

Guest Editor's Note:

15,000 Scientists from 184 Countries Issue a 'Warning to Humanity'

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Many people world-wide are wondering how serious is 'the environmental situation and climate change'. It is now 25 years since a group of scientists, 1500 in number, issued a global warning: "there needs to be a change in order to save Earth".

Now, twenty-five years later, in mid-November, 2017, a very much expanded group of scientists, 15,000 in number, from 184 countries, signed a second warning. (Ripple, W. & Crist, E., 2017). The key line in the newest warning is 'There is rising evidence that Earth has entered the sixth mass extinction event brought on by humans'. Independently, the British theoretical physicist, Stephen Hawking, recently warned that humans "must evacuate Earth in 600 years before soaring energy consumption turns the planet into a ball of fire" (Hawking, 2017).

This present Guest Editor's Note is intended to alert RJAS readers to this recent news item, in case they missed these recent reports.

The latest report presents compelling evidence under several categories. Some of these data are not unknown. However, some data may be surprising to even the best-read among readers: some facts at first glance appear to be 'good news'. However, they do have a 'dark side'.

Fresh water. The report stated that almost half of the world's population live in what is called water stressed areas. This results from more people concentrated in smaller areas (the migration from rural areas to cities) and their need for fresh water, the need for irrigation to produce food on a much grander scale, and to cool power stations. Agriculture now requires 70% of the global freshwater (The WaterHub, 2017).

Though the planet Earth is nicknamed the 'Blue Planet', because it appears to be covered in water, the fact is that some 99% of the planet's water is not useable by humans (National Geographic, 2017). And, often fresh water is in the wrong place, in the wrong form, or available at the wrong time. It is perhaps not happenstance that the diminishing supply of fresh water is the first of six reasons why life on the planet is at risk.

Unsustainable marine fisheries. Billions of people around the world rely on fish not only as a food, rich in protein, but, for centuries, fishing is also the principal occupation for millions of people. Overfishing today threatens all coastal nations, particularly local seaside communities, devastating the people whose chief source of employment and income rely on healthy, plentiful supplies of fish.

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Some 53% of the world's fisheries are fully exploited, and 32% are overexploited, depleted or recovering populations. Many nations are subsidizing their local fisheries which is further exacerbating the problem. Illegal and unsustainable practices exist everywhere. (World Wildlife Federation, 2017)

Ocean dead zones. The world's oceans, coastal seas, estuaries and many rivers and lakes are experiencing a decline in dissolved oxygen. This is happening as a result of increased levels of sewage discharges and fertilizer runoff. In turn, this results in losses to the fisheries, and generally poorer water quality.

These dead zones are known as oxygen minimum zones (OMZs) and are most noticeable off the coast of Peru, the South China Sea, and in the Baltic and Black Seas, the Bay of Bengal, and the Gulf of Mexico, to name a few regions. These dead zones have been described as waters devoid of 'breath'. Without oxygen, sea creatures cannot survive (Limburg, K., 2016).

Forest losses and dwindling biodiversity. It is estimated that more than 1 billion people depend on forests. Forest ecosystems play a critical role in stabilizing the Earth's climate and in providing food, water, wood products and medicines.

World Resources Institute (WRI) reports that 30 percent of the planet's forests have already been cleared. Another 20% has been degraded. The rest has been seriously fragmented, leaving only 15% intact. There is an urgent need for governments, businesses, and civil society to help in restoring and reforesting the land that has already been cleared (Petersen, R., 2016).

Forests also support much of the world's biodiversity. Habitat gets lost in order to meet growing needs for agriculture, urban development, water, and various materials. Fish, wildlife, and plants are overharvested, despite mounting evidence and warnings that many harvesting practices are unsustainable

Biodiversity decline encompasses more than just species loss. It also includes the loss of generic diversity within species. A diverse gene pool ensures that some members of a species will possess traits that will allow them to survive changes. Recent data show that the rate of species loss is nearly 1000 times greater than historical rates (Campbell, K., 2017).

