Second NDC - European Union and Its Member States

DIS Environmental Economics - Section A

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Author's note:

This is a proposal of a second Nationally Determined Contribution that the European Union could use to help reduce global warming, while being realistic in what the member states, and their citizens, would be willing to agree to and be able to achieve. After living in Copenhagen for 4 months, where I learned how damaging climate change currently is and will be in the near future for Denmark, I thought it was necessary to examine how the EU could revise their NDC to help prevent these environmental damages from escalating further. The EU had a tricky NDC to edit because the European Union is made up of 28 member states that are very diverse in their willingness to participate. Among the EU, there are countries such as Denmark, Finland, Sweden, and Norway, which are very progressive in their environmental protection laws and actions. On the other hand, some member states do the bare minimum of EU's environmental requirements and/or are protesting against such environmental policy changes outlined in the Paris Agreement. This made it very difficult to achieve a plan that all member states would accept and successfully accomplish. For that reason, while I was revising the EU's First NDC in lines with the IPCC's Report on 1.5 degrees of warming, I found it very important to make the alterations reasonable and not too progressive, so that the individuals will be willing to participate in these changes.

User's Guide:

How I went about revising the European Union's first NDC is that I highlighted the parts that I changed in orange. I then added a footnote that showed what the first NDC had, and what I altered it to be. Then, in an appendix, I placed my arguments of why I thought these changes were necessary and made suggestions of how these changes could be accomplished.

SUBMISSION BY LATVIA AND THE EUROPEAN COMMISSION ON BEHALF OF THE EUROPEAN UNION AND ITS MEMBER STATES

Riga, 6 March 2015 -- Revised: Copenhagen, 5 May 2019

Subject: Intended Nationally Determined Contribution of the EU and its Member States

Introduction

1. The EU and its 28 Member States are fully committed to the UNFCCC negotiating process with a view to adopting a global legally binding agreement applicable to all Parties at the Paris Conference in December 2015 in line with the below 1.5°C[1] objective.

Intended nationally determined contribution (INDC) of the EU and its Member States

2. The Lima Conference confirmed the Warsaw decision that all Parties ready to do so should communicate their INDC in the first quarter of 2015 in a manner that facilitates the clarity, transparency and understanding of the INDC.

3. The EU and its Member States wish to communicate the following INDC. The EU and its Member States are committed to a **binding target of an at least 45%[2] domestic reduction in greenhouse gas emissions by 2030 compared to 1990**, to be fulfilled jointly, as set out in the conclusions by the European Council of October 2014. In line with the Lima Call for Climate Action, in particular its paragraph 14, the following quantifiable information is hereby submitted:

[1] Changed 2°C to 1.5°C
[2] Changed 40% to 45%

ANNEX

Intended Nationally Determined Contribution of the EU and its Member States	
Parties	EU and its Member States (Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, United Kingdom) acting jointly
Type	Absolute reduction from base year emissions.
Coverage	Economy-wide absolute reduction from base year emissions.
Scope	All greenhouse gases not controlled by the Montreal Protocol: • Carbon Dioxide (CO2) • Methane (CH4) • Nitrous Oxide (N2O) • Hydrofluorocarbons (HFCs) • Perfluorocarbons (PFCs) • Sulphur hexafluoride (SF6) • Nitrogen trifluoride (NF3)
Base Year	1990.
Period	1 January 2021- 31 December 2030.
Reduction Level	At least 45% domestic reduction in greenhouse gas emissions by 2030.
% of Emissions Covered	100%.
Agriculture, forestry and other land uses	Only 0.05% of forestry and agriculture land can be removed/altered. If further technical conditions to mitigate greenhouse gases is possible, these conditions will be applied. In the meantime, this land use should not be changed by more than 0.05%.[3]
Net Contribution of International Market Based Mechanisms	No contribution from international credits.

[3] Before this cell read: "Policy on how to include Land Use, Land Use Change and Forestry into the 2030 greenhouse gas mitigation framework will be established as soon as technical conditions allow and in any case before 2020". It now reads "Only 0.05% of forestry and agriculture land can be removed/altered. If further technical conditions to mitigate greenhouse gases is possible, these conditions will be applied. In the meantime, this land use should not be changed by more than 0.05%"

