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A Review of the Sustainable Development Goals through a Climate Lens

Policy Brief

1 Introduction

In 2015, the international community made an unprecedented set of commitments to pursuing a sustainable future through the adoption of the **Agenda 2030** and its Sustainable Development Goals as well as the Paris Agreement on limiting global warming to well below 2° Celsius. The world set course for a transition to low-carbon, climate-resilient societies and economies, with countries working toward common goals while focusing on their national circumstances, challenges, and opportunities.

Adapting to climate change is a key objective of the two agendas. The 2030 Agenda for Sustainable Development aims at achieving the full implementation of the Sustainable Development Goals (SDGs) by 2030. It makes the link to climate change very clear, noting that it "is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve sustainable development," and that the widest possible cooperation is needed to mitigate and adapt. The frameworks are highly interconnected, thus failure in one process could undermine the success of the other. This interdependency can be seen as an opportunity to move away from the discourse of two competing agendas and instead pursue their implementation in a way to maximize mutual benefits.

Climate change threatens many of humanity's biggest achievements as well as its future goals as reflected in the 2030 Agenda for Sustainable Development. Progress on SDG 13 on climate action is falling short of what is needed to meet the targets of the global agenda by 2030.

Climate change poses an immediate threat to the achievement of the SDGs and to the survival and well-being of many communities, in particular, island nations and coastal communities. This calls for urgent and accelerated action by countries in their implementation of the 2030 Agenda for Sustainable Development and the Paris Agreement.

The "Global Warming of 1.5°C" Report by the Intergovernmental Panel on Climate Change (IPCC) (2018) and the World Meteorological Organization Report, "United in Science" (2019) are two reports that have transformed public discussions on climate change. The reports outline the impacts of 1.5 °C warming above pre-industrial levels and have been key in informing ACT Alliance's efforts towards climate change, sustainable development and poverty eradication.

The reports note that:

- Climate change is already **adversely affecting** people, ecosystems, and livelihoods all around the world.
- Limiting warming to 1.5°C **is possible**, but requires unprecedented transitions in all aspects of society.
- There are **clear benefits** to keeping warming to 1.5°C compared to 2°C or higher. Every bit of warming matters.

Key findings:

- The **average global temperature** for 2014–19 was the warmest of any equivalent period on record. It is estimated to be 1.1°C above pre-industrial times and 0.20°C warmer than the global average temperature for 2011–15.
- The observed rate of global mean **sea-level rise** increased from 3.04 millimetres per year (mm/yr.) during the period 1997–2006 to approximately 4 mm/yr. during the period 2007–16. The oceans absorb nearly 25 percent of the annual emissions of anthropogenic Carbon Dioxide (CO_2), thereby helping to alleviate the impacts of climate change on the planet. The CO_2 reacts with sea water increasing the acidity of the ocean which negatively affects marine life and ecosystems.

- According to the Food and Agriculture Organization of the United Nations (FAO) report, "The **State of Food Security and Nutrition** in the World," climate variability and extremes are among the key drivers behind the recent rises in global hunger and one of the leading contributors to severe food crises. Climate variability and extremes are negatively affecting all dimensions of food security i.e. food availability, access, utilization, and stability.

- The frequency of **drought conditions** from 2015–17 demonstrate the impact of the 2015–16 El Niño on agricultural vegetation. Large parts of Africa, Central America, Brazil, the Caribbean, and Australia, experienced a large increase in the frequency of drought conditions in 2015–17 compared to the 14-year average.

- **Heat waves** were the deadliest meteorological hazard in the 2015–19 period, affecting all continents and setting many new national temperature records. Unprecedented wildfires affected the Arctic region in 2019. In June alone, these fires emitted 50 megatons (Mt) of carbon dioxide into the atmosphere. This is more than was released by Arctic fires from 2010–18.

- The International Monetary Fund found that for a medium and low-income developing country with an annual average temperature of 25°C, a 1°C temperature increase would lead to a drop in economic growth of 1.2 percent. Countries whose economies are projected to be hard hit by an increase in temperature accounted for 20 percent of global Gross Domestic Product (GDP) in 2016. These countries, however, are home to nearly 60 percent of the global population, and this is expected to rise to more than 75 percent by the end of the century.

- **Fossil fuel combustion and cement production** release about 90 percent of all carbon dioxide (CO_2) emissions and about 70 percent of all greenhouse gas emissions from human activities. Fossil CO_2 emissions continue to grow by over 1 percent annually and grew by 2 percent in 2018, reaching a record high of 37 billion tonnes of CO_2. Although emissions are growing slower than growth in the global economy, there is still no sign of a peak in global emissions.

2 The SDGs and Climate Change: Mitigation and Adaptation

Mitigation Actions

Achieving the global goals, for example, those related to poverty, hunger, access to water, terrestrial and marine ecosystems, health, gender equality, etc., will be challenging if urgent action on climate change is not taken. Many of the goals and targets can be achieved in ways that would enable adaptive responses to climate change. For example, the energy transitions envisaged in SDG 7 (affordable and clean energy) would contribute significantly to lowering greenhouse gas emissions.

Similarly, industry, innovation and infrastructure (SDG 9), zero hunger (SDG 2), and responsible consumption and production (SDG 12) can all contribute toward low-emission pathways, the creation of new jobs, and long-term progress in eradicating poverty.

