

The challenges of climate change, migration and conflict in pursuit of the Sustainable Development Goals: A call to responsible and responsive policy makers

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The evidence of global warming is unequivocal, and the changes in the global climate that have occurred since the 1950s have been unprecedented in earlier decades or even millennia. 'The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased' [1]. According to the fifth assessment report of the Intergovernmental Panel on Climate Change (2013), the effects of climate change are already being felt across the world and are likely to become 'severe, pervasive and irreversible' in the years to come [1]. The report explains that climate change will affect every person on the planet, and rising temperatures are already having an impact on agriculture, human health and water supplies. Indeed, an increase of greenhouse gases in the atmosphere will probably boost temperatures over most land surfaces. Among the

devastating effects of climate change, scientists predict an increased risk of more extreme weather events such as storms, droughts, hurricanes and floods; dangerous water and food scarcity; the extinction of numerous plant, fish and animal species; and rising sea-levels destroying small island nations and a great number of coastal cities worldwide [2].

The true economic impact of climate change is very hard to predict, but scientists everywhere suggest we are heading for an apocalyptic situation [3]. The changed human environment will undoubtedly have negative consequences for people's physical and mental health, including a greater incidence of accidents and injuries, damage to the cardiovascular system and respiratory tract, allergies and infectious diseases and psychological effects such as post-traumatic stress disorders and anxiety, depression and distress symptoms [4].

According to the World Meteorological Or-

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ganization, for instance, extremely high May and June temperatures have broken records in parts of Europe, the Middle East and North Africa; the United States is also experiencing record or near-record heat, and further high temperatures are forecast [5]. Failing action, the world's average surface temperature is projected to rise by 3 degrees Celsius or more over the course of the 21st century, and some areas of the world will experience even greater rises in temperature. The poorest and most vulnerable people will be the most severely affected. In recognition of this global threat, the 21st Conference of the Parties of the United Nations Framework on Climate Change Convention (UNFCCC COP21), held in Paris in 2015, reached a historic agreement (the so-called Paris Agreement), which included an ambitious commitment to keep global warming well below 2°C above pre-industrial levels, with an aspirational target of 1.5°C [6]. On 25 September 2015, world leaders also adopted a set of goals to end poverty, protect the planet, and ensure prosperity for all as part of a new 2030 Agenda for Sustainable Development. Each of the 17 goals has specific targets (169) and indicators (230) to be achieved over the next 15 years to 2030 [7]. Specifically, Goal 13 is: 'Take urgent action to combat climate change and its impacts.' Implementation of the Paris Agreement is therefore essential for the achievement of the Sustainable Development Goals, which provides a roadmap for climate actions that will reduce emissions and build climate resilience. A key feature of the 2030 Agenda is the integration of the economic, social and environmental dimensions of sustainable development and the interlinkages within and between goals and sectors. For instance, Goal 15, 'Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss', Goal 14, 'Conserve and sustainably use the oceans, seas and marine resources', Goal 6, 'Ensure access to water and sanitation for all', Goal 12, 'Ensure sustainable consumption and production patterns', Goal 7, 'Ensure access to affordable, reliable, sustainable and modern energy for

all', and Goal 2, 'End hunger, achieve food security and improved nutrition and promote sustainable agriculture', are all inextricably linked and connected to Goal 13.

Scientists have warned that the Paris Agreement is the last chance to prevent a catastrophic rise in global temperature [8]. Similarly, the World Economic Forum believes that climate change is the single greatest threat to global stability, because of its considerable impact on the health and stability of developing nations [9]. Indeed, according to a paper recently published in *The Lancet*, the civil war in Syria and the outbreaks of emerging tropical diseases caused by the Ebola and Zika viruses are examples of the ways in which climate change can have negative effects on states' stability [10]. Indeed, a scarcity of food and water caused by climate change could lead to violent conflicts [11]. Therefore, migration, climate change and the environment are interrelated [12], and their potential link with conflict is increasingly viewed by policy makers as a security issue [11].

