CHAPTER 6



QUALITY EDUCATION • DECENT WORK AND ECONOMIC GROWTH • REDUCED INEQUALITIES • CLIMATE ACTION • PEACE, JUSTICE AND STRONG INSTITUTIONS





International Federation of Library Associations and Institutions





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Chapter 6 A2I and climate change



The United Nations (UN) General Assembly adopted universal Sustainable Development Goals (SDGs) in 2015. The 17 SDGs address all three aspects of sustainability: economic, social and environmental. The UN aims to reach the defined goals by 2030, at the latest. The SDGs are of universal relevance, i.e., nations at all levels of development are equally committed to their implementation.

The SDGs are part of UN Resolution 70/1 which sets out the Agenda for Sustainable Development for transforming the world. It highlights in particular the people, the planet, prosperity, peace and partnership. It recognises that the world is facing tremendous challenges of inequality, global environmental degradation and insecurity. It calls on nations to work toward the achievement of the goals through a revitalized global partnership based on a spirit of strengthened global solidarity aimed at leaving no one behind. It places importance on democratic governance and participation of all stakeholders and all people. Full participation of people requires empowerment, literacy and access to information.

Among the many challenges the planet is facing, climate change is truly global. Science has understood how human activity on this planet, largely drawing on fossil energy sources, is polluting the planet's atmosphere and hence leading to a more rapid rise in global temperature than what the planet has ever experienced. For this process, it is irrelevant where the greenhouse gas emissions are produced; they all end up in the atmosphere and contribute equally to the warming process. Scientists refer to the last 70 years as the great acceleration. The world population has exploded from 3 billion in 1950 to more than 7 billion today and is expected to grow to more than 10 billion in 2050. Human production and consumption patterns are putting a severe strain on the limited natural resources of our planet. Phosphate and nitrate cycles are reaching critical levels, and drinking water and fertile soils are under stress, as are ecosystems and biodiversity. And climate change is happening already, as evidenced by the more extreme weather conditions on the planet.

It is worth noting that the effects of climate change are not equal on all continents of the planet. While it is true that climate change leads to global warming, it is necessary to understand that this is measured on an average basis. It explicitly does not mean that temperatures will be rising in linear fashion everywhere on the planet. The individual reality is defined by local weather conditions. Global warming will modify these weather conditions in dramatic ways, making local weather more erratic and more extreme. The planet will experience heavier winds and hurricanes drawing strength from the warmer ocean waters; periods of heavier rainfalls, but also longer droughts; dramatic temperature shifts in tropical zones; and potentially harder winters in temperate zones. The precise translation of global warming into local day-to-day weather conditions is still a scientific challenge, but it is becoming clear that the poorest part of the planet is likely to be hit hardest. First, this is because almost all the recent demographic growth on the planet has taken place in the less developed world, and this trend continues. India, China, Southeast Asia, Brazil and Mexico have experienced this growth, and Africa is joining in — putting us on the road to more than 10 billion men and women on the planet by 2050. This growth has occurred largely in tropical zones, where the warming will make living conditions particularly

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difficult. Second, these are poor regions, with people who do not have the financial means to protect themselves against the effects of climate change. Some low islands and coastal regions will be submerged by the rising sea levels, monsoon-like rains will wash away their homes, and prolonged periods of drought will lead to extreme shortages of drinking water. Food production will also be substantially hampered. Poor populations will be most affected by the progressive destruction of the world's ecosystems and their capability to provide food and drink for human beings.

What is needed?

We need action to mitigate the man-made causes of climate change and we need to adapt to the inevitable consequences of what we have already provoked. These actions need to be globally coordinated. The United Nations Framework Convention on Climate Change (UNFCCC) is seeking to achieve consensus among the nations that urgent measures are necessary. But we still have a number of world leaders in denial of the obvious, and many individuals have insufficient awareness about the consequences of business as usual. Substantial improvements on the knowledge side are necessary, as are major mitigation efforts to reduce substantially the use of fossil fuels in the world's economies. Alternative sources of energy are being developed, with a strong focus on efficiency, in an effort to live with less energy. Food production also contributes substantially to climate change. Human diets, with less emphasis on meat, sugar and salt, can make a contribution in slowing down climate change. The transport sector also is, in its present form, a large contributor to CO_2 emissions and will need to be reformed. And the large housing sector needs to be made more energy-efficient, through better heating and cooling systems and better insulation.

