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## Poznań: A mandatory pit stop or the fast lane to Copenhagen?

By Andrew Aziz and Moustapha Kamal Gueye

"Poznań is the half-way mark between Bali and Copenhagen. It represents an important moment for stock-taking. But it also needs to urgently advance negotiations under the Bali Road Map, as well as on-going work."

With these words, Yvo de Boer, Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC), recently summed up the essence of this year's meeting of Ministers to discuss climate change. Indeed, as COP 14 gets underway in Poznań, Poland on 1 December many will already be looking beyond the conference to next December's meeting of delegates in Copenhagen.

For negotiators, Poznań will be a moment to reflect on the progress made in the past year and it will be an opportunity to clarify plans for the next 12 months. Given the current state of the global economy, and the period of political limbo in the United States as Americans await the swearing-in of their new president, few expect Poznań to yield significant progress in deciding where the world will go after Kyoto. But Poznań is important nonetheless. More than any other stop on the road from Bali to Copenhagen, Poznań will be a telling barometer as to the prospects for fruitful negotiations in Copenhagen.

### Who will commit first?

While ironing out the details of a functional technology transfer scheme will be a paramount issue for Ministers, generating the political will required to get the ball rolling

is the true obstacle. Given the significant cleavage still existing between developed and developing countries, significant short-term progress is unlikely.

Ministers and other delegates generally agree that the development and transfer of technology from developed countries to developing countries is an essential requirement for the international community if it wants to succeed in addressing climate change. But the lukewarm response from developed countries on the recent Group of 77 (G77) developing countries and China's proposal that developed countries divert as much as one percent of their gross national product (GNP) to help them achieve this goal suggests that finding the magic formula will be not be easy.

Moreover, many observers now say that what might be harder than agreeing on the numbers and the nature of a technology transfer package will be getting one of the two sides to commit first. As de Boer pointed out in his speech to the Club de Madrid in mid-November, "without ambitious targets by all industrialised countries, developing countries will not see why they should advance mitigation; and without meaningful engagement of developing countries, not all industrialised countries are willing to show ambition."



Thus negotiating a shared vision for long-term cooperative action on climate change, including a long-term global goal for emission reductions by 2050, becomes all the more critical. Ministers will have to grapple with that, and build the political consensus needed amongst developed and developing countries on the nature and level of commitments in the long-run.

Developed countries are looking to more industrialised developing countries to make binding commitments on reducing emissions. Concerns over the massive amount of emissions generated by countries such as China have many in the developed world insisting that negotiations will not move forward without ambitious commitments.

*“Mali is not China, and Ethiopia is not Saudi Arabia,” Connie Hedegaard, Denmark’s Minister of Climate and Energy said in November.*

Developing countries have expressed their discomfort over the suggestion that they be split into separate groups according to their differences - both in terms of emissions and their capacity to help mitigate them. “Mali is not China, and Ethiopia is not Saudi Arabia,” Connie Hedegaard, Denmark’s Minister of Climate and Energy said at the Beijing technology transfer meeting in November. More industrialised developing countries are resistant to the move as it could increase their burden of responsibility under a future plan.

In response to the Danish Minister’s aforementioned comments, Marthinus van Schalkwyk, South Africa’s Minister of Environment and Tourism, responded strongly that developing countries would resist any attempt to categorise them into different groupings. The objective of the current negotiations is to advance international cooperative action on climate change, as outlined in the Bali Action Plan, not to renegotiate the UNFCCC, van Schalkwyk remarked.

Developing countries want to see real financial investments in technology in any future plan. Chinese Premier Wen Jiabao emphasised this position at the recent meeting in Beijing when he called on developed countries to take a leading role by establishing the necessary fiscal and tax measures and enhanced policy guidance and incentives.

“It took developed countries several decades to solve the problems of saving energy and cutting emissions, while China has to solve the same problem in a much shorter period. So the difficulty is unprecedented,” the Chinese premier said at the conference. “Developed countries shoulder the duty and responsibility to tackle climate change and should alter their unsustainable lifestyle.”

The international press have widely interpreted Wen’s comments as a new, hard-line stance on the issue. And several media outlets are now speculating that China will be pressing the future Obama administration to take a more active role in negotiations.

## Negotiations and the financial crisis

But even with the widely expected stronger engagement on climate change under Obama, the problems related to footing the bill in the current economic context has led to much pessimistic speculation. And these concerns over the potential chilling effect on climate change spending due to the current global economic turmoil are resonating to the highest levels.

“It is undeniable that the financial crisis will have an impact on the climate change negotiations,” de Boer told Reuters recently. “If we go to citizens under the current circumstances ... and say ‘I’m increasing your tax burden in order to pay for climate policy’, that might not go down very well.”

Despite this reality, de Boer insists that the financial crisis is an opportunity for combating climate change, rather than an obstacle. “Clean industry and investment have proven that they offer secure and long-term profits and returns,” de Boer says. “Clean economic growth has the potential to create millions of new jobs. As a result, the financial turmoil may actually be seen as an opportunity to deal in a fundamental manner with some of the closely related issues and address both the financial and climate change crisis together.”

## Emissions trading

The prospect for implementing a functional emissions trading structure has led to some optimism over the past year. Creative initiatives, such as the recently unveiled UN Reduced Emissions from Deforestation and Forest Degradation Programme (UN-REDD) - which aims to allow tropical forested developing countries to sell carbon credits for ‘avoided deforestation’, have many close to the negotiations watching carefully.

*“Clean economic growth has the potential to create millions of new jobs. As a result, the financial turmoil may actually be seen as an opportunity to address both the financial and climate change crisis together.”*

What’s more, some developed countries have shown that they are interested and willing to participate in carbon offsetting schemes. In fact, Norway has already committed US\$35 million to the UN-REDD programme and has pledged to support the programme in the future if the initial stages prove to be promising. The REDD initiative is not without its critics, however. Some environmental organisations are saying forest protection should be handled in a holistic way, outside of the climate regime. Carbon trading in REDD would provide rich countries with a loophole, the option to buy their way out of emissions reductions, argues Friends of the Earth

International. Critics also caution that the current carbon market structure is underfunded and in need of better access to financial resources.

## The Obama Factor

Campaigning on a platform of ‘hope’ and ‘change’ has left the world looking to Barack Obama to deliver on just that. What is for sure is that the new US administration will alter the landscape of future climate change negotiations.

“My presidency will mark a new chapter in America’s leadership on climate change that will strengthen our security and create millions of new jobs in the process,” said Obama recently in an address to a bi-partisan meeting of governors looking at climate change.

The videotaped address spoke directly to those who will be attending COP-14 in Poznań, ensuring them that things would be different with him in the White House. “Once I take office, you can be sure that the United States will once again engage vigorously in these negotiations, and help lead the world toward a new era of global cooperation on climate change.”

*“My presidency will mark a new chapter in America’s leadership on climate change that will strengthen our security and create millions of new jobs in the process.”*

But those expecting radical change in US policy or massive new funding initiatives for climate change will likely be disappointed. Delegates have acknowledged that public funding from developed countries should be the main financial source of any future technology transfer mechanism, but securing US funding for this purpose from a more sympathetic government is not a given. While the future Obama administration is likely to be more proactive than what was seen under the Republicans, no new funding for technology transfer, such as that being asked for by China and others, has been proposed.

Nevertheless, expectations for the future role of the US in climate change negotiations are high. “With President-elect Obama, my hope is that the US can take on a leadership role and help to move the negotiations forward,” de Boer said in November.

The fact that Obama is sending a delegation to Poznań is indeed a promising sign. However, it will likely not be until February 2009 - once the new president is firmly ensconced in the White House - that we get a clear sense of the role the United States will play on the road to Copenhagen.

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## International Energy Agency outlines climate mitigation scenarios

The 2008 edition of the International Energy Agency’s World Energy Outlook, released in mid-November, reaffirmed previous predictions about the world’s continued heavy reliance of fossil fuels. The agency somewhat scaled back its projected oil growth rates due to the current recession, and called for urgent action to address climate change.

“Current trends in energy supply and consumption are patently unsustainable - environmentally, economically and socially - they can and must be altered”, said Nobuo Tanaka, Executive Director of the International Energy Agency (IEA).

Overall, the IEA projected that global energy demand will grow by 45 percent by 2030, implying a 1.6 percent annual increase. A third of this new demand will be met by coal.

As in previous years, the IEA juxtaposed “business as usual” projections of the global energy landscape in 2030 with those needed to actively address the very real threat of climate change. The report developed two different alternative scenarios, comprising the interventions necessary to contain global warming at plus two degrees Centigrade - a target embraced by the EU because it would allow the world to avoid the full force of “dangerous climate change” - and three degrees Centigrade, respectively. Under the “business as usual” scenario, run-away warming would amount to six degrees Centigrade, with catastrophic consequences for humanity, warned the IEA.

