This policy brief explores the complexities surrounding the UNFCCC and the Kyoto Protocol as the proposed mechanism for climate change mitigation. The brief will reflect the implications of the shift from the original goal of climate stabilisation to global carbon trade management using market-based solutions. It also focuses on some the issues related to the North-South polarisation of the climate-change debate; and ends with policy considerations towards climate-change mitigation based on a fair and just global compact

Background

The Rio Earth Summit provided a platform for states to sign two major conventions on climate change and biodiversity. The UNFCCC, which was adopted in May 1992, sets an overall framework for intergovernmental efforts to tackle climate change. Under the convention, governments committed themselves to:

- gather and share information on greenhouse gas emissions, national policies and best practices;
- launch national strategies for addressing greenhouse emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and
- cooperate in preparing for adaptation to the impacts of climate change.

After adoption, a number of Conference of the Parties (COP) meetings revealed that the convention commitments had "no teeth" to address climate change (UNFCCC Secretariat, website). Even though the European Community committed to the proposed CO_2 reductions of 60%, the US blatantly refused to accept the specified reductions of the UNFCCC, the primary reason being that such a reduction would require major changes in production which would be too costly (Chee Yoke Ling, 1993). From the viewpoint of the developing countries the UNFCCC was not seen as a major victory (Sokona et al). They recognised the global nature of climatic change but strongly felt there is a need to clearly identify the sources of greenhouse gases and apportion responsibility to these sources (Chee Yoke Ling, 1993).

The convention divides countries into three main groups: Annex I, Annex II and Non-Annex I Parties. Annex I Parties consist of those who have to reduce greenhouse gas emission; Annex II Parties are the countries meant to provide resources, including financial and technological resources, to developing countries to undertake emission reduction activities and Non-

Annex I Parties consist of developing countries and those most vulnerable to the adverse effects of climate change.

Two and a half years of negotiations led to the adoption of the Kyoto Protocol at COP 3 in Kyoto, Japan, on 11 December 1997 as a response aimed at providing stronger and more detailed commitments for industrialised countries (UNFCCC Secretariat, website). The key feature of the protocol is that the mandatory targets on greenhouse gases and emissions were those countries accepted as world leading economies (UNFCCC Secretariat, website). According to the UNFCCC Secretariat, the agreement offers flexibility in how countries meet their targets in an attempt to compensate for the accompanying cost incurred to meet the binding targets. The enforcement of the protocol means 30 industrialised countries are legally bound to meet their quantitative targets.

How does the protocol mechanism work?

The mechanisms to implement the Kyoto Protocol include 'emissions trading', the 'cleaner development mechanism' and 'joint implementation'. In addition, the Protocol's Adaptation Fund, established in 2001, will be activated to assist developing countries to cope with the adverse effects of climate change.

Emissions trading (popularly known as carbon trading) is "a way of assigning a monetary value to the earth's shared atmosphere" and works like "global stock market" where emissions are bought and sold (UNFCCC Secretariat, website). It allows countries that have 'spare units' to sell their excess capacity to help other countries not to exceed their targets.

Since the protocol does not set limits to the greenhouse gas emissions in developing countries, an arrangement for reductions is "sponsored" in developing countries through the so-called "cleaner development mechanism" (CDM). This mechanism works through industrialised countries paying for projects that would reduce emissions in poorer nations while at the same time receiving credits for meeting their own emission targets. To be certified the project must be approved by all involved parties and demonstrate a measurable and long-term ability to reduce emissions (UNFCCC Secretariat, website).

"Joint implementation" allows industrialised countries to meet their targets by paying for projects that reduce emissions in other industrialised countries. The sponsoring governments

will receive credits that may be applied to their emission targets and the recipient country will gain foreign investment and advanced technology but no credit towards meeting their own emission gaps as they need to implement their own processes (UNFCCC Secretariat, website).

Before instituting a project the countries should provide accurate inventories of greenhouse gas emissions and detailed registries of emission "units" and "credits". If the country has not yet set up approved registries and greenhouse gas inventories, they are allowed to carry out projects under a "second track" process. This requires international oversight which could be assigned to private companies to ensure actual emission reduction and to certify the quantity (UNFCCC Secretariat, website).