Importantly, the known tipping points need to be avoided, because if crossed, these would dramatically accelerate climate change. A significant example is the risk of release of very substantial quantities of methane, today captured under permafrost. Methane is a 30 times stronger greenhouse gas than CO₂. Science is highlighting all these effects more and more precisely.

This is where the link with information, literacy and education is obvious. Many more people need access to information. They need the capability to understand communication and to change their individual behaviour. They clearly also need to translate their improved knowledge into their democratic right to elect leaders who will do the right thing. What the planet needs is meaningful access to information, i.e., information that is clear and reliable, that has been peerreviewed as to its scientific quality and professionally verified as to its truth — a major challenge in the era of fake news and alternative facts! News media will have to play a role, but local communities may want or need to develop their own understanding based on written information. Here again, libraries can play a role in presenting unfiltered access to the widest range of scientific writings.

Information is available today at an unprecedented magnitude. International scientific panels such as the Intergovernmental Platform on Climate Change (IPCC) bring together qualified scientists from

a wide range of sciences and a broad geographical area, and they, of course, rely on access to global, up-to-date scientific information. They produce peer-reviewed models that not only explain the root causes of climate change, but also provide modelling tools that predict with ever growing probability the consequences of inaction. Many parts of the planet will become unliveable for mankind, through increased temperatures, droughts, sea level rising, etc. With changes in technology, access to information today more often relies on digital search instruments. We have basically replaced the word "research" by "Google." It is so easy, when there is access to the internet. But few people understand that their research is filtered through algorithms, which try to offer information that confirms rather than challenges previously held views. These systems effectively divide our societies in unprecedented ways, even creating acceptance for alternative facts, a complete misnomer.

Libraries must play a major role in addressing this problem. They can help individuals to check information without a filter, accessing the full spectrum of scientific knowledge. It is clearly more difficult to pretend in the US that climate change is simply a Chinese/European trick to weaken the US economy, when NASA and the US military services are among the leading sources on ongoing climate change and expected future developments. Confronting misconceptions with peer-reviewed evidence from a wide range of independent sources seems to me to represent the best hope of coming to a rational assessment of reality, rather than ideologically held beliefs. One may

argue that the dramatic change of weather conditions can be observed also by the uneducated. Many traditional communities that are living on nature's services for food and drink will indeed notice the change. They will see the migration of animals, both on land and in the seas, due to global warming. They will notice that trees and entire forests are moving into previously colder areas and that their typical crops are disappearing. This may be true for people still living with nature, less so for the many who have moved into megacities, but what is needed for all is to understand the direct link between human activity and climate change. Where the attitude of people is still mainly influenced by religious fatalism, it is difficult to argue for change of human production and consumption patterns. Where people do not understand the important greenhouse gas binding capability of wetlands, soils, forests and oceans, it remains difficult to persuade them that these ecosystems need to be protected. It requires awareness to realise that plastic litter can be a direct threat to life on land and in the oceans, putting at risk the very survival of mankind on this planet.

The same reasoning holds for necessary adaptation measures. Giving up land as overflow areas to rivers is politically difficult. Preventing construction in known flood areas is equally difficult. As a European environment minister once told me: investing in flood protection is unpopular, because it means raising taxes. Showing up in flooded areas in rubber boots and showing empathy is very popular! Uninformed people tend to make uninformed decisions! Libraries are again a major source of sound information, wherever possible peer-reviewed. And it is absolutely necessary that libraries are properly run, showing as transparently as possible the available literature on climate change. Libraries could also seek to guide people in the direction of the most peer-reviewed articles or books and organise workshops around the multilaterally discussed solutions for mitigation and

adaptation. The literature is also full of suggestions for intelligent solutions for adaptation. The role of mangrove forest to protect seashores and the maintenance of terrestrial forests are but two examples. Both forests also bind CO, and serve as CO, sinks. On land, forests tend to keep soil in better shape, in particular with regard to water absorption. This helps to prevent floods after heavy rains, or even mudslides. Trees in cities have an air conditioning effect, making heat waves more tolerable to human health.

