

## **Negotiating biodiversity: COP 10's (modest) attempt to save life on Earth**

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Most of us have held a tiny tree frog in an outstretched palm. We've touched its cool rubbery skin, mottled and iridescent green, and felt its baggy throat balloon larger and larger until it seemed that it would burst. We have listened to its harsh croak — brrdup, brrdup — as its long webbed toes grasped our fingers. If you have such a memory, hold it tight to recount to your grandchildren, who may never encounter a real frog, thrumming with life.

Thirty percent of frogs and other amphibian species are now threatened with extinction, according to the latest International Union for the Conservation of Nature (IUCN) Red List of Threatened Species (2010a). They're not alone: as of December 2010, 18,788 of a total of 52,017 animal and plant species that scientists have assessed are endangered, the IUCN reports. This includes 21 percent of all assessed mammals, 12 percent of birds, 37 percent of freshwater fish and at least 23 percent of plant species. The current extinction rate is 100 to 1,000 times the "background" or historical rate; it may rise tenfold during the next century if present trends continue (Millennium Ecosystem 2005). Hoping to forestall further biodiversity loss, more than 7,000 delegates from more than 193 countries met in Nagoya, Japan, in October 2010 at the 10<sup>th</sup> Meeting of the Parties to the Convention on Biodiversity (COP 10). This paper reports on the meeting's objectives, procedures and outcomes, while offering a first-person account of the events that transpired.

### **"The sixth great extinction"**

The greatest drivers of what many scientists are calling "the sixth great extinction" (Ananthaswamy 2004) include loss or degradation of habitat, the depletion of natural resources, the introduction of alien species, pollution and climate change, all of which, of course, are mainly due to human activity. Tropical forests, for example, home to the greatest variety and proliferation of life of any ecosystem, were destroyed at the rate of 10.4 million hectares a year between 2000 and 2005, according to the Food and Agriculture Organization (quoted in Mongabay 2010). Although the rate of net loss has slowed in recent years, that of primary forests has continued to increase as more land is

converted for monoculture tree plantations.

There have been arguments on philosophical and economic grounds that current concerns about species extinction are misplaced. Developers may claim that aborting large-scale dam or development projects because of worries about a few endangered insects or plants may damage local economies and deprive residents of needed jobs and benefits (see Plater 1998). Animal rights activists, such as Tom Regan (2003), have asserted that as each animal is a subject of a life with intrinsic value, no single animal should be more worthy of life than another simply due to its membership in an endangered species, which is no more than an artificial grouping of individuals. Others have argued that just because something is rare does not imply that we have an obligation to save it: endangered animals have been unsuccessful at adapting to a changed environment so expending resources on conserving them rather than wildlife with better prospects is both financially wasteful and often ultimately futile. Philosopher Mark A. Michael (2005) has written that “[human beings] driving other species to extinction is perfectly natural. We just do what other species do, only much more efficiently. In some sense it would be unnatural for us to rein in our activities to an extent that our behavior had no effects or exerted no ecological pressures at all on other species” (p. 51). This would seemingly imply that modern species extinction can be regarded as commensurate with natural selection. However, most people would agree with environmental ethicist Holmes Rolston III when he writes that a species is “more real, more value-able than the individual, necessary though individuals are for the continuance of this lineage” (2003, p. 148).

Environmental philosopher Bryan Norton (1992) has described ecosystems as “self-organizing systems” that play a “crucial role in supporting human economic, recreational, aesthetic and spiritual values” and wrote that “no generation has the right to destabilize these systems” (p. 24). Central to the health of these systems, he maintains, is the goal of biological complexity, consisting of diversity both within and across habitats. Biological variability in terms of genes, species and ecosystems is now commonly known as “biodiversity” (Gaston and Spicer 2004).

For environmentalists and biologists, there can be no debate: biodiversity is necessary for life to continue. Say you have two species — sea urchins and parrot fish — that feed on the algae growing on coral reefs. This might seem functionally redundant but should the sea urchins be decimated by a virus, the parrotfish can take over and keep the coral from being smothered by algae. An abundance of plant and animal species, including food crop species, help safeguard ecosystems and food supplies from the effects of sudden diseases or natural disasters. In addition, healthy biodiversity can ensure the continuation of the ecological goods and services — from food and fiber to clean air and water — that are needed for human life and sustainable development. On September 22, 2010, UN Secretary General Ban Ki-moon told

delegates to the UN General Assembly in New York that addressing biodiversity loss “is not a luxury, it is a duty,” calling it necessary for governments to agree on a strategic plan to conserve biodiversity to meet the UN’s Millennium Goals for development and realize trillions of dollars in economic potential.

### **Approaching “tipping points”**

Governments agree on the need for conserving biodiversity but consensus breaks down on the specifics. In May 1992, a convention on biological diversity (CBD) was agreed to in Nairobi with the goals of conserving and using biodiversity sustainably and sharing equitably the benefits of utilizing genetic resources. In 2002, the parties to the CBD agreed on a strategic plan for conservation and sustainable use that would “achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth” (United Nations Environment Programme (UNEP) Convention on Biological Diversity 2002). As we have seen, not only did the plan clearly fail to reduce biodiversity loss in the ensuing eight years but the situation has become measurably worse. According to the Global Biodiversity Outlook 3, a CBD review of progress on the plan issued in May 2010, “massive further loss of biodiversity is becoming increasingly likely, and with it, a severe reduction of many essential services to human societies as several ‘tipping points’ are approached, in which ecosystems shift to alternative, less productive states from which it may be difficult or impossible to recover” (UNEP Convention on Biological Diversity 2010a, p. 10). Environmentalists have argued that an agreement setting forth clearly defined national targets for conservation, monitoring and enforcement provisions and financing mechanisms is needed to reverse these trends (Steve Smith, personal communication, October 18, 2010).

