Reflections on the Kyoto Protocol—Looking Back to See Ahead

Michael Zammit Cutajar

The Kyoto Protocol can best be understood as being an economic instrument that uses flexible targets and market mechanisms to limit greenhouse gas emissions at the least cost. Its market orientation was largely inspired by the United States, which nevertheless opposes it on economic grounds. Yet a meaningful global regime requires the participation of the world’s largest economy, which in turn is a prerequisite for the engagement of large developing country emitters. Attracting the United States back into a multilateral approach will take time, during which its economic concerns must be addressed. The next phase of climate strategy should comprise a menu of emission-limitation commitments, suitable for different national circumstances, and be set in a longer time frame. An “aspirational” long-term target for atmospheric concentrations of anthropogenic greenhouse gases could be adopted as a guide to action. Moreover, resilience to climatic impacts and adaptation to climate change should be given greater importance. The environmental case for action to counter climate change has not generated sufficient traction in the economic sphere. Mobilizing commitment to an effective climate strategy will require informed economic advocacy and the involvement in negotiations of major economic actors, private and public. An approach that takes in concerns with global security and addresses the political economy of oil and coal may generate greater traction. Emission limitation pledges by private sector actors could complement governmental commitments, though governments must provide leadership and set the framework. Financial and technological incentives may be required to bring the heavyweight outsiders on board.1

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The essence of the Kyoto Protocol—its genius—is that it encourages recourse to the market to achieve environmental objectives at the least economic cost. The paradox of the protocol is that the main source of this genius—the United States—is also the source of the political veto that has prevented it from entering into force.

The Kyoto Protocol has been leading a strange life: alive for some as a political symbol and a guide to their action; moribund for others; a question mark for all, as the Russian Federation determines how to play the trump card that has been dealt into its hand. It now seems that the card has been played in favour of the protocol.2 However, while the game of guessing Russian intentions has made occasional headlines, time has been passing and the big question has shifted from “What if?” to “What next?” Not whether and when the protocol will enter into force—important as that would be to protect the design of...
the Kyoto mechanisms—but what the regime will be after 2012, the last year of the protocol’s first commitment period. For, even with the protocol in force, negotiations on post-2012 commitments should be launched in 2005.3

Increasingly, reflections on global climate strategy, such as those collected in this volume, will look ahead to the next phase of negotiations—in particular to the need to ensure equitable global engagement. In doing so, the past will be scoured for lessons that remain valid, and for hints of what could have been done differently.

1. The political economy of the Kyoto Protocol

The 1997 Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC), though negotiated under an environmental banner and largely by environment ministers, can best be understood as an economic instrument. A view of global climate strategy as an issue with deep economic implications explains the 1990 initiative of the Latin American Group to remove the incipient negotiations on climate change from the ambit of science-based bodies—the World Meteorological Organization and the United Nations Environment Programme—and place them in the political framework of the United Nations General Assembly.4 The result to date is, perhaps, the most ambitious economic regime to have been fashioned under the auspices of the United Nations since the early years of post-war institution building. The limitations on greenhouse gas emissions that are prescribed by the Kyoto Protocol reach into the heart of industrial economies, notably their energy and transport sectors. The mechanisms that the protocol envisages create new markets and offer opportunities for technological and financial innovation.

The framers of the Kyoto Protocol were attentive to the potential of market mechanisms and the needs of market operators. Flexibility thus became a key ingredient of the negotiated outcome. As regards ends, the protocol is not a substance ban nor does it seek a result at a fixed point in time. Rather, it addresses a basket of interchangeable gases and sets limitation targets over a multi-year period, initially five years. As regards means, it permits emissions to be offset by removals by “sinks,” trading of emission allowances within the group of countries bound by emission caps, and buying in emission reductions from outside that group through the Clean Development Mechanism (CDM). The latter device is also to stimulate the diffusion of cleaner technologies in developing countries and thus their sustainable development.

