Urban Pathways

VIETNAM
SUMMARY

BERLIN, 2018

Wuppertal Institut

UN HABITAT
FOR A BETTER URBAN FUTURE

UN environment

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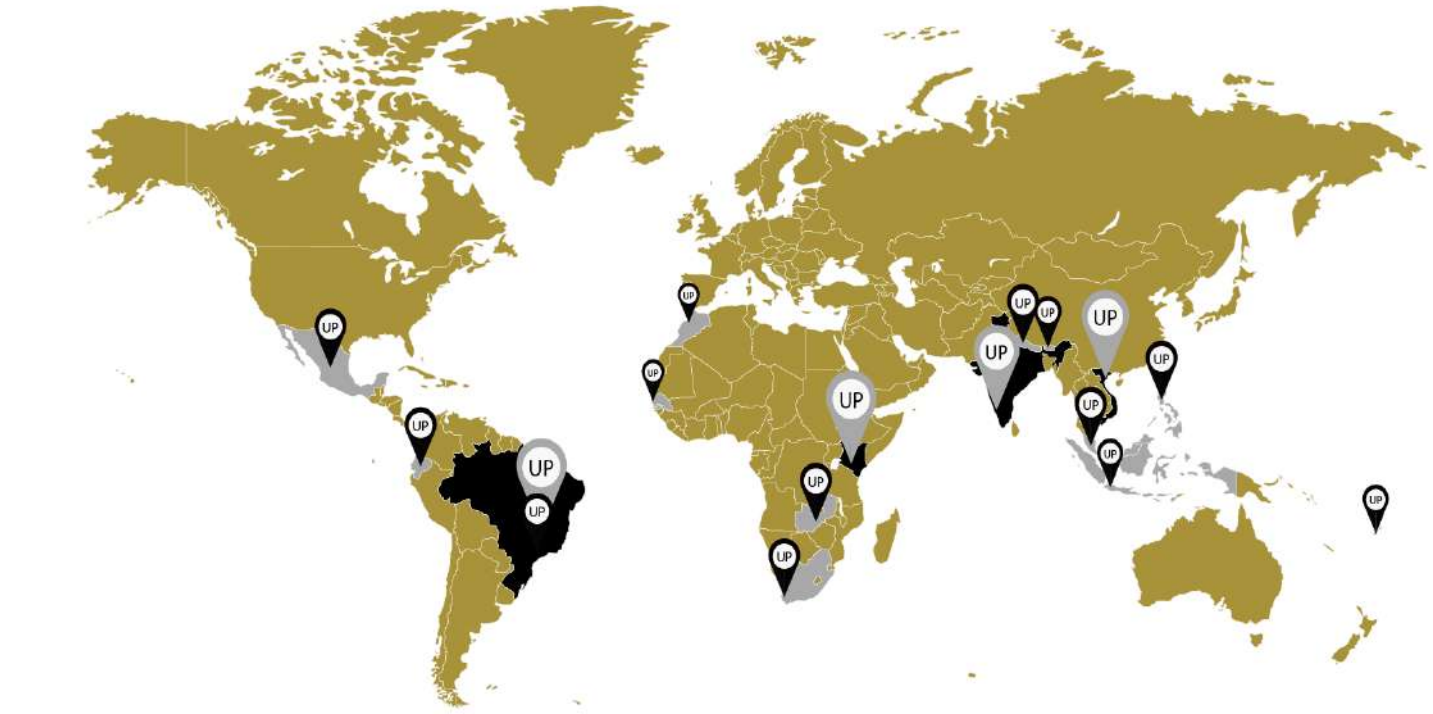

Urban Pathways Replication Cities

ABSTRACT

Vietnam has made an unconditional commitment of 8% reduction in GHG emissions by 2030 relative to their BAU projection, in which emission intensity per unit of GDP will be reduced by 20% compared to the 2010 levels. This commitment could reach a 25% GHG emission reduction by 2030, conditional on international support through bilateral and multilateral cooperation, as well as through the implementation of new mechanisms under the Global Climate Agreement, in which emission intensity per unit of GDP will be reduced by 30% compared to 2010 levels.