Stressing the importance of reaching an agreement at the upcoming meeting of the UN Framework Convention on Climate Change (UNFCCC) in Copenhagen in December 2009, the World Energy Outlook noted the need for action not only on behalf of OECD-countries. In fact, in order to stay within the two degree target, emerging economies would have to curtail their emissions growth as well, with emissions peaking at around 2020. Even if OECD countries were to bring down their emissions to zero, this would not be enough without action on behalf of the emerging economies, the report says.

While staying clear of any suggestions for burden-sharing or financing arrangements, the IEA developed its global alternative policy scenarios based on low-carbon energy development. The most important measures related to increased energy efficiency. In reaching both the target of a maximum warming of two and three degrees, efficiency measures would contribute more than half of the necessary decarbonisation of growth. The following categories of measures, in order of importance, were renewables and biofuels, carbon capture and storage, and nuclear.

“We cannot let the financial and economic crisis delay the policy action that is urgently needed to ensure secure energy supplies and to curtail rising emissions of greenhouse gases,” stressed Tanaka. “We must usher in a global energy revolution by improving energy efficiency and increasing the deployment of low-carbon energy.”

More information on the World Energy Outlook at available online at <http://www.worldenergyoutlook.org/>

# A change for climate change: President-elect Obama's environmental plan

By Caitlin Zaino

Barack Obama was elected the 44th president of the United States in what many observers are calling one of the most important elections in the country's history. Americans strongly backed Obama and his promises for 'change' in the 4 November election. And when it comes to environmental issues, such as climate change and energy, there is widespread expectation that change is indeed coming.

"Now is the time to confront this challenge once and for all," Obama told governors at a recent summit on climate change convened by California state governor Arnold Schwarzenegger. "Delay is no longer an option. Denial is no longer an acceptable response. The stakes are too high; the consequences too serious," said the President-elect.

The proposed Obama-Biden plan for the environment aims to discard many of the Bush administration's policies and in its place, integrate major climate change and energy bills that will bring the US back into the international climate change arena. This shift can be seen most immediately in the President-elect's decision to send his own representatives to the 1-12 December UN Climate Change Conference (COP-14) in Poznań, Poland.

Unlike his predecessor, President George W. Bush, Obama has committed to engage with the UN Framework Convention on Climate Change (UNFCCC) as well - the main international forum dedicated to addressing the climate change. "Once I take office, you can be sure that the United States will once again engage vigorously in these negotiations, and help lead the world toward a new era of global cooperation on climate change," Obama said recently in a videotaped address.

He has also proposed the creation of a new forum comprised of the largest energy consuming nations from both the developed and developing world. This "Global Energy Forum" would focus exclusively on global energy and the environment and include all Group of 8 (G8) members plus Mexico, China, India, and South Africa. As set out by the President-elect, this Forum would complement - and ultimately merge with - negotiation processes already underway to develop a post-Kyoto framework.

The President-elect has also expressed a strong commitment to helping developing countries combat climate change, often emphasising the correlation between environmental destruction and loss of livelihoods. On tropical deforestation, for instance, Obama has promised to engage in activities that would not only slow the release of greenhouse gas emissions but also protect the livelihoods of local people and the abundance of biodiversity inextricably linked to forests. More generally, he has also proposed exporting

climate-friendly technologies, clean coal technology, and advanced automobiles to developing countries to help them combat climate change.

*Obama has said "Delay is no longer an option. Denial is no longer an acceptable response. The stakes are too high; the consequences too serious."*

And as part of his promise to ensure that the US is a leader on global climate change issues, Obama's plan would not only thrust the US back into global initiatives, but overtake the standards and commitments of many European countries in some cases.

This is true, for instance, with the President-elect's plan to reduce greenhouse gas emissions by 80 percent by 2050 using an economy-wide 'cap-and-trade programme', which would put a price on carbon emissions that reflects the costs of global warming. The administration also says it would introduce a mandate to reduce emissions to 1990 levels by 2020. If these ambitious objectives are achieved, the US would go from one of the world's worst polluters to a leader on climate change, surpassing Europe's commitment to reduce emissions by 60 percent by 2050.

"We cannot afford more of the same timid politics when the future of our planet is at stake," President-elect Obama said during a rally in New Hampshire. "Global warming is not a someday problem, it is now. We are already breaking records with the intensity of our storms, the number of forest fires, the periods of drought. By 2050 famine could force more than 250 million from their homes."

Comments such as these have been well-received by environmentalists, and it is clear that expectations for change are high. "Obama's victory will give crucial climate negotiations a much greater chance of success - the United States must face up to its international responsibilities and show positive global leadership in low-carbon economic



development,” says Andy Atkins, Executive Director of the London-based Friends of the Earth.

In addition to a strong stance on engaging the US in international climate talks, many environmentalists are praising the President-elect’s other proposed environmental policies as multifaceted and comprehensive. His energy plan includes provisions such as investing US\$150 billion over the next ten years to help catalyse private efforts to build clean energy; establishing a national low carbon fuel standard; and weatherising one million homes annually. The policy also has incorporated ambitious objectives including putting one million hybrid cars on American roads by 2015 and ensuring that by 2012, 10 percent of domestic electricity comes from renewable resources.

Similar to Obama’s stance on climate change, his team has gone one step beyond setting ambitious domestic objectives: many of the proposed plans underline the necessary balance between the US’s need for a healthy, sustainable environment and economic growth. “A clean-energy economy can be the engine that drives us into the future in the same way the computer was the engine for economic growth over the last couple of decades,” said Obama shortly before the 4 November election.

*“A clean-energy economy can be the engine that drives us into the future in the same way the computer was the engine for economic growth over the last couple of decades.”*

To this end, Obama has promised to create five million new jobs over the next ten years that would drive the efforts to build a clean energy future. Regarding his goal of putting one million hybrid cars on the road by 2015, Obama has committed to ensuring that those vehicles are domestically produced by US-based car companies that will now receive federal support for designing fuel-efficient cars. When consumers purchase these green cars, or make their homes energy efficient, they too will receive federal assistance—in the form of tax credits.

“When I am President,” Obama said at the recent California governors’ summit, “Any company that’s willing to invest in clean energy will have an ally in Washington. And any nation that’s willing to join the cause of combating climate change will have an ally in the United States of America.”

Environmentalists around the world are welcoming the President-elect’s strong stance on the environment and energy, as well as his commitment to reverse Bush’s policies. “We are confident President-elect Obama will view these challenging times as an opportunity to reverse the ill-chosen policies of the past and chart a new course that will lead America and the world to a healthier, safer,

*Sceptics are urging prudence to all those who have set high expectations for the President-elect on the environment and other policies.*

more sustainable and prosperous future,” said Carter Roberts, CEO of WWF-US, in a press release circulated shortly after the 4 November election.

Yet, while environmentalists are optimistic about the future under Obama - some touting him as perhaps the nation’s greenest president before he has even taken office - trade observers are exercising more caution. Among some in the trade community, there is concern that future policies will be more protectionist than those seen under the Republicans.

However, in a memo addressing the North American Free Trade Agreement (NAFTA), senior Obama advisor Austin Goolsbee wrote that “Obama is less about fundamentally changing the agreement and more in favour of strengthening/clarifying language on labour mobility and environment and trying to establish these as more ‘core’ principles of the agreement.” Another reason, it seems, for environmentalists to be smiling.

But sceptics are urging prudence to all those who have set high expectations for the President-elect on the environment and other policies. The global financial crisis could severely deter many well-intentioned plans. Furthermore, because Obama’s cabinet remains to be filled, all speculation on his priorities once in office remain just that - speculation.

In recent days there have been a few leaks, however, describing the possible short-list for candidates considered for the top environmental job in the Obama administration. Howard Learner, Executive Director of the Chicago-based Environmental Law and Policy Center is among those reportedly being considered. So too is Robert F. Kennedy Jr., founder of the Waterkeeper Alliance; Lisa Renstrom, former President of the Sierra Club; Mary Nichols, Chair of the California Air Resources Board; and Kathleen McGinty, Secretary of the Pennsylvania Department of Environmental Protection.

Nevertheless, despite conjecture on the details of Obama’s environmental policy or the makeup of his administration, many supporters appear to be content for now with the undeniable hope inspired by the future President’s campaign. “This is not the future I want for my daughters. It’s not the future any of us want for our children. And if we act now and we act boldly, it doesn’t have to be,” the President-elect said during a pre-election rally.

Just how boldly he will act remains to be seen.