The sensitivity of the protocol to the market was largely instigated by the negotiating positions of the United States. An important argument in the US baggage was the success of its domestic scheme for controlling sulphur dioxide emissions, in which emission trading had resulted in spectacular cost reductions. Although all the parties to the Kyoto negotiation now embrace this outcome, with greater or lesser warmth, this was not the case before and at Kyoto. For example, the European Union—now fully

3. Although it is conceivable that the Kyoto Protocol could be brought into force without Russian ratification, through one of a number of legal devices, this could only be considered useful as a prelude to a new round of negotiations.

4. This institutional shift meant, inter alia, that the secretariat responsible for managing the negotiating process was not beholden to either of these bodies and remained subordinate to the directives emanating from the intergovernmental process. This was in contrast to negotiations managed by the United Nations Environment Programme (UNEP), whose executive head was an assertive presence in intergovernmental decision-making.
committed to emission trading—was insistent that trading should be supplementary to domestic action to limit emissions, the latter seen as essential to the development of technologies that would open the way to a low-carbon future. The European Union also frowned upon recourse to “sinks” for the same reason and because of the uncertainties surrounding that option. Yet these were among the final make-or-break issues for the US negotiators, and it is not an exaggeration to brand the mechanisms of the Kyoto Protocol as “Made in the USA.”5

The bottom line, in terms of political economics, is that the Kyoto Protocol seeks to engage enlightened economic actors who accept legitimate societal aims but ask for freedom to choose the best means of achieving them. It is in harmony with the humane current in prevailing economic philosophy, accepting globalization and seeking to use it to help satisfy global needs. Why, then, is the future of the Kyoto Protocol still in doubt?

2. The position of the United States

A knee-jerk political response will blame the impasse on the resurgence of a more hard-nosed and nationalistic current of economic philosophy in the United States, a school of thought in which the global good takes a back seat. The political influence of the energy lobbies in that country will also be cited. The presidential election of 2000 was a victory for these forces, and the subsequent rejection of Kyoto a rather evident move by the incoming president to differentiate himself from both his predecessor and his challenger on an iconic but politically cheap issue. Similarly, in Russia—left unwillingly holding the casting vote—those who oppose the protocol have repeatedly advanced the argument of national interest, contriving to represent the generous emission allowance accorded to the Russian Federation as a constraint on its ambitions for economic growth.

Such analysis of politics and personalities can lead the observer to pin the future of global climate strategy on the result of the forthcoming presidential election in the United States or on the rise and fall of presidential advisers in Moscow. This may be an intriguing game but is not very useful in considering the next steps ahead.

If one goes a little deeper into the position of the United States, one has to accept that a different electoral outcome in 2000 would not have guaranteed the consent of the US Senate to the ratification of the Kyoto Protocol. The unanimous Byrd-Hagel resolution that was adopted during the negotiations on the protocol was a clear signal of legislative opposition. The grounds for that opposition—economic cost and competitive disadvantage—were echoed by President Bush in rejecting the protocol. Moreover, a Gore administration—following one that was famously dedicated to “the economy, stupid!”—could not have been insensitive to economic considerations. In fact, the US acceptance of the Kyoto deal, after Vice-President Gore’s personal intervention at the negotiating conference, remains something of a mystery in hindsight.6 Consequently, while a change back to a Democratic administration resulting from the 2004 elections may bring in a more positive attitude to multilateral climate strategy, it cannot be

5. Though Brazil was joint inventor of the CDM.
6. It cannot be excluded that the calculations of cost that permitted the US delegation to agree to and sign the protocol did not stand up to subsequent scrutiny.
counted upon to produce a complete change of heart on the protocol. It will still be necessary to address the economic concerns of the United States. So one has to take a somewhat longer view of prospects.

Common sense suggests that a climate regime without the United States—such as the current Kyoto regime—cannot hold up for long in a global economy dominated by the US. It is already evident that the withdrawal of US demand for emission allowances under Kyoto has severely weakened the emerging trading regime—and thereby lowered the estimates of what the Russian Federation could gain as the biggest seller of such allowances. Political sense further suggests that the emerging new actors of the global economy—with China and India looming large—will not move to limit their greenhouse gas emissions until they are convinced that the United States is committed to doing so and has shown evidence of its commitment. Thus the common aim must be the construction of a global climate regime incorporating the United States, as well as the industrializing countries, in a deal that will be considered equitable by all parties. And the long view suggests that there is a long road ahead.

