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To: **UNFCCC Secretariat**
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Enhanced action on mitigation, Various approaches, including opportunities for using markets, to enhance the cost-effectiveness of, and to promote, mitigation actions, bearing in mind different circumstances of developed and developing countries (AWG-LCA)
Submission of views by Parties and admitted UNFCCC observer organizations on the matters referred to in paragraphs 79 and 80 of decision [-/CP.17] Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention, including their experiences, positive and negative, with existing approaches and mechanisms as well as lessons learned.

Consumption based emissions accounting and pricing harness market power to enhance mitigation

In this submission,

- I express my concern that many so-called market-based mechanisms do not promote effective greenhouse gas mitigation, but only sustain business-as-usual under 'smoke and mirrors'.
- I explain criteria for effective market interventions for emissions reductions.
- I describe how the allocative efficiency of markets can be harnessed to drive emissions reductions.

The design of carbon pricing systems is primarily in the hands of the sovereign nations that implement them. The UNFCCC's role is to ensure national goals for emissions reduction are consistent with the goal of the Convention to avoid 'dangerous climate change', and constitute an equitable distribution of responsibility and effort. The UNFCCC also may play vital role in ensuring international arrangements enable, rather than inhibit, the necessary economic measures to achieve rapid emissions reduction.

I argue that systemic flaws in the architecture of the Kyoto Protocol inhibit effective price signals in developed countries.

1. Emissions reporting and responsibility is on a production basis, not a consumption basis. This is inherently unequitable and disadvantages developing countries (who, on average, export more embodied emissions than they import) while giving developed countries a free ride on the goods they import.
2. It divides the wide spectrum of countries into two "black and white" boxes (Annex I and non-Annex I) which eliminates any real implementation of "common but differentiated responsibilities". A robust system needs to be able to prescribe each nation's contribution based on its capacity and responsibility, under consistent criteria applying to all.

3. It facilitates international emissions trading, which destroys price signals in the developed country, inequitably transfers effort from developed to developing countries, and corrupts emissions accounting in both - if not resulting in double counting, at least opening various loopholes to hide responsibility, for example for sequestered carbon that is released at a later date due to unanticipated events.

The next protocol should avoid these pitfalls.

It should recognize that *the only efficient market-based mechanism is a carbon tax*. A market-based mechanism allows price to effect 'allocative efficiency'.

The price signal is maximized

- when the price is conveyed directly to consumers, whose decisions determine demand for emissions,
- when it is visible and unavoidable, having equal value throughout the economy,
- when its future value is predictable maximizing investment and strategic change in consumption modes, and
- when consumption is discretionary or where viable alternatives exist.

A consumption-based carbon tax best meets all these criteria. Compared with emissions trading, it maximises the revenue available for response measures, which can include widening the availability of low-emissions alternatives and thereby increasing the elasticity of demand for emissions and achieving greater reductions at a given price.

Emissions trading is no more than a tax evasion mechanism, and serves to dampen the price signal. It minimizes the price, and therefore the emissions reduction. 'Least cost emissions' is not the same thing as 'least cost emissions reduction.' Because of the high MRV requirements of emissions trading, only large entities can be included, which means it is not an economy-wide price. Consequently it promotes a variety of perverse changes in consumption patterns and business structure, avoiding the carbon price rather than avoiding the emissions. Also because it cannot be economy-wide, the cap on volume of permits is ineffective. Emissions leakage by shifting market share to untaxed entities (domestic or international) causes a false impression that targets are being met when they are not.

The protocol should *enable nations to set their carbon price independently*, in response to emissions demand elasticity in their own economy. If price is to be the main driver of behavior change, then the price must be allowed to adjust as required to meet the target emissions reduction.

The protocol *should therefore uphold the principle of consumption-basis emissions* responsibility and pricing. Consumption basis is fairer (user-pays), allows comparability of effort (not strongly influenced by differences in industrial profile of nations, only in consumption profile), and avoids 'emissions leakage' and other perverse behaviour to avoid the price rather than avoiding the emissions.