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# Climate change, tourism and services in small island developing economies

By Keith Nurse

The climate change literature and debate so far has largely focussed on mitigation actions by the main contributors to greenhouse gas (GHG) emissions and global warming - developed market economies, as well as large industrialising economies like China, India and Brazil. Small Island Developing States (SIDS) are not large contributors to the problem of climate change, but constitute the most impacted group of countries. While the key issue for SIDS is adaptation, these countries are also highly dependent on the tourism and travel industries, which are considered to be major emitters - and so are vulnerable to the effects of international climate mitigation policies in these sectors.

This article examines the challenges and opportunities for SIDS within the climate change process, with an emphasis on tourism and travel, as well as relevant policy tools and instruments to address this issue.

## Adaptation challenges and costs

SIDS are considered to be climate change “hotspots.” According to predictions by scientists, SIDS are highly vulnerable to the impacts of global warming, particularly in terms of sea level rise, temperature rises, rainfall changes, coral bleaching and increased storm frequency. For example, sea level rise will exacerbate inundation, erosion and other coastal hazards, threaten vital infrastructure, settlements and facilities, and thus compromise the socio-economic well-being of island communities and states.

Warming seas threaten the livelihood of commercial and artisanal fisheries and coral reefs. This, by extension, has the potential to result in widespread unemployment of fishermen and tourism-related service providers (e.g. scuba tourism), the incomes of which depend upon the existence of healthy coral reefs. In addition, if climate change does result in changing rainfall distribution patterns, then many SIDS will be forced to find new and innovative ways to establish a consistent and reliable water supply. Moreover, the absence of a consistent water supply can also lead to a severe decline in agricultural production (subsistence and commercial), thus threatening food security within these island states along with the competitiveness of the tourism sector.

Adaptation costs can be devastating. This predicament is exacerbated by the fact that many SIDS are dependent upon mono-crop agricultural production and export, as well as tourism for foreign exchange earnings, employment and contribution to GDP. They are also highly dependent on the importation of food and energy for domestic consumption and for the tourism sector.

## Tourism - a double-edged sword

The travel and tourism sector is the key economic sector for SIDS in terms of earnings and jobs. Indeed, many SIDS are highly dependent upon revenue earned from tourist arrivals and through tourist-related activities. Tourism earnings account for a significant share of the foreign exchange earnings

in most SIDS. With regards to the Caribbean, travel and tourism accounts for 14.8 percent of GDP, 12.9 percent of employment and 14.6 percent of total exports. Oceania has a similar economic profile with GDP shares of travel and tourism at 11.7 percent, employment shares at 12.4 percent, and export shares at 16.9 percent of GDP. However, for both regions ten-year forecasts (2018) by the World Travel and Tourism Council (2008) suggest declining contributions from travel and tourism to GDP and employment, but not to exports.

*SIDS are climate change “hotspots.” They are highly vulnerable to the impacts of global warming, particularly sea level rise, temperature rises, rainfall changes, coral bleaching and increased storm frequency.*

SIDS, which generally are long-haul destinations from key source markets like North America and Europe, have raised concerns regarding the potential adverse impact of prospective climate regulation of the air travel and shipping sectors and consumer preferences shifting in favour of short-haul destinations. Some governments and companies have also adopted environmentally friendly charges, levies and technologies, some of which have caused the cost of travel and transportation to increase. Such cost increases will likely have adverse effects on travel and tourism to SIDS. On the other hand, the cost of inaction on climate change could be even more dismal. According to a recent study<sup>1</sup>:

1. The cost of inaction would amount to 22 percent of gross domestic product (GDP) for the Caribbean as a whole by 2100;
2. The costs of inaction will reach an astonishing 75 percent or more of GDP by 2100 in Dominica, Grenada, Haiti, St. Kitts & Nevis and Turks & Caicos;

3. The Caribbean's largest island, Cuba, faces a nearly 13 percent economic hit by mid-century, and a 27 percent loss by 2100, unless there is swift action to address climate change;
4. Losses from inaction would be less severe but still significant in Puerto Rico, reaching nearly 3 percent by 2050 and 6 percent by the end of the century;
5. The nation of Colombia, with its long Caribbean coastline, faces permanent flooding of 1,900 square miles in low-lying coastal areas, affecting 1.4 million people.

Thus, the intersection of a number of factors makes for a critical scenario for SIDS in the evolving context of climate change and trade in international services, especially tourism.

### Policy responses

At the international level, developing countries, and particularly SIDS, recognise their state of vulnerability to climate change and therefore urge a focus on adaptation and support from those parties responsible for climate change, which need to take a lead on mitigation. At the same time, SIDS are also advancing a proactive agenda looking at adaptation and mitigation in tandem, urging the development, dissemination and transfer of efficient energy technologies that can assist developing countries in mitigating the effects of climate change. Overall, developed and developing nations tend to respond to the threat of climate change in a way that is consistent with international consensus (as expressed through the UNFCCC), where nations take measures to protect the earth's ecological system through policies and instruments that reflect their common but differentiated responsibility.

SIDS also acknowledge their responsibility to collect data on the effects and implications of climate change and sea-level rise, to improve public understanding of the issue, to promote more efficient energy use and to formulate their own comprehensive adjustment and mitigation policies to be able to cope with and respond to climate change.

*Perhaps one of the most direct and legally-binding approaches that a group of nations can adopt is to sign a trade agreement that addresses issues closely related to climate change.*

Further, SIDS cooperate at the regional level to respond to the climate change challenge, and work with the international aviation and cruise line industries. For example, the Caribbean Community Climate Change Centre serves to provide research and information to the Caribbean Community. At the industry level, the International Air Transportation Association (IATA) has adopted a four-pronged approach to reducing greenhouse gas emissions, focusing on technological advancements, improved operations and infrastructure, and economic incentives. The cruise ship industry has also started taking its own steps to improve sustainability. SIDS also work with NGOs that seek to promote sustainable tourism, in order to

improve their climate profiles. WWF, for example, recognises that tourism and conservation are compatible and seeks to give tourists useful hints on how they can enjoy their vacation in an environmentally friendly way.

Only a handful of measures to address climate change also seek to safeguard the interests of the tourism industry. However, some multilateral environmental agreements (MEAs) have the potential to serve the interest of the tourism industry, particularly in SIDS. These include MEAs that focus on conservation, such as the Convention on International Trade in Endangered Species, which helps preserve valuable tourist attractions and the basis for eco-tourism.

### From vulnerability to resilience

In order to move from a position of vulnerability and dependence to one of resilience, policy tools within the international trade arena can be used to boost the capacity of SIDS. The services sector, and in particular tourism, represent a genuine opportunity for SIDS to expand their economic activity while earning foreign currency.

In addition, SIDS can seek to liberalise trade in energy efficient goods in a bid to decrease their collective carbon footprint. This policy could include both tax incentives and zero-tariff measures for the import of environmentally friendly products. The trade arena could also facilitate the transfer of technologies that contribute to the development of capacity among service providers. This can indeed be particularly useful as practitioners from SIDS within the tourism industry (and other industries as well) sometimes find the cost of technological devices to be prohibitive.

Technology transfer can also be important for environmentally-friendly technologies for local industries, and meteorological technology to inform tourists and industry officials of impending bad weather, especially severe natural hazards, enabling officials to take pre-emptive action to ensure the safety of citizens and tourists.

Perhaps one of the most direct and legally-binding approaches that a group of nations can adopt is to sign a trade agreement that addresses issues closely related to climate change. An example can be found in the Economic Partnership Agreement (EPA) between the Caribbean Community and the Dominican Republic (CARIFORUM) and the EU. The EPA represents a comprehensive trading arrangement between an archipelago of SIDS and a group of developed nations. In addition to expressing the overall objective of trade for sustainable development, the agreement contains a chapter on the environment. Additionally, the EPA contains provisions pertaining to environmental cooperation through technical assistance, trade in natural resources and public education campaigns to foster trade in environmental goods and services.

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<sup>1</sup> Ramón Bueno, Cornelia Herzfeld, Elizabeth A. Stanton, and Frank Ackerman. *The Caribbean and Climate Change: The Costs of Inaction*. Tufts University, May 2008. Available at <http://ase.tufts.edu/gdae/Pubs/rp/Caribbean-full-Eng.pdf>.

