



Are Brean (born 1965), MD, PhD, Editor-in-Chief of the Journal of the Norwegian Medical Association. He is a specialist in neurology.

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Climate change is accelerating. It threatens global health – but also provides us with opportunities.

The opportunities offered by the climate crisis

In 2016, our planet underwent several troubling climate records: It was the hottest year ever recorded, the level of CO₂ in the atmosphere reached new records, and the sea levels have never been higher (1).

New figures from the World Meteorological Organization (WMO) now show that the extremes are continuing (1). In February 2017, in the USA alone more than 11 000 heat records were set or equalled, while North Africa and the Arabian Peninsula suffered unusually cold temperatures. The proportion of CO₂ in the atmosphere continues to increase, and the Arctic winter has been characterised by warm, wet weather, while the amount of Antarctic sea ice is lower than ever before (1). These changes «are challenging the limits of our understanding of the climate system. We are now in truly uncharted territory,» said David Carlson, director of the WMO's world climate research programme (2).

The health consequences of climate change are becoming ever more obvious. Global health challenges that only a few years ago were «possible» or «future scenarios» have become a reality (3). Extreme drought and floods are forcing millions to flee and creating food shortage, epidemics and a lack of the most basic health services. The situation is particularly desperate in East Africa, where long periods of extreme drought combined with war and political instability have created what the UN Under-Secretary-General for Humanitarian Affairs calls «the worst humanitarian crisis since 1945» (4); and the accelerating climate change will only exacerbate the situation in the years to come. UNICEF has estimated that in 2040 as many as 600 million children – one of every four children on Earth – will live in a region with insufficient access to water if the global community fails to take collective responsibility (5). The WHO expects 250 000 deaths per year in the period from 2030–50 due to climate-associated undernutrition, malaria, diarrhoea and water shortage (6). It is precisely this effect on health and stability in developing countries that has caused the World Economic Forum to proclaim climate change as the greatest threat to global stability (6).

The Paris Agreement is the global community's clearest response to these challenges so far (3). The agreement entered into force in November 2016. This is the first climate agreement that is legally binding and mandatory for all countries (7), but much remains to be done before the agreement is operative. The specific regulatory framework will be formulated during 2017, and will, for example, be applicable to national emission reduction targets, financing, reporting and adaptation in the individual countries (7).

For many people, climate change may still appear remote and intangible. Nevertheless, the health challenges related to a rapidly changing climate are already tangible realities. This is also reflected in a num-

ber of multinational initiatives to tackle the health problems that come in the wake of climate change (8, 9), because the instruments that may stave off the worst effects of climate change may also improve health: for example, lower use of fossil fuels provides significant health effects. Coal represents 40 % of world electricity production and contributes to more than half of global air pollution (9). Transition to cleaner sources of energy will not only result in lower CO₂ emissions, but will also have considerable health effects due to a reduction in cardiovascular diseases, for example (9). A decline in the use of fossil fuels and transition to more active methods of transport will likewise contribute to a reduction in lifestyle diseases. Climate measures such as greater consumption of plant-based nutrients can also be expected to yield substantial positive health benefits (10). If climate change is less than is feared, this may free up resources for developing countries – for use in investment for better health (3, 6).

An operative Paris Agreement by 2018 is an important step towards minimising climate change. However, the fight against climate change is also an investment in better global health. In 2015, *The Lancet's* commission referred to tackling climate change as «the greatest global health opportunity in the 21st century» (11). Viewed thus, climate change does not represent simply a threat. It is also an opportunity.

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