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INTRODUCTION

Since the signing of the Paris Climate Agreement in late 2016, countries around the world have been submitting plans regarding their Nationally Determined Contributions (NDCs) to cutting CO_2 emissions. The agreement includes few requirements in terms of the selected targets or strategies, and the variation in these across countries is remarkable. This paper provides an overview and analysis of the energy-related CO_2 reduction targets and mitigation plans of six South-East Asian nations. Given the available information, we attempt to show the 2010 situation in each country, the projected energy-related CO_2 emissions to 2030, and compare these to stated national targets. We also consider the range of policies countries' have put forward to reach these targets, though we do not attempt to "score" these policies on the likelihood that they will be sufficient to hit targets. Our main objective is to illustrate similarities and differences across the six countries, of which there are many.

In May 2016 the UNFCCC issued an updated aggregate assessment of INDC submissions, comparing these to both a baseline and to low carbon scenarios (Figure 1). This also differentiates between 2 degree and 1.5 degree scenarios. The reductions in this figure suggest that in a 2-degree scenario (2DS), countries need reduce their emissions by 2030 to about their year 2000 emissions, on average. A 1.5 degree scenario (1.5DS), they need to achieve 1990 emission levels, on average. This progresses to 2050 with the achievement of something in the range of 50% below 2000 levels in 2DS whereas the 1.5DS reach close to zero by 2050-2060.

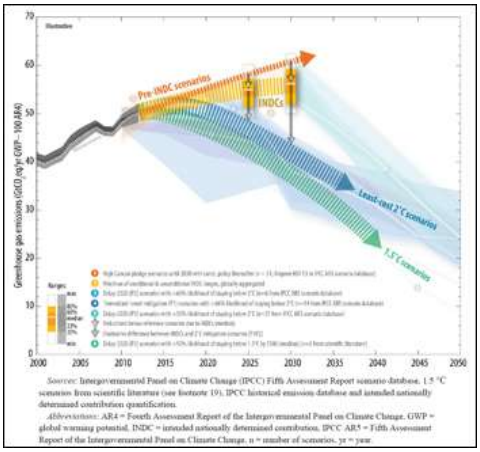

Figure 1. Comparison of global emission levels from the implementation of INDCs and under other scenarios

There are many factors affecting these targets and how reductions might be allocated across countries. Typically, OECD countries have pledged strong reductions, such as 80% by 2050, which should allow non-OECD countries more time to achieve similar targets. No international agreement on targets for different types or locations of countries, or for different sectors within countries, exists under the Paris agreement or any other UNFCCC-related frameworks. Thus the currently set targets in INDCs simply reflect the commitments that individual countries are willing to make at this time.

VIETNAM´S NDC AND TARGETS

Vietnam's INDC was delivered to the UNFCCC in September 2015 and ratified in November 2016. Vietnam has made an unconditional commitment of 8% reduction in GHG emissions by 2030 relative to their BAU projection, in which emission intensity per unit of GDP will be reduced by 20% compared to the 2010 levels. This commitment could reach a 25% GHG emission reduction by 2030, conditional on international support through bilateral and multilateral cooperation, as well as through the implementation of new mechanisms under the Global Climate Agreement, in which emission intensity per unit of GDP will be reduced by 30% compared to 2010 levels.

Their NDC specifies a 2010 GHG emission level of 247MtCO_2e, as well as BAU projections off this baseline of 474MtCO_2e by 2020, and 787 MtCO_2e by 2030. Given the 300% CO_2 increase in the BAU but also the rapid project economic growth, the 20-25% target reduction in emissions intensity results in more than a doubling in CO_2 even if the 25% reduction is achieved. Per capita, emissions would rise by 100% from about 1.5 to around 3 with the target, or 3.5 without the target. CO_2 intensity of GDP drops by about 5% in the BAU to 2030, and by a far greater 20-30% in the target case.

