in sea level is predicted which could worsen flood damage by 36 to 58%.
- Heat wave deaths could double by 2100
- India is the fifth place and UN is the first place of carbon dioxide emissions in the year 2002.

### Health effects linked to GW

*More illness and death resulting from heat waves*

- ❖ Severity heat waves will lead to more heat stroke and other health-related illnesses and death.
- ❖ Senior citizens and children are particularly more vulnerable to these effects.

*Worsening air pollution causes more respiratory and cardiovascular diseases*

- ❖ Air pollution worsens as temperatures increase and higher levels of ozone smog and other pollutants have been directly linked with



increased rates of respiratory and cardiovascular diseases, including asthma and cardiac disarrhythmia.

- ❖ Pediatric asthma has already increased over the past 25 years and GW will only exacerbate children's suffering.

#### *Vector-borne disease infections will rise*

- ❖ According to WHO, currently, malaria, diarrhea, malnutrition and floods related to Climate Change cause about 150,000 worldwide deaths annually. The range of malaria-carrying mosquitoes is spreading too, to cooler places.
- ❖ With warming temperatures the breeding cycle of malaria carrying mosquitoes is shortening, which means more mosquitoes and malaria each year.
- ❖ Viruses such as West Nile, Hantavirus and Lyme disease could increase their ranges or spread more quickly with changing weather and formerly prevalent malaria or Dengue fever could re-emerge.

#### *Changing food production and security may cause hunger*

- ❖ Rising temperatures and varying rainfall patterns could affect food production and food security. Farmers in the tropical developing world will likely see decreases in production. Such changes could be devastating to people in poor countries.
- ❖ With the prices of wheat, rice and other staples already rising rapidly, the developing world can ill afford any production decreases at home.
- ❖ More severe weather such as monsoons can destroy crops and leave entire communities without food.

#### *More severe and frequent wildfires will threaten more people*

- Severe heat can also increase the frequency and intensity of wildfires which threaten homes, lives and livelihoods and cause poor air quality.
- The Nobel Prize-winning Intergovernmental Panel on Climate Change has determined that "a warming climate encourages wild fires through a longer summer period that dries fuels, promoting easier ignition and faster spread, very likely will continue to suffer serious loss of life and property

#### *Flooding linked to rising sea levels will displace millions*

- Rising sea levels make coastal areas more susceptible to storm surges and flooding that result from severe weather.

- Increased displacement and increased transmission of water borne disease from stagnant water, the challenge of feeding and sheltering the displaced, sewage backups and squalid and strained disaster relief resources.

#### **Measures to reduce**

- Using less fossil fuels and switching off lights, fans, air- computers, AC, Refrigerator etc., when not required.
  - Replacing all the lights tubes in and around your home with energy efficient fluorescents that use fewer watts for the same amount of light.
  - Driving less, taking bikes, walking or carpooling whenever possible
  - Investing in a hybrid or electric vehicle to prevent against further GW.
  - Using solar heater to heat alternate sources of "clean" energy and wind energy that do not emit are some sure ways to reduce global wastage of food and water.
  - Buying recycled paper products and recycling much of your waste as possible
  - Planting a tree
  - Using nontoxic cleaning products
  - Insulating your home better and don't forget to repair or replace worn caulking, weather stripping, insulate your water heater.
  - Unplugging electronics when they are not in use because they still take up energy at the very last, turn items off when there not be used
  - Running the dish-washer and clothes-washer only on full load, and if available, use the energy saving settings.
  - Choosing energy-efficient appliances when its time to buy new one.
  - Washing clothes in old water and line dry whenever possible
  - Keeping your car turned up and check tire pressure often to save gas
  - Eating more organic foods to prevent global warming
- As citizens of this beautiful earth, we need to take immediate steps to control temperatures from reaching high levels. Global warming may not necessarily impact our generation but coming generations are obviously going to bear the burnt. So it becomes our moral responsibility to take steps towards reducing global warming. ■

*(The author is Lecturer, VMCON, Puducherry,  
The author acknowledges various sources  
which are available on request)*