# Enhancing market access for biofuels: What role for environmental goods negotiations?

By Mahesh Sugathan

The Doha Declaration calls for the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services (Para 31 (iii)). The question arises as to whether this mandate applies to biofuels, which are considered to be environmentally preferable to fossil fuels

The debate on biofuels has to be considered in relation to the system of product classification. Both ethanol and biodiesel are 'ex-outs,' classified under the broader HS-6 digit categories that also contain other products. While biodiesel is an industrial product (as it is produced through a chemical process called transesterification) and classified under HS code 382490 (that includes products, preparations and residual products of the chemical or allied industries not elsewhere specified), ethanol is classified as an agriculture product under HS code 2207. Ethanol is traded under HS code 2207, which covers un-denatured (HS 2207 10) and denatured alcohol (HS 2207 20).

Any reduction commitments on tariffs and non-tariff measures for ethanol and biodiesel would need to be reflected under broader commitments in negotiations on agriculture and non-agricultural market access (NAMA). They could also be singled out for fast track liberalisation in the context of negotiations on environmental goods and services (EGS). However, WTO Members have generally taken a cautious approach under the EGS mandate, given certain technical considerations and strategic concerns.

Members have principally looked at modalities for the identification of goods in the EGS discussion at the Committee on Trade and Environment (CTE). Introducing ethanol into the discussions would imply a *de facto* acceptance that environmental goods regarded as agricultural also fall under the Para 31 (iii) mandate. This has never been universally accepted, although the mandate does not explicitly exclude a consideration of agricultural goods either.

Nonetheless, certain WTO Members have proposed considering biofuels in EGS negotiations. Brazil made a submission in 2005 (TN/TE/W/59) proposing that the definition of environmental goods cover renewable energy products, including ethanol and biodiesel, and also cleaner technologies, such as "flexi fuel" engines and vehicles considered environmentally efficient products. In a later informal submission [JOB (07)/146] in 2007, Brazil stated that "biofuels are essentially an environmental good."

However, neither Brazil nor any other developing country has formally proposed that ethanol be included as part of a 'list' or 'category' of environmental goods. Developing countries have largely considered it premature to venture into a discussion of specific products. First, they would like to see the perceived drawbacks of the so called 'list approach' (which is not the only approach on the table) - such as the dubious environmental relevance of many products and predominance of 'dual-use' goods having both environmental and non-environmental end-uses - addressed.

New Zealand and Canada had earlier proposed biodiesel for enhanced tariff liberalisation, with New Zealand proposing to include methanol (which can be made from biomass and is a component in biodiesel manufacture) as an environmental good.

In 2007, a group of countries sympathetic to EGS liberalisation proposed an abbreviated list of 153 products for tariff reduction. In this revised list, both methanol and biodiesel were dropped - reportedly because the group decided to leave out the entire category of chemicals. Trade sources indicate, however, that biodiesel and ethanol are particularly sensitive to the EU and US due to massive domestic support - both political and financial - for their production.

Countries have indeed expressed concern that opening up the environmental goods basket to biofuels would bring up the contentious issue of their subsidisation. Many Members feel that the proper forum to deal with industrial subsidies (falling under the Agreement on Subsidies and Countervailing Measures) would be in the rules negotiations and agriculture subsidies within negotiations on agriculture.

In addition, given that both biodiesel and ethanol are ex-out products under six-digit categories, WTO Members would have to decide whether to liberalise the 6-digit category as a whole or only the ex-out. If they chose the latter, they would need to ensure that customs authorities at the national level either harmonise HS-codes, or at least harmonise product descriptions, to avoid confusion regarding products subject to a tariff waiver.

Most developing countries generally favour liberalising biofuels trade, although they have not taken an official position on possible modalities within environmental goods negotiations. Some developing countries informally mention that even if they do not foresee exporting biofuels per se, their feedstock exports to countries producing biofuels might increase.

Adding to their caution, countries have reacted to the bad press biofuels have gotten due to potential negative impacts on land-use and food prices. In addition, the environmental "friendliness" of biofuels would depend not only its end-use, but also on how it was produced. However, considering this aspect would bring up the issue of Process and Production Methods (PPM), which most Members are keen to avoid. Further liberalising only biofuels produced in an environmentally sound manner would imply a common agreement on standards and certification as the basis for undertaking liberalisation, given that the same biofuel (produced using different methods) cannot be physically distinguished by customs.

Discussions on EGS have been stalling due to the overall deadlock in the Doha Round. However, when the round is brought to a conclusion, pertinent EGS issues will need to be speedily resolved following compromise in key areas. The biofuels issue will most likely be one of them.

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# BioRes interview: Tuna-dolphin three?

On 24 October, Mexico requested consultations under the WTO dispute settlement understanding regarding the legality of “dolphin-safe” labels for tuna products in the US. Mexico says these are construed in a way that effectively and unfairly keeps Mexican producers out of the US market. In order to get a better understanding of the issues underlying the case, BioRes talked to Mariano Gomezperalta Casali, General Counsel for Foreign Trade Negotiations, Secretary of Economy, Mexico.

**BioRes:** *What are the concerns and motivations underlying your request for consultations?*

**Gomezperalta Casali:** The Mexican tuna fleet has incurred enormous expense in paying to have independent observers on board each vessel and taken other actions in the Eastern Tropical Pacific (ETP) to ensure that no dolphins are harmed. No fishing fleet in any other region of the world's oceans makes such an effort.

The fishing procedures and regulatory oversight established through the International Dolphin Conservation Program (IDCP), under which the Mexican tuna fleet operates, have reduced dolphin mortality in the ETP from over 130,000 per year in the 1980s to virtually none in recent years. The US fleet moved to other ocean regions to avoid the burdens of the IDCP. The Mexican fleet is primarily responsible for the investments and innovations that have largely eliminated dolphin mortalities from fishing in the ETP.

Mexico's fishing methods comply with the dolphin-protection guidelines accepted internationally, including by the US. The rules imposed by the US in its domestic market are more restrictive than those agreed internationally, are discriminatory, and lack a scientific basis.

**BioRes:** *How does this request for consultations relate to the Tuna-Dolphin cases under the GATT back in the 1990s?*

**Gomezperalta Casali:** This request for consultations addresses different measures than those subject to the 1990s GATT disputes.

**BioRes:** *The request for consultations seems to focus mainly on the US Department of Commerce dolphin-safe label. Is this correct? Reportedly, 90% of tuna importers require the private, Earth Island Institute-run dolphin-safe label. Are you also seeking to target this private label?*

**Gomezperalta Casali:** The request for consultations focuses on the U.S. requirements related to the use of the dolphin-safe label, whether official or alternative.

**BioRes:** *Does this request relate back to discussions in either the Technical Barriers to Trade (TBT) or Sanitary and Phytosanitary Measures (SPS) Committee on private-sector labelling, and different types of eco-labelling specifically?*

**Gomezperalta Casali:** This request is independent from the work conducted by WTO Members on labelling in the TBT and SPS Committee.

**BioRes:** *What systemic implications do you see regarding a possible Dispute Settlement Understanding (DSU) case on labelling?*

**Gomezperalta Casali:** Mexico has initiated this case to address specifically the US law on the use of the dolphin safe label and is not proposing to address labelling systemically.

## Background

### Spawn of tuna-dolphin

Tuna-dolphin is back. On October 24th, Mexico requested WTO dispute settlement consultations with the US claiming that its tuna exports are being discriminated against by a US government sponsored “dolphin safe” labelling system. In a press release, Mexico's Economy Minister said the US labelling requirements lacked scientific support and could be in violation of several WTO rules. Mexico's request revives an issue that has been hotly contested by trade specialists, scientists, and environmentalists since its debut at the landmark tuna-dolphin cases of the GATT era.

### Background: Tuna-dolphin, son of tuna-dolphin

The trouble began in the 1950s when fishermen in the Eastern Tropical Pacific (ETP) began encircling groups of dolphins in purse seine nets in order to harvest the tuna that swam below them. This practice depleted dolphin populations to less than 35 percent of pre-purse seining levels according to population studies commissioned by the US Department of Commerce.

***"The Mexican tuna fleet has incurred enormous expense in paying to have independent observers on board each vessel and to ensure that no dolphins are harmed."***

In the name of dolphin conservation, The US imposed strict limits on dolphin kill rates for domestic fisheries and banned tuna imports from countries with higher average kill-rates. Furthermore, the embargo extended to tuna products from any intermediary country which imported tuna from a country with higher kill rates than the US.

Mexico, which suffered a major loss to its tuna exports, brought the US to the GATT dispute settlement body in 1991 and accused the US of violating the principals of non-discrimination (Art. XIII) and national treatment (Art. III) while imposing quantitative instead of tariff barriers to trade (Art. XI). Mexico also claimed that the US practice of labelling tuna imports as “dolphin safe” was an illegal discrimination because it was based on process and production methods (PPMs) rather than the product itself. A second case levied by the EU and the Netherlands followed suit in 1994 in which the same charges were made.