NDC MAIN POLICIES

Vietnam outlines its vision in the National Green Growth Strategy for the Period 2011-2020 with a vision to 2050, which puts forward targets for GHG reduction, energy consumption and energy efficiency, and conditional commitments for 2020, 2030 and 2050. GHG emission target for 2020 is to reduce the intensity of GHG emissions by 8–10% compared to 2010 level, and the orientation towards 2030 and 2050 is to reduce annual GHG emissions by at least 1.5–2% annually.

In line with the targets, the National Green Growth Strategy states 17 specific action plans, a good number of which are explicitly for improving transport systems and technology. This also includes "Energy Infrastructure", "Sustainable Urbanization" and "Promoting sustainable consumption and building green lifestyles".

The National Climate Change Strategy targets that 90% of industrial production facilities use cleaner technologies and save energies, fuels, and materials by 2020, while, in the transport sector, it seeks to have 20% of the buses and taxis use CNG and LPG by 2020 and 80% by 2050. The strategy also recognizes that its goal to become a modern industrialized country by 2020 will be associated by energy use and GHG emission increases especially in industries, transport, and urban development, but that production of recycled and new energies requires high investment costs. The NDC refers to National Socio-economic Development Strategy (2011-2020) [20] and among its goals is that urbanization rate achieves more than 45%; this means that the management of urban energy consumption would be fundamental to achieving the NDC target. On the other side, the Strategy estimates that annual energy consumption decreases at 2.5–3% of GDP.

Additional energy related policies that form the basis for the NDC are:

- National Target Program to Respond to Climate Change (NTP)
- National Socio-economic Development Strategy (2011-2020)
- Socio-economic Development Plan (2011-2015)
- Law on Environment (6/2014);
- Law on Economical and Efficient use of Energy (6/2010)

OTHER NATIONAL POLICIES AND PLANS

Renewable Energy Development Strategy 2016-2030, adopted in November 2015 by the government of Vietnam, guides renewable energy development in the country setting clear medium and long-term goals. According to the Strategy Vietnam will promote onshore wind power until 2030 and assess offshore wind resources potential as an electricity solution post 2030.

DISCUSSION ON SOUTH EAST ASIA

The following figures compare the six countries in terms of a) the 2010 energy-related CO_2 emissions, b) the projected 2030 "business as usual" emissions (based on projections made by APERC in their recent outlook), and c) the range of 2030 CO_2 targets indicated in each countries UNFCCC Submissions. Figure 2a (totals) and 2b (per capita) illustrate that there are a wide range of situations across the six countries. Key points include:

- Most countries are expected to see rapid growth in energy-related CO_2 emissions between 2010 and 2030 in a "business as usual" (BAU) projection. This ranges from more than a doubling (e.g. Indonesia, Philippines and Vietnam, to fairly small increases (Singapore).
- The targeted reductions vary in terms of the size of the range of targets (which relate to various conditionalities put on achieving the targets, and/or an actual indicated range of targets), the position of this range relative to the BAU emissions in 2030 (and extent of reductions compared to 2030, and the position relative to 2010 emissions. Some countries (such as Indonesia and the Philippines) have targets that extend well below 2030 levels and even, in the case of the Philippines, reach their 2010 levels. Other countries have little or no reductions relative to the projected 2030 emissions.
- On a per-capita basis, the relative position of the bars is similar but substantial differences in today's and projected future emissions per person be

come evident. Some countries (Indonesia, Philippines, Vietnam) had very low per-capita emissions in 2010, while others had significantly higher per-capita emissions. Targeted emissions in 2030 also vary considerably per capita with the Philippines notable for a very low per-capita target.

- On a per-GDP basis (carbon intensity of economic output), variations are again quite significant, but the relative positions of different countries changes considerably from a per-capita view. Singapore, with the highest 2010 per-capita emissions, and the lowest emissions per unit GDP.

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