The reluctance of the United States to be bound by multilateral disciplines, by laws other than its own, is a deep-rooted trait of national character, pre-dating its great power status. The current multilateral landscape is dotted with examples of treaties that the US either opposes, or accepts with reservations protecting its sovereignty, or supports without being formally bound. This is not a recent phenomenon. The post-1945 history of multilateral negotiations holds examples of agreements reached with US participation from which it subsequently withheld acceptance. A telling case is that of the international trading regime: in the 1940s, the United States had taken the lead in negotiating the establishment of an international trade organization, which Senate opposition obliged the then US administration to abandon, still-born. It took nearly 50 years of an interim regime—the General Agreement on Tariffs and Trade (GATT)—before the US accepted to work within the multilateral rules of the World Trade Organization (WTO). While we now live in a world that moves faster, this story hints at the nature and scale of the challenge facing climate strategists.

3. Broadening the Kyoto strategy

3.1. Time frame

One criticism that is constantly aimed at the Kyoto Protocol concerns its narrow and short-term vision. It is asserted that the emission limitations prescribed for industrialized countries will only scratch the surface of the problem of global warming and will, in any case, be outweighed by the increase in emissions from countries that are not bound by Kyoto targets. This is an unfair criticism, deliberately isolating the protocol both from the long-term aim of its parent convention and from its intent to be the first of several successive steps towards limiting global emissions.

Yet it is true that the protocol explicitly covers only a five-year period—a long time in politics, perhaps, but very short in corporate planning. Moreover, it does not indicate what should happen to

7. In 1948, the UN Conference on Trade and Employment, held in Havana, adopted the Charter of the International Trade Organization. In 1950, the US administration announced that it would not submit the charter to the Senate for ratification. Consequently, the charter—comprising a wide-ranging set of trade and economic provisions—did not enter into force. However, a group of countries had previously agreed to apply the emerging trade rules of the charter, thus giving rise to the GATT (1947).
emissions by industrialized countries after 2012, not even—as one might presume—that they should not exceed the limits prescribed by the first set of targets in its Annex B.\(^8\) The protocol requires only that negotiations on new targets for those countries should start in 2005. Most important, it says nothing about broadening emission limitation commitments to other countries, though this is considered to be an obvious and essential part of the next round of negotiations. The developing countries remain behind the fence of “no additional comments,” which they erected in Berlin in 1995 as the price of their agreement to launch the negotiations that led to the protocol.\(^9\) An article that would have permitted “voluntary commitments” by developing country Parties fell away in the final Kyoto “trade-off.” The art of the possible produced these outcomes, which left the protocol in an uneasy situation as its forward momentum flagged.

Could the negotiated outcomes have been different? Definitely not as regards “no additional commitments”: this was a sine qua non for the Group of 77 (developing countries) at COP 1. Probably not, as regards an indication of post-2012 emission levels for industrialized countries; keeping future options open was part of the conceptual flexibility demanded by some negotiators. But hindsight suggests it might have been better to go for a longer budget period or for two periods. This would have been helpful at the present juncture and could be one of the elements in the next round of negotiations.

Related to this issue, in a sense, is the question whether it would be useful to set a collective long-term target by pinning a number on a “safe” level of atmospheric concentrations of anthropogenic greenhouse gases, consistent with the long-term objective of the UNFCCC.\(^10\) Such a target, possibly complemented by intermediate indicators, would be subject to revision at regular intervals as new scientific evidence comes in. It would provide direction to future rounds of negotiations, as well as a frame for the allocation of responsibility for emission limitation. A similar though simpler long-term goal—“free trade”—guided successive rounds of international trade negotiations. A concentrations target would be very difficult to negotiate multilaterally, given the different starting points of the participants, differing evaluations of risk, and the distant time horizon. But one could envisage a first step whereby a politically significant group of like-minded countries would coalesce around a long-term goal and declare it to be their collective aspiration. The debate on this topic continues.\(^11\)

### 3.2. Types of emission targets

A second issue concerns the nature of the emission targets in the Kyoto Protocol, which are simple, “top-down” caps. To those who are convinced that emission trading is one of the keys to a successful

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8. Annex B to the Kyoto Protocol assigns emissions caps to all countries listed in Annex I to the UNFCCC, expressing these as a percentage difference from 1990 emission levels, to be achieved within the protocol’s first commitment period (2008–2012).

