

Green Friends

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WHALING MORATORIUM REMAINS

IWC Fails to make Deal for Legalization

22 June, 2010, in Agadir Morocco representatives of the 88 nations comprising the International Whaling Commission met to -but couldn't- decide on a proposed deal that would re-legalize whaling, after 25 years of moratorium. The three nations most heavily engaged in whaling today are Japan, Norway, and Iceland. Several peoples, included various Pacific islanders and the Inuit, have limited rights to hunt whales for traditional reasons. The big three make full use of a loophole allowing whaling for "scientific research" purposes, despite not often conducting research on the whales. Japan has flaunted its whaling in the Southern Ocean Sanctuary - 50 million sq. km. around Antarctica - since its inception in 1994, for which Australia has brought action against Japan in the International Court of Justice. A deal that was put forward could not get enough traction to be voted on, and the decision was postponed.

The "compromise" deal would have lessened the quota of whales from Japan's (and Norway's and Iceland's) self-awarded quotas, but in recent years quotas have been decreasing; and aging whaling fleets find no revenue as a whaling market barely exists. The South Ocean Whale Sanctuary would have been re-opened, partly because Japan hunts there regardless, with the attempted resolution of creating a South Atlantic sanctuary- there has never been whaling in the South Atlantic and no country has ever hinted at doing so.

Japan was revealed to have been bribing several nations to earn votes in favor of the deal [9] and as a result 17 mostly pro-whaling nations were suspended from voting. [15] Bribes came in the form of aid, call girls for fisheries ministers and civil servants visiting Japan, or envelopes filled with cash discretely exchanged at IWC meetings. [9]

Media bias presented and presents an interesting issue for the months ahead. The UK and US governments were touting the deal as a way to finally crack down on whaling (smaller quotas, and man-

dated international observers on whaling vessels) while NGOs were revealing how legalized whaling would recreate the market and spur reinvestment in the vessels. *Discovery News* featured many articles about the loopholes and half-truths in the deal, and while *National Geographic* presented balanced viewpoints and the full details, it's headline for the deal collapse read "Whale Hunting to Continue in Antarctic Sanctuary" and the first four paragraphs were entirely about how the failure to deal keeps a status quo allowing 1500 whales to be hunted per year. [7] *The Chicago Sun-Times* ran an AP article headlined "Effort to save whales founders", with the subheader "1500 killed yearly". [11]

Australia Goes to Court

The International Court of Justice will hear a case brought by Australia, which New Zealand is mulling joining, against Japan for its hunting not only in the South Ocean Whale Sanctuary, but everywhere. The Sanctuary was only approved by 23 countries in the IWC, Japan objected to it. Australia maintains that it's still legally protected territory, and that Japan is lying about it's use of whaling for research. "A vital part of the country's food culture" some officials have said, although changing sentiment and 24 years of decreasing catches makes the "vitality" questionable. [18]

New Zealand is said to be taking serious consideration with regard to joining the action. [12] The South Ocean Sanctuary is located due South of Australia and New Zealand.

Humpback Hunt

Greenland's Inuit are now allowed to hunt humpbacks, that was one decision made in Agadir. Nine humpbacks may be killed and consumed per year through 2012. Previously allowed to hunt 178

minke whales, 19 fin whales and two bowhead whales each year, the fin whale quota will drop to 10 to keep the total number of whales constant. Greenland officials argued that hunting ten whales per year for a decade would not significantly damage the humpback population, although critics have countered that Greenland's Inuit enjoy a high household income and are not in need of extra food,

adding that "Whale meat is sold even in Copenhagen with the justification that Greenlanders live there," (so said biologist Petra Deimar, a member of the IWC scientific committee). More than 3,000 small cetaceans - including whales, dolphins and porpoises - are caught every year in Greenland's waters to feed the population of 55,000. [16]



<http://swfsc.nmfs.noaa.gov/PRD/>

Blue whale photo by NOAA Fisheries, from the Protected Resources Division, Southwest Fisheries Science Center, La Jolla, California

