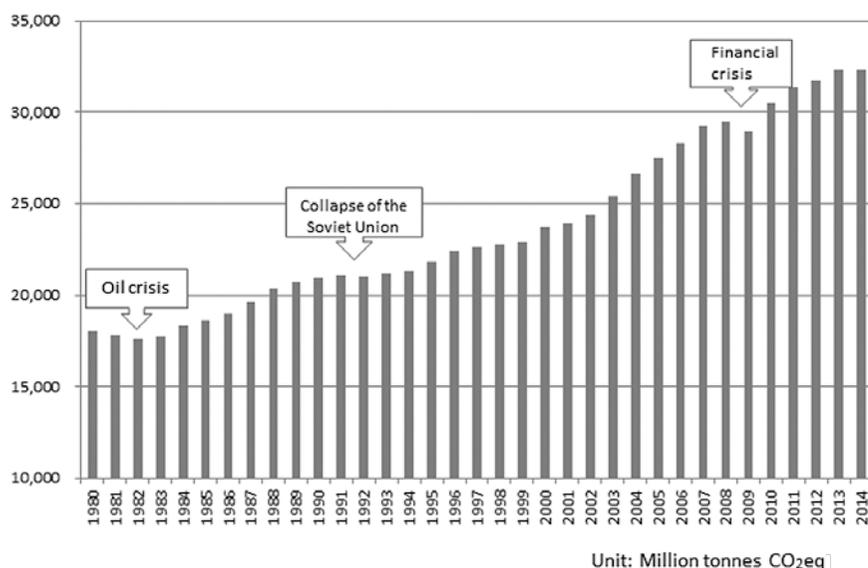


Executive Summary

There is a hint of decoupling of world economic growth from carbon dioxide (CO₂) emissions, but greater efforts are needed to achieve the 2°C target.

The growth of global carbon dioxide (CO₂) emissions has recently slowed down. As seen in Figure S.1, global energy-related CO₂ emissions stalled in 2014 while global gross domestic product (GDP) grew by 3% in the same period, according to the International Energy Agency (IEA). A strong linkage between economic growth and CO₂ emissions growth has been persistent since industrialisation, because economic growth has been achieved by consuming increasing amounts of energy, mostly by burning fossil fuels. Over the last 50 years, a decrease in CO₂ emissions was observed several times in correlation with economic stagnation. However, the recent stall in emissions was achieved along with global economic growth. IEA attributes this possible breakdown of the correlation between economic growth and emissions growth to the expansion of low-carbon energies including renewable energies, improvement of energy efficiency, and structural changes in emerging economies such as China. Nevertheless, much greater mitigation efforts are vital to accelerate this decoupling trend to achieve the 2°C target.



Source: IEA statistics

Figure S.1 Global energy-related CO₂ emissions trends

Behind the emissions structure change are similar motivations for reinforcing climate actions. Such common motivations should be leveraged by an international climate regime.

Major causes of structural change in emissions differ across countries, but there are similar motivations for climate policies observed among nations at different development levels with diverse political, economic, social and technological conditions. In particular, the European Union (EU), the United States (US) and China promote low-carbon energy and energy-efficient technologies with an aim to improving energy security and becoming global leaders in low-carbon technology markets. An international climate regime should be designed to leverage such common motivations to boost climate actions.

A cycle for reviewing and submitting subsequent nationally determined contributions (NDCs) after the initial submission should be established in the 2015 agreement.

Nationally determined contributions (NDCs) targeting 2025 or 2030 are part of longer-term efforts to transition to low-carbon societies. The latest research shows that the aggregation of nationally determined emission reductions is likely to be insufficient to achieve the 2°C target. There is also a concern that possible diversity of NDCs initially submitted would make it difficult to properly understand and compare NDCs. Thus, it is imperative to make continuous efforts to raise the level of ambition after the initial submission of NDCs. A cycle for reviewing and submitting subsequent NDCs can be a mechanism through which each Party's NDC will be ratcheted up.

For this cycle to work effectively and dynamically, the following three issues need to be solved: (1) How different implementation periods of NDCs can be addressed; (2) How the legal stringency and flexibility regarding NDCs can be balanced; and, (3) What kind of information and indicators should be used in the cycle.