These developments set the stage for the 10<sup>th</sup> Meeting of the Parties to the Convention on Biodiversity (COP 10), held in Nagoya from October 18 to 29, 2010. Perhaps the IUCN said it best, labeling COP 10 “last-chance talks for life on Earth.” And because the most effective way to save specific species is to protect the biotic communities in which they live, a major objective was to halt biodiversity loss in the mountains, marine and coastal areas, forests, agricultural lands and dry and sub-humid lands. The delegates met to thrash out a strategic plan for 2011 to 2020 that would fix the percentage of total terrestrial and marine area that each nation should set aside for preservation and would create a framework for each government to create its own biodiversity targets. To ensure greater success than the 2002 plan, it included interim goals and resource mobilization components. Another of the 47 draft decisions for consideration established a mechanism for financing the strategic plan and other

measures (UNEP Convention on Biological Diversity 2010b), since underfinancing and a lack of official development assistance for biodiversity was one of the main reasons that the 2010 biodiversity target had not been achieved. Perhaps the most contentious element of the talks, however, was deciding how people can use biodiversity-derived resources sustainably and how the benefits of their use can be shared equitably. As CBD executive secretary Ahmed Djoghlaif (2010) said at a COP 10 pre-conference meeting in September:

It is estimated that natural capital constitutes 26 percent of the total wealth of low-income countries. Indeed, small-scale or informal sectors based on such activities as small-scale farming, animal husbandry, informal forestry [and] fisheries are collectively termed the 'GDP of the poor,' being the basement sectors from which most of the developing world's poor draw their livelihood and employment. If tabulated against conventional GDP, the contribution of ecosystem services comes to about 7 percent. However, if only the GDP of the poor is considered, the contribution of ecosystem services jumps to 57 percent.

One of the most vexing problems was regulating access to genetic resources, which refers to the material of living organisms containing functional units of heredity, and how to share the financial benefits of their commercial applications equitably. This issue — known as access and benefit-sharing or ABS — becomes especially complex when considering genetic resources such as indigenous plant and tree species that may be useful for therapeutic drugs or diet aids. The influenza drug Tamiflu, for example, contains Chinese star anise, a spice from a small evergreen tree grown in southwest China, as a primary ingredient. In part because tropical rainforests are particularly biodiverse, the bulk of such genetic resources are found in developing nations and are cultivated or used by indigenous peoples, often indigent ethnic-minority groups. The fact that major pharmaceutical companies from developed nations want to exploit these natural resources commercially has resulted in escalating north-south disputes. For example, the 1994 patenting of the use of the iconic neem tree of India, which was found to harbor an antifungal agent, sparked legal battles pitting the US government and an American agrichemical company against the government of India, resulting in the patent being revoked by the European Union in 2000 on behalf of outraged Indian farmers (Hoggan 2000). Many developed nations lack legal mechanisms for regulating ABS and differences between indigenous groups and their own governments are also on the rise. In general, however, developing nations argue that not only should they be empowered to grant permission to access these resources, but any resulting financial gains should be shared with local indigenous communities as well as the nations themselves. Unlike in other types of negotiations, such as trade talks or even climate-

change conferences, these stores of coveted natural capital give developing nations a formidable voice in conceiving a new international system to regulate ABS and in pushing industrialized nations to offer more financial assistance for biodiversity conservation.

The failure of the climate-change talks in Copenhagen in December 2009, although not solely attributable to a north-south divide, highlighted the seemingly irreconcilable gap between various bloc and national interests. Some journalists wondered if the increasing complexity and fragmentation of negotiations on climate change and other issues had not rendered it nearly impossible to achieve meaningful multilateral environmental agreements (for example, see Zadek 2009). Although earlier talks, such as the 1987 Montreal Protocol, mainly involved a limited number of governments (24 initially signed on in Montreal) and intergovernmental organizations (IGOs), CBD COP 10 brought together 193 government delegations, numerous IGOs and non-governmental organizations (NGOs), indigenous community representatives and many other groups. Steve Smith of Greenpeace International has said: “It’s too difficult to reach agreement — there are 193 countries and 193 opinions. Still, [COP 10] represents the best opportunity we have to get something done” (private communication, October 18, 2010).

Another factor clouding the prospects for success in Nagoya was the non-involvement of the United States, one of only three nations (the others being Andorra and the Holy See) never to have ratified earlier CBD agreements (see COP 10 Outcome Uncertain 2010). The US was present at Nagoya only as an observer state, begging the question of whether any other party had the clout needed to effect compromise agreements. There was also concern as to whether governments would be willing to agree on tough environmental regulations amidst the continuing global economic downturn, let alone come up with measures to fund them (see Christie 2008). Could agreement finally be reached on the “Big Three” — a strategic plan for conservation, an access- and benefit-sharing protocol and a financing mechanism?

With the sponsorship of a Kyoto-based English-language magazine, *Kyoto Journal*, I was able to receive media accreditation for COP 10 from the CBD Secretariat in Montreal. In the interests of sharing the experience of attending an international environmental conference, personal impressions from four separate visits to Nagoya will be included in this report.

**Week one**  
**Monday October 18**

## **Arrival**

Although Nagoya Station is papered with COP 10 posters, none of the station attendants I ask can advise me on which subway to take to reach the conference venue, the Nagoya Congress Center. I arrive at COP 10 at last, having negotiated innumerable subway-station staircases toting a suitcase and a bundle of 15 magazines for distribution to the delegates. After a sweaty 10-minute walk in the unseasonable heat from the nearest subway station and past a phalanx of unsmiling security guards, I finally reach the entrance ramp. I'm shown to a clerk, who issues me with a photo and media pass to hang from my neck at all times. After whisking through the empty, roped-off waiting areas in the security tents, I at last approach the airport-like security screening, where I'm asked to hand over my watch, wallet, PC and camera for scanning. A security official attempts to use my camera to take a photo of the table and a slight uproar ensues when the camera fails to function. Yet, after juggling the battery, we get the camera to work and, no longer seen as a bomb risk, I'm allowed to proceed through the walk-through scanner.

## **Orientation**

That first morning, a UNEP CBD Secretariat official, Erie Tamale, thoroughly explains the CBD negotiation process to me. He says that the goal is to receive consensus approval on every draft decision crafted by working groups in preparatory meetings. Plenary sessions are held at the start and end of the conference to decide organizational matters and adopt the final document, and a plenary session after the first week convenes briefly to review progress. However, the main work on finalizing the text is done in two working groups that split up the draft agenda items. The working group chair takes up an item, which is displayed on an overhead screen, and the "parties" (official government representatives) comment ("make interventions" in UN-speak). If there appears to be general agreement on a point, they continue to the next but, if even one party expresses disagreement, various diplomatic moves will come into play. Other governments may do some subtle arm-twisting or delegates may break into informal consultation groups, called either "contact groups" (for serious differences) or "friends of the chair groups," which meet outside working-group hours and often work until late at night if thorny issues arise. In contact groups, up to 50 parties sit at a round table with a chair appointed by the head of the session. With the permission of the chair, unofficial observers, including NGOs and indigenous representatives, are allowed to attend and comment on group proceedings and, indeed, these outside experts may

make suggestions that do much to advance the process. Brackets in the text indicate phrases or issues of disagreement; once consensus is reached the brackets are taken off and working-group approval can be sought.