Development in Harmony with Nature

Highlight: Rubber

Ancient Mesoamericans Had Natural Rubber Industry

Developing in harmony with nature is something the American Indians did well, and is a better description than "sustainable development". Modern rubber is a petroleum product, causing environmental degradation at every stage in the making. It has been known that natural latex was used to make rubber by the Mesoamericans before, but now a new study reports that they- including Aztecs and Mayans- knew how to make different kinds of rubber, mixing latex from rubber trees with juice squeezed from morning glory vines in differ-

ent proportions. MIT researches experimented with the different combinations. "Bounciness is maximized when 50 percent of the mixture is juice, while longevity and wear are maximized when 25 percent of the mixture is juice. And strength, required for a rubber band, is maximized when no juice is added." [2] The modern process used to produce rubber, known as "vulcanization" was developed in 1839 by Charles Goodyear. The Mesoamerican peoples were using rubber by 1600 B.C.

Read the study here.

Natural Rubber Tires

The New York Times recently ran a piece about research into tires free from petroleum. Currently 5 to 10 gallons of petroleum go into making one tire, and much of the concern for making them “greener” has been around making them more energy efficient, reducing the car’s output of CO₂. “We found that 86 percent of the tires environmental impact revolves around how it affects fuel consumption,” said Forrest Patterson, technical director for passenger car and light truck tires at Michelin North America. “Only 12 percent of the carbon dioxide emissions associated with tires arise from the raw materials and manufacturing.” [1]

Sumitomo Rubber Industries, partnered with Goodyear, released the Enasave tire in 2006, with 11% of its composition being from synthetic rubber, down from 22% in earlier models. The natural rubber was modified chemically to give it similar properties desired from the synthetic: better grip for traction. The amount of carbon black filler (usually produced from oil, coal or charcoal) in the Enasaves tread compound were cut, and fuel-saving silica filler were upped. Vegetable processing oil was substituted for its petroleum equivalent, and the compounds were reinforced with fibers made from plant cellulose.

A 97% nonpetroleum tire was released in 2008, with hopes of a petrochemical-free tire by 2013. An 80% petroleum free tire comes from Yokohama

Tire, released in 2008 and using a processing oil derived from orange peels- leftovers from the nearby juice factory (recycling). The orange oil compound appears to reduce rolling resistance over conventional treads, but heat quickly softens the rubber (in braking or corner maneuvers, e.g.). Michelin’s Primacy MXM4 all-weather tire makes use of sunflower oil for improved traction at low temperatures and shorter braking distances in the wet.

Lesser-known plants like guayule, a desert shrub, and Russian dandelion, can all be used to produce natural latex. Goodyear’s research, however, involves isoprene (2-methyl-1,3-butadiene, CH₂=C(CH₃)CH=CH₂), which was an abundant byproduct of petroleum refining, now less so. In 2007 Goodyear collaborated with Genecor to use engineered micro-organisms to produce isoprene (they call it “BioIsoprene”). Genecor plans to open a pilot plant in 2011 to produce high quantities of BioIsoprene for the tire industry. Being a volatile substance, the gas bubbles out of the brewing vats and is a high-yield product.

Oregon State University is investigating replacing silica filler, which is energy demanding in production. Microcrystalline cellulose, a component of plant fibers, have successfully replaced up to 12% of the silica.

Around 300 million tires are discarded by domestic drivers each year. More and more are being recycled, but millions remain as waste.

Source: The New York Times [1]

Conservation

Plant Thought Extinct Discovered; Water-Lily Saved

The world’s smallest waterlily, a centimeter wide, bearing white flowers with a yellow center, went extinct in the wild- a result of overexploitation of its habitat in Rwandan hotspots. Yet some seeds were kept in storage, and Carlos Magdalena of the UK’s Royal Botanic Gardens, Kew, regrew the plants, hoping now to repopulate them. [5] Meanwhile, another team from Kew, led by botanist Phil Lamden in association with a local conservation officer, Stedson Stroud, rediscovered the small fern