The SDG Climate Action Nexus tool (SCAN-tool) by the NDC Support Cluster Project (2018) was developed to support decision makers to identify which climate mitigation actions could positively or negatively impact the SDG targets. The tool identified sector-specific mitigation action linkages to SDG targets, noting the potential and need to tackle both agendas simultaneously.

From the analysis of sector-specific linkages between mitigation and the SDGs, the following key findings are highlighted. It must be noted that the number of links identified in each sector may reflect the amount of literature available on this topic for the sector. However, the general trend (for example, the ratio between positive and negative links) can inform policy makers on what to generally expect when implementing mitigation actions in their sector.

The **electricity and heat sector** presents linkages (synergies or trade-offs) with all SDGs covered by the tool. Most linkages are related to good health and well-being (SDG 3); decent work and economic growth (SDG 8); industry, innovation and infrastructure (SDG 9); sustainable cities and communities (SDG 11); and life on land (SDG 15).

Mitigation actions in the **transport sector** link to 11 of the SDGs, with most linkages related to good health and well-being (SDG 3), decent work and economic growth (SDG 8), and sustainable cities and communities (SDG 11). Reducing emissions intensity in transport includes the adoption of electric vehicles and biofuels, both of which identify some negative linkages (for example, biofuel production threatens food security and has other environmental impacts).

Similarly, mitigation actions in the **building sectors** show the most linkages to the goals for decent work and economic growth (SDG 8); industry, innovation and infrastructure (SDG 9); and sustainable cities and communities (SDG 11). The tool identifies significant potential synergies, and a few negative linkages in reducing emissions from buildings.

Mitigation actions in the **industry sector** show mostly potential synergies across nine SDGs, with more frequency to goals on decent work and economic growth (SDG 8); industry, innovation and infrastructure (SDG 9); and responsible consumption and production (SDG 12) (for example, actions to reduce process or fugitive emissions) showed only positive linkages.

Actions in the **land use sectors,** both agriculture and forestry, link to 11 SDGs. Most of the mainly positive synergies were related to zero hunger (SDG 2) and life on land (SDG 15). Overall, only six potential trade-offs were identified between the two sectors.

Adaptation Actions

Strong positive linkages were found between all the adaptation sectors and no poverty (SDG 1). Poverty is affected by a wide range of sources, from food production, access to social services, and productivity — all of which are threatened by worsening climate change. As Stephane Hallegatte et al. (*Shock Waves: Managing the Impacts of Climate Change on Poverty,* 2016, p.2) wrote, "Climate change represents a significant obstacle to the sustained eradication of poverty, but future impacts on poverty are determined by policy choices: rapid, inclusive, and climate-informed development can prevent most short-term impacts whereas immediate pro-poor, emissions-reduction policies can drastically limit long-term ones."

SDG 4 (**quality education)** is supported by actions that correspond to other sectors, such as energy (needed for building and maintaining institutions), and transportation (which allows access to educational facilities).

Adaptation actions, particularly on physical protection, can take two forms: adaptation through natural means or through artificial means. Policy makers will benefit from further study on the costs and benefits of these in relation to ecosystem management. For instance, in coastal zone protection, adaptation to sea-level rise could be in the form of planting mangroves or creating a sea wall. While both help shield against rising sea levels, they each have different impacts in terms of supporting biodiversity.

3 Challenges Posed by Policy Integration

Coordination and Coherence

Actors, both state and non-state, operating across multiple sectors and scales, from local to global, can facilitate policy coherence and learning as integrated approaches to adaptation and sustainable development. Cross-sectoral and inter-ministerial collaboration can be challenging because it is not always apparent how the activities of different ministries interrelate, and coordination across institutions can be difficult.

Availability of Data and Information

There is a lack of or little data and information available to actors. Data on a wide variety of indicators relevant to the two agendas are simply unavailable in many countries, especially data that relate to socio-economic conditions and other facets of well-being.

Lack of Public Participation

People and communities play a central role in each of the two agendas; they benefit from action, have the opportunity to innovate and lead new ideas, galvanize other groups, and lead through example. Communities can also act as agents of change when working independently; by recognizing the potentially transformative role of communities in contributing to the two agendas, an opportunity arises to support further integration between climate change adaptation and sustainable development.

4 Recommendations and Way Forward

The first global conference on strengthening synergies between the Paris Agreement and the 2030 Agenda for Sustainable Development held in 2019 in Denmark suggested a number of considerations for maximizing co-benefits by linking implementation across SDGs and Climate Action through:

- Facilitating more coordinated and coherent planning and policy making linking the two agendas, identifying the benefits by closely aligning the two agendas to inform decision making

- Utilizing the UN system SDGs action online database as the UN system's repository of actions, initiatives, and plans on the implementation of the 2030 Agenda and the Paris Agreement

- Examining how best to leverage advocacy, policies, and programmes, implementation mechanisms, inclusive multi-stakeholder action, resources, and partnerships for both the SDGs and for climate action so that co-benefits are maximized and trade-offs minimized at all levels

- Incorporating national planning priorities and objectives in communicating Nationally Determined Contributions (NDCs) to ensure the realization of the potential mutual benefits during the implementation process. There is need for better inclusion of the links between climate action, disaster risk reduction, and the SDGs in their Voluntary National Reviews (VNRs) presented at the high-level political forum on sustainable development.

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actalliance.org

Route de Ferney 150
1218 Le Grand-Saconnex
Switzerland

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