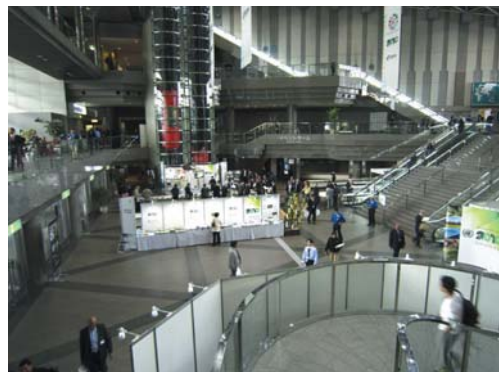
Besides the official negotiations, COP 10 offers more than 100 side events listed on scrolling display screens placed about the Congress Center. The center itself is a sprawling complex of four interconnected buildings built around a tented plaza, with one end anchored somewhat incongruously by an eight-meter high, white plastic statue of a Milanese count, General Francesco Sforza, on horseback. Side events include press briefings, seminars, debates and workshops sponsored by governments or NGOs, businesses, international organizations and other groups. For example, between 1:15 p.m. and 2:45 p.m. on the first day, October 18, participants could choose from 17 side events, ranging from a Japanese Ministry of Agriculture, Forestry and Fisheries presentation on the role of forests in conserving global biodiversity to a European Commission-sponsored meeting on the New Atlas of Soil Biodiversity and a UNEP session on the future of environmental law. Meetings foster a fertile exchange of expertise: a session on how organic farming is helping to conserve the Japanese crested ibis on Sado island, for example, engenders lively discussions of what local governments in other nations have done to involve communities in biodiversity.



The COP 10 logo



Checking the camera



Building 1 at the COP 10 venue



## **Getting down to business**

Official press conferences are held throughout the day. I not only attend a few but am able to sit on the stage myself when we announce the launch of our Kyoto magazine issue. CBD executive secretary, Ahmed Djoghlaif, and the Japanese government both hold numerous briefings where they profess confidence in a successful outcome and lavish great praise on each other's contributions. However, there are also some more provocative speakers. At an otherwise mundane briefing by the Shimin Network, the umbrella group representing Japanese NGOs at COP 10, Hiroshi Komamiya of the Gifu NPO Center criticizes the COP 10 process, saying: "Although the CBD is a convention to solve north-south problems, it's little more than the rich in the north and the rich in the south discussing problems." NGOs, however, represent the poor in both the north and south, he says, so if they were allowed to communicate more freely, we might have much different outcomes. He states that a clear message should be that homogenization through globalization hurts biodiversity and should be stopped but that there isn't much interest in this message outside COP 10.

On the first day, the two working groups begin a line-by-line consideration of draft texts of the many articles. Working Group 1 meets in a cavernous meeting room with tables in front for national delegates, rows of seats for IGOs and international NGOs, a stage for cameras and rear seating for other NGOs, indigenous representatives, academic and scientific observers and the media. Lining the back wall is a row of booths for interpreters in all the official UN languages, whose translations are accessible via headphones affixed to each seat. The proceedings are shown on four enormous screens. At the front table sits the chair, Cosima Hoffler of Austria, who good-humoredly and diplomatically steers the discussion with help from UN and other procedural experts. When progress lags, she abandons one section and goes on to the next, and she gently prods the delegates when they stray from the point or repeat themselves.

COP 10 delegates may be aiming to save species biodiversity but, at times, the gathering seems more like a World Trade Organization meeting: there is no mention of endangered rhinos or snow leopards but lots of talk about funding, recompense and profit sharing. I'm told that endangered species are not directly discussed because they are the province of other multilateral conferences, such as the CITES (Convention on International Trade in Endangered Species), but the monetary focus still rankles. It reminds me of a complaint that conservationist Paul Evans made in the September-October 2010 issue of *Resurgence* magazine, citing the "bean counters" who, by stressing concepts like ecosystem services and natural capital, reduce nature to "free-market, consumerist ideals." Yet perhaps the delegates would argue that this is the only way to persuade the public and their elected governments to take needed action.



## **Another country**

As the meeting continues, I begin to feel as though I've strayed into a foreign land whose language and customs I've yet to master. Delegates raise concerns or seek clarification on points that seem obscure but each word in the text has obvious legal ramifications (for example, should a prior decision be acknowledged, recalled or noted?) and they dare not stray from instructions given by the home office. An impassioned 50-minute discussion ensues about something that, to my ears, sounds like "attek." Thinking that I have inadvertently set my headphones to Russian, I check the other channels but, no, it's set for English. I later learn that the talk concerned the composition of Ad Hoc Technical Expert Groups or ADHTEGs. COP 10, like every UN conference, is awash in acronyms and abbreviations of every description, making one wonder if perhaps we need an additional interpreter for sentences like the following (from Article 10): "Parties designate a NFP on ABS to make information available: for applicants seeking access to TK associated with genetic resources, where possible, information on procedures for obtaining PIC or approval and involvement, as appropriate of ILCs and establishing MAT including benefit-sharing; and information on competent national authorities, relevant ILCs and relevant stakeholders." (NFP means national focal point, TK is traditional knowledge, PIC is prior informed consent, ILCs are indigenous and local communities and MAT means mutually agreed terms.)

## **What if they held a UN conference and no one came to cover it?**

My home at COP 10 is the multi-room Media Center. Japan's national television network, NHK, occupies one room filled with small booths and equipment; much of the rest of the Japanese media occupies another. For the foreign media, there are two spacious rooms of tables resting against long dividers, with PCs provided at every table, but there can't be more than 10 foreign media representatives in all. There's a sharp questioner from the BBC, a Japanese Reuters reporter from Tokyo, a correspondent from Science and an environmental writer who has been commissioned by the New York Review of Books. But where are Time, the New York Times, CNN, Canada's CBC? The US non-presence may be a factor here but, with all of the attention given these days to global warming and Copenhagen, why do so few people seem to care about biodiversity? Is it that the short-term-oriented, anthropocentric general public are only interested in the drama of climate-change-linked events like Hurricane Katrina or the threat of rising sea waters that may soon swamp Manhattan, rather than the silent extinguishing of an insect species or the disappearance of another variety of food crop? If this is so, then the responsibility of the media and their owners to alert all of us to looming long-term threats to food supplies and ecosystems would seem to be all the



The central plaza



Delegates take a break



A room for the foreign media

greater.