In both cases the US claimed that if it had inhibited free trade, it was justified in the name of environmental concerns, an exception outlined in Article XX of GATT. These cases were the first to test the legitimacy of using Article XX to defend restrictive trade measures.

*Since the perceived threat to the integrity of the US government label, the tuna industry has seen a proliferation of private labelling schemes.*

In both cases the panel ruled against the US and the article XX exception was not upheld. However, the panel declared that the US practice of labelling tuna as “dolphin safe” was justified since any competitive advantage it gives to US fisheries depends on consumers.

The panel rulings were never formally adopted. Instead, the US “settled out of court” with Mexico in bilateral negotiations over NAFTA. The embargos were eventually dropped in lieu of a US government sponsored “dolphin safe” labelling system that excludes tuna caught in purse seine nets.

### Protectionism or conservation?

But since the early days of tuna-dolphin, the US definition of dolphin safe seems more and more arbitrary. Through international agreements like La Jolla (1993), the Panama Declaration (1995), and the Agreement on the International Dolphin Conservation Program (1999), all of the countries that fish the ETP have taken measures to substantially reduce their dolphin kill rates to levels approaching zero.

A large part of Mexico’s fishing fleet still uses purse seine nets but new nets have been developed to allow dolphins to easily escape, and which are less likely to entangle dolphins. Mexico now requires independent onboard observers to verify that no dolphins are killed or injured during purse seine fishing expeditions. Since it can verify that no dolphins are killed, Mexico’s tuna exports qualify for an internationally agreed-upon dolphin safe label established by the Agreement on the International Dolphin Conservation Program (AIDCP). The US is a member of this agreement yet still does not allow a dolphin safe label to be used on any tuna imports caught using purse seine nets, even if no dolphins are killed.

Mexico argues that this is an unfair distinction, and that

national origin is the real target of the discrimination. All of the major US tuna processors buy only dolphin safe tuna products and Mexico claims that because of its inability to label its tuna as dolphin safe in US markets, it has lost more than a third of its tuna fleet.

### Science and politics

As party to the Panama Declaration, the US obligated itself to change its labelling system to include tuna caught by purse seining as long as independent, onboard observers verify that no dolphins have been killed or injured on that expedition. However, under US law, implementation of these changes is dependant upon the final findings of a study to determine if dolphin populations in the ETP are recovering. To the dismay of both politicians and dolphin lovers, the study’s findings were ambiguous: The study found that dolphin populations remained depleted at less than 35 percent of pre-purse seining levels, even though the reported kill had fallen below 0.1 percent for each dolphin stock. But without more evidence, scientists could not conclusively say why. Stress related harm done to dolphins through purse seining was just one suggested explanation, as well as the possibility of mother-calf separation. It was also suggested that observers might not be reporting all dolphin kills.

The secretary of the Department of Commerce, in attempt to make good on the US promise to adopt international dolphin safe standards, declared that the study provided sufficient evidence that purse seining does not hurt the dolphin population. Under US law, this statement would have allowed the label criteria to be changed. But environmental groups cried “nay”.

After 2 years of lawsuits brought by environmental groups, U.S. District Court for the Northern District of California rejected the attempt to weaken the dolphin safe standard. In his 24 years on the bench, US Federal Judge Thelton Henderson claimed he had “[never] reviewed a record of agency action that contained such a compelling portrait of political meddling.” The court found that the secretary’s final finding ignored the best scientific evidence available. The case was appealed and failed as recently as March 2007, rendering it impossible to loosen the labelling requirements under current US law.

### Private labelling schemes

Since the perceived threat to the integrity of the US government label, the tuna industry has seen a proliferation of private labelling schemes. In their public awareness campaigns environmental groups have attacked the government label for attempting to compromise its standards while at the same time developing their own certification and monitoring schemes. The largest tuna brands, including Starkist, Chicken of the Sea, and Bumble Bee, have declared that they would not buy purse seine tuna products even if the government labelling requirements were changed to include them. The Earth Island Institute reports that 90 percent of the world’s tuna canners hold similar convictions, refusing to sell tuna that has been caught using purse seine nets. Some experts wonder what Mexico’s purse seine fisheries hope to gain from a favourable WTO ruling considering that public opinion is already firmly set against them. While uncertainty looms about the future of EPT dolphin populations, Mexico’s purse seine fishing industry will have a difficult time gaining US market share no matter how the case concludes.

# Trade issues highlighted at IUCN Congress

The 2008 meeting of the International Union for the Conservation of Nature (IUCN) World Conservation Congress - the world's largest conservation event - saw discussion of a number of trade related issues, including labelling to ensure sustainable trade in medicinal plants, illegal wildlife trade, sustainable tourism and carbon trading.

From, more than met in Barcelona for the IUCN Congress. One of the most anticipated events of the 5-14 October congress - the release of the IUCN's updated Red List of Threatened Species, which undergoes major analysis every four years - stated that over a quarter of all mammals are now under threat of extinction.

The congress, which saw the attendance of 8,000 leaders from government, civil society, non-governmental organisations, and the private sector, strives to be a forum for all those concerned with conservation. Through dialogues, negotiations and, ultimately, resolutions, this year's Congress produced several trade-related developments.

## New labelling system for trade in medicinal plants

Signatory institutions to an international standard that promotes the sustainable management of wild plants used in medicines and cosmetics have agreed to create an industry labelling system that will allow sustainably harvested products to be easily identified.

The new international labelling system, which was endorsed by the parties to the International Standard for Sustainable Wild Collection of Medicinal and Aromatic Plants (ISSC-MAP), will primarily be used in the herbal products industry. More than 320,000 tonnes of medicinal and aromatic plants are harvested in the wild and traded annually and many are harvested unsustainably and in danger of extinction.

"Industry adoption of the standard will ensure sustainable use and equitable sharing of the world's wild plant resources," said IUCN Director General Julia Marton-Lefèvre. "This new agreement marks a significant step forward in the sustainable use of wild plants important to human health and well being."

## Illegal wildlife trade

The aforementioned Red List survey specifically targeted Vietnam and Cambodia which, according to the report, face an "empty forest syndrome". Endangered species are "getting vacuumed out of some areas where they were common," the report says.

Conservation experts say that illegal trafficking remains a serious concern. David Emmet, regional director of the Indo-Burma program at Conservation International, says that demand for endangered species from countries such as China is fuelling the black market. Two Cambodian species that are highly sought after for their use in medicine and traditional clothing have been newly classified as 'endangered' by the Red List this year.

Another one of the report's striking statistics revealed that 79 percent of primates in South and Southeast Asian now face extinction.

## New global standards for tourism services

Sustainable tourism also received international attention at the forum. Sustainability issues regarding tourism, an important source of revenue in many developing countries particularly in ecologically sensitive areas, were addressed in both economic and environmental terms.

A coalition of 27 organisations used the World Conservation Congress to launch its Global Sustainable Tourism Criteria (GSTC), a set of guidelines for sustainable practices in the tourism industry. The GSTC was developed over the past 15 months after review of more than 60 sets of criteria already being implemented around the globe.

The guidelines focus on four areas: maximising tourism's social and economic benefits to local communities, reducing negative impacts on cultural heritage, reducing harm to local environments, and planning for sustainability. The coalition also introduced its accreditation organisation for sustainable tourism certification programs, the Sustainable Tourism Stewardship Council (STSC).

## Carbon trading and indigenous populations

While many environmentalists have been applauding the likelihood of a comprehensive carbon trading scheme being incorporated into the future successor to the Kyoto Protocol, several indigenous groups now say that the commoditisation of carbon could deprive them of access to food, clothing and building materials if forests are bought up by investors. Locals also say that mapping out territories in a way that is fair to those whose livelihoods depend on them needs to be addressed.

Indigenous groups joined with 250 other representatives of business, trade unions, forestry companies, and governments at the Congress to issue a joint statement entitled, 'Beyond REDD: The Role of Forests in Climate Change'.

"The huge step is having a unified statement from businesses to indigenous groups," said Daniel Birchmeier, senior program officer for Switzerland's State Secretariat for Economic Affairs (SECO). "That can't be ignored."

Throughout the IUCN Congress, indigenous groups pushed for equitable representation in future climate negotiations as well as assurances that conservation efforts do not leave them marginalised.

"For forests to fully achieve their potential to address climate change their governance must be improved and processes established to empower disenfranchised people, including Indigenous Peoples," the document reads. "The importance of mapping and securing the tenure, property, and carbon rights of Indigenous Peoples, family forest owners, and local communities, and devising effective mechanisms for the distribution of benefits, cannot be overstated."

IUCN's World Conservation Congress was launched in 1948 and takes place once every four years.

