

## Interpretation and Analysis of Intended Nationally Determined Contributions Submitted by Switzerland and the EU

Greenovation Hub

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As one of the most important preparations for the UNFCCC COP21 scheduled in late 2015 in Paris, the submission of Intended Nationally Determined Contributions (hereafter referred to as INDC), has received global attention. According to the resolution of COP19, prepared Parties are invited to submit INDCs in the first quarter of 2015. The content of the INDC submitted by one party not only represents its will to act on climate change, but also expresses its expectations for other Parties' actions, and ultimately reflects its government's understanding of climate equity. Last year, some Parties had put forward their schedules for submission. Up to mid March this year, Switzerland and EU have officially submitted their INDCs to the UNFCCC Secretariat. These first submitted INDCs provide an important reference to other parties, and together with the INDCs from more Parties to come pave the way for the conclusion of climate agreement in late 2015. Greenovation Hub has summarized and analyzed the submitted INDCs, and will continue to track the submission progress of other Parties before COP 21.

Below is the table below summarizing the major contents of INDCs submitted by Switzerland and EU.

<b>Intended Nationally Determined Contributions (INDCs)</b>		
<b>Parties</b>	Switzerland	EU
<b>Type</b>	Absolute GHG reductions	
<b>Base Year</b>	1990	
<b>Period/Time frame of the commitment</b>	2021 -2030	
<b>GHGs covered</b>	CO2, CH4, N2O, HFCs, PFCs, SF6, NF3;	
<b>Coverage</b>	Economy-wide  Note: Switzerland supports including international shipping into the coverage of all Parties based on future international consensus	Economy-wide
<b>Reduction level</b>	By 50%	At least by 40%

<b>Net contribution from international market mechanism</b>	40% of total reductions from international market mechanism	NA
<b>Agriculture, forestry and other land uses</b>	Expected to be covered, with accounting methods to be determined	Expected to be covered, with accounting methods to be determined.  Relevant policies will be determined before 2020 once technical conditions permit.
<b>Long term</b>	10-year-policy-steps, with lifting reduction targets. It is planned to reduce emissions by 70%-85% by 2050 (including international carbon offsets), and reduce per capita emissions to 1-1.5 ton/year in the long run.	IPCC AR4-based warming scenario analysis
<b>Adaptation</b>	NA	
<b>Finance</b>	NA	
<b>Technical Transfer</b>	NA	

The two INDCs share one common merit, namely explicit structure and descriptions, which articulately list reductions, base year, GHGs and sectors covered, methods adopted as well as the proportion of offsets. The upfront information will facilitate understanding of the ambition of both Parties' climate targets. In addition, both INDCs also point out pathways or assumptions adopted in explaining ambition and equity, where Switzerland elaborates on this aspect in the form of long-term targets. These are all worth learning by other Parties.

Unfortunately, there are also some problems in both INDCs, which are expected to be improved before the COP 21 in Paris, and should arouse the attention from other Parties.

Firstly, both INDCs only touch mitigation aspects and fail to incorporate adaptation, finance, technology transfer, which are significant aspects to tackling climate change. Though focusing INDCs on mitigation has always been EU's position, it is called by other Parties especially the developing countries that INDC shall cover more elements on combating climate change. Mitigation shall not be separated from other climate goals as they all require contribution of public resources. To look at it from another angle, if the INDCs expressed by mitigation only represents overall contributions from these Parties, they would be far from sufficient compared to the Parties' "fair share." Greenhouse Development Right Framework (hereafter referred to as GDR), as an effort-sharing computing framework, calculates countries' fair share of climate action in terms of mitigation targets. If GDR is applied with settings in favor of developed countries,

adopting a weak 2°C pathway<sup>1</sup> (let's call it "GDR Low Scenario"), Switzerland should reduce emissions 515%<sup>2</sup> below 1990 levels, and EU, 149%. To this end, it is rather insufficient to only cover mitigation in INDCs. In order to achieve the 2°C limit target, the finance responsibility could be estimated through multiplying carbon price by the gap between the fair share and the mitigation target on the table. In this case, for Switzerland, its emission in 1990 is 53 million ton-CO<sub>2</sub>-eq emissions in 1990, and its fair target level is -219 million tons by 2030 under GDR Low Scenario, its total reductions required by 2030 is 272 million tons. After deducting the committed reductions of 26.5 million tons, multiply the amount with the Swiss carbon tax of USD 68\$/ton in 2014, the finance contribution for mitigation is thus estimated to be at least 16.69 billion USD. And likewise, that for EU will be at least 55.26 billion \$. Both values are of course just a reference, as the selected reduction parameters under the scenario are favorable to developed countries. Moreover, abatement cost varies with countries. Even global temperature increase is controlled within 2°C, the adaption cost will still be very huge. The two values will only provide basic expectations for the lowest bottom line of finance commitments by developed countries.