On the third floor are rooms for NGOs and indigenous people's groups. A visit to the NGO room soon results in several appointments for interviews, at which we discuss NGO objectives for COP 10. Wakao Hanaoka of Greenpeace Japan mentions a widely shared desire for COP 10 to decide on a 2020 target of 20 percent of both terrestrial and marine areas to be made protected reserves, with an eventual goal of 40 percent of the oceans to be set aside

and ecologically and biologically significant areas identified. His colleague, Steve Smith of Greenpeace International, adds that what are really needed are enforcement mechanisms and more financing for implementation. Natalia Reiter of WWF International, one of a 40-person WWF delegation in Nagoya, explains that it is important for governments to mainstream biodiversity on a national level by integrating it into national accounts. "All ministries should develop their budgets, taking into account natural resources and biodiversity," she says.

Reiter also explains that NGOs like WWF are influencing the process at COP 10 in a number of ways, through contact groups as well as through the inclusion of representatives in national delegations. While riding the subway back to my hotel that evening, I meet a man wearing a WWF lapel pin, who says he is part of a Scandinavian delegation. His views and those of other NGO representatives on his national team are usually heeded, he says. His only complaint is that the government bureaucrats on the team stay in a nicer hotel, where he is expected to appear early in the morning for daily strategy briefings.

Although the international NGOs have savvy and well-paid press representatives, whose words emerge, like cultured pearls, in well punctuated, print-ready paragraphs, the self-financed indigenous peoples' representatives could use a few tips on media relations. I enter the indigenous peoples' room, introduce myself and ask if anyone would like to share their views on how the CBD negotiations are going so far, whereupon everyone turns back to their PCs and cell phones. Finally, a solemn middle-aged woman reluctantly agrees to talk with me later that afternoon. I ask her what group she represents. In a conspiratorial whisper, she responds: "Oh, I can't tell you that yet." It doesn't matter in the end because when I return to the room at the designated time, no one is there. I learn that an indigenous peoples' meeting that is open to the press is being held next door so I saunter in and take a seat at the back, only to be politely evicted. Armand Mackenzie, a lawyer who heads the Innu Council of Nitassinan (a Canadian First Nations NGO), later provides information that helps explicate the gloomy mood. Essentially, the draft Nagoya Protocol contains no mention of the UN Declaration on the Rights of Indigenous Peoples, the definitive legal statement governing human rights for indigenous and local communities (ILCs), and it requires users of genetic resources to deal directly with indigenous peoples only where national laws acknowledge their ownership of these resources. Therefore, he explains, many ILC representatives worry that ILC rights may be abrogated in many nations.

## **Green in part**

COP 10's sponsors — Aichi prefecture, Nagoya and the Ministry of the Environment — have taken pains to make this a "green" conference. Large glass dispensers of Nagoya tap water are available on every floor and toilet signs beseech users to conserve water. A row of 11 waste receptacles — about the only trash cans to be found — labeled for paper, magazines, newspapers, other burnables, PET bottles, etc. flanks the entrance to



Sorting the waste



An interest group meeting room



Publications of every description

Building 2. As I try to discard an empty PET bottle, it's grabbed by a nimble-fingered, middle-aged female staff member, who whisks off the cap and label and throws all three in the appropriate bins. And yet video footage of rural Aichi prefecture spools endlessly on the plaza's large screen, even though no one is ever caught watching it. And the instant frozen pizzas and hot dogs on offer at the plaza don't evince a lot of thought about

sustainable eating. Each delegate receives a backpack crammed with consumer goodies — a tee shirt and *hachimaki* (bandana-like cloth), a mug adorned with a charming sketch of wild animals hand drawn by a Nagoya schoolchild, memo pads, a USB memory stick and discount tickets for Nagoya parks and museums.

And then there's the paper. Every available table is piled high with issue-specific books and journals, NGO brochures, Japanese government PR and other publications of every description. Tables in Building 1, where many working-group meetings take place, offer the latest versions of every official draft document in all the official UN languages (English, Spanish, Russian, French, Arabic and Chinese). Decrying the pace of deforestation after lifting copies of each of 31 official COP 10 article drafts seems just a bit hypocritical, but nearly everyone sweeps down the row of official documents each morning and gathers them all up.

Biological variety may be lacking at COP 10 but, with so many nations represented, we have plenty of human cultural diversity to provide visual stimulation. I spot a man in a pin-striped gray suit in deep conversation with another man in a suit — but with a *lei* of red peppers draped around his neck. There are Africans negotiating in *dashiki* and *djellaba*, some ILC representatives with impressive facial tattoos and hand-woven dress and a Samoan-looking male delegate, busy working his PC, wearing a sarong and flip-flops. It's refreshingly unlike an ordinary academic or business conference.

**Thursday October 21**

## Still relaxed

I slip into a small conference room, where a friends-of-the-chair meeting is debating how CBD can cooperate with other environmental conventions, particularly the UN Framework Convention on Climate Change (UNFCCC). Should there be a joint work program or are the climate-change people already overburdened? Should they seek to

“enhance cooperation” or “build synergies” between the different groups? Since this is a small, informal gathering without official interpreters, the atmosphere is collegial, even when China registers opposition to anything that might infringe on the UNFCCC’s mandate, while Mexico and many other developing nations push strongly for joint work. Brazil repeatedly calls on the chair to leave the previous text wordings up on the large screen, rather than revise them each time someone makes a suggestion and the put-upon chair finally jokes to the group: “Any other comments? As you can see, this microphone may point towards that [Brazil’s] corner but I’m not looking in that direction.”

Most nations at COP 10 are part of broader groupings of interests or location that operate as negotiating blocs. According to Erie Tamale of the UN, these can facilitate the workings of the conferences because the countries in each bloc must adopt a unified stance, even when it may run counter to their national interests. The interest blocs at COP 10 include a grouping of “like-minded megadiverse nations” led by Brazil; the main bloc of developing nations, called the Group of 77 + China; the EU; regional groupings for Africa, Asia the Pacific and central and eastern Europe; and a bloc with the unappetizing name GRULAC (the Group of Latin American and Caribbean Nations). Many nations belong to more than one group.

