

How did we do this?

The NDC-SDG Connections tool

1) Data

The analysis behind NDC-SDG Connections is based on all of the nationally determined contributions (NDCs) or intended nationally determined contributions (INDCs) that were available in 2016, with the exception of Iraq's which was published in Arabic only¹. The 27 member states of the European Union all share one NDC, despite being individual parties to the Paris Agreement. This means that same data will be presented for these countries. However, the EU NDC only includes one clear climate "activity" (see below), meaning that the data for EU member states is scarce.

To build the database, the content of each (I)NDCs was examined to identify "activities" – statements identifying a strand of future activity, conditional or unconditional, under the NDC. These disaggregated activities served as our data points for the analysis. Table 1 gives examples of types of statement that would, or would not, have been counted as activities.

Table 1. Illustrative NDC activity statements

Activities	Not counted as activities
[Country] will pursue actions to limit the impact of diseases.	Sectors covered: agriculture, energy, LULUCF.
[Country] has an adaptation plan for the health sector.	[Country] is vulnerable to the impact of diseases.
[Country] expresses the need for support in the health sector.	[Country] has made progress to cure diseases in the past.
	[Country] has been much impacted by the presence of diseases.

Where a statement applied to multiple SDG targets, it was added to the database multiple times (although this was the case for only a very limited number of activities). In cases, where SDG targets overlap in their definition, we assigned an activity to only one of them (e.g. education in SDG 4.7 and SDG 13.3).

Overall, from 161 (I)NDCs, we derived 7080 climate activities (data points). The figures given for relative distribution of activities between particular SDGs at global or national level are always in relation to this total (and does not reflect how much NDCs contribute in absolute terms to achieving a particular SDG or SDG target).

¹ We are currently working on introducing Iraq's INDC as well as those NDCs and INDCs that were submitted in 2017. This includes State of Palestine, Timor-Leste and Uzbekistan.

2) Analysis

The NDC-SDG Connections depends mainly on text analysis. We started by counting the frequency of key words as well as the volume of committed activities of a country in a certain policy sector. We coded the data points/climate activities² for all 17 SDGs and 161 NDCs in four broad categories:

- 1) **Interpretation:** Assessment of NDC activities according to their **radius of influence** (national, regional, local); **type of climate action** (adaptation, mitigation, both or none); if the activities imply **capacity building** measures; if the activities imply **technological improvements** (and if yes, what type of technology); if the activity mentions a **quantifiable target** to be reached; and if the activity is **related to a policy plan** or strategy (and if yes, at what level).
- 2) **SDG targets:** Here we assessed how far a climate activity can be linked to one or more specific SDG targets in their wording. For this purpose, we created a codebook that includes the wording of each SDG and its targets and also includes the official global indicators that follow each target.³
- 3) **Climate actions:** We derived, inductively from the NDC activities, a set of the most frequently mentioned categories of action that could be attributed to the SDGs and SDG targets. This set of so-called climate actions varies for each SDG.
- 4) **SDG themes/Cross-cutting themes:** We also looked for broader socio-economic sectoral categories. Some are closely related to a particular SDG, but they can also be broader than one SDG and may encompass two or even more SDGs (e.g. agriculture as a theme encompasses SDG 2 and SDG 15). This approach helped to reveal co-benefits that can be found in the climate activities that go beyond a specific SDG. For example, if an activity targeted improvement in the agricultural sector it was coded as relevant for SDG 2.4, but if it also mentioned co-benefits for water efficiency (SDG 6.4) and forest management (SDG 15.2) it was coded as providing synergistic information on these respective SDG targets. In total, we identified 42 cross-sectoral categories and they were analysed consistently across all 17 SDGs.

Except for interpretation, we used binary coding (1 or 0) where applicability was determined.

This fine-grained and synthetic analysis of the activities in all NDCs allows a more precise picture of which activities in NDCs contribute to certain SDGs at target level.

To guarantee the reliability of our analysis we applied inter-coder reliability, meaning that always at least two independent coders went through the data material while a third final approval of the decisions taken was guaranteed for all the activities in the analysis.

² We thus generated 17 spreadsheets (one per SDG) in which the rows contained the activities per country with SDG 2 (hunger/agriculture) 6 (water), 7 (energy), SDG 11 (Urbanization), SDG 15 (land use) and SDG 17 (partnerships) containing the highest number, compared to the other SDGs.

³ Developed by the Inter-Agency and Expert Group: <https://unstats.un.org/sdgs/iaeg-sdgs/>

3) Terms and definitions

NDC and SDG terms, known as	Use of terms in the NDC-SDG Connections Tool	Definition
(Intended) nationally determined contribution (NDC)	NDC	NDCs are climate action plans that reflect what a country intends to do in order to contribute to achieve the global halt of climate change (remaining below the 2° degree warming target)
NDC content	NDC activities	A statement identifying a strand of future activity, conditional or unconditional, under the NDC
Aggregated categorization of concrete NDC commitments	Climate actions	Specific areas of action within the strand of activity. These are derived from the identified activities, and differ for each SDG
SDGs	SDGs	The 2030 Agenda encompasses five principles for implementation as well as the 17 SDGs and their respective 169 targets
Targets	SDG targets	Under each of the 17 SDGs is a varying number of targets that describe either a process or a quantified outcome that is aimed to achieve with this target
SDG cross-cutting perspectives	SDG themes	SDG themes are socio-economic sectoral categories. Some are closely related to a particular SDG, but they can also be broader than one SDG and may encompass two or even more SDGs (e.g. agriculture as a theme encompasses SDG 2 and SDG 15)
Causes and challenges, mentioned in NDCs	Climate-related impacts	Climate-related impacts on the socio-economic and natural environment that increase vulnerability, cause loss and damage and are alleviated through concrete mitigation and adaptation measures