9. See COP decision 1/CP.1, The Berlin Mandate, paragraph 2(b).

10. The long-term objective in Article 2 calls for a level of concentrations that would prevent dangerous anthropogenic interference with the climate system.

11. See Noble, I., J. Parikh, and R. Watson. Forthcoming. Responses to climate change. Draft chapter in Millennium ecosystems assessment. This paper, now undergoing peer review by experts and governments, considers a concentration limit of 450 parts per million (ppm) of carbon dioxide (CO\(_2\)) (corresponding to 500 ppm of CO\(_2\) equivalent), which would restrain the rise of global mean surface temperature by 2100 to 2 degrees Celsius. This would limit adverse impacts to a globally manageable scale. These impacts, however, would be concentrated in the tropics and sub-tropics, and the many poor countries in those regions would need substantial assistance in overcoming adaptation challenges. For a negative view of the desirability of negotiating a concentration limit, see Pershing, J., and F. Tudela. 2003. A long-term target: Framing the climate effort. In Beyond Kyoto: Advancing the international effort against climate change. Arlington, VA: Pew Center on Global Climate Change.
strategy and understand that trading requires scarcity to give value to the market, a cap is the obvious and simplest instrument. A cap also gives a clear push to the technological shifts that are required. The protocol conformed to this vision.

Since Kyoto, inspired both by the protocol negotiations and especially by the rejection of the protocol by the United States, there has been a flowering of proposals for alternative types of emission commitments. Some of these proposals, such as intensity commitments and a “safety-valve” device to cap the costs of commitments, appear to be compatible with an approach aimed at capping and trading emissions. Others, such as those envisaging monitored national pledges of policy effort, do not appear to fit into the cap-and-trade scheme.

While the simplicity of emissions caps for industrialized country targets continues to hold appeal, one can imagine future negotiations taking in the interest of these countries in cost caps. National carbon intensity commitments may be the preferred type for engaging the “industrializing” developing countries, some of which—notably China—are already making remarkable progress in decoupling economic growth from carbon emissions. Sectoral performance standards for carbon emissions could be taken on by major corporate actors worldwide, thus building North-South bridges and allaying Northern concerns about loss of competitiveness. They could be complemented by a CDM-type project-based mechanism. Finally, non-binding emission commitments could be the soft end of the spectrum for other developing countries, including the smaller and weaker ones such as the least-developed countries and some small island states.

In short, the exploration inspired by the ground-breaking international cap-and-trade system embodied in the Kyoto Protocol could lead to a menu approach operating within the broad and permissive framework of the UNFCCC.

### 3.3. Not by emissions alone

The limitation of emissions is the key action needed to change the patterns of production and consumption that are increasing atmospheric concentrations of greenhouse gases at an accelerating rate. This is the focus of the Kyoto Protocol, which is intended, above all, to promote energy economy, energy efficiency, switching to cleaner energy sources, and the technological innovation required for attaining these aims. However, as envisaged by its parent convention, a global climate strategy must do more.

One additional line of action is to expand ways of lengthening the storage time of carbon sinks (e.g., through better forestry and land management practices) and removing carbon from circulation by sequestration (e.g., in disused oil wells). A group of countries led by the United States is studying this angle and may produce useful results.

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12. Intensity commitments include, notably, carbon intensity commitments by country or by productive sector (the latter are also known as sectoral performance standards, e.g., standard emissions per tonne of cement or per tonne-kilometer transported). A “safety valve” would cap marginal compliance costs by providing additional emission allowances at a pre-determined price.