Interest-group meetings are held daily to allow delegates to discuss the latest negotiations and to decide their unified position. On October 21, I spend some time at a small meeting of Asia and Pacific delegates, where they are putting the finishing touches to some proposed textual changes to an article. A convivial delegate from a southeast Asian nation chats with me about the problems of harmonizing the interests of Asian countries that may be industrialized or industrializing; biodiverse or seeking better access to resources. The pressures of working as a bloc may help explain his next comment: “It’s also hard when you have people like the delegate from (country name deleted), who can’t even follow what’s being said!”

**Friday October 22**

## **Venturing outside**

I visit some of the more than 100 booths at the NGO Fair, which is being held on parkland and in buildings adjacent to the Congress Center. While most of the booths contain Japanese NGOs or university groups eager to explain their activities, companies such as Tokyu Land Corporation and groups such as the Asian Development Bank and the Japan-Qatar Friendship Association also offer environmental displays. At one booth, I stop before a large plastic box crammed high with several hundred *nukigara* (the discarded shells of cicadas), a common Japanese summer sight rendered impressive here by its volume. The woman in charge explains that residents in her





Official papers in English are gathered up



Official papers in Arabic await takers



A Japanese government booth at the NGO fair

suburban Tokyo neighborhood collected the shells to document the rich biodiversity (more than 70 different varieties of cicada alone) of an area now threatened with housing developments.

Many students from the Graduate School of Global Environmental Studies of Kyoto University are helping at the NGO Fair in some capacity. First-year master's degree student Melina Sakiyama is an intern with an NGO that

promotes education for sustainable development in Japan. She staffs the booth, aids in organizing a side event and helps to present a statement to the COP 10 delegates on behalf of the International Youth Conference on Biodiversity, which was held in Nagoya in August. She finds that the NGO Fair is a good way to learn about Japanese NGO activities and to meet people interested in biodiversity and environment issues but she decries the physical barriers between the fair and the main conference venue, which limit participation by the delegates. Indeed, the security clearance hassles make it difficult for the more indolent of us to consider leaving the Congress Center for anything short of a natural disaster.

## **Time out/time running out**

On Saturday and Sunday, many delegates, observers and the media avail themselves of the guided tours of local biodiversity hotspots offered by the Japanese or Aichi governments. I join an IUCN visit to the Kaisho forest, a nature reserve that was the site of an international nature-themed exposition in 2005. As we walk through the

forest, IUCN biologists find photogenic crabs, katydids and praying mantises to perch upon their palms for our viewing pleasure. An Aichi government official explains how the expo site was gradually redrawn to protect the biodiversity-rich forest but IUCN makes sure we get a balanced perspective on local conservation efforts. On our walk we encounter a local farmer, who has erected huge protest banners in French and Japanese along the hiking path, castigating the hypocrisy of government pro-conservation claims. And on the bus back to the Congress Center, a local NGO representative explains about an ongoing (and seemingly doomed) battle against government-supported plans by Toyota to build an automotive testing site on land that is a habitat for several endangered species.

## **Week two**

**Monday October 25**

### **Compromise by exhaustion?**

As the second week starts, some express cautious optimism that a compromise protocol can be agreed upon. While many of us were sightseeing over the weekend, the delegates involved in negotiating the ABS provisions talked all day and into the night. According to Monday's Earth Negotiations Bulletin (ENB) — a meticulous report on negotiations, issued each morning by the International Institute for Sustainable Development — compliance with ABS safeguards and checkpoints is the main sticking point, with some delegates warning about “the imminent collapse of the ABS process.” Observers hope that the arrival of environmental ministers and other official decision-makers for the final three days’ “high-level segment” will provide the impetus needed to achieve a compromise. By Tuesday, the atmosphere seems to improve but at a glacial pace. According to the day's ENB: “Three days before the end of COP 10, assessments of the likelihood for adopting an ABS protocol at COP 10 range from ‘still possible’ to ‘unrealistic.’”

**Wednesday October 27**

### **Arrival of the big guns**

From today, the conference pace picks up and the crowds increase with the start of the high-level segment covering the last three days. Some 130 ministers and heads of state suddenly descend on Nagoya in an attempt to bring more official pressure to bear to break the deadlock. They include the World Bank president, Robert Zoellick, the heads of Yemen and Gabon, the crown prince of Monaco and the Japanese prime minister, Naoto Kan. Kan welcomes everyone with a speech in which he promises \$2 billion in additional funding for biodiversity conservation measures in developing nations



(transferred from existing ODA funds). This is welcome news for countries like Brazil and India, which had reportedly been threatening to scotch the agreement without the offer of more funding.

I greatly regret missing a press conference given by the most high-level person to appear during the high-level segment (at least in terms of media attention), the grizzled actor Harrison Ford. Representing US-based Conservation International, he urges the Obama administration to push for the ratification of the CBD. US observers at the conference aren't making public comments but, in the wake of a disastrous mid-term election and dire unemployment figures, the US government is reportedly placing biodiversity low on its list of legislative priorities. At the same time, some newspapers are reporting that, behind the scenes, US observers and American business representatives are actively opposing stricter ABS regulations.

At noon on October 27, the many brackets that remain on the draft of Article 5 (which refers to access to genetic resources) attest to the cavernous differences that must still be bridged. Article 5-1 bis ("bis" refers to an amendment to a related

passage), for example, now reads: "[Where applicable [law][national legislation]] or international law] recognizes that indigenous and local communities [own genetic resources, or otherwise have the right to grant access to such genetic resources] the prior informed consent or approval and involvement of these indigenous and local communities is required.]" This is followed by the word "or" and another bracketed passage. Harmonizing opinion on ABS



A box brimming with cicada shells



Sign in the Kaisho forest protesting against the Japanese government's environmental policy



A local farmer shares his protest against governmental policies with COP 10 visitors

will obviously draw on all of the diplomatic skills of Ryu Matsumoto, the Japanese Environment Minister and COP 10 chair, and his government. Other journalists tell me the Japanese government fervently seeks agreement on a Nagoya Protocol, both to burnish Japan's international diplomatic credentials and to improve the Cabinet's dismal domestic popularity.