Different implementation periods should be synchronised to encourage simultaneous action among Parties to adjust NDCs.

The institutional arrangements for Copenhagen/Cancun mitigation pledges are based on unilateral and uncoordinated adjustments of pledges mainly by improving mutual understanding among Parties and by allowing for easy updating of the pledges. However, the lessons learnt from that experience indicate that Parties are unlikely to increase the level of mitigation efforts unilaterally. Indeed, addressing this problem of collective action would require coordinated adjustments of NDCs.

Currently, some Parties have submitted a five-year implementation period for intended NDCs, while others have an implementation period of ten years. These should be synchronised to generate coordinated and collective adjustment of NDCs. By conducting interim reviews for those countries with a ten-year period cycle, it would be possible to have a review process every five years for both ten- and five-year period cycle countries. In other words, collective efforts to increase the level of mitigation contributions should take place in a five-year cycle.

By taking advantage of a package approach to the 2015 agreement, the NDC cycle can strike a balance between legal clarity and flexibility.

There is a general consensus among Parties that the 2015 agreement will be a package of a legally-binding core agreement and a set of related Conference of the Parties (COP) decisions and non-legal instruments. The core agreement would be concise and durable, providing key principles and direction, while COP decisions which are legal instruments but not legally-binding *per se*, would provide detailed operational rules. Non-legal instruments include a registry managed by the Secretariat and those that serve as communication and/or procedural tools. The question of how intended nationally determined contributions (INDCs) are anchored or inscribed in the 2015 agreement (for example, either in the core agreement or in a non-legal instrument) has significant implications for the legal nature and flexibility of NDCs.

Within the 2015 package, the core agreement should contain legal obligations for all Parties to submit, implement and regularly update NDCs, while they will be kept in a non-legal instrument (like the registry for Copenhagen/Cancun pledges). This approach could effectively strike the balance between legal robustness and flexibility, as well as lay a foundation for collective action for adjusting NDCs regularly.

A consortium of climate policy research institutes with good regional representation should be established to comprehensively assess the NDCs

Process for reviewing and submitting subsequent NDCs should be informed by scientific inputs, including basic comparison and assumption checks; equity-based assessment; mitigation potentials; opportunities and benefits; and aggregate ambition or adequacy of NDCs.

To provide these inputs, a consortium of climate policy research institutes with good regional representation should be established to gather a range of studies and scenarios from international, regional and local research institutes. This is particularly important for many developing countries, where greenhouse gases (GHG) mitigation pathway analyses are not readily available. In addition, this research consortium with good regional representation can ensure more nuanced assessment that is relevant to national and regional circumstances, thereby enhancing the credibility of assessments.

In individual NDC assessment, synthesis analysis of various GHG emissions scenarios can take into account various uncertainties, thereby enhancing the credibility and acceptability of the assessment results.

There are a wide range of approaches to evaluate INDCs proposed in the literature and they are complementary to each other. Three analyses conducted by IGES addressed the following perspectives: (1) comparison of economy-wide and sector-specific decarbonisation indicators with the US and the EU; (2) remaining emissions allowances under different effort-sharing principles; and (3) mitigation potential and policy effort. The results indicate that Japan's INDC may not be sufficiently ambitious in the global effort to achieve the 2°C target.

Along with traditional indicators such as “efforts required,” it is important to include indicators of development benefits and other opportunities in the assessment of INDCs. Such forward-looking indicators can motivate Parties to take more ambitious mitigation policies.

Many studies published to date emphasise the level of “efforts required” or “burden borne” by each country to achieve the global 2°C target. By contrast, there are a limited number of studies that focus on long-term benefits delivered by the transition to low-carbon economy.

It would be useful and important to include indicators of such development benefits, which are “forward-looking”, in the assessment of INDCs. However, country-level in-depth analyses of the benefits of the transition to a low-carbon economy are currently available only for a few countries (some large-emitting countries). Therefore, the research consortium could play an important role in developing these benefit-based indicators.

The 2015 agreement should also include a finance component and establish a cycle to review financial contributions to encourage greater efforts to provide financing of decarbonisation and building climate resilience.

