Academia and Climate Justice: Opportunities and Challenges

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Climate Change is affecting the lives of people and is leading to inequalities within and across countries and between current and future generations therefore creating injustice. Millions of people are affected by climate change and this represents an economic cost. Climate impacts could push on additional 100 million people into poverty by 2030. 20 million people have already been displaced. Some people and places will be more exposed than others to the direct impacts of climate change such as sea level rise or extreme weather. Climate refugees could reach 200 million by 2050. The World Bank estimates that climate change could create more than 140 million new migrants in Sub-Saharan Africa, South Asia and Latin America by 2050[164].

Climate change will increase temperatures, intensity of rainfall, flooding and storms, threaten biodiversity and coral reefs, raise sea level and accelerate the melting of glaciers. All these cause water insecurity, food insecurity and loss of livelihoods due to health risks such as malnutrition, diseases and deaths from natural disasters. Most casualties will occur in the developing and poorest countries which contribute less to climate change and account for less than 1% of Green House Gases (GHGs) emissions that lead to climate change.

I. The planet earth challenges

A. Emission from fossil Fuels

Emissions from burning fuels such as coal, gasoline and diesel for electricity and transportation are contributing to global warming which brings more intense storms, floods and droughts.

[164] World Bank 2018, *World Bank Report*, https://www.worldbank.org/en/news/press-release/2018/03/19, accessed 16 October 2019.

B. Social Conflicts

Does climate change cause conflict? This is an ongoing academic debate. In 2007, UN Secretary General Ban Ki-Moon described the conflict in Sudan's Darfur region as the World's first climate change conflict. The problem was associated with water scarcity. From a regression analysis of historical data, researchers from American universities concluded that a 1°C increase in temperature led to a 4.5% increase in civil war in Sub-Saharan Africa (Burke et al., 2009).

C. Human Rights Challenges

As public and private institutions, universities are accountable to the right of an individual for a healthy environment. Universities need to be more sustainable and encourage staff and students to protect the environment and go green. Public and institutional awareness about the reality of climate change and global warming is not enough. The fight against climate change is not only the prerogative of governments and companies but also individual students, academics and non-academics and civil society organizations.

D. Climate change exacerbates gender inequalities

Climate change places a heavy burden on women who are primary food producers and provide cooking for their families. Women are likely to bear the burden of poverty. Poverty contributes to population growth because of lack of education, healthcare and family planning.

E. Carbon footprint

Academics should be worried about our conference attendance carbon footprint and feel guilty about the waste and emissions. Flights to attend conferences release a lot of carbon dioxide (CO_2) into the atmosphere. Even at registration, plastic name-tag holders and plastic pocket files are being provided. Plastic water bottles are used at lunch. Hence, reusable tote bags, note pads and wooden name tags should be used. Academics use a lot of their computers and laptops during conferences and daily lives. A laptop that is on for eight hours a day uses between 150-300 kwh (kilowatt-hour) and emits between 44 to 88 kg of CO_2/year.

II. Opportunities part of a climate justice approach

Academics are committed to the national and international community. At universities, academics participate actively in climate action. So, opportunities which are part of a climate justice approach should include the following.

A. Universities have to move towards carbon neutrality in the next decade

Natural gas (methane) contributes much to global warming as "dirtier" fuels. So, transition to more renewable energy is a solution for universities but this will take decades. Mauritius is already in the process of reducing its GHGs, through a public investment policy favouring renewable energies.

B. Universities should include climate change, sustainability and sustainable development in their curricula

The University of Mauritius (UoM) has incorporated climate change, ethics and sustainability in its curriculum. For instance, there are modules such as understanding sustainable development and courses such as Master of Science (MSc) in Climate and Sustainable Development are being run. A Master Course or Bachelor degree in Climate Justice is hence highly recommended.

C. Universities should undertake more research on food waste

Food waste refers to discarded food that is still appropriate for human consumption[165]. According to the FAO, roughly one-third, about 1,3 billion tons per year, of the edible parts of food produced for human consumption, gets lost or wasted globally[166].

Some key facts on Food Loss and Waste given by the FAO:

– Global quantitative food losses and waste per year are roughly 30% for cereals, 40-50% for root crops, fruits and vegetables, 20% for oil seeds, meat and dairy plus 35% for fish.

[165] PARFITT J., BARTHEL M. and MACNAUGHTON S., "Food waste within food supply chains: quantification and potential for change to 2050", *Philosophical Transactions of the Royal Society B: Biological Sciences*, Vol. 365, n°1554, 2010. pp.3065-3081.
[166] FAO, *Global Initiative on Food losses and Waste Reduction*, Rome, 2014.

– Every year, consumers in rich countries waste almost as much food (222 million tons) as the entire net food production of sub-Saharan Africa (230 million tons).