# Geopiracy: The unjustifiably false attribution of location in the visual arts

By Joseph Henry Vogel, Camilo Gomides, Janny Robles and Carlos Muñiz

Have you ever seen a movie attributed to one place but filmed in another? Film buffs will recall *Tarzan of the Apes* (1918) or *Gone with the Wind* (1939) where, respectively, Morgan City, Louisiana was passed off as Africa and Hollywood, California, the antebellum South. Despite the ease of filming on location today, false attribution still happens. The 2008 releases *Vantage Point* and *Indiana Jones* passed off Mexico as Spain, and the Yucatán as the Amazon. As we write from Puerto Rico, the town of Bayamón is being filmed in *Men who Stare at Goats* as if it were Iraq.

“The Geopiracy Project™” is an interdisciplinary and international endeavor to cull films from the Internet Movie Database ([www.imdb.org](http://www.imdb.org)) and systematise them according to a typology of false attribution. The ultimate goal of the Project is to quantify the harm inflicted while suggesting *sui generis* legislation in Geographic Indications for the visual arts.

False attribution of location has four categories by which any film can be classified scene by scene.

- Type I: movies which claim to be based on a “true story” but cite a different location from where filmed.
- Type II: movies which are fictional and cite a different location from where filmed.
- Type III: movies which are fictional and invent a fictional name for the location.
- Type IV: movies which are either fictional or based on a “true story,” filmed on location, but through splicing mix locations as if they were one place.

We emphasise that justifications sometimes exist for the false attribution of location: prohibition (legally impossible to film there), *de facto* censorship (bureaucratically impossible), satire (fair use), accuracy (period settings), endangerment (likely threats), and phantasmagoria (magical plot). Recent examples would include *Dirty Dancing: Havana Nights* (2004), *Water* (2005), *Borat* (2005), *La Veuve de Saint Pierre* (2000), the aforementioned *Men Who Stare at Goats* (to be released in 2009) and *Lord of the Rings* (2001). Although many such examples exist, we daresay that most directors falsely attribute because falsification is profitable and the parties harmed are unorganised.

The harm inflicted lends itself to economic analysis. For example, the stunning landscapes of *Brokeback Mountain* (2005) were not of Wyoming but of Alberta, Canada. Moviegoers-cum-tourists will be disappointed as Alberta loses the intended revenues. Film tourism is big business. If the moviegoer happens to hail from Wyoming or Alberta, he or she will disengage from the film with every pan shot. While such harms are commensurable (estimates of tourist dollars and regional box office), others exist which are difficult or impossible to measure. We think of descendents of the Mohican Nation as they watch *The Last of the Mohicans* (1992), filmed in the Smoky Mountains of North Carolina about their ancestral home in upstate New York.

To measure the multiple harms inflicted, we first need survey data:

- (1) What percentage of moviegoers know that the location is disclosed in the ending credits of a film?

- (2) What percentage of films are shown until the ending credits and not truncated by the projectionist?

- (3) What must be the visual acuity of a moviegoer to decipher the credit from his or her seat?

- (4) What level of speed-reading must the moviegoer command in order to comprehend the fleeting projection of the credited location?

- (5) How are the filming locations distinguished in the credits when there are multiple scenes with multiple locations?

As The Geopiracy Project™ constructs a database and answers the empirical questions, we hope that the political will emerges for a *sui generis* legislation that makes faithful attribution of location the default position in the visual arts.

Joseph Henry Vogel is Professor at the Department of Economics, Camilo Gomides is Associate Professor and Janny Robles Master's Candidate the Department of Foreign Languages and Carlos Muñiz is Doctoral Candidate at the Department of Education, all at the University of Puerto Rico-Rio Piedras, USA.

## Additional resources

“On the Trail of James Bond’s Jamaica: A tour of filming locations used in ‘Dr. No’ and ‘Live and Let Die’ on the island where Ian Fleming wrote the novels.” David G. Allan and Vijai Singh, *The New York Times*. November 7, 2008. <http://video.nytimes.com/video/2008/11/07/travel/1194832287632/on-the-trail-of-james-bond-s-jamaica.html>

“Geopiracy as an Emerging Issue in Intellectual Property Rights: The Rationale for Leadership by Small States” by Joseph Henry Vogel, Janny Robles, Camilo Gomides, and Carlos Muñiz, 21 *Tulane Environmental Law Journal* (Spring 2008), 391-406. For Spanish and Portuguese translations, <http://www.biopirateria.org/otrosdocs.php>; for permission to translate and publish in other languages, write [josephvogel@usa.net](mailto:josephvogel@usa.net).

“How to Join The Geopiracy Project™” by Joseph Henry Vogel, Janny Robles, Camilo Gomides, and Carlos Muñiz. Working Paper, Department of Economics, University of Puerto Rico-Rio Piedras, September 24, 2008, <http://economia.uprrp.edu/>.

“Précis of *The Museum of Bioprospecting, Intellectual Property, and the Public Domain: A Place, A Process, A Philosophy*” by Joseph Henry Vogel, Maria Jose Moreno, Manuel Ruiz, Tomme Young, Stephen B. Brush, Charles R. McManis, Valentina Delich, Camilo Gomides, and Carlos Muñiz. *International Journal of the Inclusive Museum*. Volume 1, Issue 2, 2008, pp.111-126. <http://ijz.cgpublisher.com/product/pub.177/prod.28>



# Technology development and transfer in Poznań: A brief overview of proposals to date

By María Julia Oliva

Promoting technology development and transfer has proved an important yet elusive topic in the climate context, as in many other international discussions. It is clear that addressing climate change will require technological innovation and the rapid and widespread transfer of clean technologies. The transfer of environmentally sound technologies to developing countries also has an important role in reflecting the common but differentiated responsibilities between countries with respect to this global challenge.

The Bali Action Plan, which charts the course for current negotiations on climate change, recognises that enhanced action on technology development and transfer will be central to the full, effective, and sustained implementation of the UN Framework Convention on Climate Change (UNFCCC) up to and beyond 2012. Yet meetings of the ad hoc Working Group on Long-term Cooperative Action (AWG-LCA) have seen few proposals and limited debate on the specific features of a framework for enhanced action on technology.

## G77 and China proposal: An essential reference

Discussions are set to get more focussed, however, during the upcoming session of the AWG-LCA, which will take place in Poznań from the 1-12 December. A G77 and China proposal, put forth on the last day of the previous AWG-LCA session, provides detailed suggestions for a new UNFCCC structure charged with accelerating the development and transfer of technology. The proposal addresses the rationale, guiding criteria and institutional arrangements that would coordinate all aspects of cooperation on technology research, development, diffusion, and transfer.

These concrete propositions, as well as its significant political support, will make the G77 and China proposal an essential reference - if not the basis - for the negotiations on technology development and transfer. Nevertheless, the focus on institutional mechanisms has shown to be controversial, and other countries have fundamentally different approaches to the issue of technology, as evidenced by previous discussions and various proposals to the AWG-LCA.

## Numerous issues to cover in Poznań

The development and transfer of technology is a complex and multidimensional process, as the number of issues addressed by proposals and discussions on the topic make evident. The Bali Action Plan calls for consideration of several possible measures, including the removal of obstacles to, and provision of incentives for, the development and transfer of technology to developing country Parties and cooperation on research and development of current and new technologies.

In addition, the work of the AWG-LCA is meant to build on the

range of technology-related efforts and initiatives in other UNFCCC bodies, particularly the Expert Group on Technology Transfer (EGTT). Discussions on technology development and transfer, therefore, have addressed a variety of issues, including performance indicators, enabling environments, multilateral funds, a variety of institutional mechanisms, and intellectual property rights.

## Concerns of developing countries

For developing countries, a fundamental concern seems to be creating an institutional architecture that will coordinate efforts towards technology development and transfer, as well as securing the financial support needed to make these efforts successful. Ghana, in its submission on technology to the AWG-LCA, for instance, highlights “the need to establish a technology development and transfer board with a legal personality to oversee and supervise the entire cycle of technology development in all countries.” Ghana also calls for a multilateral technology fund to enable developing countries to have “direct access to funding,” as well as to be involved “during the stages of identification, definition and implementation of relevant technology development programmes or processes.”

Institutional structure and financing are also central issues in the G77 and China proposal. Indeed, the proposal involves a two-pronged mechanism, formed by an Executive Body and a Multilateral Climate Technology Fund, both operating under the Conference of the Parties. The Executive Body would be formed and supported by a Strategic Planning Committee; various Technical Panels; a Verification Group to control the financial and technological contributions; and a Secretariat.