Implications of the Kyoto Protocol

The Kyoto protocol's entry into force is significant for two reasons. First, it is a significant victory won by the Europeans. Second and more importantly, without concerted actions for climate change stabilisation, the Earth's climate will turn into a hostile environment with unstable weather, routine heat waves, crop failure, mass extinction and rising see levels by 2050 or even earlier (Anthanasiou, 2005). However, concerns about decisions taken at previous Conferences of the Parties (COP) have led to a dilution of the content of the original agreement of the UNFCCC (Sokona et al 2002).

Sidelining the 'principle of equity'

The 'principle of equity' refers to placing the responsibility to reduce emissions with those who generate emissions and was central to climate change discussions until the adoption of the UNFCCC. Critics felt that this principle has been sidelined in the discourse since then and especially since the Kyoto Protocol agreement (Sokona et al, 2002). Furthermore, Sokona et al (2002) highlight that the abandonment of the equity principle, particularly in the context of the related principle of 'common but differentiated responsibility', is of grave concern to the South. The abandonment of this principle directly relates to the arbitrary nature of the climate change targets of Annex 1 countries and the institution of flexible mechanisms which create a 'win-win' situation for developed countries. The key polluters evade responsibility for the emissions they generate through implementing projects to reduce emissions in other countries. In addition, industrialised developing countries such China and South Africa, for example, also evade their responsibility despite their significant contribution to climate change and are likely to end up accruing the benefits

from climate change mitigation projects. So, the focus of the regime has become skewed towards minimising the burden of implementation on the polluter industries and countries (Sokona et al, 2002).

Focus on adaptation

The initial focus of the UNFCCC was on climate stabilisation and the shift in focus to carbon trading presents a major threat, especially to least developed countries (LDC) and small island states (SIDS) (Sokona et al, 2002). Even if they were to achieve any economic development in the next few decades, they are in real danger of literally been swept away by human-induced climate change even while their contribution to climate change is miniscule (Sokona et al, 2002). The Climate Change Fund (to assist with capacity building and technology transfer) and an LDC Fund (to assist LDCs in climate-change adaptation) have been set up to address the climate change impact in vulnerable communities and countries. However, sceptics place very little confidence in this because they are voluntary, managed via the still controversial Global Environmental Facility (GEF) and remain poorly funded (Sokona et al, 2002).

Market-based solutions and the carbon trading regime

Anthanasiou (2005) advocates a more pragmatic view, supporting an abandonment of the "pointless high-flown critiques of emissions trading that conflate the weakness of the Kyoto Protocol with the commodification of nature". He feels that the immediate challenges should be to use emissions trading to fund both decarbonisation and sustainable development initiatives like generating energy from renewable sources. But in practice this may prove to be difficult. Firstly, the solution proposed by the Kyoto Protocol through carbon trade via the CDM is unlikely to benefit small poor countries as they are ignored by private sector investors. Therefore, benefits will accrue to a handful of the larger developing countries (Sokona et al, 2002).

Secondly, the concern that carbon-markets will be threatened by "phalanxes of quick-buck artists" and "eager politicians, who above all hope for efficiency and cash", even with no real decarbonisation, is already beginning to emerge. One example in South Africa is the World Bank-funded methane gas project at the Bisasar Road waste dump site in Durban. Local community activists have been fighting for the decommissioning of the Bisasar dump and are opposing the methane project. The surrounding local

community have for years suffered from the pollution, noise and health and safety dangers posed by the dump. Implementing this project may produce climate benefits by producing methane gas but will make no difference to the local community as they will continue to live along a waste dump site. Wysham (2005) affirms that "the Bisasar dump is emblematic of the sort of global apartheid that carbon trade encourages, allowing Northern governments and corporations to profit from the carbon profligacy in the North while the poorest …in the South pay with their health and lives." Another example is the Plantar eucalyptus harvesting project in Brazil: the company Plantar acquired land by forcibly removing local communities from their land during the dictatorial regimes. The harvested eucalyptus is intended to be used as charcoal for the production of low grade iron (Wysham 2005). For nearby small farmers, the consequences of the plantations have been the drying up of streams and chemical contamination of the air and water (Wysham 2005). Even though these plantations will allegedly avoid the production of 4.3 million tons of carbon dioxide that would have been emitted from coal, a Northern based industry will ultimately benefit by obtaining carbon credits at the expense of the local communities (Wysham 2005).