Anogramma ascensionis on its native island Ascension (in the S Atlantic). Believed extinct since the 1950s, the plant has struggled to survive since goats were introduced in the 1500s, with more herbivores and invasive plants coming over subsequently. Steep slopes and volcanic sediment make a difficult terrain, and a specimen was found on a bare rock face during a dry period. A drip feed was set up to water it, spores were harvested, and a 24-hour rescue was hatched to get the pores safely to London without drying. After decontamination with bleach, the plant was grown in special clean labs, with the hope of returning it in the near future. [6]

INTERNATIONAL YEAR OF BIODIVERSITY

Species loss is on the rise, and although there’s an international agreement to curb extinction rates, study after study suggests the 2010 targets won’t be met. Governments are to meet in Japan this October to set new targets at the UN’s convention on biological diversity. James Beatti, a horticulturist at the Royal Botanic Gardens, Kew, explains a change in behavior of conservationists. “In the past, efforts were very much focused on species conservation. Now it’s being attached to education and working with local partners in these programmes so you can get the message across that these plants are important and the only reason they are disappearing is because of man’s activities.” [5]

Global Biodiversity Outlook 3

The Convention on Biological Diversity published on 10 May, 2010, the Global third edition of *Global Biodiversity Outlook*. It can be read online in a variety of languages at <http://gbo3.cbd.int/home.aspx>. It can also be downloaded from there, and can also be found on the *Green Friends* website.

The assessment is that species at risk of extinction are moving closer to extinction, amphibians at the greatest risk and coral species deteriorating rapidly. Nearly a quart of plant species are estimated to be threatened. Vertebrate species are declining globally, especially in the tropics and among freshwater species. While there has been some progress toward slowing the rate of loss for tropical forests and mangroves, natural habitats continue to decline, with forest fragmentation and degradation being a major cause of biodiversity loss. Genetic diversity of crop and livestock is diminishing in agriculture, and the “five principal pressures directly driving biodiversity loss (habitat change, overexploitation, pollution, invasive alien species and climate change) are either constant or increasing in intensity.” Finally, “The ecological footprint of humanity exceeds the

biological capacity of the Earth by a wider margin than at the time the 2010 target was agreed.”

The good news: Some 170 countries have biodiversity action plans. More protected lands are being created, and the effectiveness of measures to slow deforestation suggest that given resources and political will, they can work to steer the planet back into normal rates of extinction. “It has been estimated that at least 31 bird species (out of 9,800) would have become extinct in the past century, in the absence of conservation measures.”

However, overall human encroachment has made biodiversity loss increase far beyond background levels, even breaching some prediction’s “safety limits”. The report says we must raise the efficiency of our resource usage, use market incentives while avoiding subsidies, increase education and awareness, and make use of the traditional knowledge around the world.

Read the full executive summary (and the whole report) at: <http://gbo3.cbd.int/the-outlook/gbo3/executive-summary.aspx>

Animals

Chicks Count from Left to Right

It turns out that chicks will instinctively count from left to right. A study conducted trained chicks to find food in one of sixteen little boxes. After training them to find the food box in a straight line in front of them, the boxes were turned, so the chicks faced them all at once. They repeatedly went for the fourth or sixth from the left to look for food . One researcher speculates that this is because the right hemisphere of the brain, which processes the left field of vision, is dominant in visual tasks [3] The account was published in *Biology Letters*. [13]

World’s Largest Beaver Dam

It’s visible from space. It spans 2800 feet. Construction began in the mid-1970s and generations of beavers have been working on it. The dam is located in Canada’s Wood Buffalo National Park, in a location difficult to reach. Two smaller dams at either side of the major structure could merge in the next ten years, creating a kilometer wide beaver dam. It’s encouraging, and Jean Thie, who discovered the dam, says he sees much evidence for beaver repopulating old habitats after centuries of overhunting for their pelts. In his words, “They’re re-engineering the landscape”. [4]

Renewables Update

California Considers Energy Storage Mandate

The CA Assembly passed legislation to require the California Public Utilities Commission to open proceedings on energy storage and by October 2013 to adopt an initial target for utilities to meet by the end of 2015. Nancy Skinner, a Berkeley Democrat, sponsored the bill, which in its original form would have mandated energy storage systems capable of providing at least 2.25% average peak electrical demand by 2014. By 2020 the target would rise to at least 5 percent. A report prepared for the