The other angle, essential for all countries, is to strengthen the resistance of people and their livelihoods to climatic shocks and to prepare for adaptation to climate change. However strong the response to the climate challenge may be, a degree of global warming is now inevitable. Even ambitious long-term limits for atmospheric concentrations would restrain mean global surface temperature at levels above the present. There will be adverse effects.\textsuperscript{14} It makes sense to invest in increasing the resilience of existing systems to known phenomena whose severity and frequency are expected to increase. Droughts and floods, hurricanes and heat waves, insect-borne diseases—in different degrees, these phenomena affect food production, water supplies, health services, and disaster management, for example. Such national systems need to be strengthened now. In addition, phenomena that are more specific to global warming—such as rising sea levels, shifts in agricultural production zones, or species loss—will need adaptive responses in the future.

It is no accident that the insurance industry was the first corporate sector to take on the climate change issue. But this part of the response agenda has been relatively neglected in the intergovernmental discussion. This may be ascribed to concerns of industrialized countries that they may be faced with large bills from developing countries for assistance with adaptation and, in the view of some, for their liability as the historical originators of human-induced climate change. Another cause is the dynamic of a negotiation in which the thrust of small island developing states on the adaptation front has become enmeshed with the riposte of oil-exporting countries concerned about the impact of response measures on their economies. The resulting impasse appears somewhat parochial and, by highlighting the plight of small islands, obscures much bigger cases of vulnerability (e.g., Bangladesh). Yet resilience and adaptation are global issues, in that they are of concern to all countries and need to be integrated in their economic scenarios and their development cooperation. While they do not lend themselves to the same sort of “trade-offs” as do emission limitation commitments, it will be important to give them their proper place in the agenda if a balanced global strategy is to emerge.

4. Towards constructive engagement

The foundation for such a strategy is the 1992 Convention, the UNFCCC, often overlooked in the public debate on its offspring. It has been in force since 1994. With 188 states as Parties, it is nearly universal. It binds all Parties to take climate change seriously and to cooperate in responding to it. It establishes an objective and principles to guide their response. It binds them to transparency—to exchange information about what they are doing as they move along their learning curves. It provides opportunities for exchanging “best practice” and for adopting common methods, notably methods for measuring emissions and removals of greenhouse gases. Such methods are necessary to validate emission commitments and emission trading. It recognizes that developing countries need technological and financial support to take climate change on board and makes a modest start in providing it.

The UNFCCC arose out of the first scientific assessment by the Intergovernmental Panel on Climate Change (IPCC). The second assessment of the IPCC underpinned the Kyoto Protocol. But as the political momentum behind the protocol has wavered, so too has conviction that climate change needs to

\textsuperscript{14} Though initially there may be some benefits for agriculture in temperate zones at low degrees of warming.
be dealt with now. The wealth of more immediate issues, together with a continuing campaign against the protocol and the underlying science, take their toll. Despite sustained scientific affirmation from the IPCC’s third assessment, the “wait-and-see” attitude gains ground.15

The arguments for delay may seem unconvincing to those who are converted to the importance of climate change. But they exist and need to be addressed in terms that their proponents understand and accept. Even though the Kyoto Protocol is shaped by economics, the issue of climate change needs greater traction in the sphere of economic policy making. Good answers are needed to the question “Why should I worry?” Good arguments are needed to refine estimates of the costs of responses to the climate threat, to propagate win-win opportunities, and to demonstrate the costs of inaction—the costs of “waiting-and-seeing.” And these answers and arguments need to be repeated for each generation of economic policy makers. The case in favour of “action now” cannot be taken as given. This is a challenge to existing multilateral institutions, none of which is presently equipped to perform this economic advocacy function effectively.