**Thursday October 28**

### **Small successes, big concerns**

By now, several agreements have been reached, including measures on funding and promoting biodiversity education, Japanese initiatives for designating 2010-2019 the Decade for Biodiversity, and the Satoyama initiative for biodiverse agroecosystems. Fifteen working groups are laboring to remove remaining brackets but the deadlock on ABS continues. According to Jane Smart of IUCN, the scope of the protocol — its applicability beyond national jurisdiction and whether it can be applied retroactively — as well as “the need to ensure compliance in accessing genetic resources with checkpoints at the national level” remain two areas of fundamental disagreement between north and south.

Rumors about the negotiations fly about the media room. Reportedly, India has threatened to block consensus unless the developed nations come up with more funding for building ABS capacity, and the African group concurs with this stance. The Indian delegation is only placated by a late-night visit to its hotel by an EU representative, promising who-knows-what. The members of the Group of 77+China, representing most of the developing nations, insist that a strategic plan would be meaningless unless the ABS protocol and the strategy for resource mobilization (which establishes a funding mechanism) are also adopted. It's also rumored that the US has threatened African nations with curtailed ODA unless they sign a protocol now.

Negotiations continue most of Thursday night, without success. As the ENB explains, the bleary-eyed delegates dearly want to agree to a protocol after putting their lives on hold for up to two years but “compromise by exhaustion” still eludes them. The Japanese government tries to break the impasse by holding closed meetings with representatives from the major regions, including delegates from the EU, Africa, Norway and Brazil and, based on their discussions, Japan prepares a new draft of the ABS. This angers many excluded third-world nations because it seems to reprise the kind of back-room dealings that failed in Copenhagen. The compromise text deals with many of the outstanding issues by deleting contentious wording or replacing it with vague and broadly defined terms. Still, this allows the negotiations to bypass the now entrenched positions taken by the different groups.

**Friday October 19**

## **The final day**

With the final protocol, strategic plan and financing paper still in doubt, the major NGOs cancel their scheduled mid-day press briefings, so the journalists rush about interviewing contacts for inside information. The final plenary session is scheduled for 3 p.m. and thousands of delegates, observers, press reporters and television crews gather in anticipation in the main hall of Building 1. As we wait and ABS negotiators huddle in nearby chambers, we watch, again and again, a slick video of smiling children and happy farmers holding out hands full of grain as the word *itadakimasu* (the Japanese equivalent of saying grace, meaning “I humbly receive this food”) fills the screen. The session is finally convened by Environment Minister Matsumoto at 4:38 p.m., even though talks on the three issues are continuing.

Matsumoto asks the two working groups to report on their draft decisions and then 28 of 31 draft decisions are to be submitted. Before the articles come up for a decision, the minister strongly urges the delegates: “Do not repeat past debates or undermine the delicate balance that we have reached through negotiations.” Then each article is introduced individually and any recent changes in wording or remaining brackets are explained. Matsumoto asks for objections to the article, waits just a few seconds, then hurriedly says: “No objections; the article is passed,” and gavel discussion to a close. Sometimes he gavel before the Japanese-English interpreter even has a chance to pronounce the article number, raising chortles of laughter. One by one the decisions are approved until only the Big Three and related articles remain.

Suddenly, Matsumoto suggests that we break until 7:30 p.m. for dinner and entertainment, which is sponsored by the government of India, the host of COP 11, which will be held in New Delhi in 2012. We happily adjourn to the sunken gardens at the far end of the plaza, where waiters circulate with trays of Indian food and glasses of wine, and we all watch a festive Bollywood dance and music performance. As time goes by and more wine is imbibed, the atmosphere improves measurably and the tags reading “Party,” which delegates wear around their necks, start to make sense. I can’t resist asking the three Bhutanese delegates standing beside me if theirs really is the world’s happiest nation. Oh yes, they reply, with one pointing towards the stage and adding, “but unfortunately we don’t have this,” in reference to either the writhing Bollywood dancers or the rich red cabernet.

At 7:30 p.m., a few of us return to the meeting room, only to be told that proceedings will start at 9 p.m. At 9 p.m., the place is packed and quivering in anticipation. It is rumored that, miracle of miracles, ABS is a done deal, but the front stage remains empty. With the lights, the cameras focused on the same spot and the somewhat giddy conversation, it’s like a surprise party where the guest of honor

decides to head for a bar instead of returning home.

Soon it's 10:30 p.m., then 11 p.m., and still no show. I wander up front to the almost empty delegates' tables, where two Brazilian delegates refuse to talk, saying that there will be an official statement later. Then I speak with a Bolivian delegate, who expresses her disappointment at the weak protections offered by the draft articles for indigenous minorities (who make up a majority of the Bolivian population) but says that her nation won't oppose the protocol. Due to her poor English and my lack of Spanish, our conversation quickly fizzles out so I return to my seat.

The plenary session finally resumes after 11 p.m. At a brisk pace, delegates approve a number of articles on such topics as technology transfer, engagement of business and the CBD budget. Finally, Matsumoto introduces the draft decision on article 43, the main ABS article. Delegates rush to speak, with Venezuela urging the passage of a strong statement against biopiracy, "the scourge of genetic resources." The delegate adds: "The ABS turns nature into merchandise and we oppose it." I inwardly applaud the sentiments while hoping that this is just a statement venting displeasure, not a firm stance.

Next, the EU suggests that, because they can't agree to one without knowing the fate of the others, the three contentious articles should be considered as a group. This is firmly opposed by Cuba, Bolivia and the African grouping, who request that the three articles be discussed one by one because there is no specific link between them. The EU delegate then suggests that they start with the strategic plan and the article on resource mobilization. The EU is apparently afraid that approval of regulations on access to resources might not be balanced by the passage of the other two, meaning that the compromises it has agreed to for ABS would not be rewarded. A long break ensues, as Matsumoto requests time to consult with advisors, and the rest of us hold our breaths. Finally, after 17 years, agreement on ABS looks to be within reach — but will it founder on a disagreement over which vote goes first?

Matsumoto finally suggests that we first check if opposition exists for each of the three articles, then vote on them. This seems to meet general approval. The delegates confirm that there is no unyielding opposition to the three draft decisions. The room breathes a collective sigh of relief. Then the delegates adopt the three articles one by one, sparking applause, cheers and a standing ovation. They did it! It is 1:30 a.m. but the crowd is energized and delighted. We are told that the strategic plan, which (among other things) establishes goals of setting aside 17 percent of terrestrial and 10 percent of ocean area as protected zones and reducing the rate of loss of natural habitats by at least half and, where feasible, to close to zero, will henceforth be called the Aichi Targets. The protocol itself will be known as the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.

