

## **Negotiating effective institutions against climate change**

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Executive Summary

### **1. Climate change is a global commons problem**

If no strong collective action is undertaken soon, climate change is expected to dramatically deteriorate the well-being of future generations. Most benefits of mitigation are *global* and *distant*, while costs are local and immediate. Climate change is a global commons problem. In the long run, most countries will benefit from a massive reduction in global emissions of GHGs, but individual incentives to do so are negligible. This free-rider problem is well-known to generate the “tragedy of commons.” Ostrom (1990) showed how small and stable communities are in some circumstances able to manage their local common resource to escape this tragedy, thanks to built-in incentives for responsible use and punishments for overuse. These informal procedures to control the free-rider problem are obviously not applicable to climate change.

Many activists and politicians promote climate mitigation policies as an opportunity to boost “economic growth”. The fact that only a few countries (Sweden is the best example) come close to doing its share should speak volumes here: Why would countries sacrifice the consumption of goods and leisure to be environment-unfriendly? In reality, fighting climate change will imply reducing consumption in the short run to finance green investments that will generate a better environment only in the distant future.

### **2. A uniform carbon price is necessary**

Economists have long proposed to solve the free-rider problem by inducing economic agents to internalize the negative externalities that they impose when they emit CO<sub>2</sub> (“*polluter pays principle*”). This is done by pricing it at a level corresponding to the present value of the marginal damage associated with the emission. The universality and uniformity of the carbon price guarantee that the reduction of emissions will be made at the minimum global cost.

Income and wealth inequality is often invoked to dismiss uniform carbon pricing. International inequality raises the question of the allocation of the climate-mitigation burden. This is certainly an important issue, but its solution should not be found in a manipulation of the law of one price—under the Kyoto Treaty developing countries faced no carbon price.

### *Two economic instruments for price coherence*

Two prominent strategies for organizing an efficient, uniform pricing of CO<sub>2</sub> emissions involve a carbon price and a cap-and-trade mechanism. Both rely on an “I will if you will” approach, and both require some strategy for enforcement. Under the first strategy, a minimum average price by country on all emissions around the world would be agreed upon and collected by individual countries. The carbon price of a country would be computed as the carbon revenue divided by the country’s emissions; the price could emerge from a variety of policies (tax, cap and trade, standards etc).

Under the alternative, cap-and-trade strategy, the agreement would specify a worldwide, predetermined cap on tradable emission permits. The tradability of these permits would ensure that countries face the same carbon price. To address compensation, permits would be initially allocated to the different countries or regions, with an eye on getting all countries on board (redistribution).

The cap-and-trade system was adopted, albeit with a failed design, by the Kyoto Protocol. Kyoto participants initially covered more than 65% of global emissions in 1992. But emissions coverage was reduced to less than 15% in 2012. Some countries have implemented a carbon tax. The most aggressive country is Sweden, in which a carbon tax of approximately 100 €/tCO<sub>2</sub> has been implemented in 1991. France has fixed its own carbon tax at 14.5 €/tCO<sub>2</sub>.

### **3. Pledge and review: The waiting game in the current international negotiation**

At the Copenhagen conference in December 2009 the central idea of a unique carbon price induced by international cap-and-trade was completely abandoned. This change of vision was upheld at the Cancun Conference in 2010 and more recently at the COP 20 in Lima in 2014. The new “pledge-and-review” mechanism, likely to be confirmed at the Paris COP 21 conference, will come out of this bottom-up process that is expected to yield an inefficient allocation of efforts. Free-riding is bound to prevail. The pledge-and-review regime can be analyzed as a waiting game, in which the free riding is magnified by the incentive to achieve a better deal at the bargaining table in the future.

### **4. Negotiating a price/quantity and negotiating transfers**

A Green Fund may be too transparent to be politically acceptable. As is known from other realms, parliaments are known to be reluctant to appropriate vast amounts of money to causes that benefit foreigners. The strength of the opaqueness argument in favor of the allocation of permits remains to be tested, and no-one has the answer as to whether it would work for climate change.

Rich and poor have always had opposite views as to who should compensate the other. We agree with the authors of the other papers published in this symposium that free-style negotiations among n countries are exceedingly complex and are very likely to lead to a deadlock, whether the countries negotiate about who will be a contributor or a recipient (and by how much) of the Green Fund or the allocation of free permits among countries under cap and trade.

#### **5. Price vs. quantity**

Carbon-pricing proposals allow a large array of regulatory mechanisms that get carbon-pricing credit. Under the principle of subsidiarity, we believe that all these carbon-pricing and green-standard approaches should be accounted for in order to determine the national carbon price. So the carbon-price approach requires finding conversion rates for various policies that impact climate change, but are not subject to an explicit price, such as road and housing construction standards, no-till farming or afforestation and reforestation.

One form of moral hazard consists in undoing the carbon tax through compensating transfers; presumably the countries would do this in an opaque way so as not to attract the attention of the international community.

Enforcing an international quantity mechanism is relatively straightforward when countries, rather than economic agents, are liable for their national emissions.

#### **6. Enforcement and putting negotiations back on track**

An efficient international agreement should create a grand coalition in which all countries and regions will be induced to set the same carbon price in their jurisdiction. Even if a good agreement is reached, it must still be enforced with limited means. We think that at two instruments should be employed. First, countries care about gains from trade; the WTO should view non-compliance with an international agreement as a form of dumping, leading to

sanctions. Second, non-compliance with a climate agreement should be treated as committing future administrations and treated as sovereign debt.

An international agreement must satisfy three properties: economic efficiency, incentive compatibility, and fairness. What can be done, given how delayed and confused state of current negotiations?

- Agree on a single-carbon-price principle.
- Agree on a governance, incentive and enforcement.
- Find a price trajectory that is agreeable to the international community, or fix a trajectory of emissions that scientists deem consistent with the 2°C objective.
- Put in place the monitoring environment.