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The Sustainable Development Goals viewed through a climate lens

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Key messages

- **NDC-SDG Connections shows that, at the global level, there is great potential for policy coherence between the implementation of the 2030 Agenda for Sustainable Development and the Paris Climate Agreement. The challenge is to translate these synergies into coherent implementation at the national level.**
- **Identifying synergies between the implementation of the Paris Agreement and the 2030 Agenda has the potential to boost countries' motivation to fulfil their commitments.**
- **While our analysis identifies synergies from policy documents, trade-offs are much more difficult to explore in the same manner. Nevertheless, trade-offs should be anticipated and identified early on.**
- **Insights from the NDC-SDG Connections could guide the follow-up and review process for the SDGs at the High Level Political Forum, and should generate thematic reviews that truly integrate climate change into the 2030 Agenda.**
- **Countries should draft their national sustainable development strategies in light of their NDC commitments in order to identify and build on synergies between them. Future updates of NDCs can take account of existing national sustainable development strategies to further strengthen synergies.**
- **Buy-in among various stakeholders in society can be generated by NDC-SDG synergies, so enhancing chances to increase future ambition.**

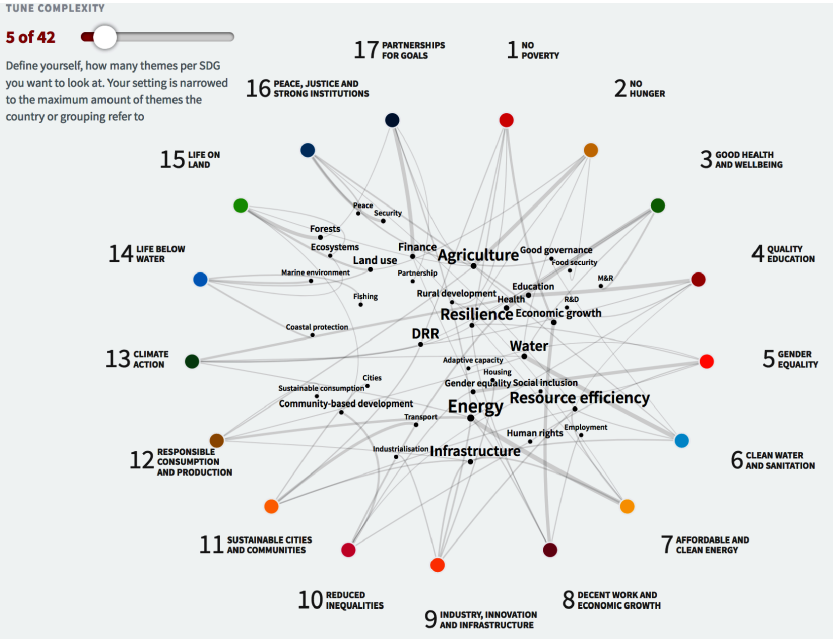
Introduction

There is great potential for greater policy coherence in the implementation of the 2030 Agenda for Sustainable Development and the Paris Agreement. To take advantage of it there is a need to identify and assess synergies between climate and sustainable development policies and avoid or manage trade-offs. At the national and sub-national level, where the Paris Agreement is implemented through national climate action plans (so-called Nationally Determined Contributions –NDCs) there is insufficient understanding of the potential coherence between the implementation of the NDCs and the 17 Sustainable Development Goals (SDGs). Different ministerial departments are responsible for implementing the NDCs and the SDGs and too often they work in silos, and the complexity of the connections between climate change and the SDGs is a challenge for conventional structures and processes of decision-making. New approaches at the global, national and sub-national levels that integrate horizontal and vertical decision-making and increase policy coherence are essential to avoid implementation inefficiencies and to maximize the desired outcomes.

This brief presents findings from a comprehensive data-driven analysis of more than 7000 climate activities extracted from 164 NDCs. These activities are visualized in the interactive online tool

Photo (above):
Water drop © EMRAN KASSIM / FLICKR

Figure 1. Synergies between the 5 most frequently found SDG themes in NDC activities and each of the 17 SDGs



NDC-SDG Connections[1] (Brandi et al. 2017a), which shows that NDCs include a large number of country-driven climate activities that are also relevant for achieving multiple SDGs (Dzebo et al. 2017; Brandi et al. 2017b).

Our analysis shows where there are synergies between climate action and sustainable development and where there might be risks of trade-offs. We argue that seeking synergies in implementation of both agendas could increase countries' motivation to fulfil their international commitments. The analysis focuses primarily on synergies, because trade-offs are rarely mentioned in international policy documents. Still, trade-offs should be anticipated and identified early on in order to be managed. Otherwise they risk undermining effective policy implementation.