The starting point for its work would be a Technology Action Plan, updated every three years, which would address all stages of the technology cycle and guide the financial support provided by the Multilateral Climate Technology Fund. This proposed fund would be formed by new and additional contributions by Annex II Parties, and would support, as determined by the Executive Body, activities such as capacity-building; development of manufacturing facilities for environmentally sound technologies; and procurement of low-greenhouse gas emission technologies.

## Parties remain split on IP

Another prominent issue in the G77 and China proposal is intellectual property, which has been a highly controversial topic in technology discussions in the UNFCCC. The G77 and China proposal submits that the Technology Action Plan should consider technologies in the public domain, in relation to which an international cooperation system might be useful to ensure lowest cost options, as well as patented technologies, which should be made affordable “including through measures to resolve the barriers posed by intellectual property rights and addressing compulsory licensing of patented technologies.”

*“the existing system does not match the increasing needs for the development and deployment of climate-related technologies”*

China, moreover, has elaborated on the issue of intellectual property rights in a later submission to the AWG-LCA, which states that “the existing [intellectual property rights] system does not match the increasing needs” for the development and deployment of climate-related technologies. In particular, China notes that compulsory licensing and other legal and regulatory measures designed to curb the “negative effects of monopoly powers” should be put in place as part of efforts to implement the UNFCCC. This later submission by China also complements its joint proposal with the G77 on institutional and financial arrangements, including for instance on the role of public private partnerships in technology transfer.

## Developed countries looking for private sector involvement

Developed country submissions have generally taken a different approach, focusing more on technology collaboration and the role of enterprises as the entities ultimately responsible for technology development and dissemination. Australia, for example, emphasises the role of the private - rather than public - sector in the technology cycle, and calls for a focus on “technology cooperation” as it relates to policies that facilitate the role of the key enablers of technology diffusion.

Japan notes that efforts to accelerate international cooperation on technology must not hamper the incentives of the private sector, so that “adequate considerations have to be made for several important points including the protection of intellectual property, [and] the prevention of unintended leakage of technology.”

New Zealand agrees that “governments need to recognise the important role of the investment/business community in developing and deploying technology, and make full use of the range of policy support measures available to them.” In this regard, New Zealand suggests that the most effective policies may be those not actually discussed in the technology context, such as “the development of an effective global agreement on climate change that establishes a price on carbon to apply as broadly as possible, and sends a clear signal to the global investment community to set up and direct resources towards technology development and innovation.”

Submissions by developed countries also tend to consider the roles of both developed and developing countries in regards to promoting the development and transfer of climate-related technologies. The European Union, for example, recognises that developed countries need to do more by supporting existing and new financing instruments, but calls on developing countries to - in turn - adopt appropriate policies and measures to create enabling environments, in particular for attracting domestic and international investment. Japan acknowledges that technology-related efforts are to be undertaken primarily by developed countries as a part of “common but differentiated responsibilities and respective capabilities,” but notes that opportunities for international collaboration posed by innovative technology development should be grasped, including by sharing of technology development roadmaps and strengthening frameworks for cooperation.

The Australian submissions goes further, calling into question the North-South approach to technology discussions, noting that “as a rule, Australia imports wind turbines from China, and not the reverse,” and that “the three countries in the world with the highest ratio of high technology exports were the Philippines (71% of exports), Singapore (57% of exports) and Malaysia (55% of exports).”

## Foundation present but long road ahead

Despite the limited discussion having taken place to date on long-term cooperation on the development and transfer of climate-related technologies, proposals to the AWG-LCA show there is a foundation for more concrete and result-oriented discussions. Indeed, several of the topics addressed by these proposals have already been identified as essential elements of an agreed outcome of technology.

In the High-level Conference on Climate Change and Technology Development and Transfer that took place in November 2008 in Beijing, China, the Executive Secretary of the UNFCCC noted that issues such as a new technology mechanism, increased private sector involvement, research and development, diffusion and transfer of technologies, and intellectual property will need to be considered in the post-2012 climate regime.

*“...the proposals that have been tabled reveal radically different approaches to technology development and transfer.”*

At the same time, the proposals that have been tabled reveal radically different approaches to technology development and transfer. Without a basis for reconciling these different positions, even if the G77 and China proposal focuses discussions in the AWG-LCA, there is still a long way to go for a successful outcome for the Poznań meeting and an agreed outcome on technology.

*Maria Julia Oliva is Senior Programme Officer, Trade, Environment and Natural Resources at ICTSD*

# ICTSD update

## Intellectual property and the transfer of climate-related technologies

While technology is often pointed to as a driving force of greenhouse gas emissions, it is also critical to meeting the challenges of climate change. That is why the development and transfer of technology has now been recognised as an essential aspect of the negotiations towards a post-2012 global climate agreement and it is a key pillar of the Bali Action Plan.

When Parties to the UN Framework Convention on Climate Change (UNFCCC) met for COP-13 last year in Bali, an Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA) was launched to facilitate cooperation on matters such as establishing a framework for enhanced technology transfer. The Expert Group on Technology Transfer (EGTT) also received a renewed mandate to advance the development, deployment, adoption, diffusion, and transfer of environmentally sound technologies to developing countries.

While both developed and developing countries acknowledge the need for technology transfer, the form and focus of collaboration remains unclear. It has become increasingly obvious that more information and ideas will be needed before Ministers can produce something tangible at the December 2009 meeting in Copenhagen, however. ICTSD is working to bridge these gaps by creating space for dialogue and through a joint study that looks at the role of patents in the development and transfer of technologies for addressing climate change.

Technological change offers important possibilities for reducing future emissions and eventually stabilising atmospheric concentrations of greenhouse gases. In long-term emission scenarios analysed by the Intergovernmental Panel on Climate Change (IPCC), technology showed the potential to significantly reduce future greenhouse gas emissions by improving technology efficiencies, introducing less carbon intensive sources of energy, and further developing carbon-free renewable energy sources.

There is still significant uncertainty, however, as to the most effective means to provide incentives for the rapid development and adoption of clean technologies. In particular, governments, experts and other stakeholders have called for additional research on the role of intellectual property (IP) in facilitating or hindering the development and dissemination of clean energy technologies.

On 4 June 2008, ICTSD organised an informal consultation and a side-event with a select group of experts under an Initiative on Climate Technology and Trade (ICTT). The purpose of the initiative was to look at the obstacles and potential points of intervention to help promote the transfer of climate-related technology. The initiative also sought to generate solutions-focused and policy-oriented outcomes that could be fed into the work of the relevant bodies dealing with climate change technology within the UNFCCC and other climate-related processes.

ICTSD is following up on the results of this meeting with a joint study with the UN Environment Programme (UNEP) and the European Patent Office (EPO). By building on the three institutions' initial work on climate-related technologies and specific areas of expertise, the project will advance the understanding of the role of patents in promoting access to clean technologies, and thus provide input into ongoing discussions on technology transfer in the context of the UNFCCC.

In general, the joint study aims to achieve three goals. First, it will provide analysis of patent trends and their implications for access to clean technologies in selected technological fields. Second, it will develop a methodology for the analysis of the impact of patent trends in the development and dissemination of clean technologies. Finally, the study will feed into ongoing international discussions and initiatives on climate change technologies.

In order to facilitate the analysis of the links between climate-related technologies and factors such as IP rights, ICTSD has built on existing identification of relevant technologies through technology mapping studies. These studies provide an overview of climate-mitigation technologies and goods within the various sectors identified by the IPCC.

Thus, they offer a broad view of technologies that are commercially available today as well as technologies that need another 5 to 10 years before commercialisation. To date, two studies - one focusing on the energy supply sector and another looking at the residential/building sector - have been completed and will provide the basis for the joint study on patents and clean technologies.

Studies on clean technologies in the past have looked primarily at industry characteristics and trends, focusing only on limited patent data. The additional quantitative and qualitative analysis offered by the current study will greatly enhance the existing body of knowledge on the links between patents and clean technologies.

In addition to this joint study, ICTSD has also commissioned two papers related to IP and technology transfer. The first will draw lessons from the global policy development on IP and public health. The second will analyse the potential role of new models of innovation in promoting innovation and technology transfer to address climate change.

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# Bridges BioRes

## Upcoming events & resources

### UPCOMING EVENTS

#### ICTSD EVENTS AT POZNAN

- 2 December, 10:30-12:30. CLIMATE CHANGE MITIGATION TECHNOLOGIES IN THE ENERGY SUPPLY AND BUILDINGS SECTOR: TRADE REALITIES AND IMPLICATIONS FOR ACCESS TO TECHNOLOGIES. Location: EU Pavilion.
- 5 December, 15:30-17:30. A POST-2012 TECHNOLOGY AND FINANCE FRAMEWORK: OPPORTUNITIES AND CHALLENGES. Location: CCTV2.
- 9 December, 10:00-18:00. CLIMATE CHANGE - THE ROLE OF FOOD AND AGRICULTURAL TRADE. By invitation only - please contact Cécile de Gardelle [cdegardelle@icstd.ch](mailto:cdegardelle@icstd.ch).