The finance component will play two critical roles—to provide the means and incentives for developing countries to achieve their fair contributions to the global 2°C target and to send a political signal to rebuild confidence and trust among the Parties. The finance component should be composed of three key elements: (1) predictability of the scale of future funding; (2) developing countries’ strategies to enhance enabling environments and scale-up domestic climate finance; and (3) the transparency of financial inputs and resulting impacts.

Accounting for the use of market-based mechanisms under the Framework for Various Approaches (FVA) should contain two key aspects: one is to ensure environmental integrity, and the other to incentivise mitigation actions by both developing and developed countries.

To contribute to the 2°C target, environmental integrity and incentives for mitigation actions by both developing and developed countries are two integral parts of an accounting framework for the FVA. An accounting framework for the FVA should be designed under a post-2020 climate regime to enable the realisation of these aspects, taking into account different national capacities and needs.

The accounting framework for the FVA should consider the needs and capacities of developing countries and promote support provided for them, so that all developing countries can have the opportunity to choose market-based mechanisms as an instrument to mitigate climate change, while ensuring environmental integrity.

Experiences obtained from the Joint Crediting Mechanism (JCM), currently being discussed under the FVA, show that developing countries are likely to encounter unique challenges at different stages of accounting, namely issuance of credits, transactions of credits, and accounting towards a country’s NDCs. Major obstacles are related not only to their varying capacities, but also the design of the current reporting framework for developing countries under the United Nations Framework Convention on Climate Change (UNFCCC).

We propose: (1) capacity building to be included as an essential element for various mechanisms under the FVA; (2) review/coordination by a team of experts of the FVA to avoid a risk to environmental integrity and enhance a country's capacity; (3) simplified registry systems for countries without sufficient capacity; (4) synergies with other market mechanisms; and (5) enhanced reporting on the use of credits through Biennial Update Reports (BURs) in a gradual manner.

The FVA negotiation process focusing on accounting needs to consider these five points as a way to enable the wider participation of countries (especially developing countries) and to ensure environmental integrity of each mechanism. Such progress will help developing countries to develop implementation plans for their NDCs, including an option to use market-based mechanisms, because they can get a clearer idea about how best to use market-based mechanisms, given their national conditions, and how that will affect other parts of their mitigation actions, e.g. reducing emissions from deforestation and forest degradation (REDD), with respect to accounting under a post-2020 climate regime.

Loss and damage (L&D) associated with climate change has emerged as one of the important issues needing urgent attention at both national and international levels. The global community has recognised that there will be considerable L&D irrespective of our current level of efforts to mitigate and adapt to climate change.

Given the unpredictable and ever-changing nature of the global climate, adaptation will always be uncertain and potentially insufficient. In addition, the developmental deficit and mitigation deficit, lack of technical and scientific information and the capacity to use it at the local level contribute to L&D. In the UNFCCC process the discussion on L&D started relatively recently at COP16 in Cancun in 2010, and there remain many challenges in coping with L&D such as limited technical capacity to design and implement adaptation projects, limited financing and limited adaptation options.

The post-2020 international climate regime should support developing countries to measure and consider non-economic L&D data in identifying and implementing appropriately designed risk reduction options.

The survey of stakeholder positions and perceptions on various issues associated with L&D reveals that there is a disagreement on the definition of loss and damage calling for a more broad-based definition. Stakeholders showed significant support for promoting risk insurance as a means to address L&D. However, the research conducted by IGES indicates that risk insurance suffers from major limitations in addressing L&D, especially the non-economic L&D. Keeping in view the importance of non-economic L&D for the developing countries where communities still depend on natural resources, and their services, and informal social structures as support mechanisms, it is essential that the international climate regime help build the capacities of countries to give more emphasis on measuring and considering non-economic L&D data in identifying and implementing appropriately designed risk reduction options. It includes identifying simple methodologies for assessing the non-economic L&D, incorporating appropriate indicators in disaster databases and data collection formats and using this information for strengthening disaster risk reduction instruments including risk insurance and compensation.

It is our hope that this report will make a useful contribution to the establishment of an ambitious post-2020 climate regime. In particular, we hope that the report can help spur the discussion over ratcheting up mechanisms for mitigation and climate finance, as well as for the design of market-based mechanisms.