Planning Process	Domestic legally-binding legislation already in place for the 2020 climate and energy package. The existing legislation for land use, land-use change and forestry (EU Decision 529/2013) is based on the existing accounting rules under the second commitment period of the Kyoto Protocol. Legislative proposals to implement the 2030 climate and energy framework, both in the emissions trading sector and in the non-traded sector, to be submitted by the European Commission to the Council and European Parliament in 2015-2016 on the basis of the general political directions by the European Council, taking into account environmental integrity.
Fair and ambitious	The target represents a significant progression beyond its current undertaking of a 20% emission reduction commitment by 2020 compared to 1990 (which includes the use of offsets). It is in line with the EU objective, in the context of necessary reductions according to the IPCC by developed countries as a group, to reduce its emissions by 90-95%[4] by 2050 compared to 1990. Furthermore, it is consistent with the need for at least halving global emissions by 2050 compared to 1990. The EU and its Member States have already reduced their emissions by around 19% on 1990 levels while GDP has grown by more than 44% over the same period. As a result, average per capita emissions across the EU and its Member States have fallen from 12 tonnes CO2-eq. in 1990 to 9 tonnes CO2-eq. in 2012 and are projected to fall to around 6 tonnes CO2-eq. in 2030. The emissions in the EU and its Member States peaked in 1979.
Key Assumptions	
Metric Applied	Global Warming Potential on a 100 year timescale in accordance with the IPCC's 4th Assessment Report.
Methodologies for Estimating Emissions	IPCC Guidelines 2006 and IPCC 2013 KP Supplement.
Approach to accounting for agriculture, forestry and other land uses	Comprehensive accounting framework, activity or land based approach, for emissions and removals from land use, land-use change and forestry.
Coverage	
Sectors/Source Categories	• Energy o Fuel Combustion • Energy industries • Manufacturing industries and construction • Transport • Other sectors

[4] Changed 80-95% to 90-95%

	• Other o Fugitive emissions from fuels • Solid fuels • Oil and natural gas and other emission from energy production o CO2 transport and storage • Industrial processes and product use o Mineral industry o Chemical industry o Metal industry o Non-energy products from fuels and solvent use o Electronic industry o Product uses as substitutes for ODS o Other product manufacture and use o Other • Agriculture o Enteric fermentation o Manure management o Rice cultivation o Agricultural soils o Prescribed burning of savannas o Field burning of agricultural residues o Liming o Urea application o Other carbon-containing fertilisers o Other • Waste o Solid waste disposal o Biological treatment of solid waste o Incineration and open burning of waste o Wastewater treatment and discharge o Other • Land Use, Land-Use Change and Forestry set out in Decision 529/2013/EU o Afforestation, reforestation o Deforestation o Forest management o Cropland management o Grazing land management o Or equivalent land-based accounting using UNFCCC reporting categories o Other categories/activities elected by the EU and its Member States as Parties to the Kyoto Protocol and its Doha Amendment.

Follow up

4. The EU and its Member States urge all other Parties, in particular major economies, to communicate their INDCs by the end of March 2015 in a manner that facilitates their clarity, transparency and understanding.

5. The EU and its Member States request the UNFCCC Secretariat to publish the INDC of the EU and its Member States on its website and to take it into account when preparing the synthesis report on the aggregate effect of the INDCs communicated by Parties.

6. The EU and its Member States look forward to discussing with other Parties the fairness and ambition of INDCs in the context of the below 1.5°C objective, their aggregate contribution to that objective and on ways to collectively increase ambition further.

Appendix:

1. Changed 2°C to 1.5°C:
    a. I made this change because all second NDC's need to take into account the most recent climate predictions so that the participants can have a more accurate and useful plan. The IPCC reported that the new goal should be keeping temperatures below 1.5 °C of pre-industrial levels, instead of the previously believed 2°C. The IPCC Report showed there are large differences in climate conditions between 1.5°C and 2°C, with such differences being: "mean temperature in most land and ocean regions (high confidence), hot extremes in most inhabited regions (high confidence), heavy precipitation in several regions (medium confidence), and the probability of drought and precipitation deficits in some regions (medium confidence)". Furthermore, limiting global warming to 1.5°C, instead of 2ºC, is predicted to reduce the rise in ocean temperature and acidity, and reduce the risk to ecosystems and biodiversity. The IPCC Report, indicated that "Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate (high confidence)", indicating the urgency needed to change our plans to meet the requirements for the 1.5°C level as soon as possible.

2. Changed 40% to 45%:
    a. I believe that the EU should have a target of at least 45% domestic reduction of greenhouse gas emissions by 2030 compared to 1990, instead of 40%. While I think this reduction should be even larger to help met the goal of below 1.5°C of pre-industrial levels, I do not believe that any larger than 45% would be beneficial. Currently, with just the INDC, there are already uproars of not wanting to follow through, such as the Yellow-Vest protests in Paris. Furthermore, as shown in class, the need to reduce greenhouse emissions by 30% over 10 years means a reducing of 3% each year, and currently even the most progressive countries in the EU are at about 0.5% for Petrol Tax Rates (see graph 1). As a result, I think 45% is realistic in that it is an improvement from what was indicated before, but not too high that the EU would not be able to fulfill this pledge. I think it is more helpful to not just create goals based on what the environment needs (even though this would be ideal), but also on what behavioral economics and psychology suggest people would actually do. If a plan is too progressive, people might see it as unrealistic and this will cause them to not put the effort in to met it, because they view it as an

unachievable goal. Or similarly, protest against it, resulting in limited progress being made.

