

# A Key Challenge for Sustained Success of the Paris Agreement

While the Paris Agreement sets forth an innovative and potentially effective policy architecture for dealing with global climate change, a great deal remains to be done to elaborate the accord, formulate required rules and guidelines, and specify means of implementation. For sustained success of the international climate regime, a key question is whether the agreement, with its Nationally Determined Contribution benchmarks — NDCs — anchored in domestic political realities, can progressively lead to submissions with sufficient ambition.

Part of the answer can be linkage of regional, national, and sub-national policies — connections among policy systems that allow for emission reduction efforts to be redistributed across systems. Linkage offers a number of important advantages. First, it offers the possibility of achieving cost savings if marginal abatement costs are heterogeneous across jurisdictions. In addition, it

can improve the functioning of individual markets by reducing market power, and by reducing price volatility. Finally, linkage can allow for the important principle in the climate convention of Common but Differentiated Responsibilities, but do so without sacrificing cost-effectiveness.

The possibility of linkage also raises concerns, including that there will be distributional impacts within jurisdictions — the creation of both winners and losers. Also, linkage can bring about the automatic propagation from one jurisdiction to another of some design elements, in particular, cost-containment mechanisms, such as banking, borrowing, and price collars. In this and other ways, linkage raises concerns about decreased autonomy.

It was by no means preordained

that the Paris Agreement would allow, let alone encourage, international linkage. Fortunately, the negotiations in Paris produced an accord that includes in its Article 6.2 the necessary building blocks for linkages to occur. Emissions reductions occurring outside of the geographic jurisdiction of a party to the agreement can be counted toward achieving that party's NDC via Internationally Transferred Mitigation Outcomes.

But the heterogeneity of national policies can present challenges to linkage. First, there is heterogeneity among policy instruments. Fortunately, not only can one cap-and-trade system be linked with another, but it is also possible to link a cap-and-trade system with a carbon tax system. In addition, either a cap-and-trade system or a tax system can be linked (via appropriate offsets) with a performance standard in another jurisdiction.

A second form of heterogeneity that affects linkage is regarding the level of government action of the relevant jurisdictions. Although the Paris Agreement has as parties both regional jurisdictions (in the case of the European Union) and national jurisdictions, sub-national jurisdictions are also taking action in some parts of the world. In fact, linkage has already been established between the state of California and the provinces of Québec and Ontario in Canada.

A third form of relevant heterogeneity is with regards to the NDC targets themselves. Some are in the form of hard (mass-based) emissions caps, while others are in the form of rate-based emissions caps, either emissions per unit of economic activity, or emissions per unit of output (such as per unit of electricity production). There are also relative mass-based emissions caps in the set of existing NDCs, such



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as those that are relative to business-as-usual emissions in a specific future year. Beyond these, there are other parties that have put forward NDCs that do not involve emission caps at all, but rather targets in terms of some other metric, such as the degree of penetration of renewable energy sources.

Combinations of various options under these three forms of heterogeneity yield a considerable variety of types of potential linkages, which may be thought of as the cells of a three-dimensional matrix. Not all of these cells, however, represent linkages which are feasible, let alone desirable.

There are a substantial number of issues that negotiators will eventually need to address, and likewise, there are a set of questions that researchers can begin to address now. For research, three questions stand out.

First, among pairings from the (3-D matrix) set of instrument–jurisdiction–target combinations that emerge from the three types of heterogeneity, which linkages will actually be feasible?

Second, within this feasible set, are some types of linkages feasible, but not desirable?

And third, what accounting treatments and tracking mechanisms will be necessary for these various types of linkages? Future research will need to focus on these and related questions in order to achieve the potential benefits of Article 6.2.