California Energy Commission noted that the intermittency of wind and solar power would mean that in order to meet it’s renewable energy targets, CA would have to install more natural gas and hydroelectric plants to smooth out grid operations, or it could invest in storing the energy, which the report stated “can be up to two to three times as effective as adding a combustion turbine to the system”. CA aims to generated 33% of its electricity from renewable sources by 2020. [17]

Review the CA Senate Bill

Property Assessed Clean Energy

PACE is a financing tool, begun in 2007, for installing rooftop solar panels, high-efficiency furnaces, and various other home improvements. Property owners pay for the energy projects as an addition to the property tax over 15 to 20 years. If the owner sells the property after some project, the unpaid balance on the bill is passed on to the new owner, who inevitably saves in electricity bills anyway. According to *Grist*, the Obama administration has endorsed PACE with 100 million USD in stimulus-act funding. Twenty-two states have passed legislation allowing and encouraging municipalities to start PACE programs. Yet Fannie Mae and Freddie Mac, government backed mortgage-finance companies, sent a message to lenders to deter lending to PACE programs. This was sent on 5 May.

If a borrow defaults, the clean energy assessment must be paid off before the mortgage- tax assessments have senior status to mortgages. Fannie and Freddie contend they shouldn't get the priority. Fannie and Freddie have said nothing since their letter, which promised "additional guidance". PACE projects are now delayed.

Despite the increased financial security its customers would receive by spread-out payments for energy-saving utilities (some new PACE programs even have safeguards, e.g. in San Francisco financing may not exceed 10% of the assessed value of the property, and properties with underwater mortgages are ineligible), Fannie and Freddie refuse to comment. Defaulting borrowers are only responsible for delinquent payments, which supporters of PACE estimate would be less than 1000 USD. [8]

Rise of Fusion

Talks of nuclear power as clean energy sources are on the rise as public pressure for "energy independence" grows. Fission produces vast amounts of radioactive waste that almost certainly cannot be safely stored for the thousands of years it needs to decay. Fusion, on the other hand, might theoretically be possible without radioactive materials (current fusion reactors require tritium, a product of nu-

clear reactions, and there is concern the high energy neutrons used in the reactor will induce radioactivity in the surrounding materials). Mark Suppes has spent 3500 USD on parts, legally, and is developing a fusion reactor in a warehouse in Brooklyn. He is a "fusioner" (so they call themselves) and a website, fusor.nt exists to share research in the hopes that some breakthroughs may occur in the near future. [14]

Books

Turned Out Nice: How the British Isles will change as the world heats up

Marek Kohn's book outlines the changes to the British Isles in the wake of climate change. Sussex will be submerged, London will boil, but the Atlantic Ocean's influence may moderate some of the more extreme changes. Read the *New Scientist* review on their website.

Biocultural Diversity Conservation: A Global Sourcebook

Written as "a comprehensive source of information for researchers, professionals, policy makers, indigenous and other local organizations, international agencies and non- governmental organizations (NGOs), funders, media and others", this book is compiled from years of research into traditional methods of sustaining biodiversity, of developing in harmony with nature, and preserving culture and biology. The project and the book are detailed on its website: <http://www.terralingua.org/bcdconservation/>



"I count from left to right!" - Getty Images

Trivia

- The US Department of Energy estimates 39% of CO₂ emissions in the US are from buildings. [10]
- Hemp paper does not need chlorine bleach in its production like wood pulp paper mills use. See more.

Your Opinion

Could legalizing whaling be the most effective way to oversee the process and protect whales?

E-mail the editor

Notice

This publication is designed as an electronic resource. While strip-mining for heavy metals and their frequent disposal-by-dumping is hazardous to say the least, mass deforestation and the chlorine bleach used in paper mills are - possibly - more serious, pressing issues than can be immediately resolved. Hyperlinks are embedded in the document for your service, and it would be nice if you didn't print this if you can avoid it. Thanks.

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