#### OTHER SIDE EVENTS AT POZNAN

- 2 December 2008, 18:00-19:30. PRINCIPLES AND PROCEDURES FOR TECHNOLOGY TRANSFER MECHANISMS UNDER THE UNFCCC. Organised by the Center for International Environmental Law (CIEL). Location: White-tailed Eagle.
- 4 December, 13:00-15:00. SUPPORTING TECHNOLOGY FINANCE, DEPLOYMENT AND INNOVATION IN DEVELOPING COUNTRIES (JOINT E3G & NRDC). Organised by the Natural Resources Defense Council (NRDC). Location: Fox.
- 4 December, 19:30-21:00. CDM REFORM: CER DISCOUNT & DEMAND-SIDE ENERGY-EFFICIENCY IMPROVEMENT. Organised by the German Emissions Trading Association (BVEK) Location: Wild Sheep (BINGO).
- 5 December, 9:00-10:30. REDD STRATEGIES FOR HIGH-CARBON RURAL DEVELOPMENT. Organised by the International Centre for Research in Agroforestry (ICRAF). Location: Aesculapian Snake.
- 5 December, 15:30-17:30. IMPLEMENTING AND ACCELERATING LOW CARBON TECHNOLOGY DEPLOYMENT - LESSONS FROM THE WORK OF CTI. Organised by the International Center for Environmental Technology Transfer (ICETT). Location: White-tailed eagle.
- 6 December, 13:00-15:00. TECHNOLOGY TRANSFER, THE IP SYSTEM AND CLIMATE CHANGE: CHALLENGES AND OPTIONS. Organised by the United Nations Industrial Development Organisation (UNIDO). Location: Aesculapian snake.
- 6 December, 18:00-19:30. POST 2012 - INTERNATIONAL ACTION SUPPORTING DOMESTIC ACTION. Organised by the International Emissions Trading Association (IETA). Location: Wild sheep (BINGO).
- 8 December, 11:00-12:30. TRADE AND INVESTMENT POLICY, TECHNOLOGY TRANSFER, AND CLIMATE CHANGE: SUSTAINABLE DEVELOPMENT NEXUS. Organised by the International Institute for Sustainable Development (IISD). Location: White-tailed eagle.
- 8 December, 13:00-15:00. TECHNOLOGY DEVELOPMENT AND DEPLOYMENT TO ADDRESS CLIMATE CHANGE. Organised by the International Chamber of Commerce (ICC). Location: Grebe.
- 8 December, 15:30-17:30. REDD, RIGHTS & WRONGS: EXPOSING FALSE SOLUTIONS & EXPLORING WHAT IS NEEDED TO MAKE REDD WORK. Organised by Rainforest Foundation UK (RFUK). Location: White-tailed eagle.
- 10 December, 13:00-15:00. SCALING UP FINANCING AND MARKET MECHANISMS TO MEET THE MITIGATION CHALLENGE. Organised by the United Nations Environment Programme (UNEP). Location: Swan.
- 10 December, 19:30-21:00. CAPTURING TRADE, INVESTMENT AND DEVELOPMENT OPPORTUNITIES UNDER THE CLIMATE CHANGE REGIME. Organised by the United Nations Conference on Trade and Development (UNCTAD). Location: Fox
- 11 December, 18:00-19:30. TECHNOLOGY TRANSFER AND DEVELOPMENT ISSUES FOR DEVELOPING COUNTRIES. Organised by the Consortium for Trade and Development (CENTAD). Location: Grouse (ENGO).
- 11 December, 19:30-21:00. TRANSFORMING THE GLOBAL WOOD TRADE TO SUPPORT REDD AND FIGHT ILLEGAL LOGGING. Organised by the Environmental Investigation Agency (EIA). Location: Grouse (ENGO).

### RESOURCES

#### ICTSD RESOURCES

FISHERIES ASPECTS OF ACP-EU INTERIM ECONOMIC PARTNERSHIP AGREEMENTS: TRADE AND SUSTAINABLE DEVELOPMENT IMPLICATIONS. By Liam Campling. ICTSD Fisheries, Trade, and Sustainable Development Series, Issue Paper No. 6 (October 2008). <http://ictsd.net/i/publications/33418/>

IMPLICATIONS FOR BRAZIL OF THE JULY 2008 DRAFT AGRICULTURAL MODALITIES. By André Meloni Nassar, Cinthia Cabral da Costa and Luciane Chiodi. ICTSD, November 2008. <http://ictsd.net/downloads/2008/11/brazil.pdf>

IMPLICATIONS FOR JAPAN OF THE JULY 2008 DRAFT AGRICULTURAL MODALITIES. By Kazuhito Yamashita. ICTSD, November 2008. [http://ictsd.net/downloads/2008/11/agriculture\\_japan\\_final.pdf](http://ictsd.net/downloads/2008/11/agriculture_japan_final.pdf)

IMPLICATIONS FOR MAURITIUS OF THE JULY 2008 DRAFT AGRICULTURAL MODALITIES. By Gowreeshankursing Rajpati. ICTSD, November 2008. [http://ictsd.net/downloads/2008/11/mauritiuspaperweb\\_final-ab-edits.pdf](http://ictsd.net/downloads/2008/11/mauritiuspaperweb_final-ab-edits.pdf)

#### OTHER RESOURCES

ILLEGAL LOGGING: LAW ENFORCEMENT, LIVELIHOODS, AND THE TIMBER TRADE. By Luca Tacconi (Earthscan, October 2008). <http://www.earthscan.co.uk/?tabid=21115>

BEST PRACTICES FOR ORGANIC POLICY: WHAT DEVELOPING COUNTRY GOVERNMENTS CAN DO TO PROMOTE THE ORGANIC AGRICULTURE SECTOR. United Nations, New York and Geneva, 2008. [http://www.unep-unctad.org/cbtf/publications/Best\\_Practices\\_UNCTAD\\_DITC\\_TED\\_2007\\_3.pdf](http://www.unep-unctad.org/cbtf/publications/Best_Practices_UNCTAD_DITC_TED_2007_3.pdf)

WAYS FOR INDIGENOUS PEOPLES' GROUPS TO ADVANCE ADAPTATION CONCERNS AND SOLUTIONS THROUGH INTERNATIONAL FORA. Foundation for International Environmental Law and Development, August 2008. <http://www.field.org.uk/files/FIELDICCPaperAugFinal.pdf>

TRADE AND CLIMATE CHANGE: ISSUES IN PERSPECTIVE. Aaron Cosbey. (International Institute for Sustainable Development, Winnipeg, 2008). [http://www.iisd.org/pdf/2008/cph\\_trade\\_climate.pdf](http://www.iisd.org/pdf/2008/cph_trade_climate.pdf)

THE ROLE OF AGRICULTURAL BIOTECHNOLOGIES FOR PRODUCTION OF BIOENERGY IN DEVELOPING COUNTRIES. Food and Agriculture Organisation of the United Nations, 2008. <http://www.fao.org/biotech/C15doc.htm>

CLIMATE POLICY AND CARBON LEAKAGE - IMPACTS OF THE EUROPEAN EMISSIONS TRADING SCHEME ON ALUMINIUM. International Energy Agency, October 2008. [http://www.iea.org/textbase/papers/2008/Aluminium\\_EU\\_ETS.pdf](http://www.iea.org/textbase/papers/2008/Aluminium_EU_ETS.pdf)

THE ROLE OF DECENTRALIZED RENEWABLE ENERGY TECHNOLOGIES IN ADAPTATION TO CLIMATE CHANGE IN DEVELOPING COUNTRIES. South Centre, Geneva, August 2008. [http://smap.ew.eea.europa.eu/media\\_server/files/o/A/South\\_Centre.pdf](http://smap.ew.eea.europa.eu/media_server/files/o/A/South_Centre.pdf)

FROM AUTONOMY TO INTEGRATION? INTERNATIONAL LAW, FREE TRADE, AND THE ENVIRONMENT. By Anja Lindroos and Michael Mehling (Martinus Nijhoff Publishers, 2008). <http://www.ecologic.eu/modules.php?name=News&file=article&sid=2459>

ENVIRONMENTAL IMPACTS OF THE ASEAN-CHINA FREE TRADE AGREEMENT ON THE GREATER MEKONG SUB-REGION. International Institute for Sustainable Development, November 2008. <http://www.iisd.org/publications/pub.aspx?pno=1017>