The science of uncertainty

An international task force report of policy activists from Britain, the US and Australia claims that "climate science is not yet able to specify the trajectory of atmospheric concentrations of greenhouse gases that correspond precisely to any particularly global temperature rise" (Athanasiou 2005). This may be true, but consider the following: current knowledge indicates that achieving a global average rise in temperature of 2˚C will require an increase of about 400 parts per million (ppm), which could rise far higher in the next decade in a "business as usual" scenario (Athanasiou 2005). Bill Hare, an accomplished climate change scientist, points out that if only carbon dioxide was considered, we have already reached 380 ppm, leaving only a decade before we pass 400ppm (Athanasiou 2005). Nevertheless, before it becomes a crisis, there will still be time to stabilise emissions even at an increase at a steady pace of 2ppm per year. Therefore, ensuring the earth's temperature remains stable and does not rise is the fundamental challenge in climate change.

Views from the North, the South and the Industrialised South

The complexities in the climate change debate stem from the heterogeneous views from the North, the poorer and vulnerable South and the industrialised

South. States are looking out for their own interest, even though the impacts are of a global scale.

Sokona et al, (2005) group the interest of the South into three categories:

1. The need to create a "predictable, implementable and equitable architecture for combating climate change that can stabilise atmospheric concentrations of greenhouse gases… while giving all nations an indication of their current and future obligations based on current and future emissions". A key concern of the Kyoto Protocol is the absence of long-term-implications, particularly the stated goals of sustainable development and that the protocol is unlikely to produce short-term benefits. A standard global emission budget linked directly to atmospheric stabilisation is proposed.
2. Enhancing the capacities of communities and countries to combat and respond to global climate change, with particular attention to adaptive capacity that enhances the resilience of the poorest and most vulnerable communities.
3. Effort to combat climate change must have sustainable development as its central goal – "at the declaratory as well as operational levels."

The United States – the world's number one carbon emitter – has broken its word, first by proposing the carbon trading idea, and then backed out once the agreement on carbon trading was accepted by the international community (Wysham 2005). According to Athanasiou (2005), the US has doggedly embarked upon a campaign through a number of bilateral agreements to render the UN climate process "irrelevant" while arguing that fossil fuels technologies like "clean coal" are the best way forward.

With the enforcement of the Kyoto Protocol, the Europe Emissions Trading System also comes into force. The business lobby will be tantalised by the prospects of carbon trading. Since CDM projects will likely be based on foreign investment, this would potentially provide a 'win-win' situation for the private sector. Polluting industries in the South will gain by technology investment from the North. Thus the North obtains returns from their investment; and carbon credits and industries in the South would obtain "free" technology to "clean-up" their industries.

Industrialised developing countries of the South fear that the Northern

pressure to accept the climate change agreements would hobble the development of the South. For instance, India proposed that development projects funded by CDM "should not actually be required to be strictly additional, [which is] climate-change speak for yielding carbon emissions that would otherwise not have occurred" (Athanasiou 2005). In other words, CDM projects should not be used for future actions to mitigate climate change or be forward looking. It should be applied to existing polluting activities.

Conclusion

At the heart of the climate change conundrum is energy consumption to meet the production and consumption needs of the middle-class and the wealthy. Yet the debate seems centred around how technology will miraculously solve climate change problems, without real changes to linear economic growth and increasing energy consumption. There is a danger that the Kyoto Protocol has become so much of a mechanism for managing global carbon trade that the real issue for managing carbon cuts has been marginalised. Athanasiou (2005) emphasises that without actual and meaningful emission cuts by the world's largest polluters, the stabilisation of atmospheric concentrations will not only be difficult but unlikely, especially if the much-touted flexibility mechanism of the Kyoto Protocol fails to deliver the expected benefits from carbon trading.

The laissez-faire approach needs be substituted by a more systemic approach, which differentiates between responsibilities and commitments, as proposed by a report on "South –North dialogue on equity in the greenhouse" (Wuppertal Institute and the Energy Research Centre, 2004). The report proposes that mitigation could take place through obliging countries that have high responsibility and capability (including the US) to pay for the emission reductions and provide financial and technological resources to countries with less capability and responsibility (Wuppertal Institute and the Energy Research Centre, 2004). In this way the 'polluter pays principle', 'the equity principle' and the 'common but differentiated principle' can be put in practice.