## “Great!”

The remaining statements and decisions will keep the meeting going until 2:59 a.m. but the real news has just been made. The EU Environment Minister, Karl Falkenberg, heads for the doors, where he is met by a camera crew and a pack of reporters, myself included, hungry for a sound bite. He yells: “Where’s the champagne? It’s a great day for Nagoya, a great day for the environment and a great day for the world. We will need higher targets [for protected zones] — we hope up to 50 percent — but overall we’re very happy.”

He returns later, a can of Asahi beer in hand, and says: “We have shown that multilateral environmental conferences can make decisions, if skillfully done. Now the focus shifts to the country level for the strategic plans and for designating protected areas. We must find ways for benefits to be shared, so it will need more work.” He quaffs his beer, pronouncing it “almost German quality.”

Other major actors exit the hall to be met by a scrum of waiting cameras and reporters, notepads in hand and digital voice-recorders held aloft. The foreign press huddle around the likeliest targets, comparing notes afterwards and checking names and titles. The Japanese scrum surrounds other likely candidates, with their lead interrogator, a beaming NHK reporter in his 20s, asking everyone the same two questions: “How do you feel?” and “What did you think of Japan’s leadership of this conference?” Everyone answers “Great!” to both questions, which seems to satisfy all parties.



Waiting for the final session to convene



CBD Executive Secretary Ahmed Djoghlaif (left) and Japanese Environment Minister Ryu Matsumoto



Origami world



Andrew Deutz, Director of the International Government Relations Department of the Nature Conservancy, concedes that some of the targets are not perfect but they will serve as a good basis for future negotiations. He says: "We're more confident now that we can succeed in implementation. These negotiations are not about nature only; the protocol recognizes the role of nature in providing ecosystem goods and services. They're also set in the context of a warming world. Most importantly, with this protocol we've overcome the curse of Copenhagen and proved that multilateral environmental agreements can still work."

Namibia's Minister of the Environment, Netumbo Nandi-Ndaitwah, is the next target. Seemingly unfazed by what must be unaccustomed global media attention, she comments: "Now we really have to get down to work at the national level. We need to ratify it and implement it. It was a compromise, so no one is completely satisfied, especially with the access and benefit-sharing provisions, but Japan provided good leadership. Clear targets are needed for multilateral mechanisms for conservation." She says that she would like to increase the protected areas to 17 percent but that would require more capacity-building, financial help and technical support. Targets were not reached before for that reason, she says. "But at least now we have a benefit-sharing protocol."

Konstantin Kreiser, a representative of one of the more active NGOs, BirdLife International, practically coos his approval. "Basically, we'll have to wait until 2012 for financing by the developed nations in exchange for agreement on benefit-sharing today," he says. "It was an historic agreement that came close to failure and it reflects great compromise on both sides. Brazil made it possible, although they were hoping for a concrete promise of financing, and the EU also had big problems in agreeing to go as far as they did. Although the EU didn't agree here to financing, it did agree to a process that's clearly outlined. We want to not just define but adopt targets and commit to financing by 2012. The NGOs will also have to help fill data gaps and make assessments."

Nick Nuttall, a flamboyant former reporter for the Times in London and one-time pop singer, who is the press representative for the United Nations Environmental Program, speaks of the "legacy of Nagoya, which will occur if engagement of business here and smart mechanisms unleash the hundreds of millions of dollars needed to save life on Earth." He adds that "we have to integrate the economics of nature into development."

Nuttall continues: "You can't expect a perfect protocol, but these multilateral negotiations have become incredibly complicated. We pulled this from the jaws of another failure. Today the member states showed that they can move forward together with compromise."

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## **What's next?**

A protocol is not the end of environmental negotiations but only a blueprint to improve and act upon. The next step is ratification by each party's national legislature, preferably within the next two years. Ninety days after the 50<sup>th</sup> party has ratified it, the Nagoya Protocol will take effect. Then nations are expected to enact the legislation and create the administrative mechanisms needed to ensure that genetic resources and ILC rights are safeguarded and natural reserves are established and protected. In line with the strategic plan, nations are expected to mainstream biodiversity as a factor in all government budgets and policies. Governments are also called upon to agree to at least halve the rate of loss of natural habitats, restore at least 15 percent of degraded areas, eliminate subsidies that harm biodiversity and take steps to eradicate alien species and to protect at least 75 percent of threatened plant species (UNEP Convention on Biological Diversity 2010c).

The resource mobilization strategy sets out a framework for financial support for the strategic plan. The most pressing task thereafter — and the main focus of COP 11 in New Delhi — will be securing financing from developed nations for third world biodiversity efforts. Another hurdle will be trying to ensure the enforcement of protected areas. As fisheries expert Francois Simard of IUCN noted, 70 percent of the ocean consists of the high seas, beyond national jurisdiction, so ensuring that fishing ships respect no-take or managed zones will be a challenge (Singer 2010).

The Nagoya Protocol no doubt owes its existence to the intentional vagueness of its wording but its many loopholes and ambiguities also leave room for nations, companies and other interests to interpret it to their benefit, and much legal wrangling can be expected. Some of the loose language will hopefully be tightened up at the India meeting but, for now, according to reporter Eric Johnston of the Japan Times, “the big winners at COP 10 are the lawyers and lobbyists” (personal communication, November 15, 2010).

Steve Smith of Greenpeace International (personal communication, October 18, 2010) suggested that regional biodiversity workshops be held regularly and be given more negotiating authority to improve the negotiation process. He added: “We’d like to see matters also handed to other groups, such as the United Nations or the climate negotiations in Cancun, for more positive cross-pollination.” Greater clarity on protection and regulation of publicly available traditional knowledge concerning biological resources also needs to be worked out with the World Intellectual Property Organization, he said.

Biodiversity merits greater urgency and stronger measures, to be sure. In a comment piece that appeared on Guardian.co.uk on November 1, 2010, George Monbiot wrote: “[I]f governments had met in Japan to try to save the banks, or the airline



companies, they would have sent more senior representatives, their task would have seemed more urgent, and every dot and comma of their agreement would have been checked by hungry journalists.” Yet as both the Nagoya Protocol and the December 2010 climate change agreement in Cancun, Mexico suggest, weak agreements can at least keep the negotiation process on track and augur greater commitments down the line.