Environmental degradation and natural disasters can be the trigger for mass migration, and the resulting movement of people can entail significant effects on the surrounding ecosystems. This complex nexus needs to be addressed in a holistic manner, taking into account other possible mediating factors, including human security and economic development, such as strategies for securing people's livelihoods [12]. Specifically, climate change could be a driver for increasing rates of migration and subsequently of conflict. We do not know how climate change might exacerbate conflict [13], but it is clear that migration is often a response to environmental stress, and the pace of environmental change has already had a significant influence on the mode of displacement and migration-related decisions [14]. The 'migration crisis' that Europe is currently facing as a result of the Syrian civil war is a challenge that affects all developed countries [15] and, undoubtedly, it may pose a real threat to the Sustainable Development Goals. Indeed, Goal 1, 'End poverty in all its forms everywhere', Goal 16,

‘Promote just, peaceful and inclusive societies’, Goal 8, ‘Promote inclusive and sustainable economic growth, employment and decent work for all’, Goal 10, ‘Reduce inequality within and among countries’, and Goal 3, ‘Ensure healthy lives and promote well-being for all at all ages’, all have a bearing on ‘inequality’ between and within countries and are therefore also intimately bound up with the ‘migration crisis’.

‘It’s time to understand that we live in a small world; indeed, we are affected by and affect what happens to our neighbors, whether they live around the corner or on the other side of the globe’. This concept should suggest a shift from the term ‘international health’ to ‘global health’ in policy discussions [16].

Effective policy action is undoubtedly needed to tackle the urgent issues of our time. However, consistent policy responses cannot be developed without an in-depth understanding of climate change, human–environment relations, migration and the connections between these phenomena [17].

According to the 2011 Report by the Netherlands Environmental Assessment Agency, the US is a top emitter of carbon dioxide and greenhouse gases, second in the world only to China [18]. Yet, US President Donald Trump recently tweeted that *“The concept of global warming was created by and for the Chinese in order to make US manufacturing non-competitive”* [19]. Accordingly, he pulled the US from the Paris Agreement, joining only Syria and Nicaragua as non-participants and establishing a high-risk policy on climate change [20]. The executive order on environmental policy issued by the White House on 28 March 2017 started a process of rescinding, revising and reviewing the regulatory decisions and authority of the US Environmental Protection Agency (EPA) – specifically those that were directed at the oil and gas industries and intended to tackle climate change. The previous Head of the EPA has been removed and recently several more scientists who acted as advisers to the EPA have been notified that their contracts will not be renewed [21]. Indeed, President Trump signed off a

budget for the EPA that would impose historic cuts as part of an effort to dramatically shrink the agency’s mission. In addition, the proposed budget would eliminate all funding for climate change programmes and the implementation of the Obama Administration’s measures restricting the emission of carbon dioxide from power plants, known as the ‘Clean Power Plan’. The Trump Administration also wished to end all spending for international climate change programmes, climate change research and partnership programmes, and related efforts – cuts worth altogether some \$100 million [22].

These decisions could seriously undermine the Paris Agreement and, subsequently, all the Sustainable Development Goals. Before the upcoming Hamburg G20 summit focusing on the Paris climate deal, free trade and the management of forced mass global migration, the German Chancellor, Angela Merkel, stated that *“those who think that the problems of this world can be solved by isolationism or protectionism are terribly wrong”* [23]. Since 2014, more than 500,000 migrants have arrived in Italy by boat and the numbers are continuing to rise. According to the UN Refugee Agency, the United Nations High Commissioner for Refugees (UNHCR), 83,650 people have reached Italy by sea since the beginning of 2017 – a 20% increase over the same period in 2016. The European Commissioner for Immigration, Dimitri Avramopoulos, stated that ‘Italy is right that the situation is untenable’, adding that the country’s management of the crisis was ‘exemplary’ [24]. The EU has a humanitarian obligation to save people and cannot leave two or three countries to deal with this issue on their own. Italy has reached saturation point, the Italian public is exasperated with the crisis and a new long-term strategy is urgently needed. Prime Minister Gentiloni has accused other European nations of ‘looking the other way’. Accordingly, Italy is threatening to close its ports and stop vessels from other countries from bringing migrants to its shores [25]. To date, the Czech Republic has accepted only 12 of the 2,000 migrants it had agreed to take, while Hungary

and Poland have taken none. The EU should therefore move from theories to the facts to avoid more serious consequences. What is happening now in Italy is 'an unfolding tragedy' and 'this cannot be an Italian problem alone', as the UN High Commissioner for Refugees, Filippo Grandi, has said [24]. A chaotic situation and widespread disagreement among European countries mean that the future looks bleak and the migration flow to Europe will continue to grow. For this reason, it is to be hoped that responsive and responsible policy makers from all countries, whether in the EU or not, will use the oppor-

tunity of the Hamburg G20 summit to find quick and effective solutions to these problems.

In this issue of the *Journal of Health and Social Sciences*, Dhimal et al. [26] show the progress of the Sustainable Development Goals (SDGs) in Nepal, and we call for scientific contributions to track the implementation of the SDGs in other countries all around the world.

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