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NDCs and metrics

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NDCs and metrics

Main issues:

- Which metrics are used in the NDCs?
- Trends with respect to single/multiple metric NDCs
- Are there trends in various groupings?
- Closer look at some of the 'bigger' Parties

NDCs and metrics

Main source for this analysis is the IGES NDC Database

Big thank you to IGES!

NDCs and metrics

We looked at 197 NDCs

- 11 of which have no (clear) metric
 - Excluded from the analysis
- 151 have a single metric
- 35 have multiple metrics

Which metrics are used in the NDCs?

- This overview looks at both single and multiple metric NDCs (totals therefore sum up to more than 100%)
- Wide variety of metrics, main ones used:
 - **CO₂e**
 - Includes CO₂ and other GHGs, CO₂e, 100 year Global Warming Potential
 - 161 NDCs (**87%**)
 - 75% of all NDCs have CO₂e as only metric
 - **Renewable energy indicator**
 - MWh or % of energy mix
 - 28 NDCs (15%)
 - **Re/afforestation metric**
 - ha or % of forest cover etc
 - 10 NDCs (5%)

Which metrics are used in the NDCs? (2)

- Some less commonly used ones:
 - ***CO2 intensity of GDP***
 - 8 NDCs
 - ***Energy efficiency***
 - 5 NDCs
 - ***CO2 intensity/capita***
 - 4 NDCs
 - ***Carbon neutrality by a given year***
 - 4 NDCs

Which metrics are used in the NDCs?

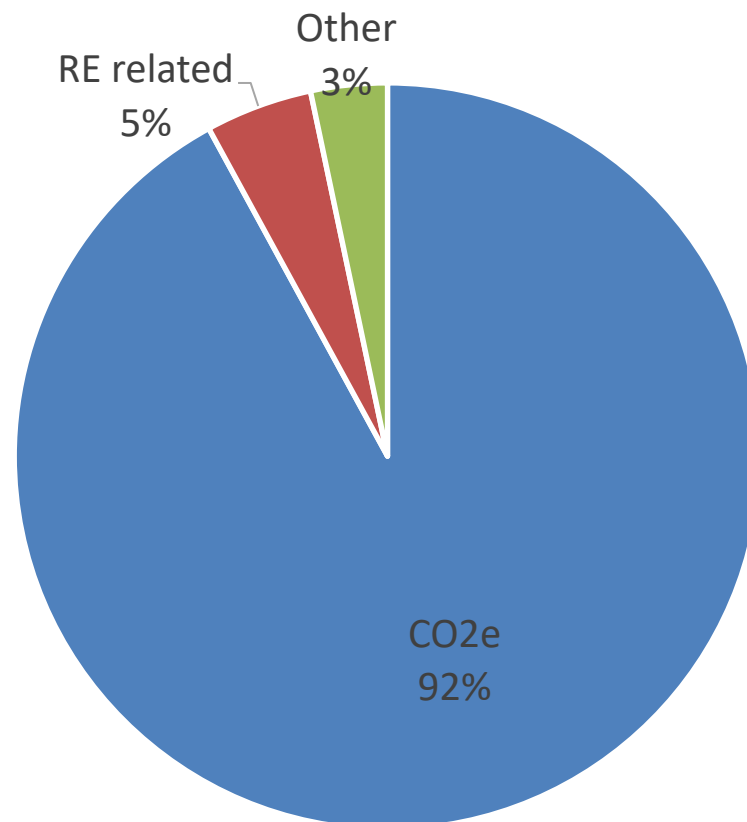
- Metrics used in only 1 or 2 NDCs include:
 - Peak year for emissions
 - Increasing absorption rate of LULUCF sector
 - Energy efficient stoves
 - Improving grid access
 - Reducing total energy use
 - Reducing fuel wood consumption
 - Protecting carbon sinks
 - Reducing use of conventional transportation fuels
 - Establishing standards
 - Successful implementation of a series of policies

Single metric NDCs

- 151 NDCs have only one metric (81%)

- Out of these 151:

- 139 use CO2e
 - 92% of single metric NDCs
- 7 use a RE related metric
 - 5% of single metric NDCs



Are there trends in various groupings?

- Is there a strong trend in one or another selected Party grouping with respect to metrics used?

| | EU | UG | Arab group | African group | AILAC | SIDS | ALBA | LMDCs |
|---------------------------------------|----|----|------------|---------------|-------|------|------|-------|
| Number of Parties | 29 | 12 | 14 | 48 | 7 | 35 | 9 | 21 |
| Parties using <u>single metric</u> | 29 | 12 | 12 | 44 | 3 | 23 | 6 | 14 |
| <i>Of which CO2e</i> | 29 | 11 | 11 | 41 | 3 | 18 | 5 | 13 |
| <i>Of which other</i> | 0 | 1 | 1 | 3 | 0 | 5 | 1 | 1 |
| Parties using <u>multiple metrics</u> | 0 | 0 | 2 | 4 | 4 | 12 | 3 | 7 |
| <i>Which includes CO2e</i> | 0 | 0 | 1 | 2 | 2 | 7 | 1 | 4 |
| Parties <u>not using CO2e at all</u> | 0 | 1 | 2 | 5 | 2 | 10 | 3 | 4 |

- Conclusions:

- EU, UG, Arab group and African group overwhelmingly use CO2e as only metric
- Other groups: approx. 50% use CO2e as only metric
- Limited numbers of countries don't use CO2e at all
 - Mostly found in SIDS, African group, LMDCs and ALBA

Closer look at some of the bigger parties

- China:
 - Uses several metrics
 - Year with peaking of emissions
 - Emission intensity of GDP
 - Share of non-fossil fuels in primary energy consumption
 - Forest stock volume (in m³)
- USA:
 - Uses CO₂e as only metric
- Russian Federation:
 - Uses CO₂e as only metric

Closer look at some of the bigger parties

- India:
 - Uses several metrics
 - Emission intensity of GDP
 - Share of installed power capacity from non-fossil fueled based sources
 - Expand carbon sinks (in CO₂e)
- Japan:
 - Uses CO₂e as only metric
- Brazil:
 - Uses CO₂e as only metric (GWP-100)

Closer look at some of the bigger parties

- Saudi-Arabia
 - Uses CO2e as only metric
- South-Africa
 - Uses CO2e as only metric
- EU:
 - Uses CO2e as only metric
 - Covers 29 parties: 28 MS+EU itself