Climate change. Already countries and communities around the world are experiencing more climate change impacts – including droughts, floods, more intense and frequent natural disasters, and sea-level rise. And, the most vulnerable people are being affected. International agencies, including the World Bank, estimate that the impact of natural disasters alone cost \$520 billion loss in annual consumption and pushes some 26 million people into poverty each year (World Bank, 2017).

The world will soon need to feed 9 billion people while transitioning from fossil fuels, and prepare for 2 billion new urban dwellers, while reducing the so-called 'carbon footprint' of cities by improving urban infra-structures. The urgent need is to find a way to limit the rise in global temperatures to below 2 degrees Celsius by the end of this century.

Changing demographics. Radelet (2015) has identified a number of significant advances in the past 25 years. For example, between 1993 and 2011, the percent of people living in extreme poverty has been reduced from 35% to 14%. The number of children who died before the age of 5 years was reduced from 12 million in 1990 to slightly over 5 million in 2014. And, in the 1980s only half of the girls in developing countries went to school, while in 2015 some 80% of girls go to school.

However, according to a recent report (Ripple & Crist, 2017), there has been a concomitant rapid increase in the global middle class – which is now more than 3 billion people. And, it is expected that this will rise to 5 billion people by 2050. The dark side of this development is that the 'carbon footprint' will increase.

Ripple and Crist state that the new middle class is already buying appliances and cars, eating more meat and travelling more. More meat means more animals, more food production, and more waste. More travel means more planes, bigger airports, more pollution.

Conclusion. How to conclude this Editor's Note? The foregoing raises one obvious question: can the nations of the world, and major corporations and organisations work together in time to delay the inevitable?

Another question, which is addressed to the readers of this Journal, and to key people in institutions of higher learning everywhere: are students being made aware of the fragile state of the planet Earth? And, to the present generation of students: can they recognize and accept the challenges that these data present to their lifestyles, both now as students, as well as in their futures?

The *Rangsit Journal of Arts and Sciences* would welcome papers that focus on issues concerning the topic of this Editor's Note, the fragile state of the planet Earth.

References

- Campbell, K. (2017). What is a reason for the decline in biodiversity. *Sciencing: Leaf Group*. Available from <https://sciencing.com/reason-decline-biodiversity-22141.html/>
- Climate Change Project. ((2016). What's the difference between global warming and climate change? Available from <https://www.climaterealityproject.org/blog/difference-between-global-warming-and-climate-change/>
- Freshwaterhub. (2017). Available from <https://freshwaterwatch.thewaterhub.org/>
- Hawking, S. (2017). Stephen Hawking lauds Chinese pop star for space migration question. *Reuters: World News, November 27, 2017*.
- Limburg, K. (2016). The ocean is losing its breath – and climate change is making it worse. Available from <http://theconversation.com/the-ocean-is-losing-its-breath-and-climate-change-is-making-it-worse-66192/>
- National Geographic, (2017). Earth's Freshwater. Available from <https://www.nationalgeographic.org/media/earths-fresh-water/>
- Petersen, R. (2016). Forests: Sustaining forests for people and planet. *World Resources Institute (WRI)*. Available from <https://www.wri.org/our-work/topics/forests>
- Radelet, S. (2015). *The Great Surge: the Ascent of the Developing World*. New York, USA: Simon & Schuster.
- Ripple, W., & Crist, E. (2017). 15,000 scientists issue dire warning that time is running out on climate change. Available from: www.sciencedaily.com/releases/2017/11/171113111127.htm
- The WaterHub, (2017). Retrieved from <https://www.thewaterhub.org/>
- World Bank. (2017). Understanding Poverty: Climate Change. Available from <http://www.worldbank.org/en/topic/climatechange/>
- World Wildlife Federation (WWF), 2017. Unsustainable fishing. Available from <http://www.panda.org/sustainablefishing/>