Consequently, it *should allow and encourage border adjustments*, on a trade-neutral basis complying with the Convention (article 3, paragraph 5), ensuring no 'arbitrary or unjustified discrimination or a disguised restriction on international trade.' A carbon tax on imports, equivalent to the tax on domestic products, is not discriminatory but only negates the discrimination imposed by a unilateral carbon price. It is not a tax on a developing country producer, but on the consumer in the developed country. The exemption of exports is also

trade neutral, and provides importing countries with the opportunity to collect revenue on the embodied emissions themselves. Consumption basis taxing is widely applied in the form of value-added taxes or goods-and-services taxes. These are WTO-compliant and cause no concern for producers of imports. A carbon price would be equivalent, and administered in a similar way, but calculated on embedded emissions rather than sale price.

Trade neutrality of pricing is vital to allow nations to set effective price signals. A high carbon price in rich countries is essential to drive energy efficiency and make low emissions technologies economically viable. If a large part of the revenue is returned to citizens (effectively providing a personal emissions quota, declining over time – but without the complication of currency conversion between permits and money), a high carbon price can be imposed without economic hardship of vulnerable community sectors. The poorest people, and those who voluntarily minimize emissions, will not be penalized. However, if the mechanism is not trade neutral, the carbon price can't be sustained far above the global price without politically unacceptable loss of market share by domestic businesses. A high global price will hurt people in developing countries, even if they are not directly paying a carbon tax. It will affect the opportunity cost of resources, privileging activities that generate a carbon credit over activities that provide local services. As these disadvantaged people are not in the country where the revenue is collected, they will not receive the compensatory payments that citizens of the taxing country may receive.

International emissions trading destroys the price signal, by forcing all nations to apply the same carbon price. Only a very low carbon price can be sustained in such a system, and a low carbon price will not drive the transition to a low carbon society.

High carbon prices in developed countries not only facilitate rapid emissions reduction, but *maximize revenue available for response measures*. A fixed proportion of carbon price revenue might be prescribed by the UNFCCC to be given to the Adaptation Fund and a Clean Development Fund. Between 20% and 25% would likely provide funds in the hundreds of billions. As taxable emissions declined, the price would be rising and so revenues would be sustained.

Thus international transfers from developed to developing countries could be of substantially greater magnitude than is likely under off-setting mechanisms.

Furthermore, any *emissions reductions achieved by such funding would be additional* to those in the developed country, not off-set by them. They would not transfer ownership of the emissions reductions, would not run the risk of double counting and would keep accounting for energy and process emissions separate from accounting of land-based carbon or potent greenhouse gases, without confusing these through off-setting.

Because funds transfers would be gifted, not off-set, *a much wider range of activities and participants could be included as beneficiaries*. Without the need for stringent MRV of every unit, incentives can be provided for changes in behavior or technology which are known to be beneficial overall, but which are difficult to measure on a case-by-case basis, or the units (individual farmers or households) are too small to carry the burden of measurement, or it is difficult to demonstrate additionality, or the carbon may be exposed to risks of future release such as through wildfires. Any of these circumstances could prevent worthy projects from accessing funding through emissions trading. They are not barriers for support using gifted money raised from a carbon tax.

Consumption basis allows comparability of effort, since consumption patterns of nations relate more closely to their wealth and capacity to implement mitigation measures than do their production patterns. Under such a system, it is much easier to provide an equitable and robust framework for allocating available emissions or emissions reduction effort among countries.

Such a framework should be based on an emissions path defined by science as providing a high chance of avoiding dangerous climate change. It could allocate the available emissions to each nation on a projected population-weighted basis (using the IIASA low population projection for future redistributions, to avoid providing perverse incentives for population growth). The rate of emissions reduction required by each nation would then be proportional to the extent by which per capita emissions exceeded the global per capita quota. Such a system would ensure contract-and-converge. Rather than the fraught notion of developed countries having to purchase surplus allocation from developing countries, the transfer payments funded by carbon tax would provide equivalent compensation, in a manner more likely to reach the hands of those most in need. Because nations with the highest per capita emissions would be required to reduce emissions fastest, they would be likely to have the highest carbon prices and the largest per capita contributions to international support.

I hope you will take these arguments into consideration.

Jane O'Sullivan