Exploring connections between SDGs through a climate lens

The tool derives activities from countries' NDCs into categories of climate action and links these with SDG targets. For example, a climate activity targeted at improving sustainable agriculture is categorized as an activity that contributes to SDG 2 (see Figure 1 for the names of the SDGs). Yet if the activity also mentions improved irrigation schemes it can be assumed to contribute to achieving water efficiency (SDG 6) and to more sustainable farming practices that reduce soil degradation (SDG 15). Hence, the activity is also considered synergistic with these SDGs and their targets.

In order to compare NDC activities across the 17 SDGs, we inductively developed 42 themes (i.e. socio-economic sectoral categories), which cover a broad spectrum across all SDGs. These are visualized on the synergies page of NDC-SDG Connections,[2] where users can tune up the level of complexity from showing one theme to all 42. Figure 1 shows the connections between the SDGs (in the outer circle) and the five most prominent themes appearing in countries' NDCs. A connection is made when a climate activity specifically refers to a theme. The size of the word indicates how frequently the theme occurs, while the thickness of connecting lines illustrates how many countries' NDCs refer to a theme.

There is a need to identify and assess synergies between climate and sustainable development policies and avoid or manage trade-offs.

Thematic connections between NDCs and SDGs

Our analysis reveals that, from the perspective of NDCs, the SDG themes with the strongest synergistic connections include energy, agriculture, water, resilience, resource efficiency, disaster risk reduction, and infrastructure. To illustrate how the analysis works, we discuss the three most common ones – energy, agriculture and water – below.

Energy

Zooming in on the energy theme (see Figure 2) reveals that energy-related NDC activities can also create synergies for a number of other SDGs besides SDG 7, especially 4, 5, 8, 11, 12, and 13.

For instance, energy-related NDC activities often link sustainable energy and energy efficiency to education-relevant measures, such as awareness-raising campaigns for saving energy or providing electricity for schools. Moreover, the links to SDG 17 illustrate that many commitments are

1 http://ndc-sdg.info/
2 http://ndc-sdg.info/synergies

conditional on international partnerships, technology transfer and financial support. In sum, the findings show that energy-related NDC activities connect with a broad set of the 2030 Agenda's economic and social goals.

Conversely, there are hardly any links between energy-related NDC activities and other climate-relevant SDGs, such 1, 6 and 15. Assuming that some energy-related NDC activities, such as bioenergy, are likely to increase competition for water and soil resources or can threaten ecosystems and biodiversity, this implies that there are substantive trade-offs between climate action and certain SDGs and their targets (see e.g. Dooley and Kartha 2017).

Agriculture

NDC activities related to this theme are mostly relevant for SDG 2 (see Figure 3). Unlike energy, agricultural activities in the NDCs also have very strong connections to SDGs 6 and 15. For example, many agriculture-related NDC activities raise the need for irrigation, drought-resistant seeds and integrated water resource management, so connecting with SDG 6. Agriculture activities also include connections to SDG 15 through soil management, livestock and agroforestry. To a slightly lesser extent, agriculture also connects to SDGs 1 and 12.

In a similar way that energy NDC activities have low connectivity to SDG 2, agriculture activities do not connect strongly with SDG 7; in fact less than 1.5% of agriculture-related NDC activities relate to energy. However, efforts to end hunger and achieve food security may limit the availability of arable land for renewable energy, particularly bioenergy, as well as limiting areas that can be used for solar energy. For example, a recent study found that by 2050 stringent implementation of mitigation policy across all sectors would have a greater negative impact on global hunger and food consumption than the direct impacts of climate change (Hasegawa et al. 2018). The lack of connections between agriculture and energy activities needs further analysis.

Water

The water theme feeds mostly into achieving SDG 6, but is also linked to several other SDGs, especially 2, 3, 12 and 13 (see Figure 4). The link between water and health and well-being shows how actions on environment can be tightly linked to social issues. For instance, water and sanitation NDC activities connect their ambitions with reducing health impacts from flooding, spread of water-borne diseases, and access to sanitation, among others (SDG 3). Water NDC activities also connect to SDG 12 through, e.g., waste-water treatment facilities and reduced pollution of watersheds. Lastly, the link between water and SDG 13 indicates the importance of policy coherence and mainstreaming of climate measures into sectoral policies at country level. But beyond creating synergies, the importance of water for achieving many SDGs hints that rising demands could lead to competition between various policy sectors. This underlines the need to understand trade-offs around water and new practices on how to deal with allocation challenges in order to avoid conflict and maladaptive practices (Janetschek and Dombrowsky 2017).

