

## **Climate Change and Natural Disasters**

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Climate change has become the major global environmental issue today. While there are natural processes that change the climate of planet Earth, it is very clear now that human activities have increased greenhouse gas (GHG) concentration in the atmosphere. Natural GHGs have increased due to human activities and manmade chemicals in the atmosphere are much more powerful GHGs than natural GHGs. The high concentration of these gases is responsible for a rapid increase in temperature of the earth atmosphere system, which in the lower atmosphere and the ocean leads to climate change and natural disasters.

Burning of fossil fuels, change in land use, raising livestock, urbanization, deforestation and population growth are the main reasons for increased GHGs in the atmosphere. While fossil fuel combustion is mainly responsible for excessive emission of carbon dioxide, mechanized agriculture, use of chemical fertilizer and flooding of agricultural lands globally contributed to nitrous oxide and Methane emissions and high concentrations in the atmosphere. It is very clear all GHGs are increasing rapidly and global warming is directly related to the increase of GHGs.

According to the reports of the Intergovernmental Panel for Climate Change, average global temperatures will rise between 1.5 and 5.8°C by the turn of the century, leading to melting of polar ice caps, glaciers and snow loads on mountains, which with thermal expansion of water will raise sea levels. Warmer ocean temperatures will create frequent severe cyclones in tropical waters and have devastating effects on the livelihoods of people living in low-lying areas and on tourism, fishing and shipping. There can be an increase vector borne and non-communicable diseases and devastating effects on agriculture, water supply and hydropower generation. Enhanced rainfall in winter and decreases in summer are predicted for South East Asia. For Sri Lanka and its neighbours 20% less rainfall is predicted in winter (northeast monsoon) and 20% more in summer (southwest monsoon), causing a major problem for agriculture and power.

It is very clear that environment protection is needed for a better future for the whole world. It is only by unified efforts worldwide to reduce global warming and climate change that life on planet Earth can be protected. It took more than two decades for the UN Framework Convention on Climate Change (UNFCCC) to reach a global agreement which it did at in Paris in 2015. The main objective of this is to limit temperature rise to well below 2°C and take all possible actions to keep the increase at 1.5 C. However in order to achieve this all developed and developing countries must work together. All countries are required to provide Intended Nationally Determined Contributions (INDCs) and these will have to be regularly updated and monitored.

Sri Lanka has submitted an ambitious target for emission reduction in Energy, transport, industry, solid waste, forestry and agriculture sectors. Sri Lanka will be looking forward for a “Blue Green Era” to use its oceanic and land resources in a sustainable manner. It is envisaged that traditional and indigenous knowledge will help to a great extent to achieve sustainable development goals. Green energy, green industry, blue green economy, green buildings, smart cities and green villages will create a better environment and quality life for all in time to come.