Secondly, mitigation targets of both INDCs are not so ambitious as declared, with a large gap with the 2°C target. The INDC submitted by EU only points out the 2°C target is in consistent with long-term targets of scientific recommendations, but fails to indicate corresponding climate change scenarios. Table below is the analysis of mitigation scenarios by IPCC AR4 WG3. It can be seen that, EU's targets basically correspond to 550ppm or even 650ppm scenario, which indicates slim chance for maintaining the 2°C target. Since Annex I Parties also cover countries in transition, if developed EU and American countries set the targets below or equal to the average value required for maintaining the 2°C target, then it means that countries in transition are expected to set higher or equivalent targets. Thus, it comes to the issue of "climate equity".

Scenarios (CO <sub>2</sub> -eq concentration)	Region	2020	2050
A-450ppm	Annex I	-25%--40%	-80%--95%
	Non-Annex I	Emissions in Latin America, Middle East, East Asia and Central Asia significantly lower than baseline	Emissions in all regions significantly lower than baseline
B-550ppm	Annex I	-10%--30%	-40%--90%
	Non-Annex I	Emissions in Latin America, Middle East, and East Asia significantly lower than baseline	Emissions in most regions, especially Latin America and Middle East significantly lower than baseline
C-650ppm	Annex I	0--25%	-30%--90%
	Non-Annex I	baseline	Emissions in Latin America, Middle East, and East Asia

<sup>1</sup> Since 2012, global carbon budget is 1,270 Gt CO<sub>2</sub>, the possibility to reaching the 2°C target is less than 50%, without considering historical liabilities, and assuming developing countries assume liabilities as much as possible, i.e. exempting minimum population.

<sup>2</sup> Source, Greenhouse Development Right Calculator, <http://gdrights.org/calculator/>

			significantly lower than baseline
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Table 2 Abatement liabilities corresponding to various CO2 concentration control targets (Source: IPCC AR4 WG3 Table13.7)

Thirdly, both INDCs fail to explicitly elaborate on “climate equity”. EU’s INDC introduces the concept of “climate equity” only through changes in per capita emissions, and fails to address historical responsibility; Though mentioning the subject, Switzerland believes the starting year of historical responsibility is 1990 when climate change became international agenda, rather than 1850 or 1900 when the industrialization , which triggered large-scale GHG emissions, started. There are controversies over the setting of the base year.<sup>3</sup> In addition, EU does not mention its existing capability, including technical and economic capacity. Though historical responsibility and existing capacity are of important relevance to needed level of commitments, EU and Switzerland fail to provide enough clarity over this rational.

Problems in both INDCs reflect the insurmountable problems in the field of climate change over the years. From the perspective of science (ambition) and ethics (equity), there is a large gap between contributions required and those politically feasible by countries. While developed countries are expected to play a leading role in combating climate change, their lack of ambition and fail to address equity will seriously damage the global collective efforts. Facing huge challenge of poverty alleviation and development, developing countries have bigger demand for emission space. Their mitigation action is thus facing stronger domestic push back. Since the emission for poverty alleviation are “necessary emissions” rather than “luxury emissions”, the demand is more legitimate.

Greenovation Hub believes, in the global efforts of pursuing climate safety, we should first face up to the problem – the gap between pledges and what’s needed and equitable. Domestic mobilization for tackling climate change is a gradual process which cannot be realized overnight. Countries should admit its own domestic constrains and challenges, and also understand challenges faced by others. More importantly, countries should acknowledge the large gap between existing action and actual needs. In other words, Paris Climate Agreement reached this year might serve as a basic starting point. However, a strong driver is still needed to reach the target of climate safety. The Review mechanism under UNFCCC is such a driver. After the Paris COP, a process is needed to regularly review progress in climate actions by countries, and examine the gap with equitable and ambitious climate targets, thus encouraging countries to constantly improve its action ambitions. It should be a constructive and non-confrontational mechanism subject to open and transparent principles. The clarification over considerations of ambition and equity, as well as national conditions (capacity and demands) with regards to the INDCs is the first step towards an open and transparent review. In addition to carbon emission gap and financial gap, the Review mechanism can also cover experience and lessons of countries, serving as a learning platform among countries.

<sup>3</sup> Climate Equity—Key to a Global Climate Deal in 2015, Greenovation Hub,2013, P20, <http://www.ghub.org/wp-content/uploads/2014/02/climate-equity.pdf>

**Related Links:**

[INDCs Submitted by Switzerland and the EU \(UNFCCC\)](#)

[Climate Equity—Key to a Global Climate Deal in 2015 \(Greenovation Hub\)](#)

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