As is the case for all 17 SDGs, it is true that Goal 13 (Climate Action) cannot be achieved in isolation. We will not secure the necessary mitigation and adaptation measures if we do not successfully fight poverty and hunger, if we do not offer decent work conditions to people, eliminate gender discrimination, empower people in democratic forms of governance, protect ecosystems on land and in our oceans, etc. We need to overcome the silo mentality that is predominant in our highly specialised world. In Europe, green NGOs lobbied for years for the use of diesel engines in the belief that they were more efficient and emitted less greenhouse gas. It was then discovered that diesel engines emit more nitrates and more fine particles and are a major cause of the 400,000 premature deaths each year due to poor ambient air in European cities. One needs to avoid developing solutions to specific problems without testing these solutions against the entire list of SDGs. This may sound ambitious, but it is the only safe way forward toward a sustainable future for mankind on this blue planet.

Some of this may seem obvious to the informed. But the planet is populated with people who have never heard of the scientific findings and the very large consensus around the causes of climate change and its rapidly increasing threats. This is not a criticism; it is unfortunately still a reality. Those people directly exposed to the visible effects of climate change do tend to realise that something is wrong. But it is not common knowledge that human activity is a major cause for the dramatic change. The sheer number of humans on the planet should be more widely recognised as a contributing factor. In the 1950s the planet was populated by 3 billion people. Today we are 7 billion and we expect to exceed 10 billion in the next 20 to 30 years. The carrying capacity of the blue planet called Earth is being seriously stretched! Almost all of the demographic growth is taking place in less developed countries. The demand for resources for a decent life is growing exponentially! Most of today's quality of life in the industrialised part of the world is fuelled by fossil energy resources. Much of our food is produced at the expense of forests and wetlands, and our meat diets are not only unhealthy for those who enjoy a steak a day, but also a big source of greenhouse gas emissions.

How can better governance deal with all of these challenges? The UN resolution on the SDGs highlights the role of democratic governance and respect for the rule of law. Both concepts need informed citizens to exercise their democratic rights and claim their individual rights under impartial rule of law. Information and education are crucial for both. And libraries are a fantastic tool for sharing human knowledge. It is no surprise that dictatorial regimes tend to destroy books and libraries, as evidenced during the fascist reign in Germany or more recently during the Islamic extremists' occupation and partial destruction of Timbuktu.

Over the centuries, access to libraries has become more open, sharing knowledge well beyond small numbers of elites. Fighting illiteracy continues to be dramatically important. The SDGs represent an attempt to overcome the increasing specialisation of today's world. The world needs specialists, to advance collective knowledge. But the world also needs generalists, who understand the specialists' languages and can bring them to interact to properly assess all consequences, not just individual silo effects. Examples of a lack of holistic analysis are plentiful. The shift toward diesel engines in cars in Europe was motivated also by fight against climate change, without consideration of the significant ambient air pollution by nitrogen emissions and fine particles. Similarly, in the shift toward renewable energy, the introduction of large dams for electricity production often fails to account for the drinking water needs of downstream populations, not to mention the problems for downstream wetlands and agriculture. Sustainable policies will need to be holistic policies. The 17 SDGs all impact each other, and only those policies that effectively consider all issues in a balanced way will eventually lead toward sustainable societies.

Scientific knowledge on these interactions is growing and documented, for example in the form of the agri-food nexus, or the deeper understanding of the functioning of the planet's many ecosystems. It is important that as many people as possible have access to these findings, in order to draw the appropriate conclusions for their personal behaviour and perhaps even more importantly, to use their right to vote for governments that will pursue sustainable policies. I remain convinced that the urgency of implementing changes for sustainability requires government regulation. The individual behavioural change of more than 7 billion people will simply take too long to maintain global warming below 2 degrees Celsius.

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