

## **In a Timely Move, Sri Lanka should join the Climate Vulnerable Forum**

**by Asoka Abeygunawardana**

Be in no doubt. Climate change is not tomorrow's future menace. It is today's growing catastrophe. The first ever Climate Vulnerable Forum of the climate vulnerable countries was conducted in November in The Maldives to discuss this matter. Delegates at the Climate Vulnerable Forum include President Tong of Kiribati, and environment ministers from Bangladesh, Nepal, Vietnam, Ghana, Kenya and Tanzania, and representatives from Barbados and Bhutan. China, Denmark, France, Japan, the Netherlands, Norway, Russia, the UK and the United States attended the Forum as observers.

The Forum requested the Head of State or Head of Government of all States, and especially of major industrialized nations and all major emerging economies to participate in the Copenhagen Summit. Though scientists talk of limiting the global average warming to 2 degrees centigrade the Climate Vulnerable Forum called for limiting global average surface warming to well below 1.5 degrees centigrade above pre-industrial levels and long-term stabilization of atmospheric greenhouse gas concentrations at well below 350 ppm, and that to achieve this, the agreement at COP 15 UNFCCC should include a goal of peaking global emissions by 2015 with a sharp decline thereafter towards a global reduction of 85% by 2050.

Sri Lanka though it is a climate vulnerable neighboring country has not joined the Forum yet as a member country. The world is discussing the possibilities of over 6 degrees Centigrade temperature increase. Sri Lanka, even at a 2 degrees centigrade increase will reach a crisis level. Sri Lanka has a 1660 km long coastline and already 30 – 35% of the coastline is eroded at the rate of 0.30 –0.35 meters per year. This will further increase with anticipated sea level rise due to climate change. The coastal zone contains 24% of the overall landmass and 32% of the population lives in this zone. Further, 80% of the tourism activities, 65% of the industrial output and 80% of fish production take place in this area. Substantial reserves of valuable minerals, Commercial ports and fishery harbors, principal road and rail infrastructure, the richest areas of bio-diversity (coral reefs, lagoons, and mangroves) are all located along the coastal belt and is threatened by the rise in sea levels. The Impacts of sea level rise include salt water intrusion into cultivated lands as well.

Almost all crops in Sri Lanka are C<sub>3</sub> plants and their photosynthesis is optimal within a temperature range of 15 - 30 degrees centigrade. With global warming, the productivity of these crops will decline. On the other hand, 14 out of 18 of the worst weeds are C<sub>4</sub> plants and their photosynthesis is optimal within the temperature range 30 - 45 degrees centigrade. This will also have a negative impact on modern agriculture. The productivity of our main food crop rice will also drastically reduce at high temperatures as the crop at temperatures over 35 degrees centigrade is vulnerable to sterility. This phenomenon is now becoming a common feature during the Yala season and is called "*Ehela Pussa*". High nighttime temperature will have a negative impact on certain crops such as Tomato as it will reduce sugar translocation to the tomato fruits. Pests prefer warmer climates and the pest population will increase with enhanced re-production.

Increasing temperature increases water loss as evaporation increases. The dry regions become drier, drought frequency may increase and the intensity of drought may increase. Rapid drying-out of irrigation tanks will be a major issue as we have only 80 major tanks having proportionately high depths against the surface area. Over 11,250 other minor tanks will lose water significantly. Land degradation,

increase in salinity in drier regions, increased soil erosion due to intense rains over 25 mm/hr with more Cumulonimbus clouds will ultimately reduce soil fertility and seriously affect farmer's livelihoods.

Increased rate of organic matter decomposition, increased loss of applied fertilizer due to volatilization and retarded microbial activity is likely to demand more inorganic fertilizer. There will be no rains when it is needed and there will be more rains and more floods when it is not needed. More droughts will result in soil moisture stress. As a result, malnutrition in poor rural communities will be on the rise under unfavorable climatic conditions for agriculture. Deepening poverty may overturn Health & Economic Indicators Sri Lanka enjoy today.

If climate change continues at the present pace, we can expect negative health effects as well. Sri Lanka must get ready for the increase in illnesses and deaths due to exposure to the urban heat island effect, loss of life, injuries and psychological trauma in cyclone, landslide and flood affected areas, expansion of areas of potential transmission of malaria, dengue, chikungunya, Japanese Encephalitis and other vector borne diseases, increase in numbers affected by water borne and water washed and respiratory diseases. Diarrhea associated with floods and droughts will be aggravated by the problem of access to safe drinking water. Co-relation between many non-communicable diseases and climate changes are well established. For instance, there is a positive correlation between increasing temperature and cardio vascular morbidities and mortalities. Lightning strikes will increase accidents and loss of lives. Malnutrition decreases the immunity of the population and makes them vulnerable to communicable diseases; malnutrition among pregnant mothers leads to poor pregnancy outcomes such as pregnancy loss and increases in maternal and infant mortality.

Sri Lanka should join the Climate Vulnerable Forum immediately and be a leading member of it. The member countries of the Climate Vulnerable Forum lie at the climate front-line and will disproportionately feel the impacts of global warming, despite the fact that, in the end, climate change will threaten the survival of all States and peoples and the end result is simply that the fate of the most vulnerable will be the fate of the world. Given the above realities, I earnestly request His Excellency the President of Sri Lanka to participate in the Copenhagen summit representing not only Sri Lanka but the SAARC and contribute positively and vehemently to the collective voice of the vulnerable countries.