Policy considerations

At an international level

A global "post-Kyoto" architecture" to limit emissions in the US and in industrialised developing countries

The global community needs to urgently contrive an architecture that is capable of limiting emissions--not only in Europe and the US but also in industrialised developing countries like

China, India, Brazil and South Africa. While there is a sense of fatigue amongst the climate change community, given the realisation that they have lost to the carbon cartel, their energies should remain focused on a fair and just global treaty that may actually reduce emissions, through reinstating the 'equity principle' so that mitigation takes place on the basis of those countries responsible for climate change.

Trade and climate change

Bierman and Brohm (2004) consider a border tax adjustment under the world trade law related to energy taxes. A border adjustment tax is based on the destination principle in economic theory: goods should be taxed in the country of consumption. It would be aimed at industrialised countries that gain trade advantages through persistent lower energy prices owing to insufficient implementation of climate policies. While a border tax on imported products may be seen as a violation of GATT provisions if the tax is not levied on similar domestic products, adjustment for taxes that are equally levied on both the domestic and imported final products are defensible under world trade law (Bierman and Brohm, 2004). However, they stipulate that border tax adjustment against developing countries should be avoided. Other means, such as financial and technical assistance, should be pursued instead. This approach is highly complex, but the study indicates that "world trade law, despite remaining ambiguity and uncertainties, prove to be permissive to such actions".

An Adaptation Fund with cash-in-hand

The 'precautionary principle' should be invoked for the 'Adaptation Fund' (to assist developing countries to cope with the negative effects of climate change) and extreme weather conditions associated with climate change. Countries largely responsible for greenhouse gas emissions need to be obliged to contribute to the fund to ensure that standing funds are available in case of a disaster. A report from Williamson (2004) suggests that this could be an extension of the Office for Co-ordination of Humanitarian Affairs (OCHA) funds within the UN system.

Technology Transfer based on the Rio Declaration

Principle 9 of the Rio declaration on Environment and Development supports cooperation for capacity building through exchanges of scientific and technical knowledge and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies. It is important for the South to recognise and understand its

technology needs based on local needs and realities, for example, in securing livelihoods, the creation of jobs etc. and allocating resources to research and development that support sustainable consumption and production patterns and energy efficiency (Wilson 2003). Emerging economies should be more proactive in production systems based on sustainable development and energy efficiency rather than be hamstrung with unsustainable production systems to fulfil economic growth objectives such as using "cheap" energy. Climate change polices should promote incentives for appropriate renewable energy technology that can be enhanced through investment in research and development, local innovations, partnerships, etc.

At a National level

CDM projects on the basis of sustainable development

While the CDM and carbon trading regime is fraught with problems, developing countries need to ensure that CDM projects are implemented on the basis of sustainable development. This entails designing projects that would result in measurable and long-term ongoing emission reductions, provide local environmental and social benefits, demonstrate sustainable consumption and production and are based on "environmentally sound technology" as articulated in the UNFCCC (Climate Change Action Network, 2002).

Instituting the "polluter pays" principle

Athanasiou (2005) argues that the Kyoto Protocol is set on the premise that the global community accepts that the costs for climate change mitigation will be high, but without deciding who will foot the bill. He recommends that if global warming is framed as pollution and asserts that the polluter should pay, then this overly technical problem becomes much easier to understand.

National and local government regulation

A compromised Kyoto Protocol only provides meagre steps towards emission reduction. Therefore, the onus lies with national and local initiatives to institute regulation that supports the implementation of renewable energy and penalises unsustainable production patterns as the "the only true and meaningful road to climate equilibrium" (Wysham, 2005).

The role of nongovernmental organisations and civil society organisations

NGOs and CSOs have an important lobbying, advocacy and monitoring role to play to ensure reduction and stabilisation of greenhouse emissions in the global commons and justice for the poor and vulnerable communities affected by pollution and over-

consumption patterns. Rose (2005) states that NGOs "could test those in power on non-rhetorical grounds by encouraging a questioning atmosphere" and asks "where are the promised results?" The results required are in terms of security, fuel prices, jobs, and so forth. He believes that "over time, questioning will erode confidence that the current administration or government strategy is right".

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Suggested Readings

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