Most of the COP 10 delegates agreed that the Nagoya Protocol provided a good foundation on which to build a biodiverse future. Given the low general expectations of those going into the conference, the sight of 193 national delegations compromising to achieve environmental protection in the midst of the current economic crisis was sweet for all who attended. We left Nagoya not only with new COP 10-branded USB memory sticks but also with a restored faith in the multilateral negotiations system.

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## References

- Ananthaswamy, Anil (2004, March 18). Earth faces sixth mass extinction. *New Scientist*. Retrieved on November 15, 2010 from [www.newscientist.com/article/dn4797-earth-faces-sixth-mass-extinction.html](http://www.newscientist.com/article/dn4797-earth-faces-sixth-mass-extinction.html)
- Ban, Ki-Moon (2010, September 22). *Convention on biological diversity*. Remarks at high-level event on biodiversity, United Nations General Assembly, New York. Retrieved December 1, 2010 from [www.cbd.int/doc/un/unga65/iyb-hle-uns-g-remarks.pdf](http://www.cbd.int/doc/un/unga65/iyb-hle-uns-g-remarks.pdf)
- Christie, Ian (2008, May). Recession: Eclipse or stimulus. *Greenfutures. Forum for the future*. Retrieved on December 26, 2010 from [www.forumforthefuture.org/greenfutures/articles/eclipse\\_or\\_stimulus](http://www.forumforthefuture.org/greenfutures/articles/eclipse_or_stimulus)
- COP 10 outcome uncertain/Rich-poor divide on resource profits likely to split biodiversity meet (2010, October 15). *Yomiuri Shimbun*.
- Djoghla, Ahmed (2010, September 14). Statement to the International Seminar on the Role of Agrobiodiversity in Addressing Hunger and Climate Change: The Road to Nagoya. Cordoba, Spain. Retrieved on November 14, 2010 from [www.cbd.int/doc/speech/2010/sp-2010-09-14-cordoba-climate-en.pdf](http://www.cbd.int/doc/speech/2010/sp-2010-09-14-cordoba-climate-en.pdf)
- Gaston, Kevin and Spicer, John (2004). *Biodiversity: An introduction (2<sup>nd</sup> ed.)*. Maiden, MA: Blackwell Publishing.
- Hoggan, Karen (2000, May 11). Neem tree patent revoked. *BBC News, Sci/Tech*. Retrieved on December 1, 2010 from [news.bbc.co.uk/2/hi/science/nature/745028.stm](http://news.bbc.co.uk/2/hi/science/nature/745028.stm)
- IUCN (2010a). Why is biodiversity in crisis? Retrieved on December 30 2010 from [www.iucn.org/what/tpas/biodiversity/about/biodiversity\\_crisis](http://www.iucn.org/what/tpas/biodiversity/about/biodiversity_crisis)
- IUCN (2010b, October 7). Last-chance talks for life on earth. *Media advisory*. Retrieved on November 11, 2010 from [www.iucn.org/?6216/Last-chance-talks-for-life-on-earth](http://www.iucn.org/?6216/Last-chance-talks-for-life-on-earth)
- Michael, Mark A. (2005). Is it natural to drive species to extinction? *Ethics & the Environment* 10.1, 49–66.
- Millennium Ecosystem Assessment (2005). Ecosystem and human well-being: Synthesis. Retrieved on December 30, 2010 from [www.maweb.org/documents/document.356.aspx.pdf](http://www.maweb.org/documents/document.356.aspx.pdf)
- Monbiot, George (2010, November 1). We’ve been conned. The deal to save the natural world never happened. Retrieved November 30, 2010 from [www.guardian.co.uk/commentisfree/cif-green/2010/nov/01/deal-to-save-the-natural-world-](http://www.guardian.co.uk/commentisfree/cif-green/2010/nov/01/deal-to-save-the-natural-world-)

- never-happened
- Mongabay (2010). A world imperiled: Forces behind forest loss. Retrieved December 15, 2020 from [rainforests.mongabay.com/0801.htm](http://rainforests.mongabay.com/0801.htm)
- Norton, Bryan (1992). A new paradigm for environmental management. *Ecosystem health: New goals for environmental management*, ed. by R. Costanza, B. Norton and B. Hakell. Washington, DC: Island Press, 23-41.
- Plater, Zygmunt (1998). The three economies: An essay in honor of Joseph Sachs, *Ecology Law Quarterly*, 25.
- Regan, Tom (2003). Animal rights: What's in a name? *Environmental ethics: An anthology*, ed. by A. Light and H. Rolston III. Malden, MA: Blackwell Publishing, 65-73.
- Rolston, Holmes III (2003). Value in nature and the nature of value. *Environmental ethics: An anthology*. Malden, MA: Blackwell Publishing, 143-153.
- Singer, Jane (2010, October 24). Striving to stave off marine extinctions. *Japan Times*.
- United Nations Environmental Program Convention on Biological Diversity (2002). *Strategic plan 2002*. Retrieved on November 10, 2010 from [www.cbd.int/sp/](http://www.cbd.int/sp/)
- United Nations Environmental Program Convention on Biological Diversity (2010a, May 10). *Global biodiversity outlook 3*. Retrieved on December 2, 2010 from [www.cbd.int/doc/press/2010/pr-2010-05-10-gbo3-en.pdf](http://www.cbd.int/doc/press/2010/pr-2010-05-10-gbo3-en.pdf)
- United Nations Environmental Program Convention on Biological Diversity (2010b). *COP 10 outcomes*. Retrieved on December 10, 2010 from [www.cbd.int/nagoya/outcomes/](http://www.cbd.int/nagoya/outcomes/)
- United Nations Environmental Program Conference on Biological Diversity (2010c). *Report of the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity*. Retrieved December 27, 2010 from [www.cbd.int/cop10/doc/](http://www.cbd.int/cop10/doc/)
- United Nations General Assembly (2010). *Press statement*. Retrieved October 12, 2010 from [www.un.org/News/Press/docs/2010/ga10992.doc.htm](http://www.un.org/News/Press/docs/2010/ga10992.doc.htm)
- Zadek, Simon (2009, December 19). Learn from Copenhagen's failure. *Open Democracy*. Retrieved December 1, 2010 from [www.opendemocracy.net/simon-zadek/learn-from-copenhagens-failure](http://www.opendemocracy.net/simon-zadek/learn-from-copenhagens-failure)

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