As shown by the yellow-vest protest, people are more concerned with how increased taxes will cause problems for them today, rather than how climate change will cause major issues for them and many others in the future. Policies need to be implemented that focus on this dilemma. A potential fix to help cut greenhouse emissions by 45%, would be to lower income taxes for lower brackets, but to have an overall increase in taxes for greenhouse gases. These tax changes should be implemented, and should be fully explained that it will not negatively impact the lower and middle classes by much due to the increased greenhouse gas taxes being counterbalanced by the lowered income tax rate for their brackets. Furthermore, the tax revenue that is generated should not be used lightly. These taxes should be utilized to further help reduce greenhouse emissions, such as using it to create a subsidy for lower classes to be able to afford renewable energy and other low-carbon solutions, and to invest in Research and Development to create cleaner energy.

In the New York Times article, “The Problem With Putting a Price on the End of the World”, by David Leonhardt had an excellent quote by Nathaniel Keohane. Keohane indicated that “If we’re going to succeed on climate policy, it will be by giving people a vision of what’s in it for them, a positive vision of how it matters for their life and their kids”. He also stated that too many times we start the conversation with the mechanism rather than the end goal, discouraging people to participate. I think this quote needs to be internalized before proposing a solution. With this quote in reference to my previous proposal of an increased tax on greenhouse gases, I think it would be important to make sure the individuals in lower and middle income brackets fully understand that they will not be negatively financially impacted, because the lower income tax and the subsidies will help them to afford cleaner energy.

I think using the “Red Dot” strategy would be very beneficial in lowering the EU’s greenhouse emission. Instead of having many, too “progressive”, methods of reducing global warming that do not generate the change needed, the EU should focus on a few methods and really dedicate themselves to achieving those goals in the short and long run. I think that the EU should implement a 45% goal by 2030, but also have quarterly

targets each year to help measure their progress. Having small challenges that are achievable and tracked four times a year might be more uplifting than seeing one, huge challenge to be evaluated every 5 years. Additionally, if the country is strongly off track, they will be able to see this sooner, helping to make their long term goal possible. I think this will help the "instant gratification monkey" to be tamed by the "panic monster" sooner, to help the "rational decision maker" take charge before it is too late. In other words, having small goals that are tracked and measured 4 times a year, instead of having one large goal examined every 5 years, will result in less procrastination, and thus more progress being achieved.

Graph 1. Trends in EU15 Petrol Tax Rates 1995-2015

Source: author based on EC and Eurostat

3. Changed "Policy on how to include Land Use, Land Use Change and Forestry into the 2030 greenhouse gas mitigation framework will be established as soon as technical conditions allow and in any case before 2020". It now reads "Only 0.05% of forestry and agriculture land can be removed/altered. If further technical conditions to mitigate greenhouse gases is possible, these conditions will be applied. In the meantime, this land use should not be changed by more than 0.05%"
    a. Before, the only "plan" that the EU had, was to wait until new technology is available. I personally do not think this is acceptable. There is no clear knowledge of when, or even if, new technology will be produced to help greenhouse gas mitigation in relation to "Agriculture, forestry and other

land uses". Therefore, I thought the least that could be implaced is to make sure that not too much more land, with the purpose for agriculture and forestry, is destroyed for the objectives such as building houses, stores or to just use the material without replanting trees. It is believed that 0.18% of forest areas are destroyed each year, so I picked 0.05% to help reduce this percentage. With reducing the amount of deforestation that takes place, it will help lower the amount of greenhouse gases in the atmosphere. According to an article by World Resources Institute, "Tropical tree cover alone can provide 23 percent of the climate mitigation needed over the next decade to meet goals set in the Paris Agreement in 2015". This helps to prove the importance of implementing some guidelines that protects forestry.

4. Changed 80-95% to 90-95%
    a. This change was made with similar reasons as the change made in index/appendix 2. The EU should reduce its emissions by 90-95% by 2050 compared to 1990, so that it is closer aligned with meeting the 1.5°C level, rather than the 2°C level. Also similar to index 2, this goal was slightly improved to help balance the need to correct human's contribution to global warming, with the knowledge that too radical of a change will result in little being achieved.

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