Figure 2. Connection between energy and the 17 SDGs

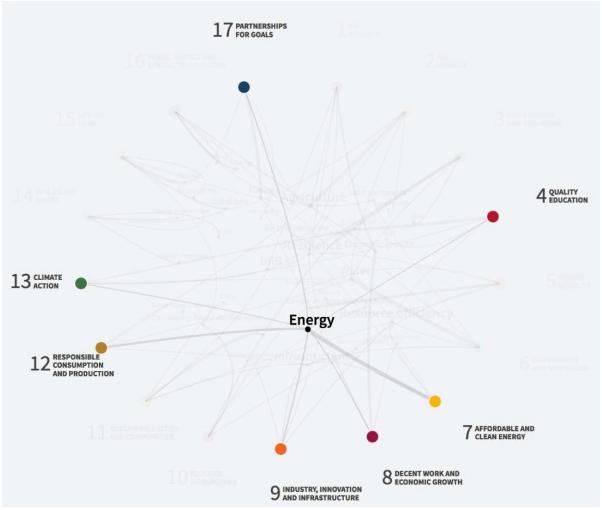


Figure 3. Connections between agriculture and the 17 SDGs

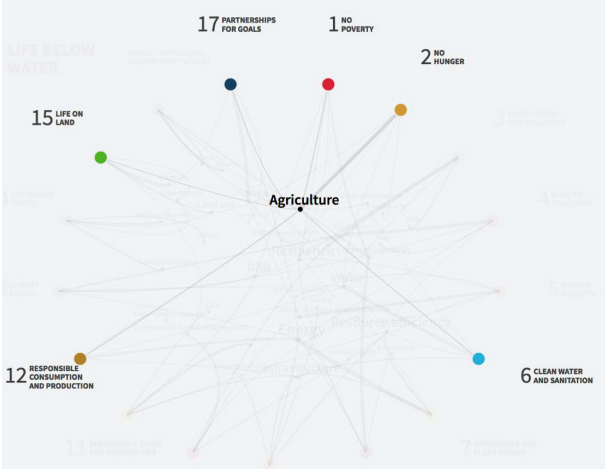
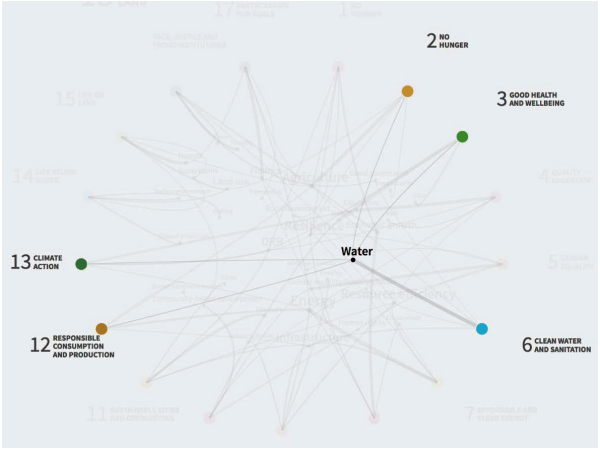


Figure 4. Connections between water and the 17 SDGs



Social issues

While SDGs on social issues, such as SDGs 3, 4, 5, and 10 are less prominent in countries' NDCs, projected climate change will, with very high confidence, have an adverse impact in these areas, and will affect human health and well-being mainly by exacerbating existing health problems (IPCC 2015). Therefore, countries should also strengthen their actions on health, gender, human rights and inequality. With regard to SDG 3, for example, there are opportunities to work with closely linked areas

such as sanitation and nutrition, gender equality, and efforts to reduce inequality, which have the potential to play important roles in reducing health-related climate impacts, but which are currently are underrepresented in NDC activities (Dickin and Dzebo 2018).

Trade-offs and gaps between climate action and sustainable development

While information on synergies is abundant, less is known about managing potential trade-offs among different policy objectives. Nevertheless it is still possible to expose areas where there are few or no connections, which could indicate potential policy conflicts. While a lack of connections between NDCs and SDGs does not always reveal a trade-off, it is important for countries to consider that trade-offs will arise in national implementation. This could be done by taking account of critical trade-offs in the UNFCCC global stocktake process, and by integrating a chapter on existing challenges in each NDC that highlights areas where critical mediation is needed to avoid environmental harm, or policies that are counter-productive for social or economic aims. Trade-offs and synergies should also be taken into account in financing processes, as is the case with the Green Climate Fund's sustainable development criteria.

Towards policy coherence

Policy coherence can be improved from two perspectives. First, countries that have not yet embarked on implementing the SDGs can design their future national sustainable development strategies in a way that takes account of their existing NDCs. The strategies could, for example, complement the content of the NDCs by focusing on issues that have not been addressed in them. Second, because NDCs are cyclical, future updates can take account of existing national sustainable development strategies and their synergistic potential. Energy, agriculture and water cut across the whole climate and sustainable development spectra. Our approach in NDC-SDG Connections shows that the potential for synergies is strong at the global level. Then, the challenge is to translate this potential into national decision-making.

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