One generic institutional handicap is that—despite the original shift into the political sphere of the UN General Assembly, referred to above—climate strategy continues to be driven by scientists and environmentalists. Conferences of the Parties to the Convention are essentially assemblies of ministers holding their country’s environment portfolio—their most visible photo opportunity on the global stage. The same constituency is in the lead when climate change is discussed in the United Nations forums on sustainable development and drives the issue in the work of the European Union and the G8. It has to be recognized that—with few exceptions—this constituency does not rank high in national political and economic clout. Yet the UNFCCC process, if it is taken seriously, is meant to be shaping nothing less than a new global energy economy! Thus, the challenges in taking the strategy forward include finding ways of broadening participation, bringing in political heavyweights even at the cost of being less virtuously “green,” and raising the topic up the political agenda even at the risk of blurring the environmental image.16

One possible hook for a broader approach is global security. Long-term climate change will be a factor of global inequity, dumping the adverse fall-out of global economic growth on poor people least able to cope. It will thus add to global instability, if only because of its impacts on food, water, and migration. It is interesting that an institution as hard-nosed as the US Department of Defense recently carried out a study looking at climate change from the security angle.17

Another hook is oil security. The unpopular tactics of oil-exporting countries in the climate change negotiations are, in the end, an expression of concern about their economic security in a low-carbon economy. The same industrialized countries whose delegates bemoan these tactics are concurrently

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15. The recent report of Bjorn Lomborg’s Copenhagen Consensus (May 2004) predictably contributes to this attitude. Using economic cost-benefit analysis, a panel of eight economists ranked 17 proposals “competing” for a hypothetical fund of US$50 billion in terms of their potential to advance global welfare, in particular that of developing countries. Proposals addressing HIV/AIDS, malaria, malnutrition, and free trade top their list. Three “projects” related to climate change—the Kyoto Protocol and two versions of a carbon tax—occupy the last three places in the ranking, classified as “bad projects.” Some 20 other proposals, addressing inter alia education, civil conflict, and financial stability, were not ranked. This selection of apples and oranges is presented as “a prioritized list of solutions to the world’s great challenges.” See www.copenhagenconsensus.com.

16. UK Prime Minister Tony Blair, like Margaret Thatcher before him, has included climate change in his political agenda.

negotiating with the oil exporters to secure oil supplies at affordable prices. These issues must be addressed openly if the climate negotiations are to prosper. The right people to address them need to be brought into play. Industrialized countries cannot credibly speak in one voice to members of the Organization of Oil Exporting Countries (OPEC) and in another in the UNFCCC, especially when some of their key interlocutors among the former also take part in the latter.

A third approach would address the climate change issue through the perspective of the political economy of coal. As in the case of oil, coal interests are a major source of opposition to action on climate change. This opposition needs to be addressed, not wished away. Coal will remain, for the foreseeable future, the cheapest and most plentiful source of energy, vital for industrial growth worldwide. Many major emitters, North and South, are coal producers. Many key industrial sectors, South and North, are coal users. Together, producers and users represent a significant mass of economic power. At the same time, coal is and will remain a major source of urban air pollution and the respiratory ailments this causes. For many developing countries, the health impact of coal use is a much more compelling reason to moderate it than the prospect of climate change. A dialogue on the sustainable development of coal could assemble these various interests and attempt to orient them towards a healthier, more climate-friendly future. It could explore ways of encouraging more efficient “clean coal” technologies and emission standards for coal-using sectors. And it could take on the issue of coal subsidies, thus addressing one of the well-founded concerns of oil producers.

In general, increased private-sector involvement would enhance the economic relevance of the climate change process. Corporate pledges to limit emissions could be announced, registered, verified, and monitored. Indeed, some types of commitments—sectoral performance standards—would have to be negotiated with and among major corporate actors. Global corporations can be a positive force: they seek resource efficiency, need predictable global rules, and increasingly accept global accountability. In a situation where intergovernmental agreement remains elusive and fragmented systems are emerging, their global long-term vision can be a factor of integration and a source of forward thinking.

Yet, in the end, it is up to governments to exercise their responsibility for leadership and vision and to set the framework for corporate action. Those that are ready to take the lead have to persuade and encourage the others. Preaching and exhortation will not bring the heavyweight outsiders on board. Their specific concerns will have to be understood, addressed, and to some extent accommodated. They may need financial or technological incentives to move off the defensive. They may await assurance that their interests will be adequately reflected in other multilateral negotiations, notably the Doha trade round. But it is important, in any case, that all the players realize they are in the same boat. Because that is where climate change has put them.

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