– Per capita waste by consumers is between 95-115 kg a year in Europe and North America, while consumers in sub-Saharan Africa, south and south-eastern Asia, each throw away only 6-11 kg a year.

30% of food is wasted. Our eating habits have to be changed. There is a need to educate consumers. Strategies need to be found to reduce waste. In 2019, the Faculty of Agriculture (FoA), UoM conducted a study on food waste in the food and beverages sector of hotels to find causes of food waste and waste minimization strategies. From the study, it was observed that customers' left overs were the most prominent cause of food wastage in hotels surveyed both during peak and off-peak seasons. When peak and off-peak seasons were compared, it was seen that more food wastage occurred during the peak season.

D. Academics should communicate climate change research

As 21st century researchers, academics need to communicate the relevance and importance of climate change research through innovations in science and climate justice research and technology. More expert researchers influencing climate policy and attending conferences are needed rather than politicians who lack experience and expertise in climate science. Climate scientists, climate law practitioners should be able to engage in public dialogue about policy issues and advocacy without harming the credibility of the scientific community. Universities need to advocate for evidence-based climate science. More scientific engagement is required to meet the needs of society. The role of academics is not to put political pressure on leaders. It is the role of activists to adopt aggressive climate action plans towards zero carbon-emission. Fortunately, institutions and universities are beginning to address advocacy. However, universities must include environmental law, environmental/sustainable tourism as a discipline. A bottom-up approach should be adopted where students express a growing interest in environmental topics instead of a top-down approach. A curriculum for climate justice could be developed and future climate activists trained.

E. Universities to incorporate Sustainable Development Goals (SDGs)

Climate Justice is a human rights issue. Considering Agenda 2030 on SDGs, human rights should be placed at the heart of policy making to empower the vulnerable and marginalized community, for instance, right to health (SDG3), right to decent work (SDG 8). Climate Justice can link human rights and development to safeguard the rights of the vulnerable in an equitable and fair

manner. Climate Justice can amplify the voices of the poor and vulnerable groups especially those who contribute less to GHG emissions and are the most severely affected. Universities call for more grassroots mobilization around the theme climate change since it is a pressing issue. Scientists need to rethink their roles and responsibilities within the societies in order to confront the climate change challenges and environmental challenges taking into consideration the Agenda 2030 on the SDGs. Why do SDGs matter to universities? Universities are coming on board with SDGs thanks to the Sustainable Development Solutions Network, Future Earth, and United Nations Educational, Scientific and Cultural Organisation (UNESCO). Universities key roles are to provide knowledge and solutions to underpin the implementation of the SDGs, create current and future SDG implementers, embody the principles of SDGs through organizational governance, operation and culture, since Universities have significant social, economic and environmental footprints and also to provide cross-sectoral leadership in implementation since universities have a key role in educating the public and other sectors on SDGs.

The UoM has left no stone unturned and task forces on SDGs have been set up since 2019.

F. Transportation sector is the largest source of emissions

Human beings need to change their lifestyles. Should we swap cars for bikes like in the Netherlands? Air travel to conferences, talks and meetings can account for one-third or more of C-footprints. This produces millions of pounds of carbon for one university per year. So what can universities do? Should universities have online carbon-neutral conferences?

However, it is true that carbon neutral conferences (online) do not provide the same type of networking opportunities or face-to-face interactions as big annual conventions. Academics working on climate issues will challenge the status-quo by saying that travelling is essential to spread messages/deliver talks about decarbonising the economy. But it is high time that academics minimize the need for air travel. Academics are on the carbon-problem rather than the solution. Less meat, burgers and dairy products could be consumed during lunch, and shifting to lower carbon foods and plant-based diets should be the new normal.

Since food accounts for a lot in a household’s carbon footprint especially in high income countries, the government could increase the price of foods and increase value added tax that involves high emissions.

G. UoM has installed photovoltaic renewable energy systems (Solar panels) on its rooftops

Instead of air conditioning systems, manual ventilation and solar energy could be used in universities since the bill of air conditioning can be quite high. The UoM has left no stone unturned by shifting gradually to photovoltaic solar panels.

Conclusion

The challenges of climate change should be addressed and the gap between climate justice and climate injustice bridged. The right policies and incentives on climate change and climate justice are needed. We are in dire straits if we do nothing as universities. Why not implement green universities initiatives to reduce environmental impact? Together with leaders, academics should drive urgent climate action ahead of 2020 when national governments will submit a new round of nationally determined contributions (NDCs) as part of the Paris Climate Agreement.

References:

Burke, M., Satyanath, S., Dykema, J., Lobell, D. (2009). *Warming increase the risk of civil war in Africa.* PNAS. Available at [https://www.pnas.org/content/106/49/20670]. (Accessed: 16 October 2019).